

# Ordinary Council Meeting

10 October 2018

## Minutes



Members of the public who attend Council meetings should not act immediately on anything they hear at the meetings, without first seeking clarification of Council's position. Persons are advised to wait for written advice from the Council prior to taking action on any matter that they may have before Council.

Agendas and Minutes are available on the City's website [www.kwinana.wa.gov.au](http://www.kwinana.wa.gov.au)

## **Vision Statement**

### ***Kwinana 2030***

***Rich in spirit, alive with opportunities,  
surrounded by nature – it's all here!***

## **Mission**

**Strengthen community spirit, lead  
exciting growth, respect the environment  
- create great places to live.**



## **We will do this by –**

- providing strong leadership in the community;
- promoting an innovative and integrated approach;
- being accountable and transparent in our actions;
- being efficient and effective with our resources;
- using industry leading methods and technology wherever possible;
- making informed decisions, after considering all available information; and
- providing the best possible customer service.

## **Values**

**We will demonstrate and be defined by our core values, which are:**

- Lead from where you stand – Leadership is within us all.
- Act with compassion – Show that you care.
- Make it fun – Seize the opportunity to have fun.
- Stand Strong, stand true – Have the courage to do what is right.
- Trust and be trusted – Value the message, value the messenger.
- Why not yes? – Ideas can grow with a yes.



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**Present:**

MAYOR CAROL ADAMS  
 DEPUTY MAYOR P FEASEY  
 CR W COOPER  
 CR M KEARNEY  
 CR S LEE  
 CR S MILLS  
 CR M ROWSE  
 CR D WOOD

MRS M COOKE	-	Acting Chief Executive Officer
MS C MIHOVLOVICH	-	Director City Strategy
MRS B POWELL	-	Director City Living
MR R NAJAFZADEH	-	Acting Director City Infrastructure
MS M BELL	-	Director City Legal
MR P NEILSON	-	Manager Planning and Development
MR T HOSSEN	-	Lawyer
MS A MCKENZIE	-	Council Administration Officer

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**1 Declaration of Opening:**

***Presiding Member declared the meeting open at 7:00pm and welcomed Councillors, City Officers and gallery in attendance and read the Welcome.***

“IT GIVES ME GREAT PLEASURE TO WELCOME YOU ALL HERE AND BEFORE COMMENCING THE PROCEEDINGS, I WOULD LIKE TO ACKNOWLEDGE THAT WE COME TOGETHER TONIGHT ON THE TRADITIONAL LAND OF THE NOONGAR PEOPLE”

**2 Prayer:**

***Councillor Sandra Lee read the Prayer***

“OH LORD WE PRAY FOR GUIDANCE IN OUR MEETING. PLEASE GRANT US WISDOM AND TOLERANCE IN DEBATE THAT WE MAY WORK TO THE BEST INTERESTS OF OUR PEOPLE AND TO THY WILL. AMEN”

**3 Apologies/Leave(s) of Absence (previously approved)****Apologies**

Nil

**Leave(s) of Absence (previously approved):**

Nil



#### **4 Public Question Time:**

Nil

#### **5 Applications for Leave of Absence:**

Nil

#### **6 Declarations of Interest by Members and City Officers:**

Deputy Mayor Peter Mayor declared an impartiality interest in item 15.1, Adoption of Local Development Plan, Stage 2B Cassia Glades, (Lot E26) Kwinana Town Centre as his supervisor is the Minister for Housing and the Department of Communities – Housing Division is a joint venture with Satterley.

Deputy Mayor Peter Mayor declared an impartiality interest in item 15.2, Adoption of Amended Local Development Plan – Lot 9237 Parmelia Avenue, Parmelia (Cassia Rise Estate) as his supervisor is the Minister for Housing and the Department of Communities – Housing Division is a joint venture with Satterley.

Mayor Carol Adams declared an indirect financial interest in item 16.2, Review of Beekeeping Fees and Charges due to her husband recently purchasing a single beehive and being an attendee of the Kwinana Bee Group. The outcome of the agenda item will either impose a fee to be paid or not given he only has a single hive.

Councillor Wendy Cooper declared an impartiality interest in item 16.2, Review of Beekeeping Fees and Charges due to her son in law having a bee hive.

Councillor Merv Kearney declared a financial interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware as MT and SE Kearney own Kearns Garden, Hardware and Pets.

Mayor Carol Adams declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

Deputy Mayor Peter Feasey declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

Councillor Wendy Cooper declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

Councillor Sandra Lee declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

## 6 DECLARATIONS OF INTEREST BY MEMBERS AND CITY OFFICERS

Councillor Sheila Mills declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

Councillor Matthew Rowse declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

Councillor Dennis Wood declared an impartiality interest in item 16.3, Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware due to the lessee being a fellow Elected Member.

## 7 Community Submissions:

### 7.1 Mr Steve Allerding on behalf of Allerding & Associates regarding item 15.4, Retrospective Development Application for alterations to the Landscaping Business Depot - Lot 53 (1038) Thomas Road, Casuarina:

Thank you Mayor and Councillors, my name is Steve Allerding of 125 Hamersley Road, Subiaco and I am speaking on behalf of item 15.4 which relates to the modification to the existing approval for the Landscaping Business Depot at 1038 Thomas Road, Casuarina. I would like to express my support for the officer's recommendation and confirm we have no objection to any of the conditions proposed.

The brief background to this matter is that the Council approved the use of the land for the Landscape Depot back in 2015.

Under this application the use does not change. The essence of the proposal is the relocation of the existing office from the original building at the front of the property to within the interior of the approved shed as it was approved in 2015. This relocation, however, does not result in any changes to the development footprint of the site that was approved in 2015. In fact, there is no new development proposed other than an addition to the rear of the existing shed, which will not be visible from the street or from the surrounding properties. That shed addition resulted from the Council staff's request to provide storage under cover and not out in the open.

However as part of the engagement with the City and State Government Departments there has been an opportunity to review and improve on certain elements of the proposal from that approved in 2015 in terms of drainage management, as well as to refine other minor matters.

The consequence of that is that we are pleased to note that all State Government agencies are supportive of the proposal along with the City's officers.

The final form of the proposal resulted from extensive liaison with both State and Local Government Agencies to provide all the information and plans required. All of these State and Government Agencies are providing support for the proposal.

## 7 COMMUNITY SUBMISSIONS

Additionally, and even though it doesn't form part of the development application, we have addressed other matters after consultation, including lighting and dust management to ensure the ongoing protection of the amenity of neighbouring landowners.

For councillors who have visited the premises or driven past, the visual appearance of the premises, including the verge spaces, is of a very high quality. Since the Landscaping Business depot was first established, the extent of landscaping has been increased considerably.

The landscaping has also been carefully designed and engineered to be water wise and combined to meet the Department of Water and Environmental Regulation's very stringent requirements for the disposal of stormwater, given its location within a Rural Water Resource zone.

The landscaping depot has been a positive contribution to the City of Kwinana and Horizon West enjoy being part of the Kwinana community.

It leaves me to commend the officers recommendation to you and confirm that we have no objection to the conditions proposed.

### 7.2 Mr Soren Houlberg on behalf of the Rockingham Kwinana Bee Buddy regarding item 16.2, Review of Beekeeping Fees and Charges

Your Worship and honourable Councilors, I would like to submit my gratitude to the City on behalf of the Kwinana Bee Buddy Group and myself for the City's positive attitude toward keeping honey bees in Kwinana and making Kwinana an even more friendly environment.

I would like to inform you that the Rockingham Kwinana Bee Buddy Group was established five months ago, and today we have more than 60 followers of amateur beekeepers. We meet once a month and we are a division from the Western Australian Apiarists' Society (WAAS) they normally meet in South Perth and have more than 1200 members.

Thank you again for your important contribution to protection of the honey bees in this area, it is such a special place in Western Australia (WA) with such a special diversity of fauna.

## 8 Minutes to be Confirmed:

### 8.1 Ordinary Meeting of Council held on 26 September 2018:

#### COUNCIL DECISION

292

MOVED CR P FEASEY

SECONDED CR S LEE

That the Minutes of the Ordinary Meeting of Council held on 26 September 2018 be confirmed as a true and correct record of the meeting.

NOTED – The Mayor requested that a notation be made on the Minutes of the last Ordinary Council Meeting, held on the 26 September 2018.



**8 MINUTES TO BE CONFIRMED**

**The Mayor incorrectly declared that she had an indirect financial interest in Item 21.1, Request for consent to declaration of Trust, City of Kwinana Waste Supply Agreement and vacated the Council Chambers.**

**The Mayor does not have an indirect financial interest to disclose and would like a notation to that effect made on the minute record. The Mayor did however correctly declare an impartiality interest arising out of a friendship with the proponent.**

**CARRIED  
8/0**

**9 Referred Standing / Occasional / Management /Committee Meeting Reports:**

Nil

**10 Petitions:**

Nil

**11 Notices of Motion:**

Nil

**12 Reports – Community**

Nil

**13 Reports – Economic**

Nil

**14 Reports – Natural Environment**

Nil

## 15 Reports – Built Infrastructure

### 15.1 Adoption of Local Development Plan, Stage 2B Cassia Glades, (Lot E26) Kwinana Town Centre

#### DECLARATION OF INTEREST:

Deputy Mayor Peter Mayor declared an impartiality interest as his supervisor is the Minister for Housing and the Department of Communities – Housing Division is a joint venture with Satterley.

#### SUMMARY:

A draft Local Development Plan (LDP) for stage 2B Cassia Glades, (Lot E26) Kwinana Town Centre, has been received for consideration under the City of Kwinana's Local Planning Scheme No. 2 (LPS2) (refer Attachment A for Location Plan).

The draft LDP (refer Attachment B) sets out design requirements for the development of the lots indicated within the LDP boundaries. These requirements apply in addition to standard LPS2 and State Planning Policy No. 3.1 (Residential Design Codes of Western Australia) requirements and permit certain variations in order to achieve a desired outcome.

Subdivision approval was granted for stage 2B of the Cassia Glades Estate by the Western Australian Planning Commission (WAPC) on 28 May 2018 with a condition requiring the preparation of an LDP for the subject lots.

The draft LDP is considered against three key local planning policies, Local Planning Policy No. 1 – Landscape Feature and Tree Retention (LPP No 1), Local Planning Policy No. 2 – Streetscapes (LPP No. 2) and Local Planning Policy No.8 – Designing Out Crime (LPP No. 8) which were adopted by Council on 28 September 2016, 26 April 2017 and 13 June 2018 respectively.

LPP No. 1 focuses on retention of significant trees and landscape features. In this respect, the clearing of vegetation for stage 2B was undertaken prior to the adoption of LPP No. 1, under a previous subdivision approval. Whilst no trees were retained within this stage, trees were retained in the previous stage 2A and adjacent areas of Public Open Space (POS) to the east and south of this stage. The development of Cassia Glades Estate is still progressing, and LPP No. 1 will apply to the future stages of development.

LPP No. 2 focuses on improved streetscapes across the City and places an emphasis on trees, landscaping and road design. Engineering drawings for stage 2B have been lodged and, in conjunction with the draft LDP, have been reviewed by the City's Development Engineers who are satisfied that the documents comply with the requirements of LPP No. 2. LPP No. 2 also requires that all LDPs contain built form design provisions relating to garage setbacks, dwelling façade treatment, fencing and the location of street trees. In this respect, the draft LDP is reflective of LPP No. 2.

LPP No. 8 sets out designing out crime considerations for LDPs. The draft LDP responds to the requirements of LPP No. 8 in that all future dwellings on these lots are required to have habitable rooms addressing both the primary and secondary streets to provide passive surveillance.

**15.1 ADOPTION OF LOCAL DEVELOPMENT PLAN, STAGE 2B CASSIA GLADES, (LOT E26)  
KWINANA TOWN CENTRE**

All lots within this stage are subject to a Bushfire Management Plan (BMP), and require a Bushfire Attack Level (BAL) assessment and certification at the building permit stage. The draft LDP (refer Attachment B) has been assessed and supported by City Officers and is recommended for approval.

**OFFICER RECOMMENDATION:**

That Council approves the Local Development Plan for Stage 2B, Cassia Glades Estate, Kwinana Town Centre (as per Attachment B), pursuant to Clause 52(1)(a) of Schedule 2 – Deemed Provisions for Local Planning Schemes of the *Planning and Development (Local Planning Schemes) Regulations 2015*:

**DISCUSSION:**

Land Status

Local Planning Scheme No 2: Residential R30  
Metropolitan Region Scheme: 'Urban' Zone

Background

The draft LDP (refer Attachment B) has been specifically required as a condition of the WAPC's subdivision approval for the subject land. This draft LDP sets out design requirements for the development of the lots indicated within the LDP boundaries within the stage 2B area. These requirements apply in addition to standard LPS2 and R-Codes requirements and will permit certain variations in order to achieve an optimal form of development.

It should be noted that a previous subdivision approval (WAPC Ref: 149078) was issued on 12 June 2014 for this locality. The proponent subsequently commenced works, which included the clearing of vegetation for stage 2B based on the previous approval. This subdivision approval lapsed before stage 2B lots had been created, however, vegetation had been cleared as part of the previous subdivision approval. Subsequently, a new subdivision approval (WAPC Ref: 156327) was issued for stage 2B on 28 May 2018.

Local Planning Policy No. 1 - Landscape Feature and Tree Retention

As discussed, LPP No. 1 focuses on retention of significant trees and landscape features and the location of services. The LPP No. 1 states that prior to subdivision works being undertaken, the proponent is required to submit a Landscape Feature and Tree Retention Plan to the City for approval.

The clearing and earthworks for stage 2B was undertaken prior to the adoption of LPP No. 1, under the previous subdivision approval and as such, a Landscape Feature and Tree Retention Plan is not required in this instance. It is noted that trees were retained in the previous stage 2A and adjacent POS areas to the east and south of this stage of development.



15.1 ADOPTION OF LOCAL DEVELOPMENT PLAN, STAGE 2B CASSIA GLADES, (LOT E26)  
KWINANA TOWN CENTRE

Local Planning Policy No. 2 - Streetscapes

Engineering drawings for stage 2B have been reviewed by the City's Engineering Department and are supported. The engineering drawings comply with LPP No. 2 in terms of road infrastructure, location of footpaths and sufficient road reserve widths to accommodate street trees. The proposed street trees have been shown on the draft LDP as required by LPP No. 2.

In conjunction with the Engineering drawings, the draft LDP has been reviewed by the City's Development Engineers and is supported.

In respect to building articulation and garage setbacks LPP No. 2 refers to the following;

Dwelling facade treatment

*All dwellings to provide an appropriate, high quality design interface with the surrounding streetscape, through the use of at least three of the following architectural design features:*

1. *Articulation in dwelling facade (i.e. varied wall setbacks);*
2. *A minimum of two building materials, colours and/or finishes (E.g. render, brick, cladding);*
3. *Major habitable room openings incorporating large windows to provide surveillance;*
4. *Roof forms that incorporate gables;*
5. *A balcony, portico, or verandah; or*
6. *A built in planter box.*

The draft LDP complies with LPP No. 2 as the dwelling facade treatment provision has been incorporated into the LDP for all lots. Compliance with these provisions will ensure that all dwellings constructed within this LDP area will provide the desired design interface with the surrounding streetscape.

Fencing

1. *Cohesive and consistent fencing is to be constructed by the developer along the front boundaries of all of the proposed lots with vehicle access from a rear laneway.*
2. *For all rear-loaded lots, a ground level height difference of between 300mm and 600mm between the front boundary and the street is encouraged.*
3. *Front fences within the primary street setback being visually permeable above 0.9m to a maximum height of 1.2m above natural ground level.*
4. *For secondary street boundaries, fencing shall be visually permeable above 1200mm behind the primary street setback, for a minimum length of 3m behind the truncation with a habitable room addressing the street.*

This LDP area does not contain any laneway lots, therefore cohesive and consistent fencing is not a requirement. However, provisions requiring visually permeable fencing for front fences and portion of the secondary street have been included on the draft LDP.

### 15.1 ADOPTION OF LOCAL DEVELOPMENT PLAN, STAGE 2B CASSIA GLADES, (LOT E26) KWINANA TOWN CENTRE

#### Garages

LPP No. 2 requires that where footpaths adjoin the property boundary, garages be setback a minimum of 4.5m from that boundary. The intent of the 4.5m garage setback is to ensure that vehicles parked in the driveway would not obstruct the footpath. The footpaths in stage 2B are boundary aligned, and as such the draft LDP includes a provision requiring a minimum 4.5m garage setback for all lots from the property boundary.

#### Local Planning Policy No. 8 – Designing Out Crime

LPP No. 8 sets out design guidelines to be implemented during the design and assessment of LDPs. Designing out crime considerations for LDPs should take into account building orientation and surveillance. All lots contained in stage 2B have direct road frontage. The draft LDP provisions require that all dwellings address the primary and secondary street frontages through the provision of habitable rooms with large windows to provide surveillance. In addition, all front fences within the primary street setback are required to be visually permeable above 0.9m to a maximum height of 1.2m above the natural ground level. For secondary street boundaries, fencing is required to be visually permeable above 1.2m behind the primary street setback, for a minimum length of 3m behind the truncation. All future dwellings on these lots are required to have habitable rooms addressing both the primary and secondary streets to provide passive surveillance.

#### Bushfire Management

All lots within this stage of development are subject to a BMP and as such have been identified on the draft LDP. A BAL assessment and certification will be required for all lots at the building permit stage.

#### Conclusion

The draft LDP will be a single point of reference that will provide clarity and certainty to builders, property owners and City Officers.

City Officers have assessed the provisions and requirements of the draft LDP and are supportive on the basis that it is consistent with the City's relevant Local Planning Policies and similar LDPs approved throughout the City.

#### **LEGAL/POLICY IMPLICATIONS:**

For the purpose of Councillors considering a financial or impartiality interest only, the landowner is Department of Communities with Satterley Property Group developing the site, and the applicant is Burgess Design Group.

The following strategic and policy based documents were considered in assessing the application;

#### Legislation

*Planning and Development Regulations 2015*

**15.1 ADOPTION OF LOCAL DEVELOPMENT PLAN, STAGE 2B CASSIA GLADES, (LOT E26)  
KWINANA TOWN CENTRE**

Schemes

Metropolitan Region Scheme; and  
City of Kwinana Local Planning Scheme No. 2.

Local Planning Policies

Local Planning Policy No. 1 – Landscape Feature and Tree Retention;  
Local Planning Policy No. 2 – Streetscapes; and  
Local Planning Policy No. 8 – Designing Out Crime.

State Government Policies

State Planning Policy No. 3.1 (Residential Design Codes of Western Australia);  
State Planning Policy No. 3.7 – Planning in Bushfire Prone Areas; and  
Liveable Neighbourhoods Operational Policy.

**FINANCIAL/BUDGET IMPLICATIONS:**

There are no financial or budget implications as a result of this application.

**ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications as a result of this application.

**ENVIRONMENTAL IMPLICATIONS:**

The draft LDP encourages the use of passive solar urban design. The draft LDP also identifies additional street trees which will be required for all lots.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Strategic Community Plan.

Plan	Outcome	Objective
Strategic Community Plan	A well planned City.	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

**COMMUNITY ENGAGEMENT:**

The draft LDP was prepared by the developer and the lots have not yet been created and are all in the ownership of the developer. The draft LDP was not advertised as it is not considered to adversely affect any owners or occupiers within the area covered by the plan or an adjoining area. The application is considered to be of low impact and would only affect the current landowners.



**15.1 ADOPTION OF LOCAL DEVELOPMENT PLAN, STAGE 2B CASSIA GLADES, (LOT E26)  
KWINANA TOWN CENTRE**

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	Appeal of Council's decision on the amended LDP.
Risk Theme	Failure to fulfil statutory regulations or compliance requirements.  Providing inaccurate advice/ information.
Risk Effect/Impact	Reputation Compliance
Risk Assessment Context	Strategic
Consequence	Minor
Likelihood	Possible
Rating (before treatment)	Low
Response to risk treatment required/in place	Work instructions in place and checklists used when assessing the application. Consideration of the application within the statutory timeframes. Compliance of the proposal with Local Planning Scheme No.2, R-Codes, Wandi South Local Structure Plan, Bushfire Guidelines and relevant Policies. Liaising with the applicant throughout the application process.
Rating (after treatment)	Low

**COUNCIL DECISION**

293

**MOVED CR S MILLS**

**SECONDED CR M ROWSE**

**That Council approves the Local Development Plan for Stage 2B, Cassia Glades Estate, Kwinana Town Centre (as per Attachment B), pursuant to Clause 52(1)(a) of Schedule 2 – Deemed Provisions for Local Planning Schemes of the *Planning and Development (Local Planning Schemes) Regulations 2015*:**

**CARRIED  
8/0**

Attachment A - Location Plan





Attachment B - Draft LDP



PROVISIONS

- General**
- This Local Development Plan (LDP) applies to all lots within Stage 2B of Cassia Glades Estate.
  - This LDP varies the provisions of the City of Kwinana Town Planning Scheme No.2 and State Planning Policy 3.1 *Residential Design Codes* (R-Codes).
  - The provisions of this LDP constitute 'Deemed-to-Comply' provisions of the R-Codes.
  - Development that complies with the LDP does not require consultation with surrounding landowners.
  - The City of Kwinana may vary the provisions of this LDP where considered appropriate to achieve a specific design outcome.
  - This LDP is to be read in conjunction with the Estate's Residential Building Guidelines covenant.
- Street Setbacks**
- A 3.0m minimum and 5.0m maximum primary street setback is permitted for R30 coded lots as shown (averaging not permitted).
- Boundary Setbacks**
- Boundary walls are permitted to the southernmost and westernmost boundary, behind the street setback line and to within 4m of the rear boundary, except where otherwise shown, or where this boundary abuts a road, recreation or drainage reserve.
  - Where boundary walls would be permitted and are not proposed, setbacks are to be in accordance with the R-Codes.
- Garages**
- Garages shall be setback a minimum of 4.5m from the street.
  - Garages shall be located as shown on this LDP, where applicable.
  - All garages shall have doors to enclose them such that its contents are screened from public view.
- Open Space and Outdoor Living**
- The minimum open space requirement (minimum % of the site) for R30 coded lots is 35%.
  - Outdoor Living Areas shall be located to maximise access to winter sunlight.
- Dwelling Orientation and Streetscape for Corner Lots**
- Dwellings on corner lots shall address both primary and secondary streets by:
    - providing articulation in the building facade along both boundaries;
    - Incorporating similar materials, facade treatments, and fenestration along both boundaries; and,
    - Incorporating similar roof forms along both boundaries (e.g. eaves, gables etc.).
- Other Design Elements**
- Front fences within the primary street setback being visually permeable above 0.9m to a maximum height of 1.2m above natural ground level.
  - For secondary street boundaries, fencing shall be visually permeable above 1.2m behind the primary street setback, for a minimum length of 3m behind the truncation with a habitable room addressing the street.
- Where sheds and outbuildings do not match the construction materials and finish of the primary dwelling, they are to be screened from public view.
  - All dwellings to provide an appropriate high quality interface with the surrounding streetscape, through the use of at least three of the following design features:
    - Articulation in dwelling facade (i.e. varied wall setbacks);
    - A minimum of two building materials, colours and/or finishes (e.g. render, brick, cladding));
    - Major habitable room openings incorporating large windows to provide surveillance;
    - Roof forms that incorporate gables;
    - A balcony, portico, or verandah; or
    - A built in planter box.
- Bushfire Management**
- The land subject to this LDP is within a bushfire prone area, as designated by the Department of Fire and Emergency Services. Those lots identified on this LDP as being subject to a Bushfire Management Plan require a Bushfire Attack Level Assessment and certification prior to construction, in accordance with *Australian Standard 3959*.
- Street Trees**
- In accordance with the City's Policy, a minimum of one street tree per lot and three street trees for corner lots is required. Street trees will be provided by the developer within the road verge, and maintained for a minimum of two years until established. Street trees are to be generally located as shown on this LDP, subject to detailed landscape design. Street trees are not be relocated or removed by landowners.

LEGEND

- |                             |  |  |
|-----------------------------|--|--|
| Local Development Plan Area | 3.0m minimum 5.0m maximum primary street setback   | Retained Trees                             |
| Residential R30             | Dwelling orientation   | Lots subject to a Bushfire Management Plan |
| Mandatory garage location   | Approximate street tree location. Street trees are not to be removed or relocated by landowners. |  |

APPROVED

..... Coordinator Statutory Planning City of Kwinana	..... Date	LDP: ..... City of Kwinana Reference No.
--	---------------	--

## **15.2 Adoption of Amended Local Development Plan – Lot 9237 Parmelia Avenue, Parmelia (Cassia Rise Estate)**

### **DECLARATION OF INTEREST:**

Deputy Mayor Peter Mayor declared an impartiality interest as his supervisor is the Minister for Housing and the Department of Communities – Housing Division is a joint venture with Satterley.

### **SUMMARY:**

A request to amend the Local Development Plan (LDP) for Lot 9237 Parmelia Avenue, Parmelia (Cassia Rise Estate) (refer Attachment A for Location Plan), has been received for consideration under the City of Kwinana's Local Planning Scheme No. 2 (LPS2) (refer Attachment B). The proposal seeks to amend the LDP that was initially adopted by Council on 8 July 2015 (refer Attachment C) and subsequently amended on 14 September 2016 and 28 February 2018 respectively (refer Attachments D and E).

The approved LDP (refer Attachment E) indicates the lots that are subject to specific building design requirements for bushfire in accordance with the Bushfire Attack Level (BAL) ratings as specified in the Bushfire Management Plan (BMP) for this area. An updated BMP has been prepared for this development and additional updates to the BMP are anticipated as development progresses and setbacks of lots from classified vegetation changes over time. In line with the City's practice, the proponents wish to remove specific BAL ratings from the draft amended LDP. Instead, lots affected by a BMP are identified on the LDP, with a requirement for a BAL assessment and certification at the building permit stage. This approach means that there is no need to amend the LDP every time the detailed BAL requirements change via a review of bushfire risk. It only occurs once at the building permit stage. This approach has been supported by the City's Fire Consultants.

All the other provisions on the approved LDP relating to open space requirements, setbacks and quiet house design requirements remain unchanged.

The draft amended LDP (refer Attachment B) has been assessed and is supported by City Officers and is recommended for approval.

### **OFFICER RECOMMENDATION:**

That Council approves the Amended Local Development Plan for Lot 9237 Parmelia Avenue, Parmelia (Cassia Rise Estate) (as per Attachment B), pursuant to Clause 52(1)(a) of Schedule 2 – Deemed Provisions for Local Planning Schemes of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

### **DISCUSSION:**

#### Land Status

Metropolitan Region Scheme:  
Local Planning Scheme No. 2:

'Urban' Zone  
Residential R20

**15.2 ADOPTION OF AMENDED LOCAL DEVELOPMENT PLAN – LOT 9237 PARMELIA AVENUE, PARMELIA (CASSIA RISE ESTATE)**

**Background**

The LDP for the Cassia Rise Estate was originally approved by Council on 8 July 2015 (refer Attachment C). An amended LDP was adopted by Council on 14 September 2016 (refer Attachment D). The first amendment to the LDP was to combine the stage 1 and stage 2 developments into a single LDP. The amended LDP identified lots that were subject to BALs and quiet house design provisions as outlined in the BMP and Acoustic Report respectively. A second amendment to the LDP was approved by Council on 28 February 2018 (refer Attachment E). This amendment varied the primary street setbacks and updated quiet house design requirements for some of the lots within stage 2 of this development.

The approved LDP indicates the lots that are subject to specific building design requirements for bushfire in accordance with the BAL ratings as specified in the BMP for this area. The BAL ratings for lots can often change between the time the BMP was prepared and individual dwellings are constructed, normally as a result of changes in the surrounding vegetated landscape. An updated BMP has been prepared for this development and additional updates to the BMP may be required as development progresses, resulting in changes to BAL ratings for lots. The City's position has been to require the identification of lots on the LDP that are subject to a BMP without specifying the BAL ratings. In line with the City's practice, the proponents wish to remove specific BAL ratings from the draft amended LDP. Instead, lots affected by a BMP are identified on the LDP, with a requirement for a BAL assessment and certification at the building permit stage. This approach has been supported by the City's Fire Consultants.

All the other provisions on the approved LDP relating to open space requirements, setbacks and quiet house design requirements remain unchanged.

**LEGAL/POLICY IMPLICATIONS:**

For the purpose of Councillors considering a financial or impartiality interest only, the applicant is CLE Planning and Design and the landowner is Department of Communities Housing with Satterley Property Group developing the site.

The following strategic and policy based documents were considered in assessing the application;

**Legislation**

*Planning and Development Regulations 2015*

**Schemes**

Metropolitan Region Scheme; and  
City of Kwinana Local Planning Scheme No. 2.

**Local Planning Policies**

Local Planning Policy No. 1 – Landscape Feature and Tree Retention; and  
Local Planning Policy No. 2 – Streetscapes.

**State Government Policies**

State Planning Policy No. 3.1 (Residential Design Codes of Western Australia);  
State Planning Policy No. 3.7 – Planning in Bushfire Prone Areas; and  
Liveable Neighbourhoods Operational Policy.

**15.2 ADOPTION OF AMENDED LOCAL DEVELOPMENT PLAN – LOT 9237 PARMELIA AVENUE, PARMELIA (CASSIA RISE ESTATE)**

**FINANCIAL/BUDGET IMPLICATIONS:**

There are no financial or budget implications as a result of this application.

**ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications as a result of this application.

**ENVIRONMENTAL IMPLICATIONS:**

The LDP encourages the use of passive solar urban design. Quiet house design provisions are included in the LDP.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Strategic Community Plan.

Plan	Outcome	Objective
Strategic Community Plan	A well planned City.	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

**COMMUNITY ENGAGEMENT:**

The majority of the lots subject to a BMP are still in the ownership of the developer, with the exception of six lots within stage 2 that are privately owned. Dwellings have already been constructed on five of the privately owned lots. It was considered that the proposed changes to the LDP did not warrant advertising to the owner of the property that is currently vacant as this lot is still identified on the LDP as being subject to a BMP.

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	Appeal of Council's decision on the amended LDP.
Risk Theme	Failure to fulfil statutory regulations or compliance requirements.  Providing inaccurate advice/ information.



**15.2 ADOPTION OF AMENDED LOCAL DEVELOPMENT PLAN – LOT 9237 PARMELIA AVENUE, PARMELIA (CASSIA RISE ESTATE)**

Risk Effect/Impact	Reputation Compliance
Risk Assessment Context	Strategic
Consequence	Minor
Likelihood	Possible
Rating (before treatment)	Low
Response to risk treatment required/in place	Work instructions in place and checklists used when assessing the application. Consideration of the application within the statutory timeframes. Compliance of the proposal with Local Planning Scheme No.2, R-Codes, Bushfire Guidelines and relevant Policies. Liaising with the applicant throughout the application process.
Rating (after treatment)	Low

**COUNCIL DECISION**

**294**

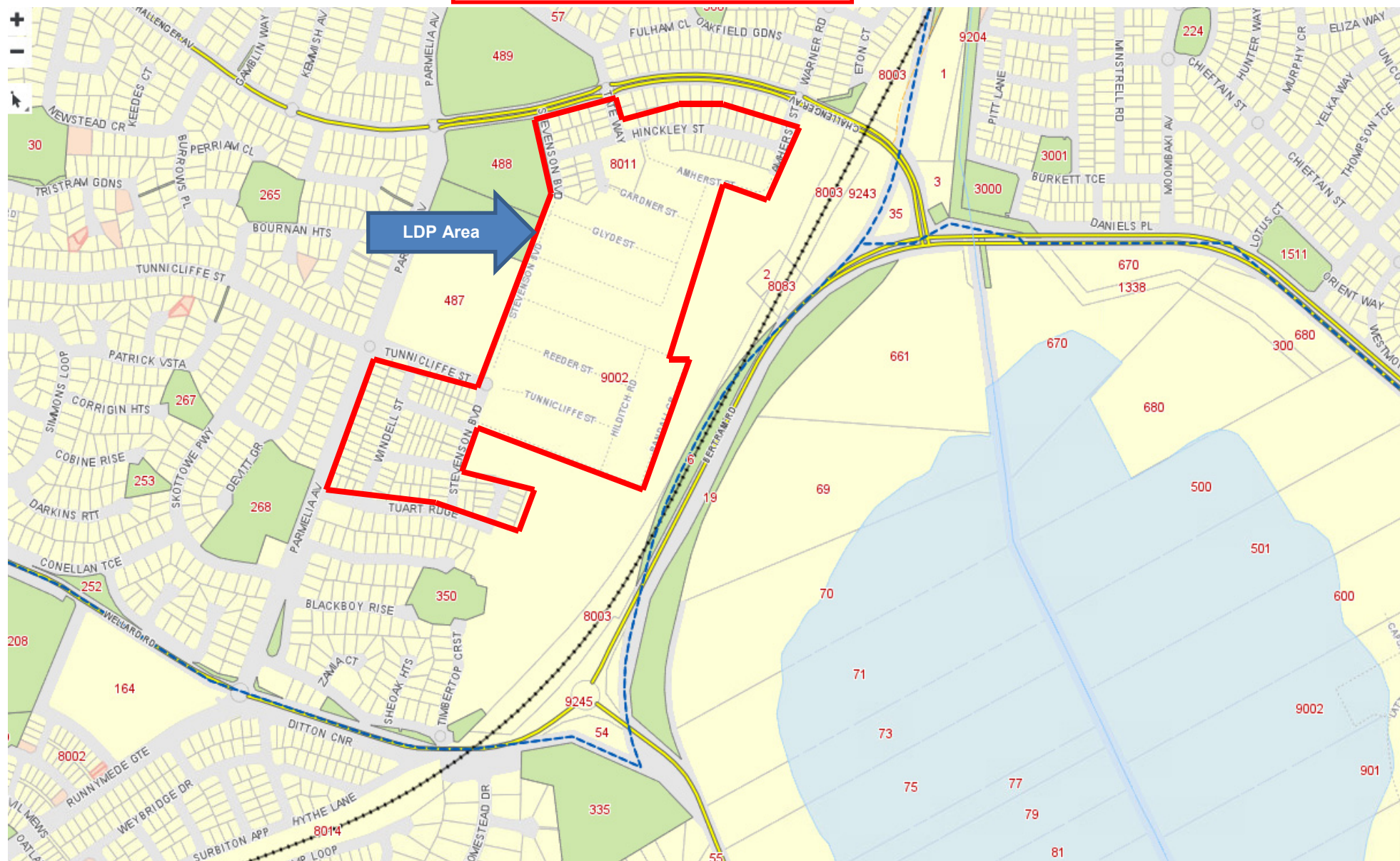
**MOVED CR M ROWSE**

**SECONDED CR S MILLS**

**That Council approves the Amended Local Development Plan for Lot 9237 Parmelia Avenue, Parmelia (Cassia Rise Estate) (as per Attachment B), pursuant to Clause 52(1)(a) of Schedule 2 – Deemed Provisions for Local Planning Schemes of the *Planning and Development (Local Planning Schemes) Regulations 2015*.**

**CARRIED  
8/0**

## Attachment A - Location Plan





# cassia RISE



## RESIDENTIAL DESIGN CODE VARIATIONS

- The provisions detailed below constitute as 'deemed-to-comply' provisions of the Residential Design Codes (R-Codes).
- Unless provided for below, the provision of the City of Kwinana Town Planning Scheme 2 and the R-Codes apply.
- Compliance with the Local Development Plan (LDP) provisions will not require consultation with adjoining and/or nearby landowners.
- The City may vary the provisions of the LDP where considered appropriate to achieve a specific design outcome.
- The density coding of the lots contained within the LDP is R20.
- This LDP shall be read in conjunction with the approved Fire Management Plan.

## Street Setback

- 3m minimum and 5m maximum (no average) from the primary street to the dwelling (as defined by the R-Codes, excluding garages and carports).
- Notwithstanding Provision 1 above, for Lots 1089 to 1104 (inclusive) and 1106 to 1116 (inclusive), a 4m minimum and 6m maximum setback from the primary street to the dwelling (as defined by the R-Codes, excluding garages and car ports) shall apply.
- 1m minimum to a secondary street.

## Garage/Carport Setback

- For lots designated as Stage 1 (as shown on this LDP) the garage setback will be a minimum of 0.5m behind the dwelling (as defined by the R-Codes, including any porch, verandah or balcony).
- For all lots not within Stage 1 (as shown on this LDP) a minimum of 4.5m from the primary street.
- Garages shall have doors that enclose them.

## Site Cover

- Site cover may be increased to 60% subject to the provision of 30m<sup>2</sup> of outdoor living area with a minimum dimension of 4m, two thirds of this area uncovered and located behind the street setback area.

## Fire Management

- Dwellings constructed on lots identified as being at risk of bushfire attack under the approved Bushfire Management Plan shall be constructed to the appropriate BAL rating in accordance with Australian Standard 3959.
- This LDP shall be read in conjunction with the approved Bushfire Management Plan.

## Public Open Space Interface

- Where lots abut Public Open Space the design of the dwelling shall consist of at least one major opening to a habitable room overlooking the Public Open Space and its view not obstructed by visually impermeable fencing.

## Noise Affected Lots

- Quiet house design requirements are applicable to all noise affected lots identified on this Local Development Plan. Details of quiet house design requirements (A & B) are included as Attachment 1.
- Modifications to the quiet house design requirements may be approved by the City where it can be demonstrated that proposed development will be provided within the acceptable level of acoustic amenity and subject to the development proposal being accompanied by a Noise Assessment undertaken by a suitably qualified professional.

## LEGEND

- Subject Area
- Stage 1
- Public Open Space
- BAL Affected Lots
- Retaining Wall
- Designated Garage Location

## QUIET HOUSE DESIGN

- Upper Floor - Package B  
Ground Floor - Package B
- Upper Floor - Package B  
Ground Floor - Package A
- Upper Floor - Package A  
Ground Floor - Not Required

This Local Development Plan has been adopted by Council and signed by the Manager Planning and Development.

City of Kwinana

Date

## RESIDENTIAL DESIGN CODE VARIATIONS

- The provisions detailed below constitute as 'deemed-to-comply' provisions of the Residential Design Codes (R-Codes).
- Unless provided for below, the provision of the City of Kwinana Town Planning Scheme 2 and the R-Codes apply.
- Compliance with the Local Development Plan (LDP) provisions will not require consultation with adjoining and/or nearby landowners.
- The City may vary the provisions of the LDP where considered appropriate to achieve a specific design outcome.

### Street Setback

1. 3m minimum and 5m maximum (no average) from the primary street to the dwelling (as defined by the R-Codes, excluding garages and carports).
2. 1m minimum to a secondary street.

### Garage/Carport Setback

3. Minimum of 0.5m behind the dwelling (as defined by the R-Codes, including any porch, verandah or balcony).
4. Garages shall have doors that enclose them.

### Site Cover

5. Site cover may be increased to 60% subject to the provision of 30m<sup>2</sup> of outdoor living area with a minimum dimension of 4m, two thirds of this area uncovered and located behind the street setback area.

### Fire Management

6. All properties are subject to compliance with the approved fire management plan. Dwellings constructed on lots identified as being at risk of bushfire attack under the approved Fire Management Plan or within 100m from any bushland, equal to or greater than 1ha in area, shall be constructed to the appropriate BAL rating, in accordance with AS3959.
7. A proposed reduction to the nominated BAL rating as specified within the fire management plan for any development will require a planning application for consideration. The applicant will be required to undertake a new BAL assessment by a suitably qualified consultant, as part of the building and planning approval process to determine the bushfire attack level in accordance with AS3959 and WAPC Guidelines Planning for Bushfire Protection Policy.
8. For all lots, where an incursion into the building setback area is proposed, a reassessment of the Bushfire Attack Level is required.

### Public Open Space Interface

9. Where lots about Public Open Space the design of the dwelling shall consist of at least one major opening to a habitable room overlooking the Public Open Space and its view not obstructed by visually impermeable fencing.

This Local Development Plan has been adopted by Council and signed by the Manager Planning and Development.









City of Kwinana

13 July 2015

Date

## Attachment C - Original LDP - Superceded

### LEGEND

-  Subject Area
-  Residential R20
-  Public Open Space
-  Bushfire Attack Level 12.5
-  Bushfire Attack Level 29
-  Designated Garage Location



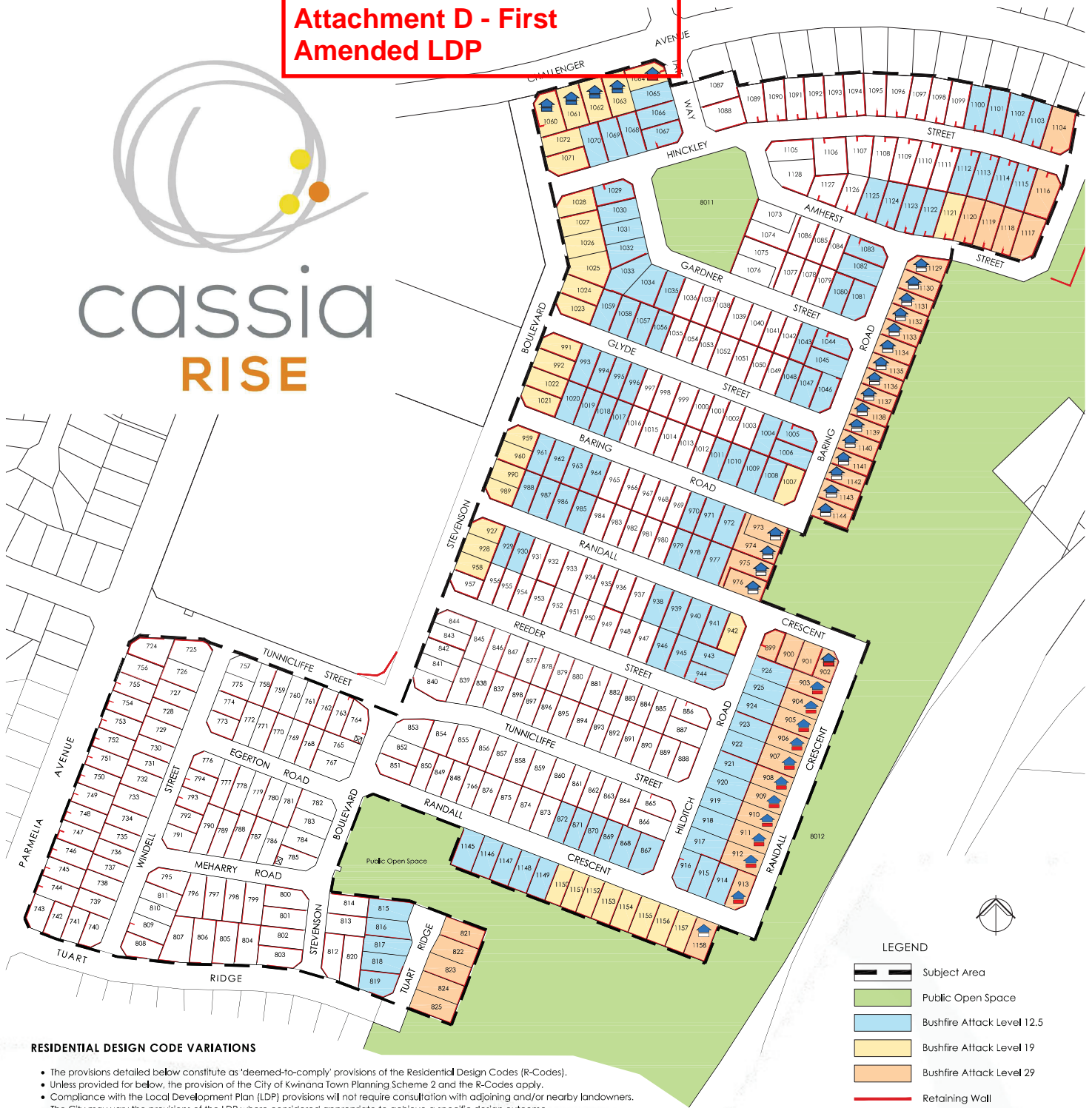

LOCAL DEVELOPMENT PLAN (STAGE 1)





# Attachment D - First Amended LDP

cassia  
RISE



## RESIDENTIAL DESIGN CODE VARIATIONS

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- Compliance with the Local Development Plan (LDP) provisions will not require consultation with adjoining and/or nearby landowners.
- The City may vary the provisions of the LDP where considered appropriate to achieve a specific design outcome.
- The density coding of the lots contained within the LDP is R20.
- This LDP shall be read in conjunction with the approved Fire Management Plan.

### Street Setback

1. 3m minimum and 5m maximum (no average) from the primary street to the dwelling (as defined by the R-Codes, excluding garages and carports).
2. 1m minimum to a secondary street.

### Garage/Carport Setback

3. Minimum of 0.5m behind the dwelling (as defined by the R-Codes, including any porch, verandah or balcony).
4. Garages shall have doors that enclose them.

### Site Cover

5. Site cover may be increased to 60% subject to the provision of 30m² of outdoor living area with a minimum dimension of 4m, two thirds of this area uncovered and located behind the street setback area.

### Fire Management

6. All properties are subject to compliance with the approved Fire Management Plan. Dwellings constructed on lots identified as being at risk of bushfire attack under the approved Fire Management Plan or within 100m from any bushland, equal to or greater than 1ha in area, shall be constructed to the appropriate BAL rating, in accordance with AS3959.
7. A proposed reduction to the nominated BAL rating as specified within the Fire Management Plan for any development will require a planning application for consideration. The applicant will be required to undertake a new BAL assessment by a suitably qualified consultant, as part of the building and planning approval process to determine the bushfire attack level in accordance with AS3959 and WAPC Guidelines Planning for Bushfire Protection Policy.
8. For all lots, where an incursion into the building setback area is proposed, a reassessment of the Bushfire Attack Level is required.

### Public Open Space Interface

9. Where lots abut Public Open Space the design of the dwelling shall consist of at least one major opening to a habitable room overlooking the Public Open Space and its view not obstructed by visually impermeable fencing.

### Noise Affected Lots

10. Quiet house design requirements are applicable to all noise affected lots identified on this Local Development Plan. Details of quiet house design requirements (A & B) are included as Attachment 1.
11. Modifications to the quiet house design requirements may be approved by the City where it can be demonstrated that proposed development will be provided within the acceptable level of acoustic amenity and subject to the development proposal being accompanied by a Noise Assessment undertaken by a suitably qualified professional.

## LEGEND

- Subject Area
- Public Open Space
- Bushfire Attack Level 12.5
- Bushfire Attack Level 19
- Bushfire Attack Level 29
- Retaining Wall
- Designated Garage Location

## QUIET HOUSE DESIGN

- Upper Floor - Package B  
Ground Floor - Not Required
- Upper Floor - Package B  
Ground Floor - Package B
- Upper Floor - Package B  
Ground Floor - Package A

This Local Development Plan has been adopted by Council and signed by the Manager Planning and Development.

19/09/2016  
City of Kwinana Date



# cassia RISE



## RESIDENTIAL DESIGN CODE VARIATIONS

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- Compliance with the Local Development Plan (LDP) provisions will not require consultation with adjoining and/or nearby landowners.
- The City may vary the provisions of the LDP where considered appropriate to achieve a specific design outcome.
- The density coding of the lots contained within the LDP is R20.
- This LDP shall be read in conjunction with the approved Fire Management Plan.

### Street Setback

- 3m minimum and 5m maximum (no average) from the primary street to the dwelling (as defined by the R Codes, excluding garages and carports).
- Notwithstanding Provision 1 above, for Lots 1089 to 1104 (inclusive) and 1106 to 1116 (inclusive), a 4m minimum and 6m maximum setback from the primary street to the dwelling (as defined by the R-Codes, excluding garages and car ports) shall apply.
- 1m minimum to a secondary street.

### Garage/Carport Setback

- For lots designated as Stage 1 (as shown on this LDP) the garage setback will be a minimum of 0.5m behind the dwelling (as defined by the R-Codes, including any porch, verandah or balcony).
- For all lots not within Stage 1 (as shown on this LDP) a minimum of 4.5m from the primary street.
- Garages shall have doors that enclose them.

### Site Cover

- Site cover may be increased to 60% subject to the provision of 30m<sup>2</sup> of outdoor living area with a minimum dimension of 4m, two thirds of this area uncovered and located behind the street setback area.

### Fire Management

- All properties are subject to compliance with the approved Fire Management Plan. Dwellings constructed on lots identified as being at risk of bushfire attack under the approved Fire Management Plan or within 100m from any bushland, equal to or greater than 1ha in area, shall be constructed to the appropriate BAL rating, in accordance with AS3959.
- A proposed reduction to the nominated BAL rating as specified within the Fire Management Plan for any development will require a planning application for consideration. The applicant will be required to undertake a new BAL assessment by a suitably qualified consultant, as part of the building and planning approval process to determine the bushfire attack level in accordance with AS3959 and WAPC Guidelines Planning for Bushfire Protection Policy.
- For all lots, where an incursion into the building setback area is proposed, a reassessment of the Bushfire Attack Level is required.

### Public Open Space Interface

- Where lots abut Public Open Space the design of the dwelling shall consist of at least one major opening to a habitable room overlooking the Public Open Space and its view not obstructed by visually impermeable fencing.

### Noise Affected Lots

- Quiet house design requirements are applicable to all noise affected lots identified on this Local Development Plan. Details of quiet house design requirements (A & B) are included as Attachment 1.
- Modifications to the quiet house design requirements may be approved by the City where it can be demonstrated that proposed development will be provided within the acceptable level of acoustic amenity and subject to the development proposal being accompanied by a Noise Assessment undertaken by a suitably qualified professional.

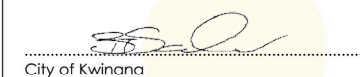
## LEGEND

- Subject Area
- Stage 1
- Public Open Space
- Bushfire Attack Level 12.5
- Bushfire Attack Level 19
- Bushfire Attack Level 29
- Retaining Wall
- Designated Garage Location

## QUIET HOUSE DESIGN

- Upper Floor - Package B  
Ground Floor - Package B
- Upper Floor - Package B  
Ground Floor - Package A
- Upper Floor - Package A  
Ground Floor - Not Required

This Local Development Plan has been adopted by Council and signed by the Manager Planning and Development.

  
City of Kwinana

2/03/2018  
Date



### **15.3 Development Application – Ancillary Dwelling - Lot 140 (415) De Haer Road, Wandí**

#### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

#### **SUMMARY:**

An application has been received, seeking planning approval for an oversized ancillary dwelling at Lot 140 (415) De Haer Road, Wandí (Refer to Attachment A: Context Map). The subject site is zoned Special Rural under Local Planning Scheme No.2 (LPS2). The ancillary dwelling has a plot ratio area of 111 m<sup>2</sup>, proposing a variation to the maximum permitted plot ratio area of 100 m<sup>2</sup> as prescribed under the City's Ancillary Dwelling Local Planning Policy (refer to plans: Attachments B – E).

City Officers do not have delegation to determine applications proposing a variation to the maximum permitted plot ratio area for ancillary dwelling developments. As a result, the application has been referred to Council for determination. The current property owners are ageing and becoming semi-dependant, and intend to occupy the ancillary dwelling once constructed. In order to meet the needs of the property owners, the ancillary dwelling has been designed to comply with the Australian Standards for wheelchair accessibility and aged or dependent persons.

City Officers consider the proposed 11% increase to the maximum permitted plot ratio area acceptable, given the design for disability access. Furthermore, City Officers note the proposal complies with the provisions for development within the Special Rural Zone as prescribed under LPS2 and the Development within Special Rural Zones Local Planning Policy (Special Rural LPP). The proposal to vary the plot ratio requirement of 100 m<sup>2</sup> to 111 m<sup>2</sup> is also considered to satisfy the overarching objectives of the Ancillary Dwelling Local Planning Policy. The proposed ancillary dwelling is recommended for approval subject to conditions and advice.

#### **OFFICER RECOMMENDATION:**

That Council grant planning approval for an ancillary dwelling at Lot 140 (415) De Haer Road, Wandí, subject to the following conditions and advice:

Conditions:

1. The premises being kept in a neat/tidy condition at all times by the owner/occupier to the satisfaction of the City of Kwinana.
2. Stormwater drainage from roofed and paved areas to be disposed of on site.
3. The applicant shall implement dust control measures for the duration of site works to the satisfaction of the City of Kwinana.
4. The ancillary dwelling shall be connected to an effluent disposal system. Details are to be submitted with the building permit application.
5. This approval is valid for 24 months only. If development is not completed within this period a fresh approval must be obtained before commencing or continuing with the development.

**15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI****Advice Notes:**

1. The applicant is advised that all future development must be submitted to the City of Kwinana prior to the commencement of works or alteration of land use.
2. All existing effluent disposal systems are to be decommissioned prior to installation of a new ATU in accordance with the *Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974*. The old system is to be pumped out by an approved Liquid Waste Contractor. Once clear, the tank is to be filled with clean yellow sand and the cement at the top of tank to be broken. All contaminated waste must be disposed appropriately to an approved Department of Environmental Regulation landfill facility. A copy of the receipt showing disposal of liquid waste to be submitted to the Environmental Health Section within 7 working days of decommissioning.
3. Should the applicant be aggrieved by the decision or any condition imposed, then a right of review should be lodged with the State Administrative Tribunal within 28 days of the date of this decision.
4. The applicant is further advised that this is not a building permit the City of Kwinana issues to enable construction to commence. A building permit is a separate Council requirement and construction cannot be commenced until a building permit is obtained.
5. The applicant should ensure the proposed development complies with all other relevant legislation, including but not limited to, the *Environmental Protection Act 1986 and Regulations*, *Health Act 1911 and Regulations*, and the National Construction Code.

**DISCUSSION:****Land Status**

Local Planning Scheme No. 2: Special Rural Zone

Metropolitan Region Scheme: Rural – Water Protection Zone

**Background**

The subject lot is zoned Special Rural under LPS2 and Rural – Water Protection under the Metropolitan Region Scheme. The property is developed with an existing double storey house and associated infrastructure including an outbuilding and pool.

The proposal is defined as ancillary dwelling (also referred to as ancillary accommodation) under planning legislation. LPS2 does not exempt ancillary dwelling developments from requiring planning approval. The applicant therefore submitted the subject application.

**Proposal Description**

The proposed ancillary dwelling is self-contained and has a total plot ratio area of 111 m<sup>2</sup> comprising of a bathroom, kitchen, laundry, living area, dining area and three bedrooms (refer to Attachment D). Under planning legislation, an ancillary dwelling is defined as a:

### 15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI

*Self-contained dwelling on the same lot as a single house which may be attached to, integrated with or detached from the single house.*

The proposed dwelling is attached to the existing primary dwelling via an enclosed passageway and is to be constructed with brick walls and a tiled roof matching that of the existing primary dwelling. The floor area of the passageway connecting the ancillary dwelling to the primary dwelling is not included as part of the total plot ratio area of the ancillary dwelling. Plot ratio area is defined in the Ancillary Dwelling Local Planning Policy and includes the gross total area of all floors of buildings with the exception of amenities areas that are common to more than one dwelling. The enclosed passageway connecting the existing dwelling with the proposed ancillary is considered to be an amenity area that is common to both the existing dwelling and the ancillary. Therefore, the passageway is considered to not contribute to the plot ratio area.

The ancillary dwelling is located to the north of the existing dwelling, being setback 16.3 m from the northern boundary and 5.2 m from the existing dwelling, in an area that is void of any native vegetation (refer to Attachments B and C). The ancillary dwelling is located where trees and small shrubbery that were planted by the property owner for screening (and are considered not native to the area) are presently located. This vegetation will be removed to allow for the ancillary dwelling. Vehicular access for the ancillary dwelling tenants is proposed to be from the existing crossover at De Haer road. No changes are proposed to the existing vehicular access arrangement.

#### **Planning Assessment**

##### **State Planning Policy 3.7 – Planning in Bushfire Prone Areas**

The development is located within a designated bushfire prone area under the *Fire and Emergency Services Act 1998* (as amended). State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP3.7) requires applications for habitable development on lots greater than 1,100 m<sup>2</sup> be accompanied with a Bushfire Attack Level (BAL) assessment. The applicant provided a BAL assessment identifying a BAL12.5 rating with no further clearing or bushland management required (refer to Attachment F). The application was referred by City Officers to an external bushfire consultancy who concur with the BAL assessment and proposed BAL12.5 rating. The proposed development is considered consistent with the policy.

##### **Metropolitan Region Scheme**

The subject lot is zoned Rural – Water Protection under the Metropolitan Region Scheme (MRS) due to the fact it is located within the Jandakot water mound area. State Planning Policy 2.3 – Jandakot Groundwater Protection (SPP 2.3) provides guidance for planning within the Jandakot Water Mound area and is therefore applicable to the subject lot. Under SPP 2.3, an ‘Ancillary Dwelling’ use is classified as ‘Compatible’ on the subject lot. The proposal is considered to be consistent with the objectives of SPP 2.3 in ensuring the protection of groundwater and the preservation of natural vegetation cover. Furthermore, SPP 2.3 states that the determination of development proposals shall be based on the zoning prescribed under the applicable Local Planning Scheme and associated policies. Therefore, while City Officers note the application is consistent with the provisions of SPP 2.3, the proposal is primarily assessed against the provisions of LPS2 and associated Local Planning Policies.

### 15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI

#### **Local Planning Scheme No.2**

The subject lot is zoned Special Rural under LPS2 and is located within the Wandi Policy Area. The proposal was therefore assessed against and considered to comply with the relevant provisions of Clause 6.12 and Schedule 2 of LPS2. Furthermore, the proposal is consistent with the policy statement for the Wandi Policy Area as prescribed under Clause 4.3 of LPS2. The applicable policy statements for Wandi are as follows:

- *The predominant use shall be equestrian special rural development*
- *Development of land for special rural purposes shall occur in such a manner as to secure the preservation of banksia woodlands*
- *Land use and development shall be consistent with the objectives of SPP 2.3 – Jandakot Groundwater Protection.*

The purpose and intent of the Wandi Policy Area is for orderly development to accommodate certain rural pursuits. The ancillary dwelling is sited in an area that has already been cleared, ensuring there is no impact on native vegetation including banksia woodlands. Therefore, City Officers note the ancillary dwelling is compatible with the primary use of the site and will not adversely impact on the intent of the Wandi Policy Area.

#### **Development within Special Rural Zones Local Planning Policy**

The Special Rural LPP has been adopted under LPS2 and is applicable to all development within the Special Rural zone. City Officers consider the proposed ancillary dwelling to be compliant with all requirements of the Special Rural LPP. A significant objective of the Special Rural LPP is to ensure all development is sited so as to ensure minimal clearing of native vegetation. The proposed ancillary dwelling is located to the north of the existing dwelling within an area that is currently cleared of native vegetation and consists of manicured lawn. Furthermore, the LPP requires all building envelopes and development to be setback a minimum of 10 m from side boundaries and 15 m from the front boundary. The subject lot does not have a building envelope. The nearest boundary to the proposed ancillary dwelling is a minimum of 16 m to the north, which is compliant with the Policy requirements. The proposal is compliant with all provisions of the Special Rural LPP.

#### **Ancillary Dwelling Local Planning Policy**

The Ancillary Dwelling Local Planning Policy has been adopted under LPS2 and is applicable to the development of ancillary dwellings. This policy enables a variation to Clause 5.5.1 of the Residential Design Codes, by increasing the size of ancillary dwellings in rural areas from 70 m<sup>2</sup> to 100 m<sup>2</sup>. The objectives of the policy are listed below:

- *To provide a set of criteria for the development of ancillary dwellings and ensure its structure conforms with the existing scale and character of the locality;*
- *To ensure that ancillary dwellings are provided, constructed and located in such a way as to minimise their impact on adjacent properties and provide a high standard of built form.*

**15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI**

Although the plot ratio area of 111 m<sup>2</sup> exceeds the maximum permitted plot ratio area of 100 m<sup>2</sup>, the proposal complies with the above listed objectives of the Policy in relation to scale and character. The existing primary dwelling on the site is a large double storey design with the proposed ancillary dwelling being single storey. The ancillary dwelling is located within close proximity to the existing dwelling and is ancillary in all regards to the primary dwelling by way of size, design, appearance and location. The ancillary dwelling is attached to the primary dwelling via a passage way, making it appear as an addition to the existing primary dwelling. Furthermore, the ancillary dwelling is designed to be compliant with the Australian Standards for wheelchair accessibility and meets the needs of aged or dependent persons. This includes the provision of 920 mm wide doorways, 1000 mm wide passageways and increased manoeuvring space within the wet areas to accommodate wheelchair access. The dwelling is also designed with larger bedrooms to better accommodate for dependant persons. The applicant has provided information that the current property owners reside in the existing primary dwelling and will occupy the proposed ancillary dwelling following the completion of construction. The property owners are ageing and becoming semi-dependant. Therefore, the plan is for immediate family of the current property owners to occupy the existing primary dwelling. The proposed ancillary dwelling will enable the current property owners to continue residing on the Special Rural property while receiving assistance from immediate family members living within the primary dwelling. The design for disability access is a contributing factor in the proposal to increase the total plot ratio area beyond the permitted 100 m<sup>2</sup>. City Officers consider the proposed 11% increase to the maximum permitted plot ratio area acceptable, given the design for disability access.

Furthermore, the proposal is appropriately set back from adjoining neighbours and will not adversely impact the visual amenity or character of the locality. Existing, mature and native vegetation is located along the northern boundary on both the subject and adjoining properties. This vegetation provides adequate screening of the ancillary dwelling from the nearest adjoining property. The setback distance from the front boundary and existing native vegetation will ensure the ancillary dwelling is not visible from the primary street. Existing services such as water and electricity infrastructure, in addition to vehicle access and parking, will be shared with the primary dwelling. Furthermore, the ancillary dwelling is designed with a tiled roof and brick exterior walls to match the primary dwelling. City Officers consider that the scale and location of the proposed ancillary dwelling will not compromise the amenity of the adjoining properties or the character of this special rural area. The proposed development therefore satisfies the objectives of the Ancillary Dwelling Local Planning Policy.

**Conclusion**

The proposed ancillary dwelling is considered to be consistent with the relevant Scheme and Policy requirements. The proposal to vary the plot ratio requirement of 100 m<sup>2</sup> to 111 m<sup>2</sup> is considered to satisfy the objectives of the Ancillary Dwelling Local Planning Policy. The dwelling is sited to ensure minimal impact on native vegetation and is setback adequately from adjoining properties. These factors will ensure the ancillary dwelling minimises impacts on neighbouring properties and conforms to the character of the locality. The application is therefore recommended for approval.

### 15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI

#### **LEGAL/POLICY IMPLICATIONS:**

For the purpose of Councillors considering a declaration of interest only, the landowners and applicants are Peter and Pauline Lloyd.

The following strategic and policy based documents were considered in assessing the application:

#### Legislation

*Planning and Development Act 2005*

#### Schemes

Metropolitan Region Scheme

City of Kwinana Local Planning Scheme No. 2

#### Local Planning Policies

Development within Special Rural Zones

Ancillary Dwelling Local Planning Policy

#### State Government Policies

State Planning Policy No. 2.3 – Jandakot Groundwater Protection

State Planning Policy No. 3.7 – Planning in Bushfire Prone Areas

#### **FINANCIAL/BUDGET IMPLICATIONS:**

There are no financial implications as a result of this report.

#### **ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications as a result of this report.

#### **ENVIRONMENTAL IMPLICATIONS:**

There are no environmental implications as a result of this report.

#### **STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Strategic Community Plan.

Plan	Outcome	Objective
Strategic Community Plan	A well planned City	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

### 15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI

#### COMMUNITY ENGAGEMENT:

There are no community engagement implications as a result of this report. City Officers considered the proposed development to be consistent with the relevant planning legislation and policy objectives. The Development within Special Rural Zones Local Planning Policy requires all development to be setback a minimum of 10 m from side boundaries. The proposed ancillary is setback 16.3m from the nearest side boundary. Therefore, it wasn't considered necessary to advertise the proposal.

#### RISK IMPLICATIONS:

The risk implications in relation to this proposal are as follows:

Risk Event	Negative impact on amenity of the area.
Risk Theme	Failure to fulfil statutory regulations or compliance requirements  Providing inaccurate advice/ information.
Risk Effect/Impact	Reputation Compliance
Risk Assessment Context	Strategic
Consequence	Minor
Likelihood	Possible
Rating (before treatment)	Low
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	Work instructions in place and checklists used when assessing the application. Consideration of the application within the statutory timeframes. Compliance of the proposal with Local Planning Scheme No.2 and relevant policies.
Rating (after treatment)	Low



15.3 DEVELOPMENT APPLICATION – ANCILLARY DWELLING - LOT 140 (415) DE HAER ROAD, WANDI

**COUNCIL DECISION**

295

**MOVED CR S LEE**

**SECONDED CR D WOOD**

**That Council grant planning approval for an ancillary dwelling at Lot 140 (415) De Haer Road, Wandl, subject to the following conditions and advice:**

**Conditions:**

1. The premises being kept in a neat/tidy condition at all times by the owner/occupier to the satisfaction of the City of Kwinana.
2. Stormwater drainage from roofed and paved areas to be disposed of on site.
3. The applicant shall implement dust control measures for the duration of site works to the satisfaction of the City of Kwinana.
4. The ancillary dwelling shall be connected to an effluent disposal system. Details are to be submitted with the building permit application.
5. This approval is valid for 24 months only. If development is not completed within this period a fresh approval must be obtained before commencing or continuing with the development.

**Advice Notes:**

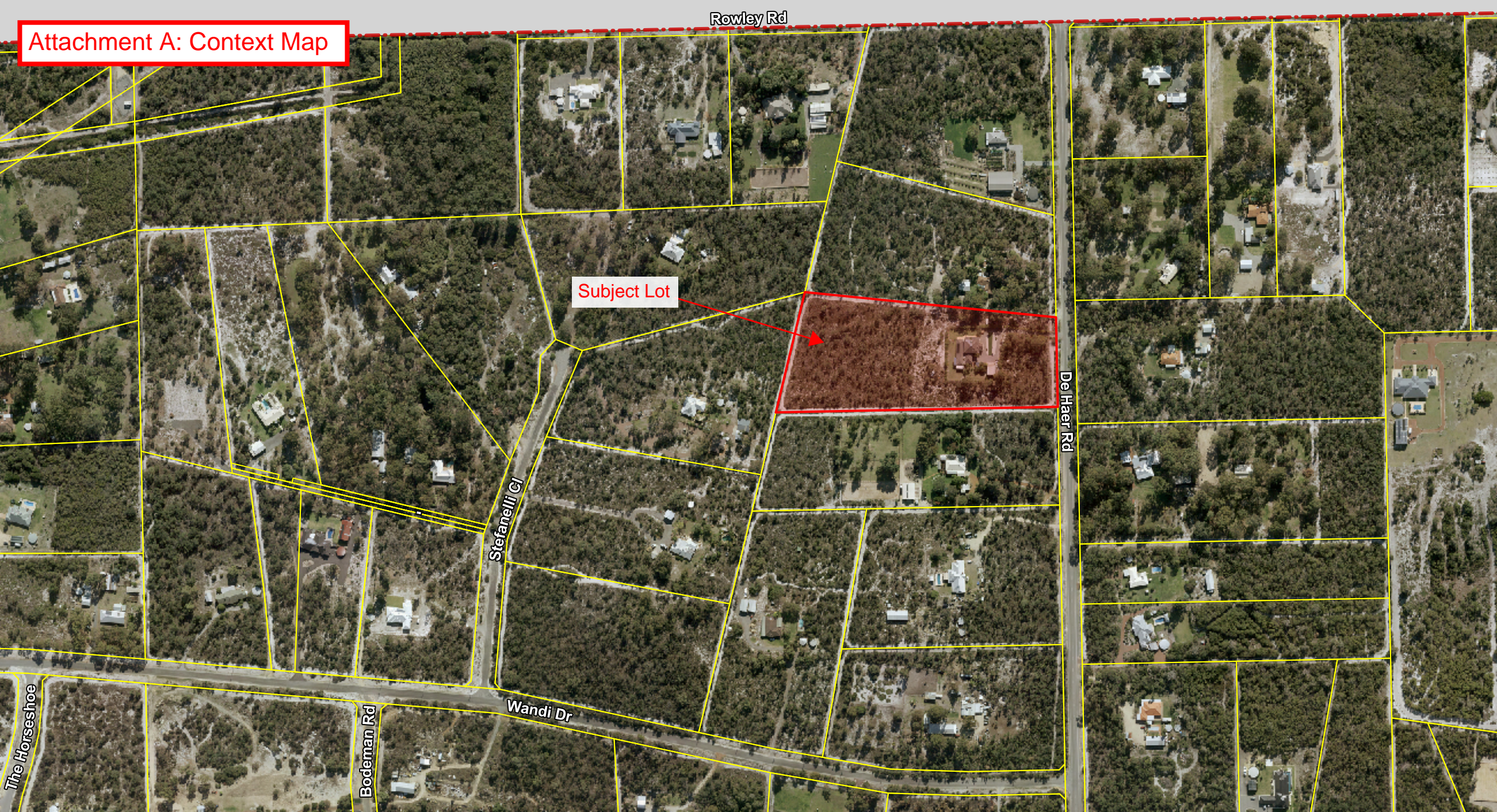
1. The applicant is advised that all future development must be submitted to the City of Kwinana prior to the commencement of works or alteration of land use.
2. Should the applicant be aggrieved by the decision or any condition imposed, then a right of review should be lodged with the State Administrative Tribunal within 28 days of the date of this decision.
3. The applicant is further advised that this is not a building permit the City of Kwinana issues to enable construction to commence. A building permit is a separate Council requirement and construction cannot be commenced until a building permit is obtained.
4. The applicant should ensure the proposed development complies with all other relevant legislation, including but not limited to, the *Environmental Protection Act 1986 and Regulations*, *Health Act 1911 and Regulations*, and the National Construction Code.

**CARRIED  
8/0**

**NOTE – That the Officer Recommendation has been amended to remove the original Advice Note 2 and update the numbering accordingly.**



Attachment A: Context Map



Rowley Rd

Subject Lot

Stefanello Ct

DeHaer Rd

Wandri Dr

Bodeman Rd

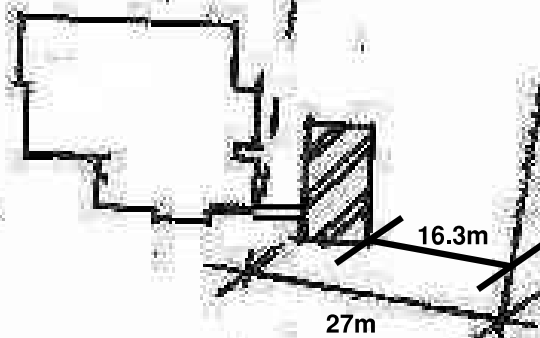
The Horseshoe



# Attachment B: Site Plan

Lot 140

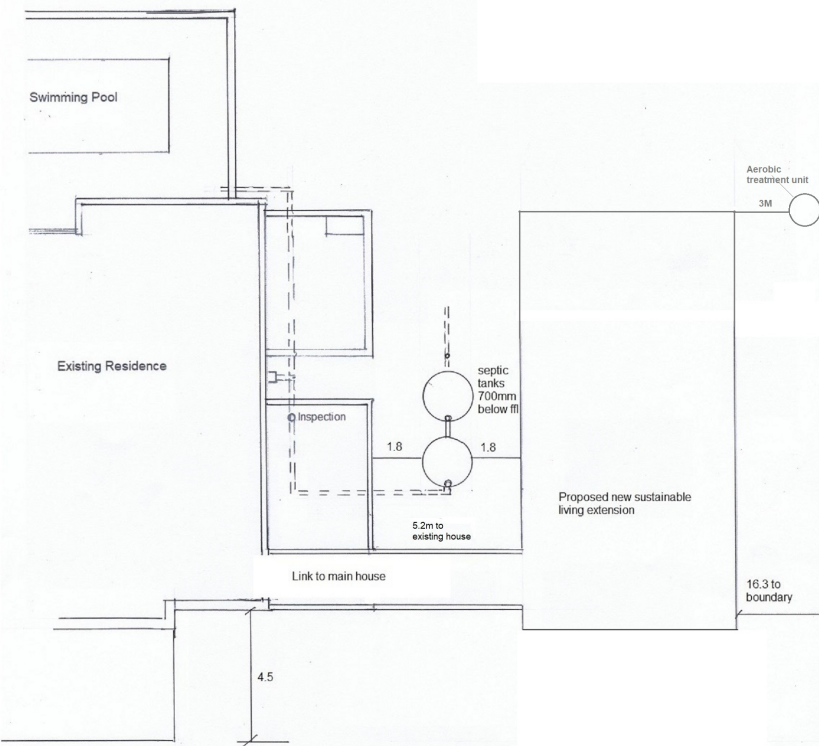
Lot 139



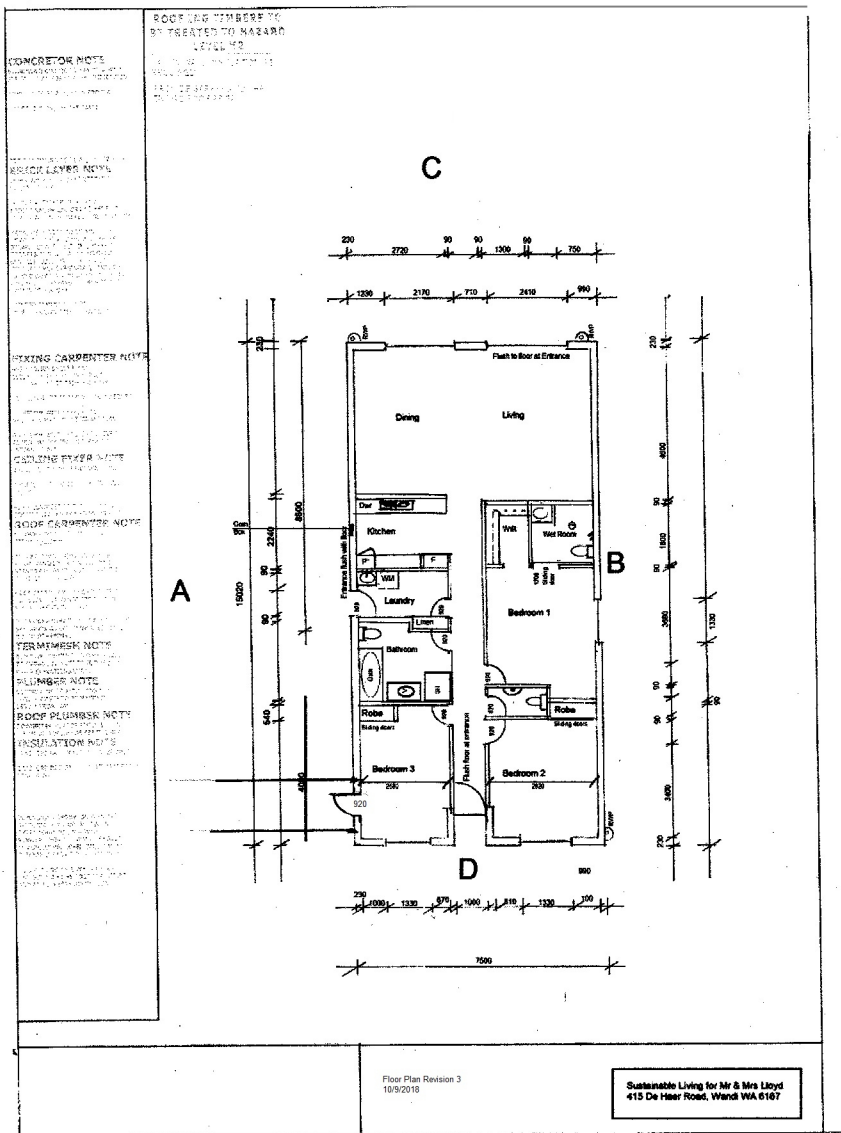
De Haer Road

Site Plan

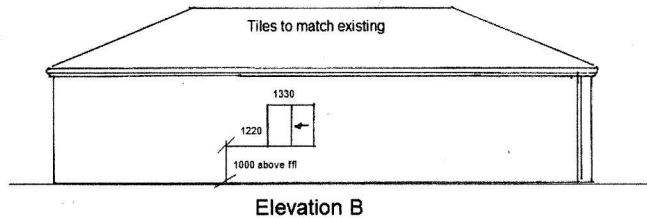
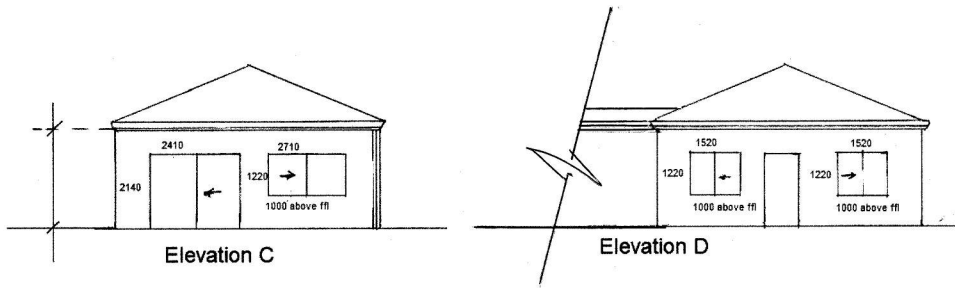
# Attachment C: Location Plan



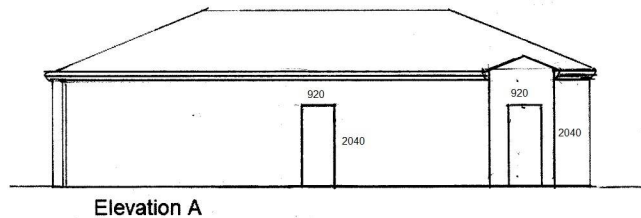
# Attachment D: Floor Plan



## Attachment E: Elevation Plan



Roof Trusses to Australian Standards



Elevations Rev 3  
10/9/2018

Elevations for sustainable living.  
Mr & Mrs Lloyd, 415 De Haer Road, Wandí WA  
6167



## AS3959 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT REPORT

Site Details			
Unit no	Street no 415	Lot no	Street name / Plan Reference De Haer Road
Suburb Wandi		State WA	Postcode 6167
Local Government Area		City of Kwinana	
Main BCA class	Class 1a	Use(s) of the building	Residential
Description of the building or works		Proposed Ancillary Dwelling	

Report Details			
Report Number: 16896	Report Version: 1	Assessment Date: 5 September 2018	Report Date 6 September 2018
Revision Date: -		Reason for Revision	

08 9555 9444

[BAL@bushfiresmart.com.au](mailto:BAL@bushfiresmart.com.au)

Address: 71 Allnutt Street, Mandurah, 6210  
Postal: PO Box 4160, Mandurah North, WA, 6210



## Site Assessment

The assessment of this site/development was undertaken on 5 September 2018 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959-2009 Simplified Procedure(Method 1).



08 9555 9444



[BAL@bushfiresmart.com.au](mailto:BAL@bushfiresmart.com.au)




Address: 71 Allnutt Street, Mandurah, 6210

Postal: PO Box 4160, Mandurah North, WA, 6210




All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

<b>Photo ID:</b>	1	<b>Plot:</b>	1
<b>Vegetation Classification or Exclusion Clause</b>			
Class B Woodland - Woodland B-05			
<b>Description / Justification for Classification</b>			
Trees 10-30 m high; 10-30% foliage cover dominated by eucalypts; understorey low trees to tall shrubs typically dominated by Acacia, Callitris or Casuarina.			
			
<b>Photo ID:</b>	2	<b>Plot:</b>	2
<b>Vegetation Classification or Exclusion Clause</b>			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
<b>Description / Justification for Classification</b>			
Maintained gardens around house			
			

<b>Photo ID:</b> 3 <b>Plot:</b> 2	
<b>Vegetation Classification or Exclusion Clause</b> Excludable - 2.2.3.2(f) Low Threat Vegetation	
<b>Description / Justification for Classification</b> Maintained gardens around house	
<b>Photo ID:</b> 4 <b>Plot:</b> 2	
<b>Vegetation Classification or Exclusion Clause</b> Excludable - 2.2.3.2(f) Low Threat Vegetation	
<b>Description / Justification for Classification</b> Cleared in preparation for building	
<b>Photo ID:</b> 5 <b>Plot:</b> 2	
<b>Vegetation Classification or Exclusion Clause</b> Excludable - 2.2.3.2(f) Low Threat Vegetation	
<b>Description / Justification for Classification</b> Managed gardens around house	



<b>Photo ID:</b> 6 <b>Plot:</b> 2	
<b>Vegetation Classification or Exclusion Clause</b> Excludable - 2.2.3.2(f) Low Threat Vegetation	
<b>Description / Justification for Classification</b> Managed gardens around house	
<b>Photo ID:</b> 7 <b>Plot:</b> 3	
<b>Vegetation Classification or Exclusion Clause</b> Class G Grassland – Tussock grassland G-22	
<b>Description / Justification for Classification</b> All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.	
<b>Photo ID:</b> 8 <b>Plot:</b> 4	
<b>Vegetation Classification or Exclusion Clause</b> Class B Woodland - Low woodland B-07	
<b>Description / Justification for Classification</b> Low trees and shrubs 2-10 m high; foliage cover less than 10%. Dominated by eucalypts and Acacias. Often have a grassy understorey or low shrubs. Acacias and Casuarina woodlands grade to Atriplex shrublands in the arid and semi-arid zones.	

## Attachment F: BAL Assessment

All vegetation within 100 metres of the site was classified in accordance with clause 2.2.3 of AS3959-2009.

### Fire Danger Index (FDI) – 80-table 2.4.3

#### Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class B Woodland	Flat/Upslope	29.5m	BAL – 12.5
2	Excludable – Clause 2.2.3.2(f)	N/A	N/A	BAL – LOW
3	Class G Grassland	Flat/Upslope	25.5m	BAL – 12.5
4	Class B Woodland	Flat/Upslope	45.4m	BAL – 12.5

*Table 1: BAL Analysis*

#### Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2009 using the above analysis.

<b>Determined Bushfire Attack Level</b>	<b>BAL – 12.5</b>
---	-------------------

Please note: measurements taken from pegs on site.

Nathan Peart



Level 1 BPAD Accredited Assessor  
Accreditation No: BPAD38808





#### **15.4 Retrospective Development Application for alterations to the Landscaping Business Depot - Lot 53 (1038) Thomas Road, Casuarina**

##### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

##### **SUMMARY:**

An application has been received seeking retrospective planning approval for changes to an approved Landscaping Business Depot at Lot 53 (1038) Thomas Road, Casuarina (refer to the context map: Attachment A). The subject lot is located within the Jandakot Water Mound and is therefore subject to State Planning Policy 2.3 - Jandakot Groundwater Protection (SPP 2.3). The lot is zoned Rural Water Resource under the Local Planning Scheme No.2 (LPS2).

The use of the site as a Landscaping Business Depot was approved retrospectively at the Ordinary Council Meeting on 11 March 2015 (refer to Attachments B and C). Land use permissibility for properties within the Jandakot Water Mound area are defined in SPP 2.3. A Landscaping Business Depot use is not specifically defined in SPP2.3 under Table 1 – Land Use Suitability for the Rural Water Resource Zone, and was therefore approved as a 'Use not Specified' under the Policy.

The company operating from the site is a contracting business undertaking high profile landscaping projects for private land developers and local governments across the metropolitan area. The company stores all vehicles and equipment pertaining to the business on site, in addition to various supplies such as mulch, sand and small plants. Administration work for the business also occurs within the offices located on the property. Majority of employees of the business, park their personal vehicles on the property during the day and then use company vehicles during business hours for work related use.

Since receiving retrospective approval in 2015, the business operations have significantly expanded and the business footprint has increased. The number of employees has increased from 13 to approximately 29 staff. The footprint of the approved hardstand storage and parking area has expanded approximately 2000 m<sup>2</sup> into the area denoted as 'New Landscaping and Turf Area' (refer to Attachment B) without the City's approval. Furthermore, the administration offices have been relocated into an existing outbuilding and constructed with a significant increase in floor area to that which was previously approved.

The City's Compliance Officers pursued the issue of noncompliance at the site and discussed with the owner of the Landscaping Business Depot the extent of the illegal development (in particular, the extent of the expanded illegal hardstand). City Officers expressed the view that the hardstand should be reduced to be consistent with the previous approval of 2015, and that the area of 2000m<sup>2</sup> be rehabilitated. This was agreed and incorporated into a retrospective development application for alterations to the Landscaping Business Depot.

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

The major changes that are proposed as part of this application are listed below (as seen in Attachments D to I):

- Reduction in size of the current (unapproved) hardstand storage and parking area, with the northern portion being landscaped. The proposal is for the total area of the hardstand where vehicles, equipment and supplies are stored to be as per the previous approval (compare Attachments B and D).
- Designated parking bays to be located within the hardstand storage area for staff and vehicles used for the business.
- Retrospective approval for storage containers (refer to Attachment I), waste bins and mulch bays being located within the hardstand storage area.
- Retrospective approval for the administration offices to be re-located to the existing large outbuilding located towards the western boundary (refer to Attachments F and G). The floor space of the office has significantly increased from approximately 64 m<sup>2</sup> (as was previously approved) to 138.4 m<sup>2</sup>. The previously approved office building located in the North West corner of the site is currently vacant and proposed to be used for storage purposes only (refer to Attachment E).
- An extension of the large outbuilding for additional storage of equipment pertaining to the business (refer to Attachment H).
- Retrospective approval for an unsealed plant storage area located to the south of the hardstand area.

As part of the subject application, the hours of operation are proposed to change from 7am to 5pm (as was previously approved) to be from 7am to 6pm, Monday to Friday. No changes are proposed to the existing approved dwelling located to the north east of the lot.

As per the previous approval, the subject application was also advertised to all adjoining properties for a period of 21 days. One submission objecting to various elements of the application was received from an adjoining property owner. The submitter requested a number of elements be addressed relating to privacy, noise, and light spill.

The application was referred to the Department of Water and Environmental Regulation (DWER), and the Department of Biodiversity, Conservation and Attractions (DBCA) considering the subject site is within the Jandakot Water Mound area and a wetland traverses the subject site. DWER and DBCA provided comment in support of the application, subject to conditions. The application was also referred to Main Roads Western Australia (MRWA) who provided comment in support of the application and recommended an advice note be included in the approval.

While it is recognised that the Landscaping Business Depot operations have expanded, City Officers note that the previously approved use of the site and the total area being utilised remains unchanged. Throughout the application process, the applicant has addressed various issues that were raised by City Officers, external referral agencies and from the neighbour comments received during advertising. City Officers recommend the retrospective application be approved subject to conditions.

**OFFICER RECOMMENDATION:**

That Council grant retrospective planning approval for alterations to the Landscaping Business Depot at Lot 53 Thomas Road, Casuarina as per the plans (Attachments D to I), subject to the following conditions and advice:

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

**CONDITIONS:**

1. The premises being kept in a neat/tidy condition at all times by the owner/occupier to the satisfaction of the City of Kwinana.
2. Stormwater drainage shall be contained on site in accordance with the Drainage Strategy Plan dated 04/04/18 and comply with the endorsed Stormwater Drainage Management Strategy dated 29/08/18, within 90 days of the date of this approval.
3. All existing and proposed trafficable areas within the subject lot being constructed and drained to comply with the Drainage Strategy Plan and endorsed Stormwater Drainage Management Strategy dated 29/08/18.
4. The applicant shall submit a Dust Management Plan detailing dust control measures for the ongoing operation of the site for approval within 90 days of the date of this approval. The applicant shall implement and comply with the Dust Management Plan as approved by the City of Kwinana.
5. All outdoor lighting on the site is to be in accordance with Australian Standard AS4282 (Control of the Obtrusive Effects of Outdoor Lighting). The recommendations of the Lighting Report dated 13 August 2018 (Reference: 1819.020 Ltr 01) are to be implemented within 90 days of the date of this approval.
6. All vehicle parking bays are to be in accordance with Australian Standard AS2890 and clearly marked to the satisfaction of the City of Kwinana.
7. Staff parking shall be within the marked staff car parking bays only.
8. The parking of all commercial vehicles shall be located in the areas indicated on the approved site plan only.
9. There shall be no refuelling, maintenance or wash down of the vehicles on-site at any time.
10. All materials and equipment related to the business to be stored in the hardstand area and/or outbuilding only.
11. Crossovers to be located and constructed to the specifications and satisfaction of the City of Kwinana.
12. Landscaping, revegetation and reticulation shall be established in accordance with the approved Landscaping Plan dated 13/08/2018 within 90 days of the date of this approval and thereafter maintained to the satisfaction of the City of Kwinana.
13. The business shall operate between the hours of 7am and 6pm, Monday to Friday only. There shall be no operating or loading of commercial vehicles outside of these times.
14. There shall be no retail sales of plants, materials or equipment to the public at any given time.
15. There shall be no rearing of plants on the property at any given time.
16. The potted plants that are temporarily stored on site are to have individual trays under each plant to retain nutrient-rich leachate.
17. The applicant shall submit an application for alterations to the existing approved Aerobic Treatment Unit to the City's Environmental Health Service within 90 days of the date of this approval.
18. The storage of all toxic and hazardous substances (THS), including fuels and lubricants, shall be located within a weatherproof indoor compound, upon a bunded hardstand area.
19. All future development or alterations to the Landscaping Business Depot must be submitted to the City of Kwinana prior to undertaking of works or occupancy.

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA****ADVICE NOTES:**

1. Should the applicant be aggrieved by the decision or any condition imposed, then a right of review may be lodged with the State Administrative Tribunal within 28 days of the date of this decision.
2. In relation to Condition 4, an application for the approval of a Dust Management Plan shall be submitted to the City's Environmental Health Service.
3. The applicant is advised to contact the City's Building Department regarding the submission of a retrospective building permit. A number of existing structures on the property do not have a building permit. The existing unapproved structures require a building approval certificate or be removed. All proposed buildings require a building permit prior to construction.
4. The applicant is further advised that this is not a building approval certificate or building permit the City of Kwinana issues to enable construction to commence. A building approval certificate/building permit is a separate City requirement and construction cannot be commenced until a building permit is obtained.
5. The applicant should ensure the proposed development complies with all other relevant legislation, including but not limited to, the *Environmental Protection Act 1986 and Regulations*, *Health (Sewerage, Lighting and Ventilation) Regulations*, Government Sewerage Policy, *Health Act 1911 and Regulations*, *Contaminated Sites Act 2003* and the National Construction Code.
6. In relation to Condition 17, detailed hydraulic drawings of internal and external plumbing lines and fixtures for the office component are to be provided as part of an application to the City's Environmental Health Service. The applicant should contact the City's Environmental Health Service on 9439 0475.
7. The applicant should note that any future changes to operations on site which impact on the number of vehicle movements to and from the site, inclusive of heavy vehicle movements, will need to be referred to Main Roads for further assessment and comment.

**DISCUSSION:****Land Status**

Local Planning Scheme No. 2: Rural Water Resource Zone  
Metropolitan Region Scheme: Rural - Water Protection Zone

**Background**

The subject application has been received as a result of a compliance matter that was identified by the City's Compliance Officers in 2017. At its meeting on 11 March 2015, Council approved a Landscaping Business Depot (Use not Specified) on the site, subject to conditions (refer to Attachments B and C). Since this time, the business operations have expanded and development has occurred that is not in accordance with the initial planning approval. The footprint of the approved hardstand storage and parking area has expanded approximately 2000 m<sup>2</sup> into the area denoted as 'New Landscaping and Turf Area' (refer to Attachment B) without the City's approval. Furthermore, the administration offices have been relocated into an existing outbuilding and constructed with a significant increase in floor area to that which was previously approved.

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

The City's Compliance Officers pursued the issue of noncompliance and provided the owner with direction to comply with the existing planning approval or apply for retrospective planning approval for alterations to the business. On 8 March 2018, a site visit was conducted by City Officers, whereby preliminary advice was provided to the property owner on how to proceed. City Officers note that while the business has expanded, the overall use of the site as a Landscaping Business Depot and the site area being utilised for business operations is to remain unchanged from that which was approved by Council in 2015. Approval is sought to alter and extend some buildings in the approved hard stand areas to accommodate the operations growth.

The company operating from the site is a contracting business undertaking high profile landscaping projects for private land developers and local governments across the metropolitan area. The company stores all vehicles and equipment pertaining to the business within a large hardstand area and outbuilding. Additional supplies such as mulch, sand and small plants are also proposed to be stored on the property. Administration work for the business occurs within the mezzanine offices located in the large outbuilding located to the north west of the property. The majority of employees of the business, park their personal vehicles on the property during the day and then use company vehicles during business hours.

**Current Proposal**

Since receiving Council approval in 2015, the business operations have expanded. The number of employees has increased from 13 to an average of 29 staff entering the site each day. No customers are proposed to visit the site and the retail sale of plants or equipment from the site does not occur. Retrospective approval is being sought for the administration offices to be relocated with a significant increase in floor area. The hours of operation are proposed to change from 7am to 5pm (as was previously approved) to 7am to 6pm, Monday to Friday. The footprint of the existing hardstand storage and parking area is proposed to be reduced with the area denoted as 'New Landscaping and Turf Area' (refer to Attachment B) being re-landscaped to be consistent with the previous approval. While it is recognised that the business has expanded, the proposal aims to contain business operations within the footprint that was previously approved in 2015. The major changes that are proposed as part of this application are listed below (as seen in Attachments D to I):

- Reduction in size of the current (unapproved) hardstand storage and parking area, with the northern portion being landscaped. The proposal is for the total area of the hardstand where vehicles, equipment and supplies are stored to be as per the previous approval (compare Attachments B and D).
- Designated parking bays to be located within the hardstand storage area for staff and vehicles used for the business.
- Retrospective approval for storage containers (refer to Attachment I), waste bins and mulch bays being located within the hardstand storage area.
- Retrospective approval for the administration offices to be re-located to the existing large outbuilding located towards the western boundary (refer to Attachments F and G). The floor space of the office has significantly increased from approximately 64 m<sup>2</sup> (as was previously approved) to 138.4 m<sup>2</sup>. The previously approved office building located in the North West corner of the site is currently vacant and proposed to be used for storage purposes only (refer to Attachment E).
- An extension of the large outbuilding for additional storage of equipment pertaining to the business (refer to Attachment H).



#### 15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA

- Retrospective approval for an unsealed plant storage area located to the south of the hardstand area.

#### **Local Planning Scheme No. 2**

The subject lot is located within Policy Area 3 - Thomas Road and is zoned Rural Water Resource under LPS2. Proposed uses within this zone are required to comply with SPP 2.3 – Jandakot Groundwater Protection. Furthermore, Clause 4.3 of LPS2 states that the predominant uses within Policy Area 3 – Thomas Road, shall be rural home sites and land use and development shall be consistent with the objectives of SPP2.3 – Jandakot Groundwater Protection.

Although the previously approved use of the site as a Landscaping Business Depot is remaining unchanged, the scale of the use and associated works has changed. Under Clause 6.1 of LPS2, such works are not exempt from requiring planning approval.

#### **SPP 2.3 – Jandakot Groundwater Protection**

SPP 2.3 seeks to prevent uses that will cause environmental damage or pose a threat to the public drinking water supply potential of the Jandakot Water Mound. The objectives of this policy are:

- *To ensure that all development and changes to land use within the policy area are compatible with maximising the long-term protection and management of groundwater, in particular for public drinking water supply;*
- *To protect groundwater quality and quantity in the policy area in order to maintain the ecological integrity of important wetlands that are hydraulically connected to that groundwater, including wetlands outside the policy area;*
- *To prevent, minimise, and manage in defined locations development and land uses that may result in contamination of groundwater; and*
- *To maintain or increase natural vegetation cover over the policy area.*

The proposal is considered to be consistent with the above objectives. Measures have been implemented to ensure the proposed works protect groundwater quality. Furthermore, the proposed works are located outside of the wetland area and a Stormwater Drainage Management Strategy has been devised to ensure there is no contamination of groundwater. A landscaping plan has also been provided displaying an increase in natural vegetation cover across the site. As detailed below, the application was referred to DWER and DBCA for comment.

#### **Referrals to DWER and DBCA**

In addition to the site being located within the Jandakot Water Mound area, a Resource Enhancement Wetland (REW) and an Environmental Protection Policy (EPP) Lake straddle the property to the south and south east. All existing and proposed works for the Landscaping Business Depot are located outside of the REW and EPP Lake area. The property owner has commenced re-vegetation of the site using local and native plant species in certain areas across the site (refer to Attachments K and L).

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

DWER provided comment in support of the application subject to a number of modifications and conditions. DWER recommended that areas used for the parking of large vehicles pertaining to the business be managed so as to contain all possible leaks and spills of fuel, lubricants and wastewater. It was also requested that drainage for the site be designed to ensure stormwater is directed away from any potentially contaminated areas. A number of conditions were also recommended for the provision of individual trays under each plant being stored in the designated plant storage area (refer to Attachment D showing the location of the plant storage area). Following receipt of comments from DWER, the applicant contacted the Department to discuss the proposal and ascertain an acceptable outcome, specifically in relation to stormwater drainage and surface material. The applicant provided a Drainage Strategy Plan and associated Stormwater Drainage Management Strategy (refer to Attachment M). Confirmation has been received from DWER and the City's Engineering Department that the proposed Stormwater Drainage Strategy and surface material complies with the relevant requirements and should be endorsed as part of the planning approval.

DBCA also provided comment in support of the application. DBCA identified a portion of land to the south of the approved hardstand area that has been cleared of vegetation. The Department requested this area be revegetated with native species. DBCA also requested that advice for the preservation, management and rehabilitation of the existing REW be provided on the approval. The above comments from DBCA were relayed to the applicant who has since provided a Landscaping Plan addressing this matter (refer to Attachment J) and evidence that revegetation of cleared areas has commenced (refer to Attachments K and L).

**Main Roads Western Australia**

The subject lot abuts Thomas Road which is classified as a Primary Regional Road. The application was therefore referred to Main Roads Western Australia (MRWA) who provided comment in support of the application. MRWA requested advice be provided to the applicant that all future changes to the site which impact on the number of vehicle movements be referred to MRWA for assessment. Furthermore, the applicant has confirmed only one crossover is proposed for access in and out of the site, to be consistent with previous advice provided by MRWA. The property owner has recently upgraded the crossover into the property to be bitumen as per the City's Engineering requirements.

**Parking**

The applicant provided statistics regarding the number of staff vehicles that park at the site on a standard business day. The average number of staff vehicles on site during the day is 29.4. The proposal is for 26 staff vehicles to be parked within the hardstand area and the remaining four located adjacent to the office. In the instance where a greater number of staff vehicles are present on the site, all parking of vehicles is to be located within the hardstand area.

#### 15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA

##### **Dust Management**

During the assessment process, City Officers identified the need to provide a Dust Management Plan for the site. This was deemed necessary considering the number of vehicle movements in and out of the site per day. Although historically there have been no concerns from neighbouring properties in relation to dust, City Officers recognise the importance in ensuring the issue of excessive dust from business operations does not occur. During the application process, a draft Dust Management Plan was submitted. This draft Dust Management Plan is required to be revisited and updated to reflect the requirements of the City's Engineering Department. A Dust Management Plan is therefore requested as a condition of approval to address potential issues and minimise any adverse effects.

##### **Advertising**

Under LPS2, the City has discretion to advertise a development application to neighbouring properties that are deemed to be affected by a proposal. Although the overarching use of the site is remaining unchanged, the operation has increased in size and a number of additional construction works have been undertaken. Therefore, the application was advertised for a period of 21 days to all adjoining properties.

During the advertising period, the City received one submission from an adjoining property owner to the west of the subject lot, objecting to various elements of the application. The submitter requested that issues relating to privacy, noise, and light spill be addressed. The submitter's comments and the City's response is detailed below:

##### **Noise**

The submitter stated that there has been an increase in noise levels emanating from the subject site due to the business operations. The submitter indicated that business hours have increased with noise such as reverse beepers, vehicle movements and the banging of doors being heard as early as 5.30am. The submitter noted that while it is recognised the area is within close proximity to a busy road (Thomas Road), the progressive expansion of the business has increased overall noise levels in the area.

In response to the submitter's comments regarding noise, the applicant provided information regarding hours of operation which are 7am to 6pm, Monday to Friday. The applicant stated that although the business operations will begin at 7am, employees arrive at the site prior to this time. The operational activities of the business will then commence no earlier than 7am, which complies with the *Environment Protection (Noise) Regulations 1997*. Furthermore, the proposed vehicle access into the site is located to the centre of the property and additional landscaping will be provided along the boundaries to further mask noise. Revegetation of the unapproved portion of hardstand area and the resulting reduction of total hardstand area is also expected to further concentrate and reduce impacts of noise. The business is required to comply with the *Environmental Protection (Noise) Regulations 1997* in regard to noise levels.

##### **Privacy**

The submitter also provided comment in relation to the mezzanine office and its potential to impact on the privacy of adjoining properties. Considering the office is a double storey design, the submitter noted that there is potential for additional windows to be constructed, particularly on the western façade, which will impact on the privacy of the adjoining properties to the west.

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

While City Officers note there may be potential for windows on the western side of the office and subsequent privacy impacts, the current proposal does not indicate any openings to the western facade. Furthermore, any changes to the current proposal are required to be approved by the City prior to construction. It is also noted the entrance into the office is located on the northern façade of the building while storage and machinery entrance into the outbuilding is oriented to the east. This reduces the impacts in terms of privacy, particularly for adjoining properties to the west.

**Lighting**

Currently there are a number of outdoor lights scattered across the site for security purposes. The submitter provided comment stating the security lighting on the site is excessively bright and consequent light spill is having an adverse impact on the adjoining properties.

In response to the submission, the applicant has provided a Lighting Assessment Report outlining compliance with the Australian Standards AS4282: Control of the Obtrusive Effects of Outdoor Lighting. This report identified a number of flood lights on the site that are non-compliant with the Australian Standards. The report provides recommendations to ensure compliance and minimal impact on the adjoining properties in terms of light spill. The applicant also provided the City with written confirmation stating a number of lights on the site have since been adjusted to be in compliance with the report. A condition is recommended to ensure all outdoor lighting complies with AS4282 and for the recommendations of the Lighting Assessment Report to be implemented.

**Conclusion**

City Officers consider the proposed works consistent with the existing (approved) Landscaping Business Depot use and relevant planning legislation. Although business operations have expanded, the total area being utilised for the operations is unchanged from that which was previously approved by Council in 2015. City Officers have undertaken an assessment of the existing and proposed works against LPS2 and SPP2.3 – Jandakot Groundwater Protection. The proposal was advertised to all adjoining property owners with one objection being received. City Officers consider that the applicant has sufficiently addressed each of the concerns raised in the submission to minimise impacts on the adjoining properties are reduced. The proposal is considered compatible with the primary intention of the zone to facilitate development that protects and preserves the underground water resource. The proposal is therefore recommended for approval subject to conditions.

**LEGAL/POLICY IMPLICATIONS:**

For the purpose of Councillors considering a declaration of interest only, the landowner is Albra Investments Pty Ltd and the applicant is Allerding and Associates.

The following strategic and policy based documents were considered in assessing the application:

**Legislation**

*Planning and Development Act 2005*

*Environmental Protection (Noise) Regulations 1997*

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA****Schemes**

Metropolitan Region Scheme

City of Kwinana Local Planning Scheme No. 2

**State Government Policies**

State Planning Policy No. 2.3 – Jandakot Groundwater Protection

It should be noted that prior to the lodgement of this application, the City undertook prosecution against the owner of the Landscaping Business Depot for the illegal development. A fine of \$52,397.35 was issued by the Rockingham Magistrates Court on 28 June 2018 for the illegal works.

**FINANCIAL/BUDGET IMPLICATIONS:**

There are no financial implications as a result of this report.

**ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications as a result of this report.

**ENVIRONMENTAL IMPLICATIONS:**

The application was referred to the DWER and the DBCA to ensure the environmental values of the site are considered as part of the application. Relevant conditions have been imposed to minimise impacts on wetlands and the Jandakot Water Mound that traverse the site.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Strategic Community Plan.

<b>Plan</b>	<b>Outcome</b>	<b>Objective</b>
Strategic Community Plan	A well planned City	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

**COMMUNITY ENGAGEMENT:**

The application was advertised to surrounding landowners. One objection was received from the adjoining landowner and considered in the assessment of this development application. It is considered that the points of objection have been adequately addressed as part of the approval and its conditions.



**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	Negative impact on amenity of the area.
Risk Theme	Failure to fulfil statutory regulations or compliance requirements  Providing inaccurate advice/ information.
Risk Effect/Impact	Reputation Compliance
Risk Assessment Context	Strategic
Consequence	Minor
Likelihood	Possible
Rating (before treatment)	Low
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	<ul style="list-style-type: none"> <li>• Work instructions in place and checklists used when assessing the application.</li> <li>• Consideration of the application within the statutory timeframes.</li> <li>• Compliance of the proposal with <i>Local Planning Scheme No.2</i>, local laws and relevant Policies.</li> <li>• Liaising with the applicant throughout the application process.</li> </ul>
Rating (after treatment)	Low

**COUNCIL DECISION**

296

**MOVED CR S MILLS**

**SECONDED CR W COOPER**

**That Council grant retrospective planning approval for alterations to the Landscaping Business Depot at Lot 53 Thomas Road, Casuarina as per the plans (Attachments D to I), subject to the following conditions and advice:**

**CONDITIONS:**

- 1. The premises being kept in a neat/tidy condition at all times by the owner/occupier to the satisfaction of the City of Kwinana.**
- 2. Stormwater drainage shall be contained on site in accordance with the Drainage Strategy Plan dated 04/04/18 and comply with the endorsed Stormwater Drainage Management Strategy dated 29/08/18, within 90 days of the date of this approval.**

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

- 3. All existing and proposed trafficable areas within the subject lot being constructed and drained to comply with the Drainage Strategy Plan and endorsed Stormwater Drainage Management Strategy dated 29/08/18.**
- 4. The applicant shall submit a Dust Management Plan detailing dust control measures for the ongoing operation of the site for approval within 90 days of the date of this approval. The applicant shall implement and comply with the Dust Management Plan as approved by the City of Kwinana.**
- 5. All outdoor lighting on the site is to be in accordance with Australian Standard AS4282 (Control of the Obtrusive Effects of Outdoor Lighting). The recommendations of the Lighting Report dated 13 August 2018 (Reference: 1819.020 Ltr 01) are to be implemented within 90 days of the date of this approval.**
- 6. All vehicle parking bays are to be in accordance with Australian Standard AS2890 and clearly marked to the satisfaction of the City of Kwinana.**
- 7. Staff parking shall be within the marked staff car parking bays only.**
- 8. The parking of all commercial vehicles shall be located in the areas indicated on the approved site plan only.**
- 9. There shall be no refuelling, maintenance or wash down of the vehicles on-site at any time.**
- 10. All materials and equipment related to the business to be stored in the hardstand area and/or outbuilding only.**
- 11. Crossovers to be located and constructed to the specifications and satisfaction of the City of Kwinana.**
- 12. Landscaping, revegetation and reticulation shall be established in accordance with the approved Landscaping Plan dated 13/08/2018 within 90 days of the date of this approval and thereafter maintained to the satisfaction of the City of Kwinana.**
- 13. The business shall operate between the hours of 7am and 6pm, Monday to Friday only. There shall be no operating or loading of commercial vehicles outside of these times.**
- 14. There shall be no retail sales of plants, materials or equipment to the public at any given time.**
- 15. There shall be no rearing of plants on the property at any given time.**
- 16. The potted plants that are temporarily stored on site are to have individual trays under each plant to retain nutrient-rich leachate.**
- 17. The applicant shall submit an application for alterations to the existing approved Aerobic Treatment Unit to the City's Environmental Health Service within 90 days of the date of this approval.**
- 18. The storage of all toxic and hazardous substances (THS), including fuels and lubricants, shall be located within a weatherproof indoor compound, upon a bunded hardstand area.**
- 19. All future development or alterations to the Landscaping Business Depot must be submitted to the City of Kwinana prior to undertaking of works or occupancy.**

**ADVICE NOTES:**

- 1. Should the applicant be aggrieved by the decision or any condition imposed, then a right of review may be lodged with the State Administrative Tribunal within 28 days of the date of this decision.**
- 2. In relation to Condition 4, an application for the approval of a Dust Management Plan shall be submitted to the City's Environmental Health Service.**

**15.4 RETROSPECTIVE DEVELOPMENT APPLICATION FOR ALTERATIONS TO THE LANDSCAPING BUSINESS DEPOT - LOT 53 (1038) THOMAS ROAD, CASUARINA**

- 3. The applicant is advised to contact the City's Building Department regarding the submission of a retrospective building permit. A number of existing structures on the property do not have a building permit. The existing unapproved structures require a building approval certificate or be removed. All proposed buildings require a building permit prior to construction.**
- 4. The applicant is further advised that this is not a building approval certificate or building permit the City of Kwinana issues to enable construction to commence. A building approval certificate/building permit is a separate City requirement and construction cannot be commenced until a building permit is obtained.**
- 5. The applicant should ensure the proposed development complies with all other relevant legislation, including but not limited to, the *Environmental Protection Act 1986 and Regulations, Health (Sewerage, Lighting and Ventilation) Regulations, Government Sewerage Policy, Health Act 1911 and Regulations, Contaminated Sites Act 2003* and the National Construction Code.**
- 6. In relation to Condition 17, detailed hydraulic drawings of internal and external plumbing lines and fixtures for the office component are to be provided as part of an application to the City's Environmental Health Service. The applicant should contact the City's Environmental Health Service on 9439 0475.**
- 7. The applicant should note that any future changes to operations on site which impact on the number of vehicle movements to and from the site, inclusive of heavy vehicle movements, will need to be referred to Main Roads for further assessment and comment.**

**CARRIED  
8/0**



Attachment A: Context Map



Thomas Rd

Subject Site

Woodland Pl

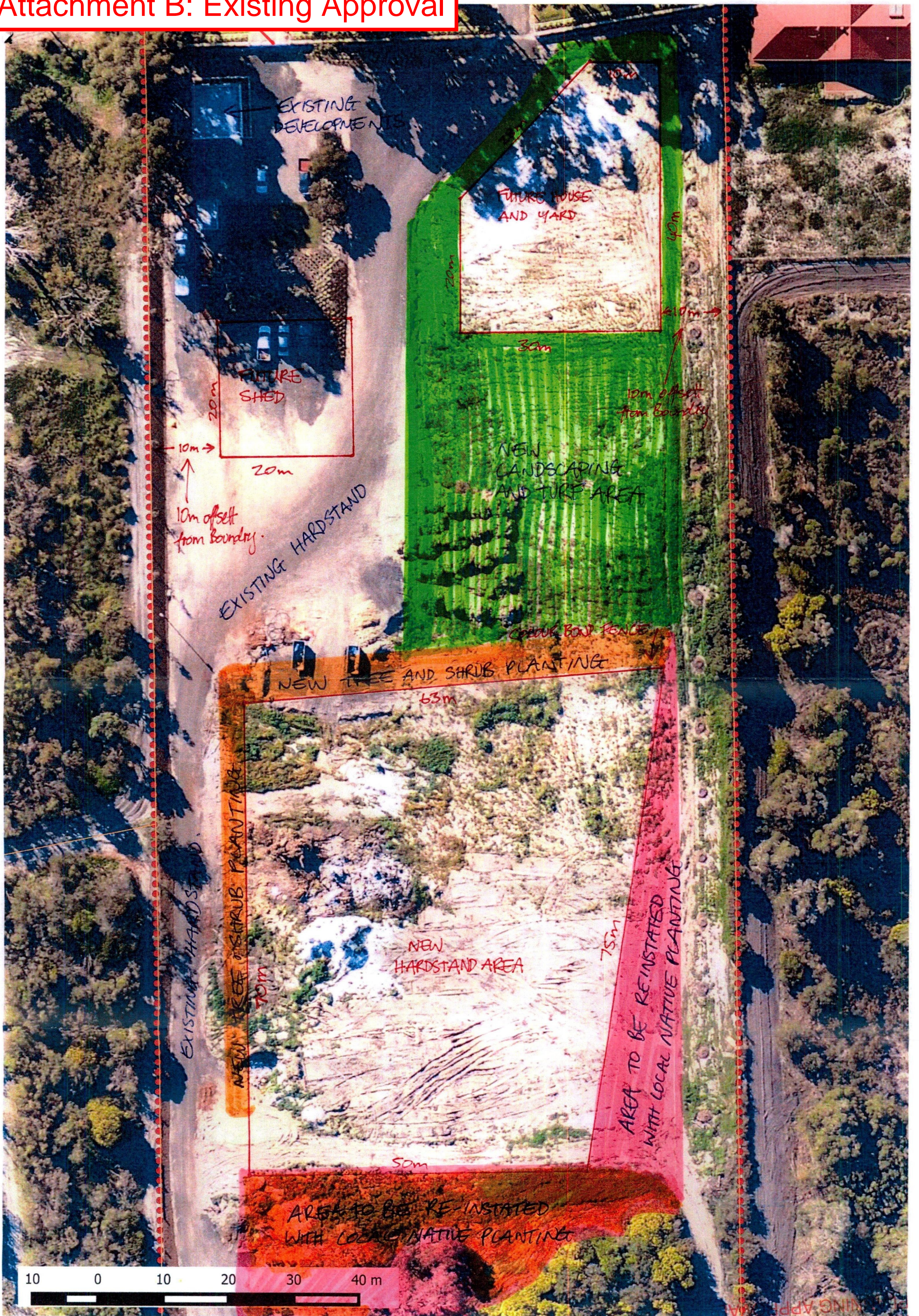
Newbold Rd

Marri Park Dr

Surflin Ct



# Attachment B: Existing Approval



SUBJECT TO ATTACHED  
CONDITIONS

CITY OF KWINANA



**PLANNING AND DEVELOPMENT ACT 2005**

**CITY OF KWINANA**

**DECISION OF APPLICATION FOR PLANNING APPROVAL**

Parcel Number: 6230 Application Number: 8158  
Assessment Number: 7733  
Lot Number: Lot: 53 DP: 33354  
Property: 1038 Thomas Road CASUARINA 6167

Development:	Use Not Listed - Landscaping Business Depot
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OWNER DETAILS: **Albra Investments**  
**15 Calophylla Court**  
**WANNEROO WA 6065**

APPLICANT DETAILS: **Albra Investments**  
**15 Calophylla Court**  
**WANNEROO WA 6065**

Council's Planning Approval to the proposed development, described on the application dated 22/10/2014 and the accompanying plans, is **GRANTED** subject to the attached conditions:

**CONDITIONS:**

- (1) The premises being kept in a neat/tidy condition at all times by the owner/occupier to the satisfaction of the City of Kwinana.
- (2) Stormwater drainage from roofed and paved areas to be contained and disposed of on site within 90 days of the date of this approval. The stormwater drainage shall be designed to comply with Stormwater Management Manual for Western Australia.
- (3) The applicant shall implement dust control measures for the duration of any further site works to the satisfaction of the City of Kwinana.
- (4) The parking of all commercial vehicles shall be on an impermeable surface that will contain all possible leaks and spills of all fuels, lubricants and wastewater in the event that the integrity of the vehicles becomes compromised. These works shall be undertaken within 90 days of the date of this approval.



**Administration**

Cnr Gilmore Ave & Sulphur Rd, Kwinana WA 6167 | PO Box 21, Kwinana WA 6966 | **Hours** Mon-Fri 8am-5pm (Cashier hours 8am-4pm)  
**Telephone** 08 9439 0200 | **Facsimile** 08 9439 0222 | **TTY** 08 9419 7513 | [admin@kwinana.wa.gov.au](mailto:admin@kwinana.wa.gov.au) | [www.kwinana.wa.gov.au](http://www.kwinana.wa.gov.au)

## Attachment C: Existing Approval

- (5) There shall be no refuelling, maintenance or wash down of the vehicles on-site at any time.
- (6) The storage of all toxic and hazardous substances (including fuels and lubricants) shall be located at least two metres above the maximum wet season groundwater table. The proposed location of the hardstand area is less than 2 metres to the maximum groundwater level. Therefore, clean fill shall be used to build up the finished floor level of the hardstand area to ensure that this area is not less than 2 metres above the highest known ground water level. Amended plans will be submitted to the satisfaction of the City of Kwinana within 30 days of the date of this approval demonstrating the required floor levels.
- (7) All materials related to the landscaping business shall be stored in the hard stand area at all times. No materials shall be stored in the front of the property.
- (8) Stormwater from roofs and clean paved areas should be directed away from potentially contaminated areas where toxic and hazardous substances are stored or handled.
- (9) The existing office and any future residential house shall be connected to an Alternative Treatment Unit (ATU) that is appropriate for the number of people using the systems.
- (10) The existing unapproved septic system shall be decommissioned and a Nutrient Retentive Effluent Disposal system being provided to the satisfaction of the Manager Environmental Health Services within 30 days of the date of this approval.
- (11) A sealed crossover shall be constructed to the satisfaction of the City of Kwinana within 60 days of the date of this approval.
- (12) The driveway and parking areas shall be sealed to the satisfaction of the City of Kwinana in accordance with condition 12 within 90 days of the date of this approval and shall be outside of wetland conservation areas.
- (13) All existing and proposed trafficked routes within the subject lot being sealed and drained to comply with the City of Kwinana's 'Specification for Pavement and Drainage of Trafficable Areas'.
- (14) The Development being provided with a potable water supply to the satisfaction of the City of Kwinana.
- (15) All future activities or changes of use of the Landscaping Business Depot shall receive Council's Planning approval prior to undertaking of works or occupancy.
- (16) This approval is for the Landscaping Business Depot and associated office building only. The future residential house and future shed are not part of this approval.
- (17) All commercial vehicles and staff vehicles are to be parked on the hardstand area behind the existing northern colorbond fence within the property at all times.
- (18) The existing hardstand area and sea containers in the wetland area shall be removed and the area reinstated with local native planting to the satisfaction of the City of Kwinana within 90 days of the date of this approval.
- (19) The proponent shall prepare a Landscaping/Revegetation Plan to the satisfaction of the City of Kwinana which outlines the proposed species and location of vegetation including semi-mature/advanced screening species along the eastern boundary (from the existing limestone wall) and the reinstated wetland areas. The Landscaping Plan shall be submitted and approved by the City of Kwinana within 28 days of this approval.



## Attachment C: Existing Approval

- (20) Landscaping, revegetation and reticulation shall be established in accordance with the approved Landscape Plan within 90 days of the date of approval of the Landscaping/Revegetation Plan required in condition 19 and thereafter maintained to the satisfaction of the City of Kwinana.
- (21) The business shall operate between the hours of 7am and 5pm Monday to Friday only. There shall be no loading or unloading of vehicles or staff operating outside of these times.
- (22) No green waste or general rubbish shall be brought to the site for storage or disposal at any time.
- (23) Fencing being installed along the wetland boundary. There shall be no storage or mulching of green waste or general rubbish in this area at any time.
- (24) No earthworks shall encroach onto the Thomas Road reserve.
- (25) No stormwater drainage shall be discharged onto the Thomas Road reserve
- (26) All vehicle access shall be restricted to the driveway on the eastern side of the property.
- (27) The redundant driveway shall be removed and the verge and its vegetation reinstated at the applicant's cost within 90 days of this approval.
- (28) The ground levels on the Thomas Road reserve boundary shall be maintained as existing.
- (29) There shall be no retail sales of plants to the public at any time.
- (30) There shall be no rearing of plants on the property at any time.

### **ADVICE NOTES:**

- (1) The applicant is advised that all future development must be submitted to the City of Kwinana prior to the commencement of works or alteration of land use.
- (2) Should the applicant be aggrieved by the decision or any condition imposed, then a right of review should be lodged with the State Administrative Tribunal within 28 days of the date of this decision.
- (3) The existing structures on the property do not have a building permit. The existing unapproved structures require a building approval certificate or be removed. The future buildings require a building permit prior to construction.
- (4) The applicant is further advised that this is not a building approval certificate or building permit the City of Kwinana issues to enable construction to commence. A building approval certificate/building permit is a separate Council requirement and construction cannot be commenced until a building permit is obtained.
- (5) Compliance with the Environmental Protection (Noise) Regulations 1997 in regard to noise levels.
- (6) The applicant should ensure the proposed development complies with all other relevant legislation, including but not limited to, the Environmental Protection Act 1986 and Regulations, Health (Sewerage, Lighting and Ventilation) Regulations, Government Sewerage Policy, Health Act 1911 and Regulations, Contaminated Sites Act 2003 and the National Construction Code.

## Attachment C: Existing Approval

- (7) The proponent is advised that the proposal is located within the Peel-Harvey Catchment and the provisions of the Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992 and the Statement of Planning Policy No. 2.1 – the Peel-Harvey Coastal Plain Catchment (SPP 2.1) shall apply.
- (8) The subject area is located within the Serpentine Groundwater Area as proclaimed under the Rights in Water and Irrigation Act 1914. Any groundwater abstraction in this proclaimed area for purposes other than domestic and/or stock watering taken from the superficial aquifer is subject to licensing by the Department of Water. The issuing of a groundwater licence is not guaranteed but if issued will contain a number of conditions that are binding upon the licensee.
- (9) Drainage systems should be designed and constructed consistent with the Stormwater Management Manual for Western Australia (DoW, 2007-2008).

Date: 17 March 2015

Signed:

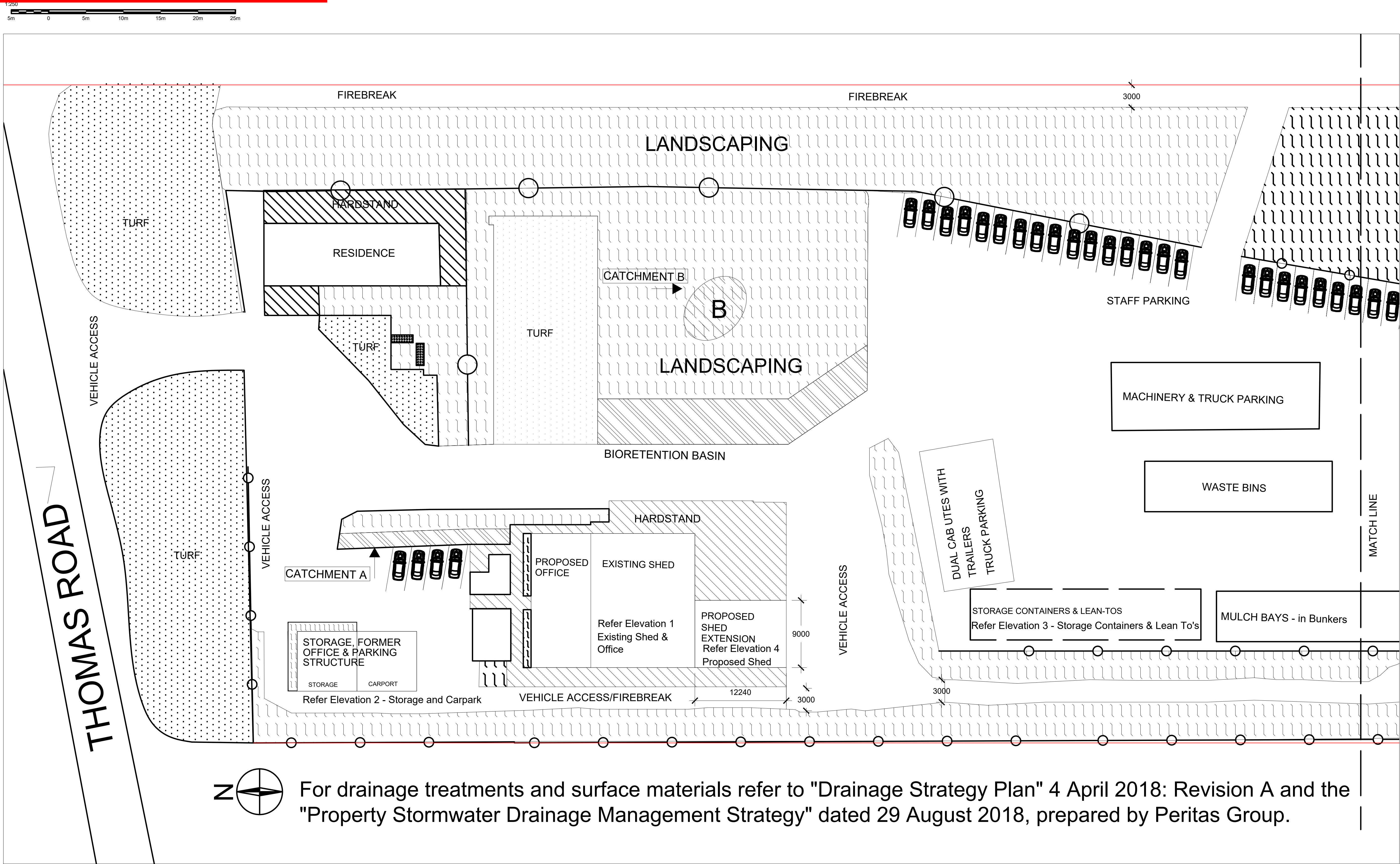


Brenton Scambler

COORDINATOR STATUTORY PLANNING



Attachment D: Site Plan



Revision notes:		
Rev:	Date:	Notes:
		Site Plan A (Plan 1 of 10)

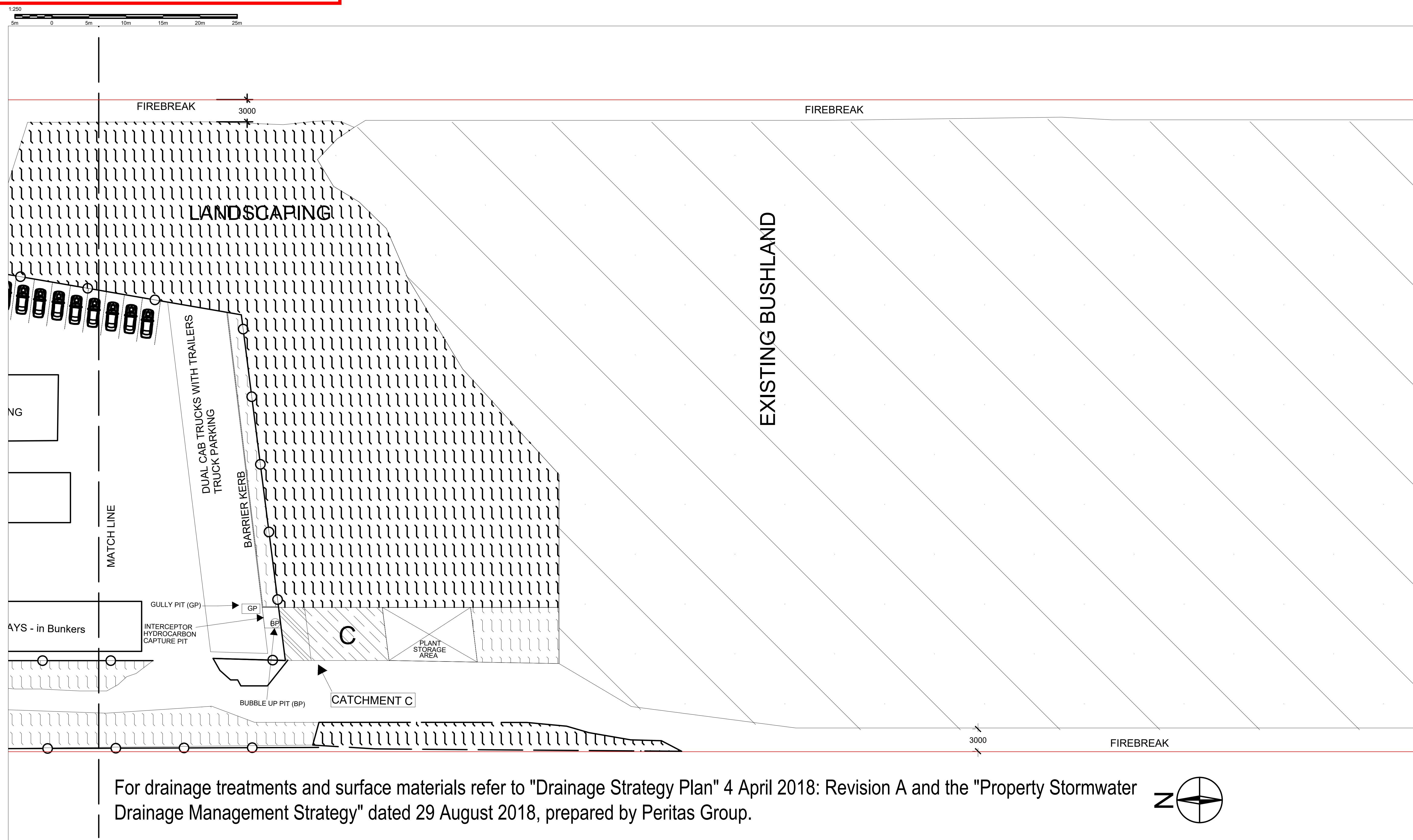
Drawn by: JODI WITHNALL
Client: HORIZON WEST

Project: 1038 (LOT 53) THOMAS ROAD CASUARINA
Drawing Title: DRAINAGE PLAN SHEET 1 OF 3

Date: 3/9/18
Scale: 1:250 AT A1
Revision: 1



## Attachment D: Site Plan



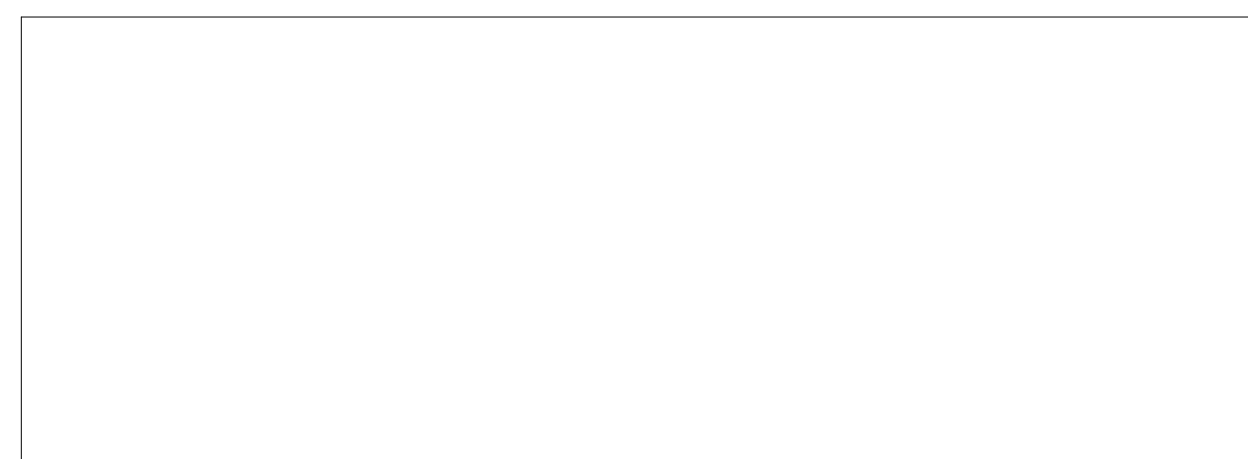
Revision notes:		
Rev:	Date:	Notes:
		Site Plan B (Plan 2 of 10)

Drawn by:  
JODI WITHNALL

**Project:**  
1038 (LOT 53) THOMAS ROAD CASUARINA

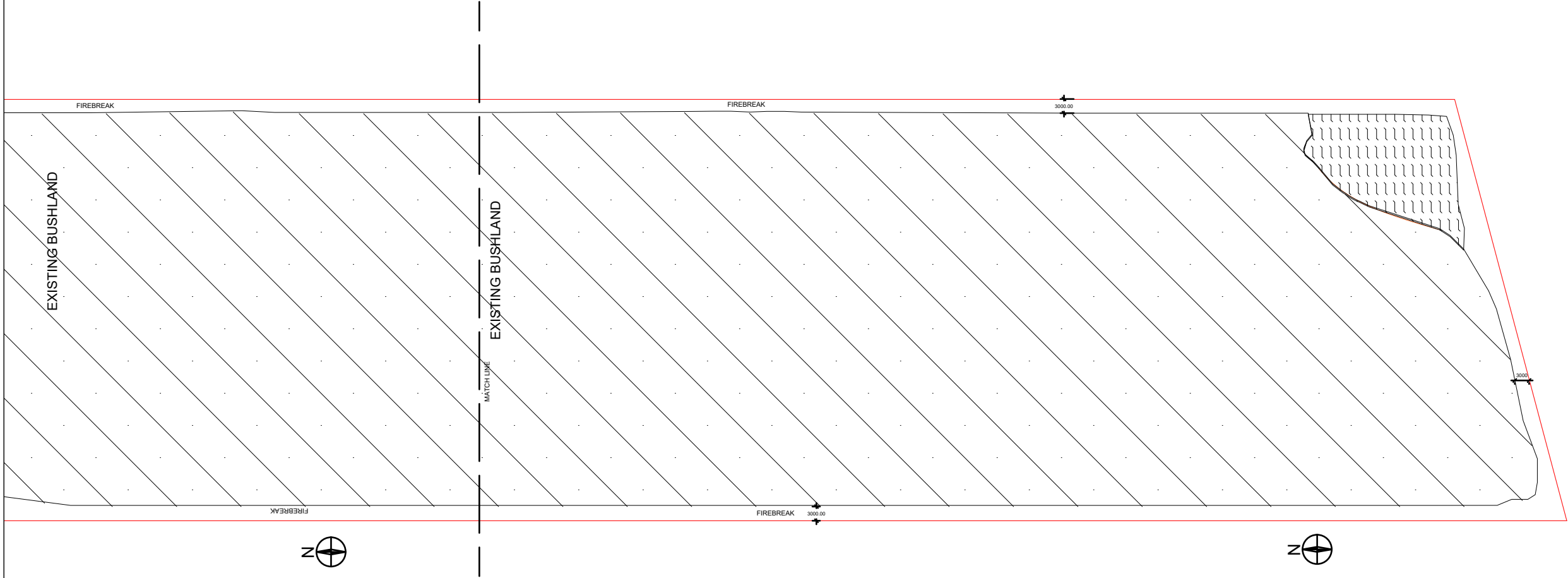
**Drawing Title:**  
DRAINAGE PLAN  
SHEET 2 OF 3

<b>Date:</b> 3/9/18
<b>Scale:</b> 1:250 AT A1
<b>Revision:</b> 1





Attachment D: Site Plan



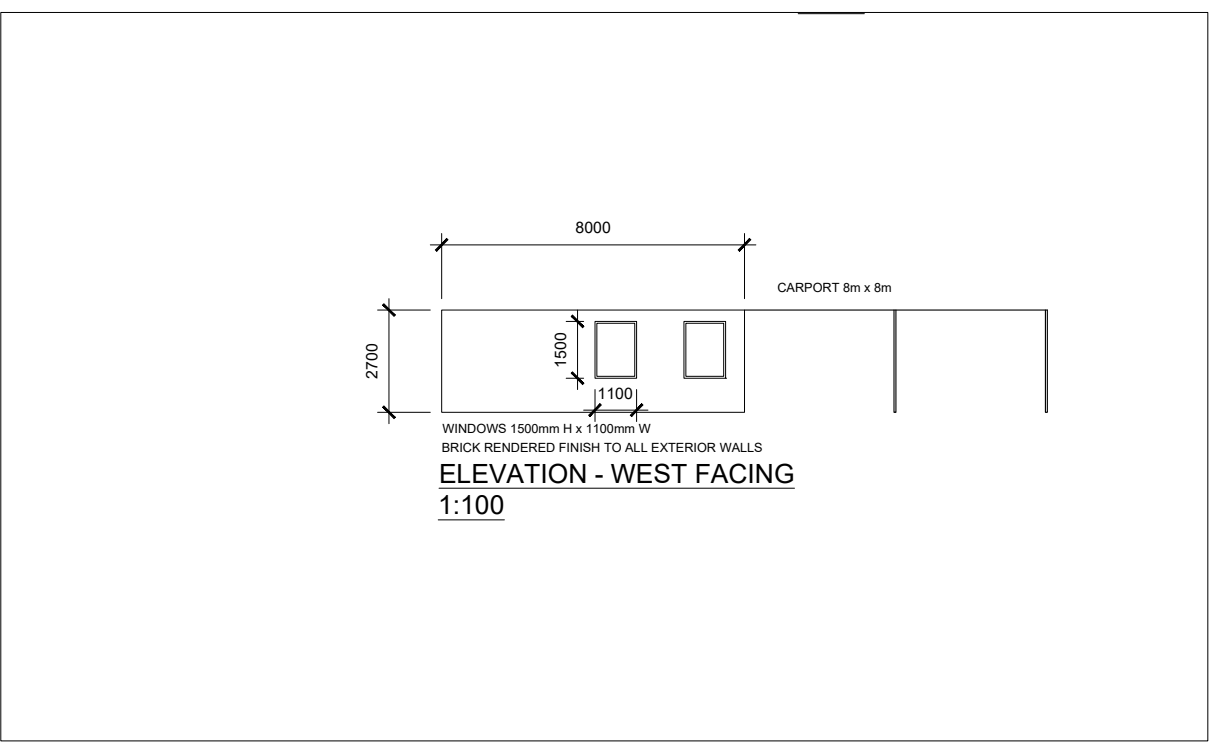
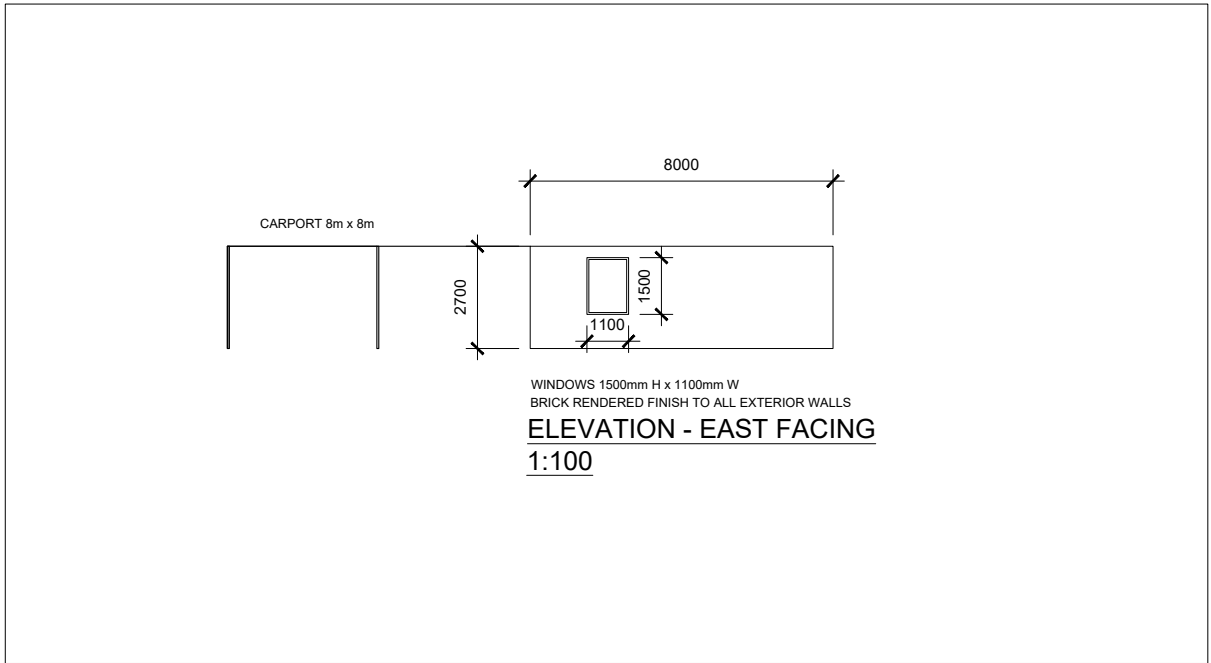
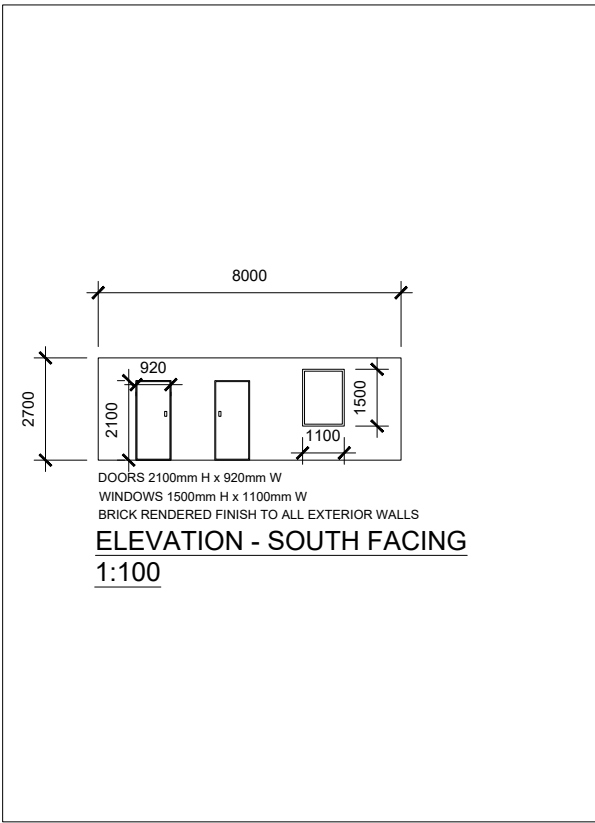
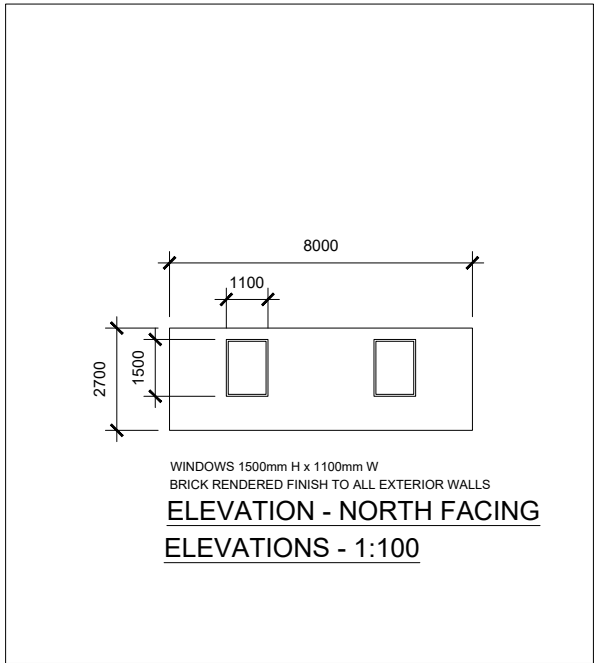
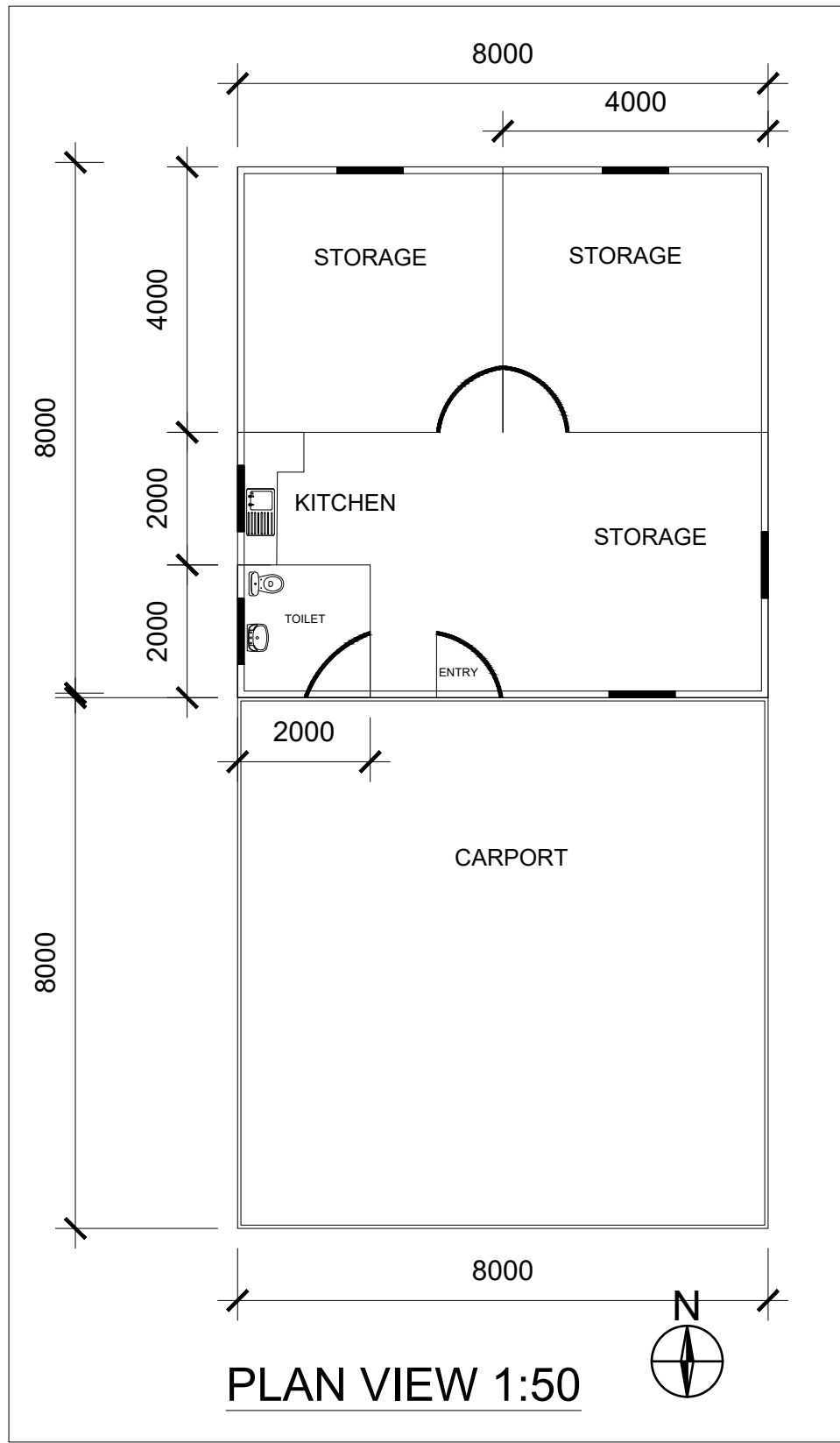
Revision notes:		
Rev:	Date:	Notes:
		Site Plan C - (Plan 3 of 10)

<b>Drawn by:</b> JODI WITHNALL	<b>Project:</b> 1038 (LOT 53) THOMAS ROAD CASUARINA
<b>Client:</b> HORIZON WEST	<b>Drawing Title:</b> SITE PLAN SHEET 3 OF 3

<b>Date:</b> 10/8/18	<b>Scale:</b> 1:500 AT A1
<b>Revision:</b> 3	

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# Attachment E: Storage Building



Elevation 2 - Storage and Carport

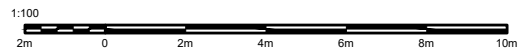
Revision notes:		
Rev:	Date:	Notes:
2	8 AUG 2018	Storage and Carport- (Plan 4 of 10)

Drawn by: Jodi Withnall
Client: Internal

Project: 1038 (LOT 53) THOMAS ROAD CASUARINA WA 6167
Drawing Title: STORAGE AND CARPORT

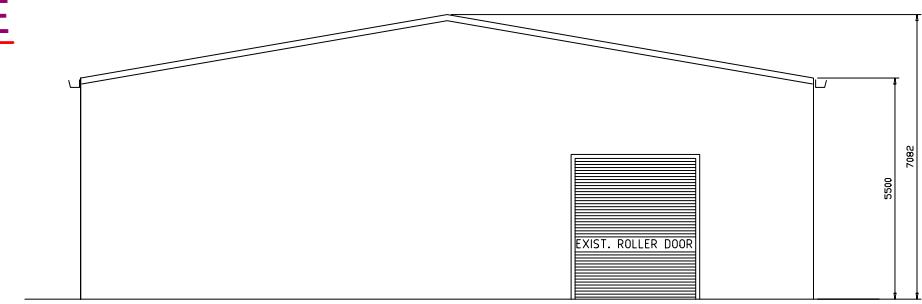
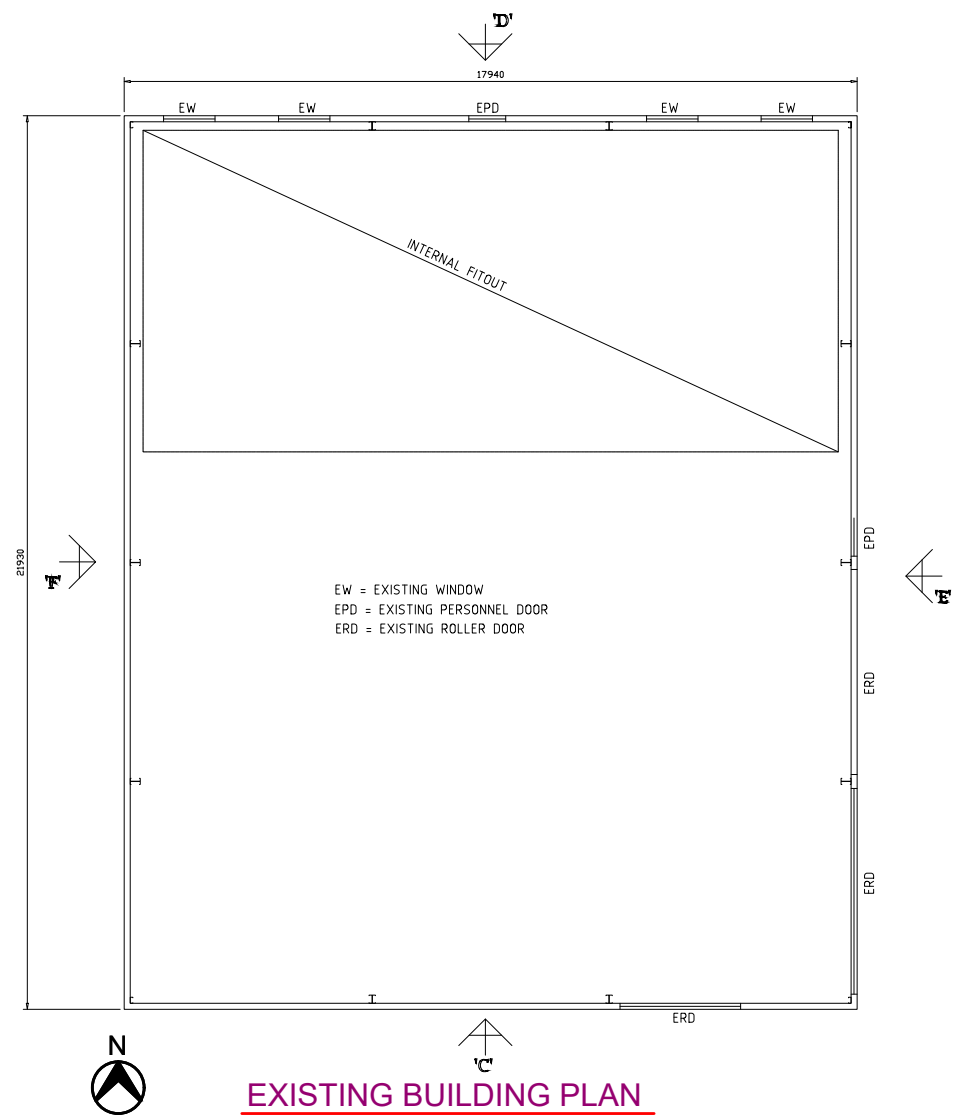
Date: 8 AUGUST 2018
Scale: AS SHOWN
Revision: 2



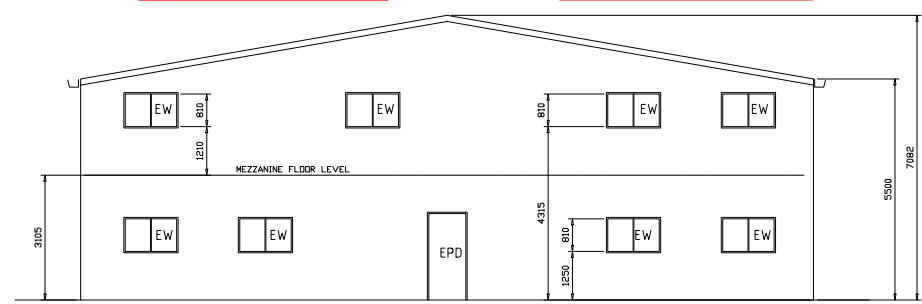


# Attachment F: Outbuilding/Office Plan

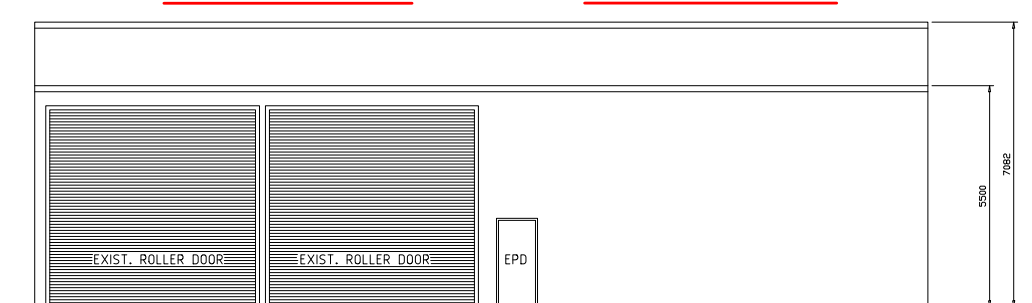
## ELEVATION 1 - EXISTING SHED AND OFFICE



ELEVATION - 'C' SOUTH FACING



ELEVATION - 'D' NORTH FACING



ELEVATION - 'E' EAST FACING

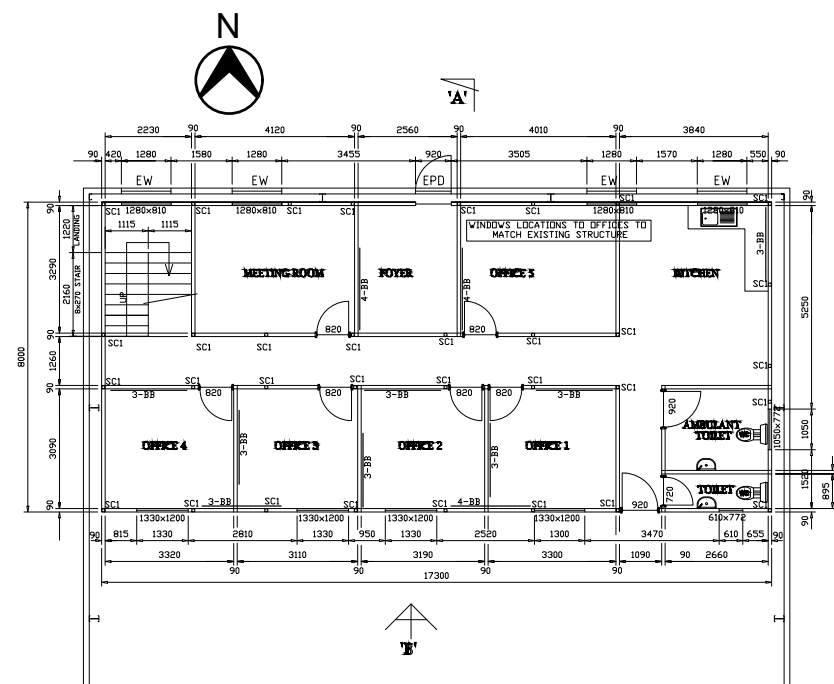


ELEVATION - 'F' WEST FACING

## EXISTING SHED/PROPOSED OFFICE

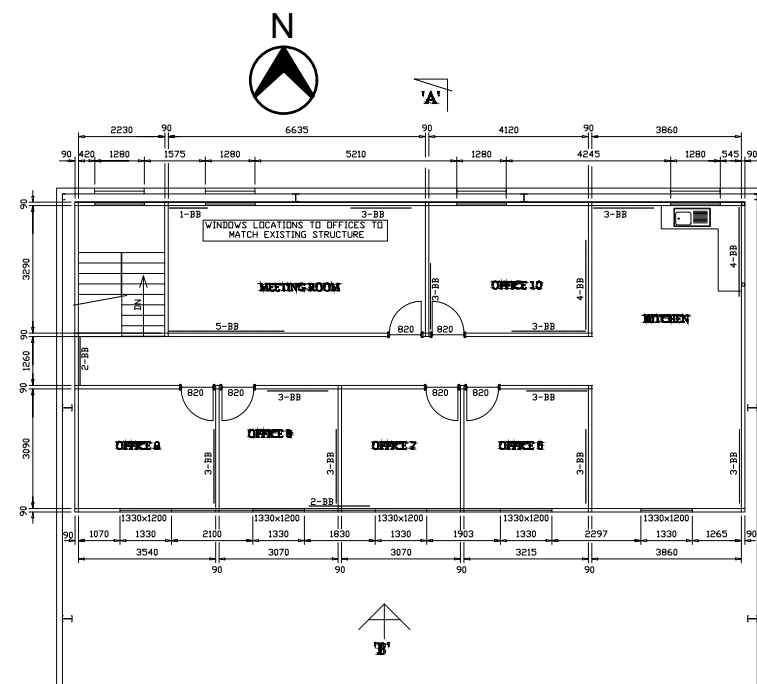


## Attachment G: Office Floor Plan



## GROUND FLOOR LAYOUT PLAN

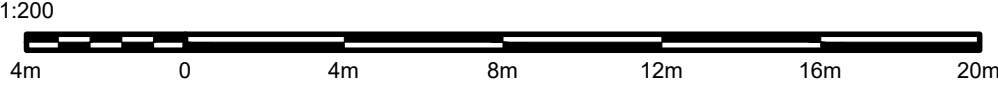
NOTE: GROUND & MEZZANINE FLOORS STRUCTURES  
ARE STAND-ALONE FROM EXISTING BUILDING STRUCTURE



## MEZZANINE FLOOR LAYOUT PLAN

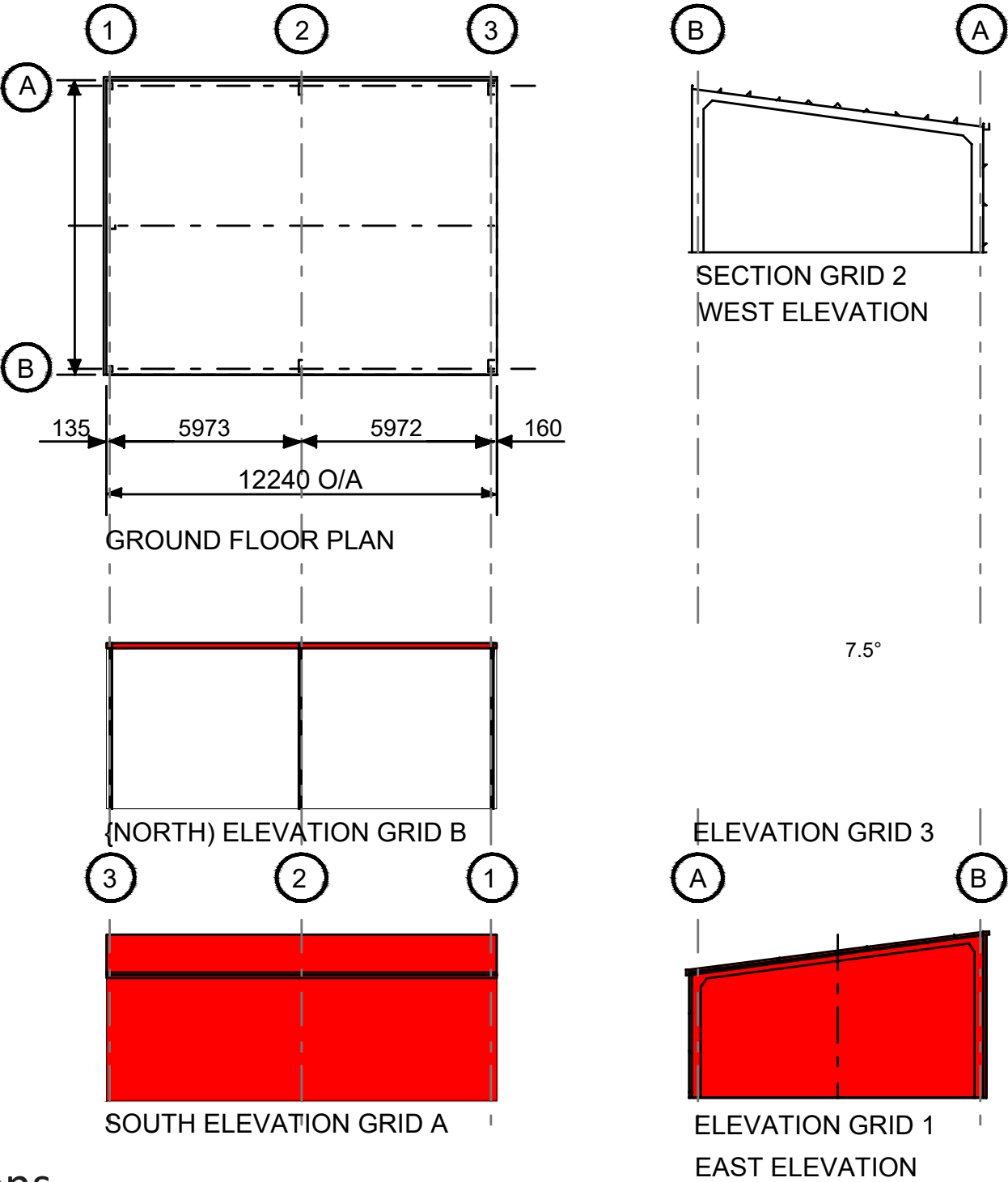
Existing Shed/Proposed Office: Office Layout (Plan 6 of 10)

<b>SIMON CARR BENG CENG MSTRUCTE</b>			<b>LEIGHTON SURVEYS</b> Structural Design, Detailing and Surveying 11, LUCCA ENTRANCE PEARSALL W.A. 6065 Phone 9405 1180 Fax 9405 1185				PROPOSED MEZZANINE TO EXISTING WAREHOUSE AT LOT 53/1038 THOMAS ROAD, CASUARINA , W.A. 6167			
							DRAWING			
							INTERNAL FITOUT DETAILS			
	DATE	SCALE					DRAWN	JOB NO.	SHEET	
	24-02-17	1:100					P.B.E.	1440	S02	'A'
<b>DATE:</b>	"A" ISSUED FOR APPROVAL	24-02-17								
	NUMBER REVISION	/DATE								



Attachment H: Outbuilding Extension Plan

PROPOSED SHED EXTENSION



Elevations

Copyright 2017  
Lysaght Building  
Solutions Pty Ltd  
trading as RANBUILD

CLADDING			
ITEM	PROFILE (min)	FINISH	COLOUR
ROOF	TRIMDEK 0.42 BMT	CB	AA
WALLS	TRIMDEK 0.42 BMT	CB	AA
CORNERS	-	CB	AA
BARGE	-	CB	AA
GUTTER	SHEERLINE	CB	AA
DOWNPIPE	100x75	CB	AA

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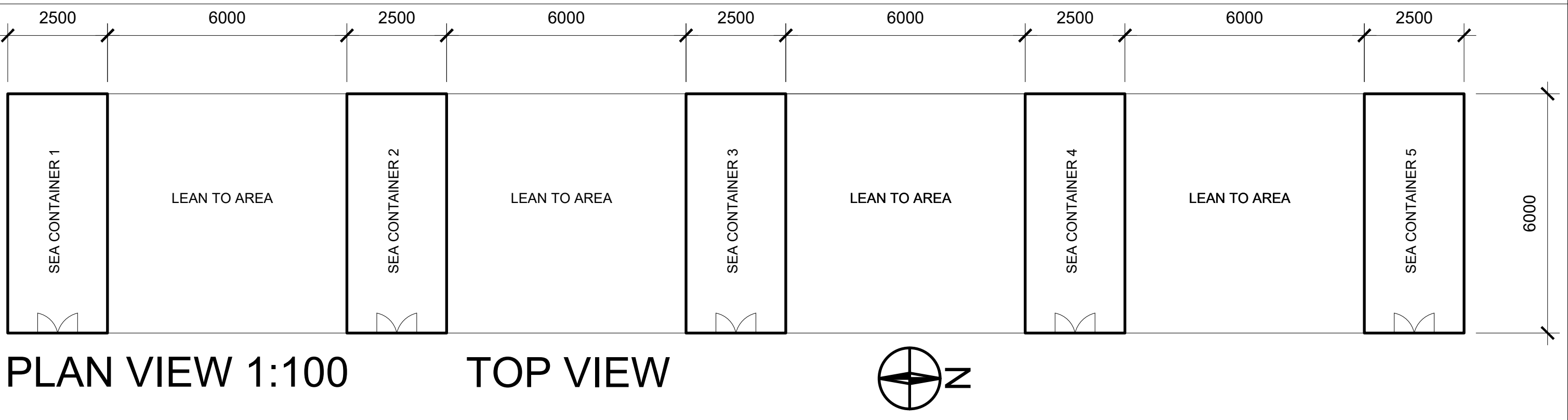
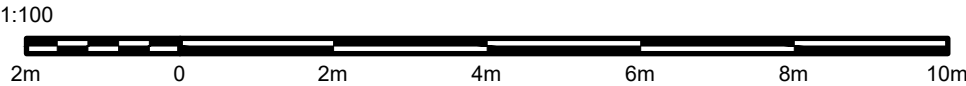
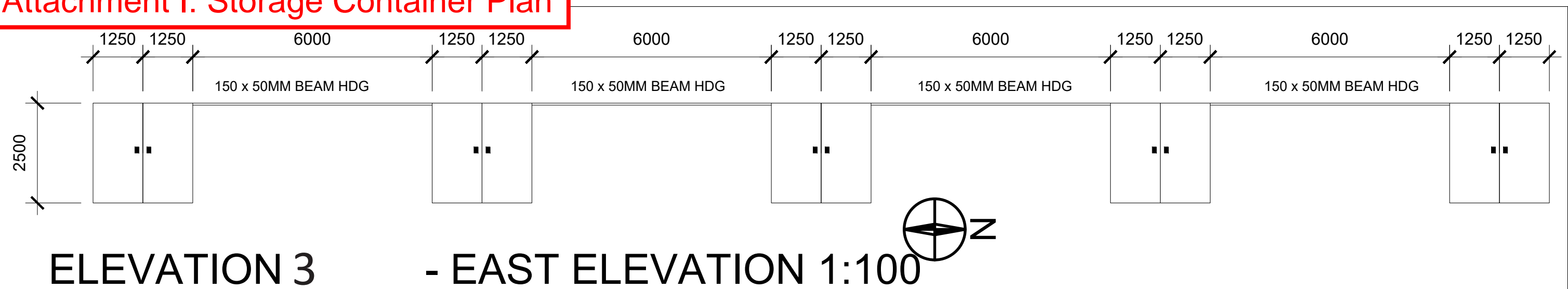
ACCESSORY SCHEDULE & LEGEND		
QTY	MARK	DESCRIPTION

ARCHITECTURAL DRAWING ONLY, NOT FOR CONSTRUCTION USE

WIND DESIGN			
IMPORTANCE LEVEL	REGION	TERRAIN Ms	
2	A	2	1.0

CLIENT Horizon West		
SITE Lot 53 Thomas Rd CASUARINA WA 6167		
BUILDING BIG G SKILLION 9010 SPAN x 3813/5000 EAVE x 12240 LONG		
TITLE GENERAL ARRANGEMENT		
SCALE A3 SHEET 1:200	DRAWING NUMBER OWBS03-0372	PAGE 1/1

Attachment I: Storage Container Plan



Storage Containers and Lean Tos (Plan 8 of 10)

Drawn by:  
JODI WITHNALL

Client:  
INTERNAL - HW

Project:  
1038 (LOT 53) THOMAS RD  
CASUARINA

Drawing Title:  
ELEVATION 3 - STORAGE  
CONTAINERS & LEAN TO'S

Date:  
10/8/18

Scale:  
1:100

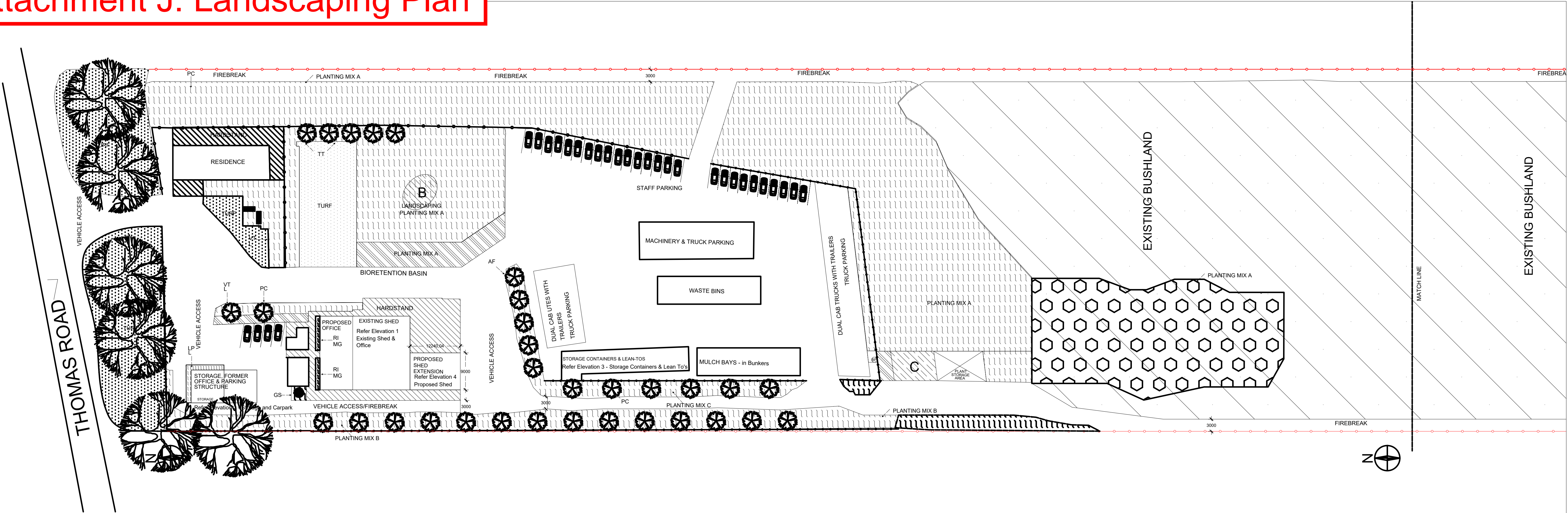
Revision:  
3







Attachment J: Landscaping Plan



SPECIES	SYMBOL
PLANTING MIX A	
EUCALYPTUS GOMPHOCEPHALA	EG
EUCALYPTUS FICIFOLIA	EF
MELALEUCA RHAPHIOPHYLLA	MR
GREVILLEA OBTUSIFOLIA GIN GIN GEM	GG
GREVILLEA THELMANNIANA	GT
KUNZEA ERICIFOLIA	KE
DIANELLA VARIEGATED	DV
DIANELLA REVOLUTA	DR
EREMOPHILA KALBARRI CARPET	EKC
CONOSTYLIS SP.	C
ACACIA SP.	A
MYOPORUM SP.	M
PLANTING MIX B	
CHAMELAUCIUM UNCINATUM	CU
EUCALYPTUS GOMPHOCEPHALA	EG
GREVILLEA OBTUSIFOLIA GIN GIN GEM	GG
DIANELLA VARIEGATED	DV
ANIGOZANTHUS FLAVIDUS	AF
EREMOPHILA KALBARRI CARPET	EKC
HIBISCUS TILIACEUS RUBRA	HTR
PLANTING MIX C	
VIBURNUM TINUS	VT
DIANELLA VARIEGATED	VG
ANIGOZANTHUS FLAVIDUS	AF
PLANTING MIX D	
GREVILLEA OLIVACEAE	GO
VIBURNUM TINUS	VT
MYOPORUM SP.	M
OTHER	
PYRUS CALLERYANA	PC
AGONIS FLEXUOSA	AF
RAPHIOLEPSIS INDICA	RI
VIBURNUM TINUS	VT
LIRIOPE SP.	LS
GLEDITSIA SHADE MASTER	GS
TIPUANA TIPU	TT
MAGNOLIA GRANDIFLORA	MG

AGONIS FLEXUOSA	GREVILLEA THELMANNIANA	EREMOPHILA KALBARRI CARPET
ANIGOZANTHUS FLAVIDUS	HIBISCUS TILIACEUS RUBRA	MELALEUCA RHAPHIOPHYLLA
CHAMELAUCIUM UNCINATUM	KUNZEA ERICIFOLIA	EUCALYPTUS FICIFOLIA
DIANELLA REVOLUTA	MAGNOLIA GRANDIFLORA	EUCALYPTUS GOMPHOCEPHALA
PYRUS CALLERYANA	RAPHIOLEPSIS INDICA	TIPUANA TIPU
GLEDITSIA SHADE MASTER	GREVILLEA OLIVACEAE	

KEY			
	Bio-retention Area - Landscaping		Landscaping Area
	Turf		Previously rehabilitated area to be maintained

Revision notes:

Rev:	Date:	Notes:
Landscape Plan Part A (Plan 9 of 10)		

Drawn by:  
JODI WITHNALL

Client:  
HORIZON WEST

Project:  
1038 (LOT 53) THOMAS ROAD CASUARINA

Drawing Title:  
LANDSCAPING PLAN  
SHEET 1 OF 2

Date:  
13/08/2018

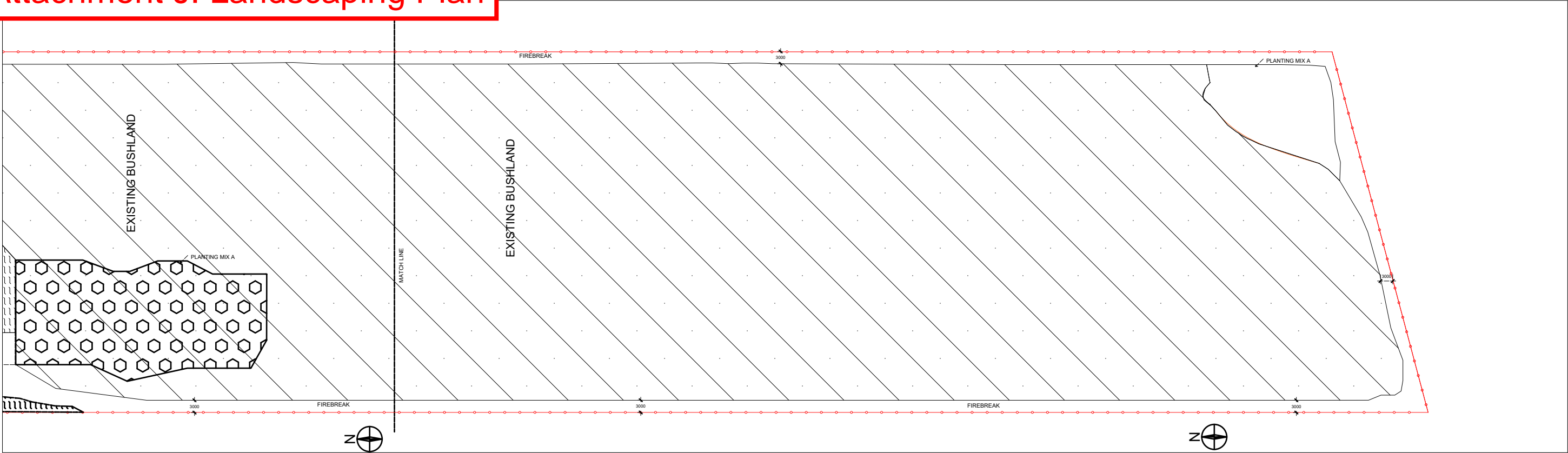
Scale:  
1:500 @ A1

Revision:  
3





Attachment J: Landscaping Plan



SPECIES	SYMBOL
<b>PLANTING MIX A</b>	
EUCALYPTUS GOMPHOCEPHALA	EG
EUCALYPTUS FICIFOLIA	EF
MELALEUCA RHAPHIOPHYLLA	MR
GREVILLEA OBTUSIFOLIA GIN GEM	GG
GREVILLEA THELMANNIANA	GT
KUNZEA ERICIFOLIA	KE
DIANELLA VARIEGATED	DV
DIANELLA REVOLUTA	DR
EREMOPHILA KALBARRI CARPET	EKC
CONOSTYLIS SP.	C
ACACIA SP.	A
MYOPORUM SP.	M
<b>PLANTING MIX B</b>	
CHAMELAUCIUM UNCINATUM	CU
EUCALYPTUS GOMPHOCEPHALA	EG
GREVILLEA OBTUSIFOLIA GIN GEM	GG
DIANELLA VARIEGATED	DV
ANIGOZANTHUS FLAVIDUS	AF
EREMOPHILA KALBARRI CARPET	EKC
HIBISCUS TILIACEUS RUBRA	HTR
<b>PLANTING MIX C</b>	
VIBURNUM TINUS	VT
DIANELLA VARIEGATED	VG
ANIGOZANTHUS FLAVIDUS	AF
<b>PLANTING MIX D</b>	
GREVILLEA OLIVACEAE	GO
VIBURNUM TINUS	VT
MYOPORUM SP.	M
<b>OTHER</b>	
PYRUS CALLERYANA	PC
AGONIS FLEXUOSA	AF
RAPHIOLEPSIS INDICA	RI
VIBURNUM TINUS	VT
LIRIOPE SP.	LS
GLEDITSIA SHADE MASTER	GS
TIPUANA TIPU	TT
MAGNOLIA GRANDIFLORA	MG

AGONIS FLEXUOSA	GREVILLEA THELMANNIANA	EREMOPHILA KALBARRI CARPET
ANIGOZANTHUS FLAVIDUS	HIBISCUS TILIACEUS RUBRA	MELALEUCA RHAPHIOPHYLLA
CHAMELAUCIUM UNCINATUM	KUNZEA ERICIFOLIA	EUCALYPTUS FICIFOLIA
DIANELLA REVOLUTA	MAGNOLIA GRANDIFLORA	EUCALYPTUS GOMPHOCEPHALA
PYRUS CALLERYANA	RAPHIOLEPSIS INDICA	TIPUANA TIPU
GLEDITSIA SHADE MASTER	GREVILLEA OLIVACEAE	

## Attachment K: Revegetation of Wetland Area



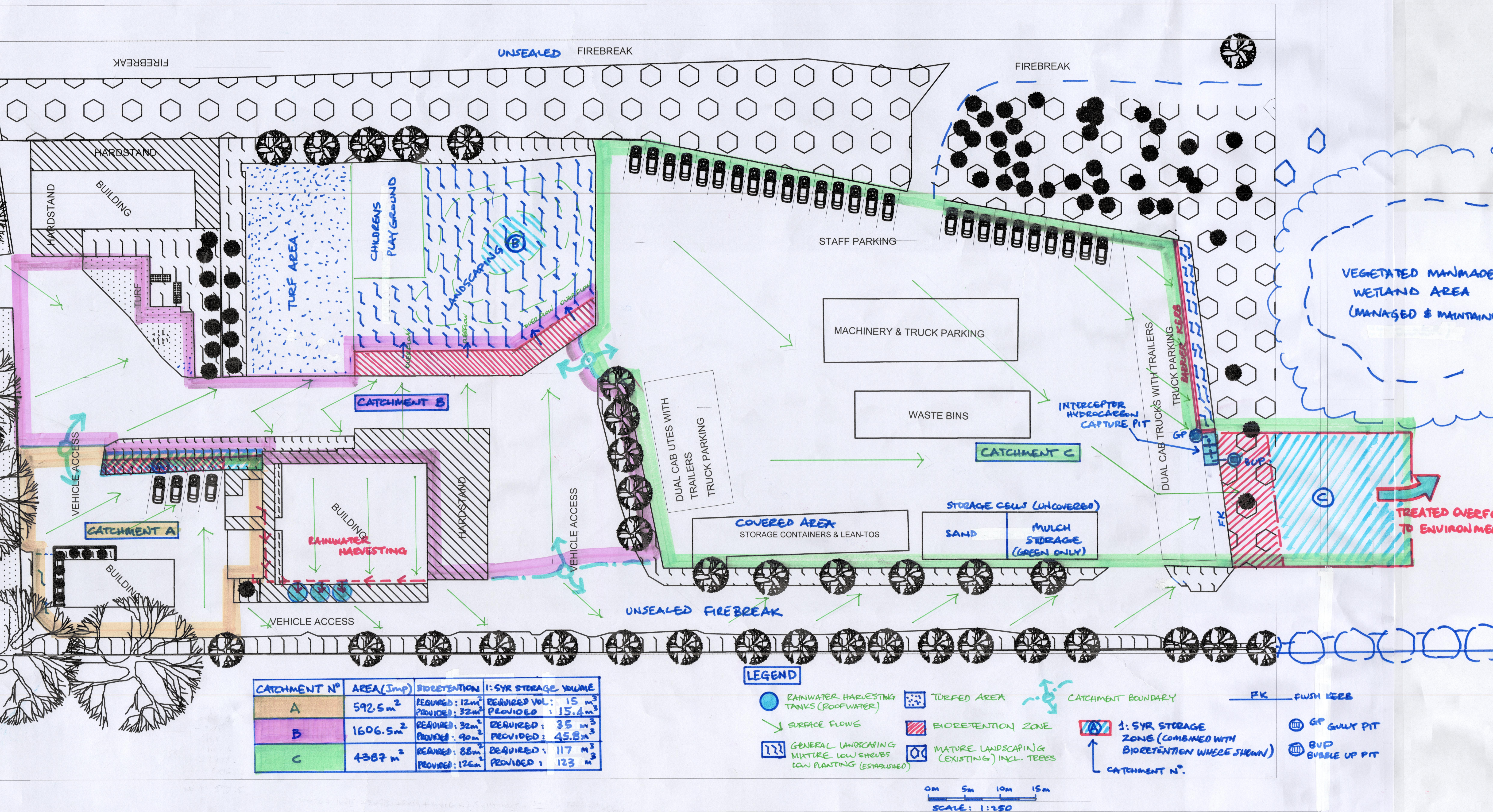


Attachment L: Revegetation north of the Hardstand Storage Area





Attachment M: Drainage Strategy Plan





## **15.5 Adoption of Local Planning Policy No. 13: Telecommunications Infrastructure and Communications Equipment**

### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

### **SUMMARY:**

This report presents draft Local Planning Policy No. 13 (LPP 13): Telecommunications Infrastructure and Communications Equipment, under the City's Local Planning Scheme No. 2 (LPS2) (Refer to Attachment A) to Council for consideration and final adoption.

LPP 13 is intended to replace the existing Telecommunications Installations Local Planning Policy (LPP) (Refer to Attachment B). LPP 13 sets out the City's position in regards to the development requirements for telecommunications infrastructure and communications equipment.

The objectives of LPP 13 are to ensure an efficient communications network is implemented that is compatible with the surrounding built and natural environments. LPP 13 provides a consistent approach in dealing with applications and seeks to reduce any adverse impacts on the visual amenity of the area due to the development of telecommunications infrastructure and communications equipment. To achieve these objectives, LPP 13 outlines development provisions for a variety of telecommunications infrastructure and communications equipment types from telecommunications towers to satellite dishes. LPP 13 also outlines the types of telecommunications infrastructure and/or communications equipment that are exempt from requiring planning approval, as stipulated in the *Telecommunications Act 1997*.

Council considered draft LPP 13 at its Ordinary Council Meeting held on 25 July 2018, and resolved to adopt the draft LPP 13 for advertising purposes. In accordance with Council's resolution, City Officers advertised the draft LPP 13 from 10 August 2018 to 31 August 2018 inclusive, with no submissions being received.

City Officers recommend LPP 13 be adopted without modifications as detailed in Attachment A (the finalised version of the policy) and the current Telecommunications Installations LPP be rescinded.

### **OFFICER RECOMMENDATION:**

That Council:

1. Adopt Local Planning Policy 13: Telecommunications Infrastructure and Communications Equipment, as detailed in Attachment A.
2. Publish notice of the adoption of Local Planning Policy 13: Telecommunications Infrastructure and Communications Equipment in a newspaper circulating in the Scheme area.
3. Rescind Local Planning Policy: Telecommunications Installations, as detailed in Attachment B.



**15.5 ADOPTION OF LOCAL PLANNING POLICY NO. 13: TELECOMMUNICATIONS INFRASTRUCTURE AND COMMUNICATIONS EQUIPMENT****DISCUSSION:****Background**

Development applications for telecommunications infrastructure and communications equipment are currently assessed against the Telecommunications Installations LPP which was adopted by Council in January 1998 and last reviewed in July 2012 (Refer Attachment B). Since this time, State Planning Policy 5.2 – Telecommunications Infrastructure (SPP 5.2) and Commonwealth legislation has changed. A review of the current policy was therefore considered necessary to respond to the changing legislative framework.

LPP 13 sets out the City's position in regards to the development requirements for telecommunications infrastructure and communications equipment. Significant formatting changes have been undertaken to ensure LPP 13 is user friendly and consistent with other Local Planning Policies. City Officers also identified the need for LPP 13 to be better aligned with SPP 5.2. The development provisions of LPP 13 are also consistent with the relevant provisions of SPP 3.1 and relevant Commonwealth legislation, in particular the *Telecommunications Act 1997*. Considering LPP 13 is replacing the existing Telecommunications Installations LPP, it is intended that it be rescinded. All future applications for telecommunications infrastructure and communications equipment will be assessed against LPP 13 (Refer to Attachment A).

**Local Planning Policy No. 13**

LPP13 aims to:

- *Facilitate the implementation of an efficient communications network within the City that is compatible with the surrounding built and natural environments.*
- *Reduce the impact of telecommunications infrastructure and communications equipment on the visual amenity of the area.*
- *Ensure a consistent approach in the assessment and determination of development applications for telecommunications infrastructure and communications equipment.*

The objectives of LPP 13 will promote an efficient communications network that is compatible with the surrounding built and natural environments. The policy objectives also seek to provide a consistent approach in dealing with applications, incorporating legislation such as the *Telecommunications Act 1997* and SPP 5.2. LPP 13 also seeks to reduce impacts of telecommunications infrastructure and communications equipment on the visual amenity of the areas in which they are located.

**State Planning Policy 5.2: Telecommunications Infrastructure**

SPP 5.2 was gazetted in September 2015. The intent of SPP 5.2 is to provide guidance pertaining to the siting, location and design of telecommunications infrastructure. The release of SPP 5.2 and its content has been a significant factor in prompting City Officers to review the existing Telecommunications Installations LPP and ensure all provisions are consistent with SPP 5.2.

**15.5 ADOPTION OF LOCAL PLANNING POLICY NO. 13: TELECOMMUNICATIONS INFRASTRUCTURE AND COMMUNICATIONS EQUIPMENT**

Research findings undertaken as part of SPP 5.2 (see Public Health Implications below for more detail) resulted in setback distances not being stipulated in local planning policies. The existing Telecommunications Installations LPP stipulates setbacks for telecommunications towers from certain zones and land uses. However, LPP 13 does not stipulate setbacks or buffers for telecommunications infrastructure from various zones and/or land uses. This significant change to the existing LPP will ensure LPP 13 is consistent with state policy. LPP 13 seeks to ensure telecommunications infrastructure is designed and located so as to have minimal impact on the visual amenity of the area.

**Community Consultation**

Council considered draft LPP 13 (Refer to Attachment A) at its Ordinary Council Meeting held on 25 July 2018, and resolved to adopt the draft LPP 13 for advertising purposes. In accordance with Council's resolution, City Officers advertised the draft LPP 13 from 10 August 2018 to 31 August 2018 inclusive, with no submissions being received.

**Conclusion**

Considering no submissions were received during the advertising period, no modifications to the draft policy are proposed. The version that was previously presented to Council on 25 July 2018 is the version of LPP 13 that is recommended for adoption (Refer to Attachment A). Therefore, City Officers recommend LPP 13 be adopted without modifications as detailed in Attachment A, and the current Telecommunications Installations LPP be rescinded.

**LEGAL/POLICY IMPLICATIONS:**

The following strategic and policy based documents were considered in the preparation of this Local Planning Policy:

**Legislation**

*Planning and Development (Local Planning Schemes) Regulations 2015*  
*Telecommunications Act 1997*

**Schemes**

Local Planning Schemes No.2 and No.3

**Local Planning Policies**

Telecommunications Installations Local Planning Policy

**State Government Policies**

Western Australian Planning Commission State Planning Policy 5.2 Telecommunications Infrastructure

Western Australian Planning Commission State Planning Policy 3.1 Residential Design Codes

**FINANCIAL/BUDGET IMPLICATIONS:**

The preparation and advertising of LPP13 was undertaken within the City's existing budget. There will be a small cost associated with advertising the adoption of LPP 13. There are no other direct financial implications associated with the adoption of LPP 13.

### 15.5 ADOPTION OF LOCAL PLANNING POLICY NO. 13: TELECOMMUNICATIONS INFRASTRUCTURE AND COMMUNICATIONS EQUIPMENT

#### ASSET MANAGEMENT IMPLICATIONS:

No direct asset management implications are associated with the draft LPP.

#### ENVIRONMENTAL IMPLICATIONS:

No direct environmental implications are associated with the draft LPP.

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following outcome and objective detailed in the Strategic Community Plan.

Plan	Outcome	Objective
Strategic Community Plan	A well planned City	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

#### COMMUNITY ENGAGEMENT:

A requirement of the *Planning and Development (Local Planning Schemes) Regulations, 2015*, is that local planning policies are advertised for a minimum of 21 days in a paper circulating the Scheme area. In this regard, following Council's resolution of 25 July 2018, the draft LPP 13 was advertised from 10 August 2018 to 31 August 2018 in the Weekend Courier. No submissions were received.

In accordance with the provision of the *Planning and Development (Local Planning Schemes) Regulations, 2015*, notice of adoption of LPP 13 is required to be published in a newspaper circulating in the City of Kwinana. This will also be published on the City's website and a post added to the City's Facebook page.

#### PUBLIC HEALTH IMPLICATIONS:

The use and location of telecommunications infrastructure has raised public concern regarding possible health issues associated with the exposure to electromagnetic emissions. Research was undertaken as part of SPP 5.2 with the findings concluding that typical exposure to radiofrequency fields from telecommunications infrastructure were very low and do not cause any adverse health effects. Therefore, SPP 5.2 states that setback distances for telecommunications infrastructure from any land use and/or zone shall not to be stipulated in a local planning policy and/or scheme. In order to be consistent with SPP 5.2, LPP 13 does not stipulate setback distances for telecommunications infrastructure from land uses and/or zones and aims to reduce impacts on visual amenity. Based on the research undertaken as part of SPP 5.2, it is considered there are no public health implications as a result of the adoption of LPP 13.



**15.5 ADOPTION OF LOCAL PLANNING POLICY NO. 13: TELECOMMUNICATIONS INFRASTRUCTURE AND COMMUNICATIONS EQUIPMENT**

**RISK IMPLICATIONS:**

Risk Event	Inconsistency between existing Local Planning Policy requirements and State Planning Policy and Legislation.
Risk Theme	Failure to fulfil statutory regulations or compliance requirements. Poorly located telecommunications infrastructure with adverse visual and amenity impacts.
Risk Effect/Impact	Compliance
Risk Assessment Context	Operational
Consequence	Moderate
Likelihood	Possible
Rating (before treatment)	Moderate
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	Adoption of draft LPP 13 provides clear objectives and guidance regarding the City's requirements and standards for telecommunications infrastructure and communications equipment that is consistent with State Planning Policy and legislation thereby mitigating the risk.
Rating (after treatment)	Low

**COUNCIL DECISION**

297

**MOVED CR D WOOD**

**SECONDED CR S LEE**

**That Council:**

- 1. Adopt Local Planning Policy 13: Telecommunications Infrastructure and Communications Equipment, as detailed in Attachment A.**
- 2. Publish notice of the adoption of Local Planning Policy 13: Telecommunications Infrastructure and Communications Equipment in a newspaper circulating in the Scheme area.**
- 3. Rescind Local Planning Policy: Telecommunications Installations, as detailed in Attachment B.**

**CARRIED  
8/0**



# Local Planning Policy No. 13

## Telecommunications Infrastructure and Communications Equipment





# Local Planning Policy No. 13

## Telecommunications Infrastructure and Communications Equipment Policy

### 1. TITLE

Local Planning Policy No. 13: Telecommunications Infrastructure and Communications Equipment

### 2. PURPOSE

The purpose of this policy is to provide guidance for the assessment and determination of development applications for telecommunications infrastructure and communications equipment within the City of Kwinana (the City) that cannot be classified as low-impact facilities.

The Policy should be read in conjunction with State Planning Policy 5.2 Telecommunications Infrastructure, the *Telecommunications Act 1997* and State Planning Policy 3.1: Residential Design Codes.

### 3. OBJECTIVES

The objectives of the Policy are to:

- Facilitate the implementation of an efficient communications network within the City that is compatible with the surrounding built and natural environments.
- Reduce the impact of telecommunications infrastructure and communications equipment on the visual amenity of the area.
- Ensure a consistent approach in the assessment and determination of development applications for telecommunications infrastructure and communications equipment.

### 4. POLICY APPLICATION AND INTERPRETATION

This policy applies to all land within the City's Local Planning Schemes No. 2 and No. 3.

This policy applies to the installation of telecommunications infrastructure and communications equipment throughout the City, other than those that are specifically exempt and classified as low impact facilities under the *Telecommunications Act 1997*.

The *Telecommunications Act 1997* states that the installation of low-impact facilities are exempt from the requirement to obtain planning approval when they are installed by a Carrier (for example Telstra, Optus and the like).

Under sub-clauses 6(4), (5) and (7) of the *Telecommunications Act 1997*, and as per the *Telecommunications (Low Impact Facilities) Determination 1997* (and its subsequent amendments), the following telecommunications facilities are NOT low-impact facilities:

- (a) Designated overhead lines;
- (b) A tower that is not attached to a building;
- (c) A tower attached to a building and more than 5m high;
- (d) An extension to a tower that has previously been extended; and

*(e) An extension to a tower, if the extension is more than 5m high. Accordingly, overhead cabling and new mobile telecommunications towers are NOT low-impact facilities. Furthermore, a facility in an 'area of environmental significance' (as defined under Section 2.5 of the Telecommunications (Low Impact Facilities) Determination 1997) cannot be a low-impact facility.*

Telecommunications Infrastructure is classified as a use within Local Planning Scheme No. 2 (the Scheme), Table No.1. The permissibility of Telecommunications Infrastructure in Table No. 1 of the Scheme can be summarised as follows;

- (a) The use is classified as an 'SA' use in the Residential, Special Residential, Rural A and Special Rural Zones. This means Telecommunications Infrastructure is not permitted unless the Council has exercised its discretion by granting Development Approval, following a process of community consultation in accordance with Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City's Community Engagement Policy;
- (b) The use is classified as a 'P' use in the General Industry zone. This means Telecommunications Infrastructure is permitted within the General Industry zone; and
- (c) In all other zones, the use is classified as an 'AA' use. This means Telecommunications Infrastructure is not permitted unless the Council has exercised its discretion by granting Development Approval.

The *Telecommunications Act 1997* also provides guidance and exemptions to the development of National Broadband Network (NBN) infrastructure.

Clauses 5.4.4 and 6.4.5 of the Residential Design Codes provide assessment criteria with respect to the installation of incidental external fixtures and features, including communications equipment on residential properties. The provisions of this policy should be read in conjunction with the Deemed-to-Comply requirements of the abovementioned clauses of the Residential Design Codes.

*Note: this policy does not address the health impacts of telecommunications infrastructure on humans. The health impacts and research findings are outlined in State Planning Policy 5.2: Telecommunications Infrastructure.*

## 5. DEFINITIONS

**Telecommunications Infrastructure** - means land used to accommodate any part of the infrastructure of a telecommunications network and includes any line, equipment, apparatus, tower, antenna, tunnel, duct, hole, pit or other structure used for, or in connection with, a telecommunications network.

**Communications Equipment** - includes satellite dishes, television antennas, citizen band antennas, microwave antennas and other equipment and structures used to transmit or receive television and radio signals.

**Above Ground Infrastructure:** refers to any line, equipment, apparatus, tower, antenna or any other structure that is visible above ground level.

**Below Ground Infrastructure:** refers to pit and pipe infrastructure to house fixed line (fibre, Hybrid Fibre Coaxial, copper) to carry voice and data services.

## 6. SUBMISSION REQUIREMENTS

Applications for Development Approval for telecommunications infrastructure and/or communications equipment shall be made on the form prescribed by the City, shall be signed by the owner(s), and accompanied by the following information;



1. Plans and other information that the City may reasonably require to enable the application to be determined (Refer to Schedule 2, Clauses 62 and 63 of the *Planning and Development (Local Planning Schemes) Regulations 2015*).
2. A written submission which should outline the following information:
  - A statement about the extent to which the proposed facility complies with this Planning Policy and (if applicable) justification for any variation from the relevant scheme and policy provisions;
  - detailed reasons for the design, location and configuration of the telecommunications infrastructure and/or communications equipment;
  - details of any significant environmental constraints, including those associated with the species, condition and significance of vegetation to be removed (and, where relevant, commitments stating how these constraints will be managed to prevent an unacceptable impact upon the environment); and
  - details of co-location investigations (if applicable).

## **7. DEVELOPMENT PROVISIONS**

### **7.1 General requirements**

1. All decommissioned telecommunication infrastructure and communications equipment shall be removed and the site reinstated to its original condition at the applicant's cost.
2. No above ground telecommunications cabling will be approved by the City, even in areas where above ground electrical services are established.

### **7.2 Above Ground Infrastructure**

1. Towers:
  - 1.1 Towers shall generally be located in Industrial, Commercial and Rural areas.
  - 1.2 Co-location of antennae facilities on single towers will be required except where technical impediments preclude such co-location or where the visual impact of two or more towers is less than that of co-located facilities.
  - 1.3 Towers shall not be located within areas designated for Landscape Protection under the Scheme.
  - 1.4 Towers shall be sited so as to not intrude, encroach, obscure or detract from significant landscape features.
  - 1.5 Towers shall be of mono-pole construction.
  - 1.6 Lattice or other towers may be supported where the proponent demonstrates to the satisfaction of the City the technical necessity of such a tower, in terms of achieving the necessary elevation of antennas.
  - 1.7 The base of the tower and associated installations shall be screened by established vegetation. Where local trees do not exist, or their retention is not sufficient, the planting of mature trees approved by the City is required.
  - 1.8 The City will not support towers where antennae can be established on an existing structure/building with the concurrence of the landowner.

- 1.9 The City may require the use of innovative tower structure design, particularly within an urban context, so that the external appearance of the tower is compatible with the surrounding built form and mimics urban structures such as clock towers, columns or includes urban art features.
- 1.10 Favourable consideration will generally be given to the establishment of towers in the following circumstances;
  - 1.10.1 where existing public utility corridors are used.
  - 1.10.2 where the tower height is in keeping with the height and bulk of surrounding built form.
  - 1.10.3 where the base of the tower is screened by established significant vegetation.

## 2. Satellite Dishes:

- 2.1 Planning Approval is not required for the installation of satellite dishes where they comply with all of the following criteria;
  - 2.1.1 The maximum diameter of the satellite dish is 1.2 metres.
  - 2.1.2 The satellite dish is of a neutral, non-reflective coloured material.
  - 2.1.3 The satellite dish is not visible from the street.
- 2.2 Planning Approval is required for all satellite dishes that do not meet the criteria listed in 2.1 above. A Building Permit may be required subject to preliminary assessment.
- 2.3 Planning Applications for satellite dishes will be considered by the City where they comply with all of the following criteria:
  - 2.3.1 The height of the dish is a maximum of 3 metres above the ground level.
  - 2.3.2 The dish has a diameter greater than 1.2 metres and a maximum of 1.5 metres.
  - 2.3.3 The dish is constructed in a material of neutral and non-reflective colour.
  - 2.3.4 The dish is setback a minimum of 3 metres from any boundary.
  - 2.3.5 The dish is not visible from the street or will not impact on the streetscape.
  - 2.3.6 The dish is located within the General and Light Industrial or Service Commercial Zones.
- 2.4 Where all of the above requirements (2.3) have not been satisfied, planning Applications for satellite dishes will be considered against the following criteria:
  - 2.4.1 The visual impact of the installations on the subject site, the street and surroundings in terms of design, bulk, colour, height, material and general appearance is to be minimised. Satellite dishes shall be constructed of a material of a neutral and non-reflective colour.
  - 2.4.2 Satellite dishes with a diameter greater than 1.5 metres should be



constructed with mesh and painted black or a similar dark colour.

- 2.4.3 Where visible from an adjoining property, the applicant shall provide adequate screening for satellite dishes.

3. Panel Antennae, Omni Directional Antennae, Micro Cells:

- 3.1 All of the above installations (3.), where not described as Low Impact Facilities under the *Telecommunications Act 1997* shall be so coloured, finished and fixed to or within buildings so as to blend/harmonise with the colour and design of the building and where possible should be screened from public places by elements of the building.

- 3.2 Should not protrude from a building into and/or above a public road reserve, pedestrian access-way or other public space.

4. Pillar, Roadside Cabinet, Pedestal, External Equipment Shelters:

- 4.1 All of the above installations (4.), where not described as Low Impact Facilities under the *Telecommunications Act 1997*, shall be so positioned, coloured and designed so as to not visually intrude into the streetscape, hinder pedestrian/cyclist/vehicular movement or obscure significant views or vistas.

### 7.3 Below Ground Infrastructure

1. Pits, Manhole, Underground Equipment Shelter, Underground Conduit or Cabling:

- 1.1 All of the above installations where not described as Low Impact Facilities under the *Telecommunications Act 1997* shall be designed and positioned so as not to interfere with other public utility installations or hinder pedestrian/cyclist safety and movement.

## 8. CONSULTATION

Development applications for the installation of the following telecommunications infrastructure and/or communications equipment will be the subject of a process of community consultation in accordance with Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City's Community Engagement Policy:

Towers:

- All applications for the development of a tower in the Residential, Special Residential, Rural A and Special Rural Zones are required to be advertised.
- Notice of the proposed tower is to be given to the owners and occupiers of all properties within a 200m radius of the affected site (at a minimum).

Satellite dishes

- All applications for the development of a satellite dish are required to be advertised where they:
  - have a diameter greater than 1.2 metres; or
  - have a height greater than 3 metres above the ground; or
  - are NOT located within the General and Light Industrial or Service Commercial Zones; or
  - are setback less than 3m from any property boundary.
- Notice of the proposed satellite dish is to be given to the owners and

occupiers of all adjoining properties for a period of 14 days.

Name of Policy	Local Planning Policy 13: Telecommunications Infrastructure and Communications Equipment
Date of Adoption and resolution No	
Review dates and resolution No #	
Next review due date	
Legal Authority	<i>Planning and Development (Local Planning Schemes) Regulations 2015 – Schedule 2 Deemed Provisions (Division 2)</i>
Directorate	City Regulation
Department	Planning
Related documents	





## POLICY

## TELECOMMUNICATIONS INSTALLATIONS



## TELECOMMUNICATION INSTALLATIONS

To define criteria against which Telecommunication Installations are assessed.  
To facilitate Telecommunication coverage of the municipal area while minimising;

Visual impact/intrusion, Visual clutter, Impact on amenity of area, Overshadowing,  
Health and Safety Impacts, Environmental impact, Heritage qualities and  
Interference with existing development.

### Exemptions from Council's Planning Approval:

In accordance with the Commonwealth Telecommunication Act 1997, the following  
activities and installation do not require Local Planning Approval;

**Low Impact Facilities (Attachment 1), Inspection, Maintenance of Facilities, Subscriber  
connections and Temporary Defence Facilities.**

Adopted:	21/01/1998 #461
Last reviewed:	27/09/2006 #519 28/04/2010 #105 <b>11/07/2012 #163</b>
Legal Authority	Local Government Act Section 2.7 – The Role of Council Commonwealth Telecommunications Act 1997 Town Planning and Development Act 1928 Metropolitan Region Town Planning Scheme Act Town Planning Scheme No. 2 Clause 8.6 (Planning Policy)

### **Policy:**

#### Above Ground Facilities

#### 1. Towers:

- 1.1 Towers shall not be located within 300 metres of residential zoned land (whether subdivided, developed or not, or land that has been identified by Council as having urban potential), or schools (including ovals & playgrounds), child care facilities or other land used for children's activities.
- 1.2 Towers shall generally be located in Industrial, Commercial and Rural areas.
- 1.3 Co-location of Antennae Facilities on single towers will be required except where technical impediments preclude such co-location or where in the opinion of Council, the visual impact of two or more towers is less than that of co-located facilities.
- 1.4 Towers shall not be located within areas designated for Landscape Protection under Council's operative Town Planning Scheme.
- 1.5 Towers shall be sited so to not intrude, encroach, obscure or detract from significant landscape features, vistas or views identified under Council Rural Strategy.
- 1.6 Towers shall be of mono-pole construction, although lattice or other towers may be supported by Council where the proponent demonstrates to the satisfaction of Council the technical necessity of such a tower, in terms of achieving the necessary elevation of antennas.



## TELECOMMUNICATIONS INSTALLATIONS

- 1.7 The external colour and texture of towers shall be so as to harmonise and blend with the background landscape and this will be dependent of the sitting of the facility and the surrounding topography as follows;
  - 1.7.1 Where the tower is to be established against a predominantly sky background, the external colour of the tower should be of a pale blue hue or similar.
  - 1.7.2 Where the tower is sited against a vegetation backdrop, the external colour of the tower should be of a darker green hue with the intensity of colour to match the colour of background foliage.
  - 1.7.3 Where the tower is situated against an unvegetated ridgeline backdrop or against the backdrop of industrial or commercial development, the external colour of the tower shall match as closely as possible the colours of the relevant backdrop.
- 1.8 The base of the tower and associated installations shall be screened by established vegetation.
- 1.9 Council will not support towers where antennae can be established on existing structure/buildings with the concurrence of the landowner.
- 1.10 Council may require the use of innovative tower structure design, particularly within an urban context, so that the external appearance of the tower is compatible with the surrounding built form and mimics urban structures such as clock towers, columns or includes urban art features.
- 1.11 Favourable consideration will generally be given to the establishment of towers in the following circumstances;
  - 1.11.1 areas of concave topography
  - 1.11.2 locations sited at the base and below prominent ridgelines
  - 1.11.3 where colour of tower does not contrast with background
  - 1.11.4 where existing public utility corridors are used
  - 1.11.5 where the tower height is in keeping with the height and bulk of surrounding built form
  - 1.11.6 where base of tower is screened by established significant vegetation

## 2. Satellite and Radio Communication Dishes:

- 2.1 Planning Approval and Building Licences shall not be required for the installation of satellite dishes where they comply with all of the following criteria;
  - 2.1.1 The maximum diameter of the satellite dish is 1.2 metres.
  - 2.1.2 The satellite dish is of a neutral, non reflective coloured material.
  - 2.1.3 The satellite dish at no time shall be utilised to transmit for any purpose whatsoever.
- 2.2 Planning Approval is required for all other satellite dishes. A Building Licence may be required subject to a preliminary assessment by the Manager Building Services.

## TELECOMMUNICATIONS INSTALLATIONS

- 2.3 All satellite dishes shall be considered by Council except where they comply with the following criteria. In these instances the Manager Planning Services shall have authority to approve applications.
  - 2.3.1 The height of the dish is 3.5 metres or less when located at ground level.
  - 2.3.2 A roof mounted dish which has a diameter between 1.2 - 1.5 metres.
  - 2.3.3 The proposed dish is to be constructed in a material of neutral and non reflective colour.
  - 2.3.4 The proposed dish is to be located at least 3 metres from any boundary.
  - 2.3.5 Where the dish is not visible from the street or will not impact on the streetscape.
  - 2.3.6 Any proposed satellite dish within the General and Light Industrial Zone.
- 2.4 All proposals for roof mounted satellite dishes with a diameter greater than 1.2 metres and all dishes greater than 3 metres in height, except those within the General and Light Industrial Zones, are to be advertised to adjoining neighbours for a period of 7 days. If objections are received, the matter shall be dealt with by Council. Where refusal is recommended, the matter be dealt with by Council.
- 2.5 All other applications shall be dealt with by Council.
- 2.6 In considering applications for satellite dishes, Council shall generally have regard to the following;
  - 2.6.1 Visual impact of the installations on the subject site, the street and surroundings in terms of design, bulk, colour, height, material and general appearance. Satellite dishes shall generally be constructed of a material of a neutral and non reflective nature.
  - 2.6.2 Satellite dishes to be constructed with a diameter greater than 2.5 metres should be constructed, where possible, with mesh which should be painted black or other similar dark colour.
- 2.7 Where installations are proposed in a visible position the following should also be taken into account in assessing the applications;
  - 2.7.1 Justification and supporting information to be obtained from a qualified consultant that there are valid technical reasons for why the structure must be located in a visible position, and there are no suitable locations within the lot where the structures can be located so as to be not visible from the street.
  - 2.7.2 Comment should be obtained from the neighbours considered to be affected by the proposal.

### 3. Panel Antennae, Onni Directional Antennae, Micro Cells:

- 3.1 All of the above installations (3.0), where not described as Low Impact Facilities under the Telecommunications Act 1997 shall be so coloured, finished and fixed to or within buildings so as to blend/harmonise with the colour and design of the building and where possible should be screened from public places by elements of the building.



## TELECOMMUNICATIONS INSTALLATIONS

- 3.2 Should not protrude from a building into and/or above a public road reserve, pedestrian accessway or other public space.

### Above Ground Housing

#### 4. Pillar, Roadside Cabinet, Pedestal, External Equipment Shelters:

- 4.1 All of the above installations (4.0), where not described as Low Impact Facilities under the Telecommunications Act 1997, shall be so positioned, coloured and designed so as to not visually intrude into the streetscape, hinder pedestrian/cyclist/vehicular movement or obscure significant views or vistas.

### Underground Facilities

#### 5. Pits, Manhole, Underground Equipment Shelter, Underground Conduit or Cabling:

- 5.1 All of the above installations where not described as Low Impact Facilities under the Telecommunications Act 1997 shall be designed and positioned so as not to interfere with other public utility installations or hinder pedestrian/cyclist safety and movement.

#### 6. General:

- 6.1 All decommissioned Telecommunication Installations shall be removed and the site reinstated to its original condition at the proponent's cost.
- 6.2 No above ground telecommunications cabling will be approved by Council, even in areas where above ground electrical services are established.

## **15.6 Draft Kwinana Bike and Walk Plan – Request to Advertise for Public Comment**

### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

### **SUMMARY:**

The purpose of the draft Bike and Walk Plan (draft Plan) is to provide a safe network of cycle routes and walking paths that are convenient for people of all ages and abilities to ride or walk to local destinations such as schools, shops, parks, bushland, bus stops and train stations. The intention being to create communities where cycling and walking are the preferred choices for short trips and everyone has the opportunity to choose a healthy lifestyle.

The draft Plan also integrates the local network of cycling routes and walking paths with the regional cycling and walking network to connect with areas beyond the City.

In conjunction with the Department of Transport (DoT), the City engaged GTA Consultants (GTA), an experienced transport planning consultancy, to prepare the draft Plan. GTA's expertise in active transport planning, combined with the City's engagement with the local community have contributed to the development of the draft Plan.

City Officers have prepared a Summary document (Attachment A) to provide the community and stakeholders with an outline of the objectives and key parts of the draft plan. The full draft Plan document (Attachment B) will also be available for stakeholder and community comment.

In preparing the draft Plan, GTA and City Officers have:

- evaluated the safety and connectivity of the existing cycling and walking network in the City;
- reviewed population data (age and health) to determine how the cycling and walking network should be designed to best meet the requirements of the local community;
- investigated the current level of use of the existing cycling and walking network in the City;
- consulted with the local community via an on online interactive survey;
- identified opportunities to upgrade the City's cycling and walking network in accordance with best practice design and infrastructure standards to facilitate safe and convenient travel to local destinations;
- developed a long term plan for the continued development of a network of cycling routes and walking paths; and
- identified community and education programs to reinforce and promote the benefits of active transport (cycling and walking) on the overall health and wellbeing of the community, and as a viable alternative to car trips.

The draft Plan responds to the City's Strategic Community Plan (2017- 2027) and Healthy Lifestyle Plan (2015-2018) and forms part of a coordinated approach at addressing the local community's health, and strengthening community spirit and identity.



**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT**

The draft Plan also supports and integrates with National and State Government strategies and policies and is consistent with the current standards for providing safer cycling and walking facilities. It is necessary for the City to adopt a bike plan in accordance with Western Australian Bicycle Network Plan and the DoT's policies in order to receive grants from the State Government to plan, design and build cycling infrastructure.

Upon its final adoption, the draft Plan will serve as a guide to the City for its consideration in planning and budgeting for the delivery of future cycling and walking networks. City Officers will consider the draft Plan and any priorities as part of ongoing budgeting for infrastructure and asset management provision, and as a part of the City's long term financial planning.

It is intended that the draft Plan and Summary documents be advertised for public comment following which a final plan will be prepared and presented to Council for consideration.

**OFFICER RECOMMENDATION:**

That Council:

1. Adopt the Summary and Draft City of Kwinana Bike and Walk Plan (Attachments A and B) for the purposes of public advertising.
2. Publically advertise the draft Kwinana Bike and Walk Plan and Summary for a period of 21 days.
3. Require a report back to Council that details the submissions received during the advertising period and a recommendation on the final form of the Kwinana Bike and Walk Plan.

**BACKGROUND:**

The City's current Bike Plan was adopted by Council in 2011. Since then, the population of the City has grown from 30,697 in 2011 to 40,058 in 2016. The number of residential dwellings also increased during this period from 11,493 to 15,311 dwellings. The State and Federal Governments have also adopted new policies concerned with the provision of cycling and walking infrastructure, including:

- Western Australian Bicycle Network Plan (DoT, 2017)
- Walking and Riding and Access to Public Transport (Australian Government, Department of Infrastructure and Transport 2013)
- Perth and Peel@3.5million – The Transport Network (DoT, March 2018)

The increase in population and changes in policy necessitated a review of the City's current Bike Plan, and in May 2016, the City successfully secured funding from the DoT to prepare a new cycling and walking plan. The City appointed GTA Consultants to assist in preparing the draft Plan. The draft Plan has been developed with input from the community, DoT, Main Roads WA, City of Cockburn, City of Rockingham and the Shire of Serpentine–Jarrahdale.

**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT****CURRENT PATTERNS OF CYCLING AND WALKING:**

The City and GTA consultants have analysed data sourced from the Australian Bureau of Statistics (ABS) and STRAVA to determine current travel patterns within the City.

The proportion of trips to work by car rather than by cycling, walking or public transport is higher within the City of Kwinana (69.8% including car passengers) than the Perth metropolitan area (67.5%). Less than one percent (0.2%) of Kwinana residents cycle to work and approximately one percent walk to work. (id community, 2016).

Data collected by the STRAVA application indicates that popular routes used by cyclists and walkers are:

- Kwinana Freeway primary route;
- Rockingham Road / Patterson Road primary route; and
- Wellard Road / Mandurah Road / Beach Street / Kwinana Beach Road / Rockingham Beach Road to connect to Rockingham (in lieu of a coastal recreational route).

The data also indicates that:

- Strategic routes on the western side of the City are more popular than the east;
- Wellard Road is a popular strategic route connection both to Rockingham Beach Road and to Patterson Road; and
- The Kwinana Freeway primary route and the Kwinana Loop Trail are popular routes for runners and walkers.

**COMMUNITY SURVEY:**

An interactive online community survey was conducted by the City enabling residents and other stakeholders to identify where the cycling and walking issues are in the City. The results of the survey are summarised in Attachment C.

The survey was available online for 6 weeks between 15 May 2017 and 30 June 2017. A total of 137 people provided active input into the survey, providing approximately 500 comments in relation to 199 locations within the City. Sixty percent of the comments were in relation to walking issues and forty percent were in relation to cycling issues.

In summary, the cycling issues raised included poor connectivity of cycling networks. A large proportion (43%) of the walking issues raised, were concerned with deficiencies in infrastructure. Particular areas of concern were the poor standard of walking paths and pedestrian crossings in Bertram and the Kwinana City Centre, and the need for cycle lanes along Thomas Road and additional signalised pedestrian crossings on Chisham Avenue.

The issues raised in the online survey assisted the City and GTA to understand the strengths and weaknesses of the existing cycling and walking routes and who is using the network. The results of the survey have been used by GTA and City Officers to identify implementation plans for future cycle routes and walking paths.



**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT****PROPOSED NETWORK HIERARCHY:**

The draft Plan utilises the cycling network hierarchy described in the Western Australian Bicycle Network Plan (DoT, 2017). The draft Plan has been designed to provide a safe and convenient network of local cycling routes and walking paths that connect schools, shops, parks, bushland, bus stops and train stations for use by people of all ages and abilities. The proposed network utilises existing routes and pathways and recommends locations where connections can be improved and the infrastructure upgraded to contemporary standards.

GTA has used its expertise to develop a network of cycling and walking routes, taking account advice provided by City Officers and information provided in the online community survey. GTA also conducted surveys of potential cycling and walking routes taking into account existing infrastructure, maintenance considerations, travel distances and ease of movement between travel destinations at different hierarchical levels.

The cycling network hierarchy is described as follows:

**Primary Routes**

These routes provide safe cycling connections separated from road traffic and form the spine of the regional cycle network.

The Western Australian Bicycle Network Plan identifies five primary routes within the City. These routes are listed in Table 1 and identified in Attachment D. In addition to these primary routes, the draft Plan identifies the Kwinana Freight Line as a potential long term primary route.

**Table 1 Primary Routes identified in the Long Term Secondary Network for Cycling and Walking**

<b>Route</b>	<b>Location</b>
Kwinana Freeway (existing)	Freeway reserve
Kwinana Train Station to Rockingham Train Station	Rail reserve
Rockingham Road	Road reserve
Kwinana Freight Line	Rail reserve
Fremantle Rockingham Controlled Access Highway	Road reserve
Mundijong Road	Road reserve

**Secondary Routes**

Secondary routes provide safe and direct connections between primary routes and major trip generators such as train stations, shopping centres, and community facilities. Ten routes are identified in the draft Plan (Long Term Secondary Cycling Network) and are listed in Table 2 and depicted in Attachments D and E. These routes connect key destinations within the City such as the Wellard and Kwinana Train Stations, Kwinana City Centre, Darius Wells Library and Resource Centre, Kwinana Adventure Park and community centres.

## 15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT

**Table 2 Secondary Routes in the Long Term Secondary Network for Cycling and Walking**

<b>Project</b>	<b>Destination</b>
Kwinana City Centre to Kwinana Train Station	Kwinana
Kwinana Train Station to Rockingham Train Station (alternative route to primary shared path in rail reserve)	Rockingham
Kwinana City Centre to Rockingham Beach	Rockingham
Kwinana City Centre to Wellard Centre	Kwinana
Wellard Train Station to Cockburn Central	Cockburn
Hope Valley to Armadale City Centre (Anketell Road and Da Haer Road)	Armadale
Kwinana City Centre to Coogee	Cockburn
Kwinana City Centre to Rockingham City Centre	Rockingham
Kwinana Train Station to Byford	Serpentine - Jarrahdale
Kwinana City Centre to Mundijong	Serpentine - Jarrahdale
Tramway Reserve Trail	Kwinana

**Local Routes**

Local routes are proposed to be structured around the residential neighbourhoods within the City and focus on providing access to schools, shops, parks and bus stops for people of all ages and abilities. The draft Plan includes detailed local route plans for Bertram, Leda, Kwinana City Centre and Calista as priorities for implementation, following the analysis and online community consultation undertaken to date. A local route plan for Medina has also been included in the draft Plan to demonstrate new approaches to designing cycle routes, such as bike boulevards. These alternative approaches will require further consideration and consultation as part of the City's Place Making Program and long term financial planning.

It is also anticipated that more detailed local route planning will be required for Parmelia, Wellard and Orelia in the future. Nonetheless, implementation plans have been prepared for these areas outlining upgrades and improvements that are required as a priority (refer to Sections 15, 16 and 17 of the draft Plan).

**LEGAL/POLICY IMPLICATIONS:****City of Kwinana**

- Strategic Community Plan 2017 -2027

**State Government**

- Western Australian Bicycle Network Plan (DoT, 2017)
- Perth and Peel@3.5million – The Transport Network (DoT, March 2018)



**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT****Federal Government**

- Walking and Riding and Access to Public Transport (Australian Government, Department of Infrastructure and Transport, 2013)

**FINANCIAL / BUDGET IMPLICATIONS:**

The preparation and advertising of the draft Plan will be undertaken within the City's existing budget.

It is necessary for the City to adopt a bike plan in accordance with the Western Australian Bicycle Network Plan and the DoT's policies in order to receive grants from the State Government to plan, design and build cycling infrastructure.

**ASSET MANAGEMENT IMPLICATIONS:**

A bike plan prepared in accordance with the Western Australian Bicycle Network Plan and the DoT's policies will support the City's application for grants from the State Government to plan, design and build cycling infrastructure.

The Plan once finalised and adopted by Council will serve as a guide to the City for its consideration in planning and budgeting for the delivery of future cycling and walking networks. City Officers will consider the Plan and any priorities as part of ongoing budgeting for infrastructure and asset management provision, and will be utilised to inform the City's long term financial planning.

The City will be financially responsible for maintaining cycle routes and walking paths within the City, with the exception of the route along the Kwinana Freeway.

**ENVIRONMENTAL IMPLICATIONS:**

Cars are a major source of common air pollutants. The intention of the draft Plan is to create neighbourhoods within the City where cycling and walking are an integrated part of daily life, reducing the need for short trips by car and exhaust emissions.

**STRATEGIC/SOCIAL IMPLICATIONS:**

The draft Plan will support the achievement of the following outcomes and objectives detailed in the Strategic Community Plan 2017-2027.

<b>Plan</b>	<b>Outcome</b>	<b>Objectives</b>
Strategic Community Plan 2017-2027	A community in which every resident can cycle or walk to local facilities and destinations, and the opportunity to choose a healthy lifestyle.	Improve levels of disability access and inclusion throughout the community.
		Provide a safe and efficient integrated network of footpaths and cycle routes.

**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT**

		The community has easy access to, well equipped quality parks and public open spaces.
		A healthy active community with services for everyone's needs.

**COMMUNITY ENGAGEMENT:**

Prior to preparing the draft Plan, an interactive online survey was prepared for the City enabling residents and others stakeholders to identify locations where they like walking and riding and where there are cycling and walking issues, such as the need for a path or maintenance to an existing path.

The survey results assisted the City and GTA to prepare the draft Plan and will be used by the City to guide the long term implementation of future cycle routes and walking paths.

The draft Plan has been developed with input from the DoT, Main Roads WA, City of Cockburn, City of Rockingham and the Shire of Serpentine – Jarrahdale.

The draft Plan is deemed to meet the category of “High Impact: All of Kwinana” in the Community Engagement Council Policy because it is an initiative with *“a high level of real or perceived impact or risk across the whole local government area.”*

Given the strategic nature of the draft Plan, it will be publically advertised together with the Summary for a period of 21 days. The following is proposed to take place during the advertising period:

- Media release;
- Email distribution to stakeholders (cycling and walking groups);
- Notify participants in the online community survey;
- Notice in local newspaper;
- Notice on the City's webpage;
- Facebook post;
- Ask a question online; and
- Mail, email or phone the City with ideas and comments.

All comments and submissions will be considered prior to the finalisation of the Plan.

**PUBLIC HEALTH IMPLICATIONS:**

The draft Bike and Walk Plan has been prepared to provide a safe network of cycle routes and walking paths that are convenient for people of all ages and abilities to ride or walk to local destinations so that cycling and walking as the preferred choices for short trips and people have the opportunity to choose a healthy lifestyle.



**15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT**

Cycling and walking have the potential to improve both mental and physical health. The physical health benefits are far ranging and include reduced obesity levels and reduction in the risk of cardiovascular disease and diabetes. The effects of a number of mental health conditions such as depression and anxiety can also be reduced.

**RISK IMPLICATIONS:**

Risk Event	Without a Bike and Walk Plan the provision of cycling routes and walking paths will be ad hoc and disjointed.  Convenient cycle or walking facilities may not be provided and local residents will continue to rely on vehicles to reach local facilities and daily destinations, which will continue to contribute to declining public health.
Risk Theme	A poorly integrated cycling and walking network.
Risk Effect/Impact	Inhibits selecting walking and cycling as the preferred choice for short trips to local destinations.
Risk Assessment Context	Operational
Consequence	Moderate
Likelihood	Possible
Rating (before treatment)	Moderate
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	The Bike and Walk Plan provides greater clarity and guidance to State Government, the City, local residents and developers regarding the provision of an integrated cycle and walking network in the City.
Rating (after treatment)	Low

**COUNCIL DECISION**

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**MOVED CR W COOPER****SECONDED CR M ROWSE****That Council:**

- 1. Adopt the Summary and Draft City of Kwinana Bike and Walk Plan (Attachments A and B) for the purposes of public advertising.**
- 2. Publically advertise the draft Kwinana Bike and Walk Plan and Summary for a period of 21 days.**

*15.6 DRAFT KWINANA BIKE AND WALK PLAN – REQUEST TO ADVERTISE FOR PUBLIC COMMENT*

- 3. Require a report back to Council that details the submissions received during the advertising period and a recommendation on the final form of the Kwinana Bike and Walk Plan.**

**CARRIED**  
**8/0**



# **BIKE AND WALK PLAN**

## Summary

**DRAFT**  
**2018**



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9. Secondary Route – Kwinana City Centre to Rockingham Beach
10. Secondary Route – Kwinana City Centre to Wellard Neighbourhood Centre
11. Secondary Route – Wellard Train Station to Cockburn Central (Kwinana Section to Rowley Road)
12. Secondary Route – Hope Valley to Armadale (Kwinana Section to Rowley Road)
13. Secondary Route – Kwinana to Coogee
14. Secondary Route - Kwinana City Centre to Rockingham City Centre
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18. Bertram Long Term Local Route Plan
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## **Tables**

1. Long Term Primary and Secondary Cycling and Walking Network
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## **Appendices**

1. Long Term Primary and Secondary Routes Cycling Network
2. Long Term Secondary Route Cycling Network



# 1. Introduction

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The City of Kwinana's (the City) vision is to create a community that is:

*Rich in spirit, alive with opportunities and surrounded by nature.*

The draft Bike and Walk Plan has been prepared to meet key aspects of this vision by:

- identifying a safe network of cycle routes and walking paths (integrating existing paths, future paths and upgrades) that are convenient for people of all ages and abilities to ride or walk to local destinations such as schools, shops, parks, bushland, bus stops and train stations;
- promoting communities where cycling and walking as the preferred choices for short trips and everyone has the opportunity to choose a healthy lifestyle; and
- integrating the local cycling routes and walking paths with the district cycling and walking network to connect with areas beyond the City.

In preparing the draft Plan the City has:

- evaluated the safety and connectivity of the existing cycling and walking network in the City;
- reviewed population data (age and health) to determine how the cycle and walking network should be designed to best meet the requirements of the local community;
- investigated the current level of use of the existing cycling and walking network in the City;
- consulted with the local community using an online interactive survey;
- identified opportunities to upgrade the City's cycling and walking network in accordance with best practice design and infrastructure standards to facilitate safe and convenient travel to local destinations;
- developed a long term plan for the continued development of a network of cycling routes and walking paths; and
- identified community and education programs to reinforce and promote the benefits of active transport (cycling and walking) on the overall health and wellbeing of the community, and as a viable alternative to car trips.

In conjunction with the Department of Transport (DoT), the City engaged GTA Consultants (GTA), an experienced transport planning consultancy, to prepare the draft Plan. GTA's expertise in active transport planning, combined with the City's engagement with the local community have contributed to the development of the draft Plan.

The draft Plan supports and integrates with Federal and State Government strategies and policies and will align with National and State infrastructure and funding programs.

The draft Plan provides a guide to the City for its consideration in planning and budgeting for the delivery of future cycling and walking infrastructure. The City will consider the draft Plan and any priorities as part of ongoing budgeting for infrastructure and asset management provision, and as a part of the City's long term financial planning.

The draft Plan is now being advertised to seek community and stakeholder input into its recommendations. This community feedback will be considered by Council and changes made where appropriate prior to the adoption of the final Plan.

This summary paper aims to provide an overview of the draft Bike and Walk Plan analysis, community consultation outcomes and the implementation plan going forward for the City.



## 2. Current Patterns of Cycling and Walking

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The City and GTA consultants have analysed data sourced from the Australian Bureau of Statistics and STRAVA to determine current travel patterns within the City.

Community engagement has also been essential to understanding where improvements could be made to the existing network, and developing a draft Plan that will enable local residents to cycle and walk to local destinations. A key part of the community consultation to date has been an interactive online survey as outlined in Section 3.

### 2.1 Modes of Travel

The proportion of trips to work by car rather than by cycling, walking or public transport is higher within the City of Kwinana (69.8% including car passengers) than the Perth metropolitan area (67.5%). Less than one percent (0.2%) of Kwinana residents cycle to work and approximately one percent walk to work. (id community, 2016)

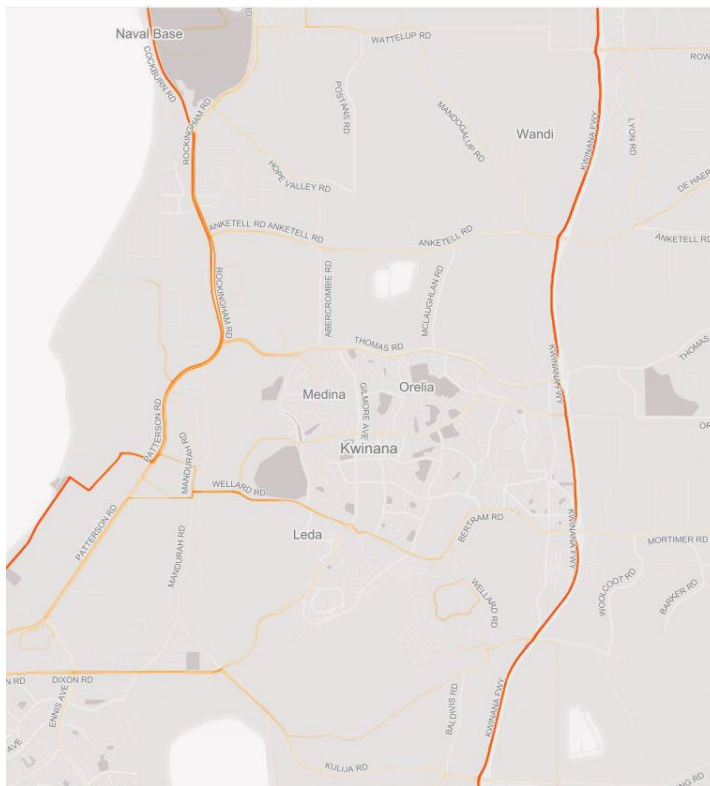
Data collected by the STRAVA application (Figure 1) indicates that popular routes used by cyclists and walkers are:

- Kwinana Freeway primary route;
- Rockingham Road / Patterson Road primary route; and
- Wellard Road / Mandurah Road / Beach Street / Kwinana Beach Road / Rockingham Beach Road to connect to Rockingham (in lieu of a coastal recreational route).

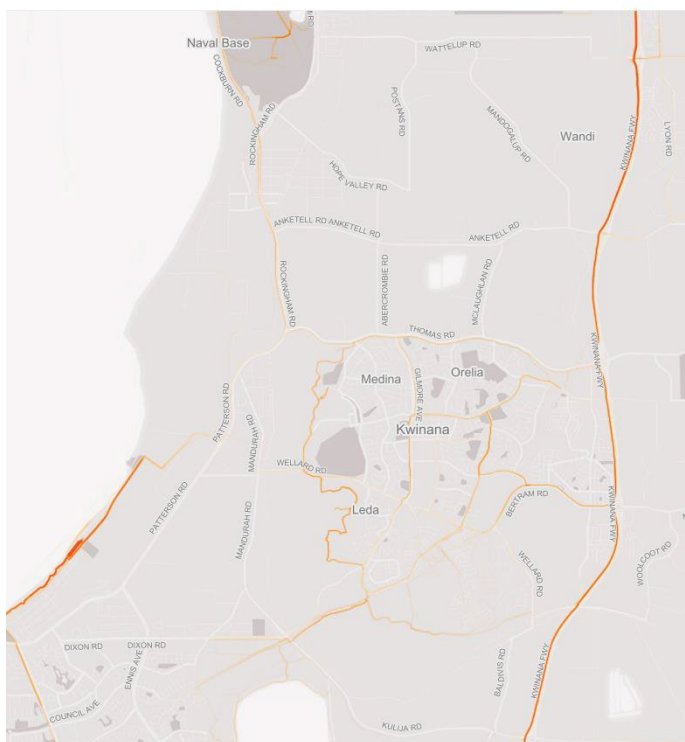
The data also indicates that:

- Strategic routes on the western side of the City are more popular than the east;
- Wellard Road is a popular strategic route connection both to Rockingham Beach Road and to Patterson Road; and
- The Kwinana Freeway primary route and the Kwinana Loop Trail are popular routes for runners and walkers (Figure 2).

**Figure 1 STRAVA Cycling Data**



**Figure 2 STRAVA Walking Data**





## **2.2 The existing Cycling and Walking Network**

There is an extensive network of cycle routes and footpaths within the City that have been constructed, either by the City or by private developers, in accordance with earlier bike plans prepared by the City. However, there are still areas where cycle routes and walking paths are poorly connected or the road environment does not provide a safe cycle environment.

### **2.2.1 Existing Cycling Network**

Kwinana benefits from having a primary route along the western side of the Kwinana Freeway which provides connection to surrounding areas. However, the Kwinana and Wellard railway stations are not connected by a primary route along the rail line and there is also a gap in the coastal primary route due to the difficulty in providing a continuous route through the Kwinana Industrial Area.

### **2.2.2 Existing Walking Network**

There are a number of roads within the City that have inadequate footpaths and pedestrian crossings, especially crossings that are disability access compliant. There are also a number of locations in the City where there are barriers that restrict the movement of cyclists and pedestrians such as along the eastern side of the Kwinana Freeway and along the rail line between the Kwinana and Wellard Train Stations.

The draft Plan proposes to extend and upgrade cycle routes and footpaths, and improve the safety and connectivity of the existing cycling and walking network in the City.

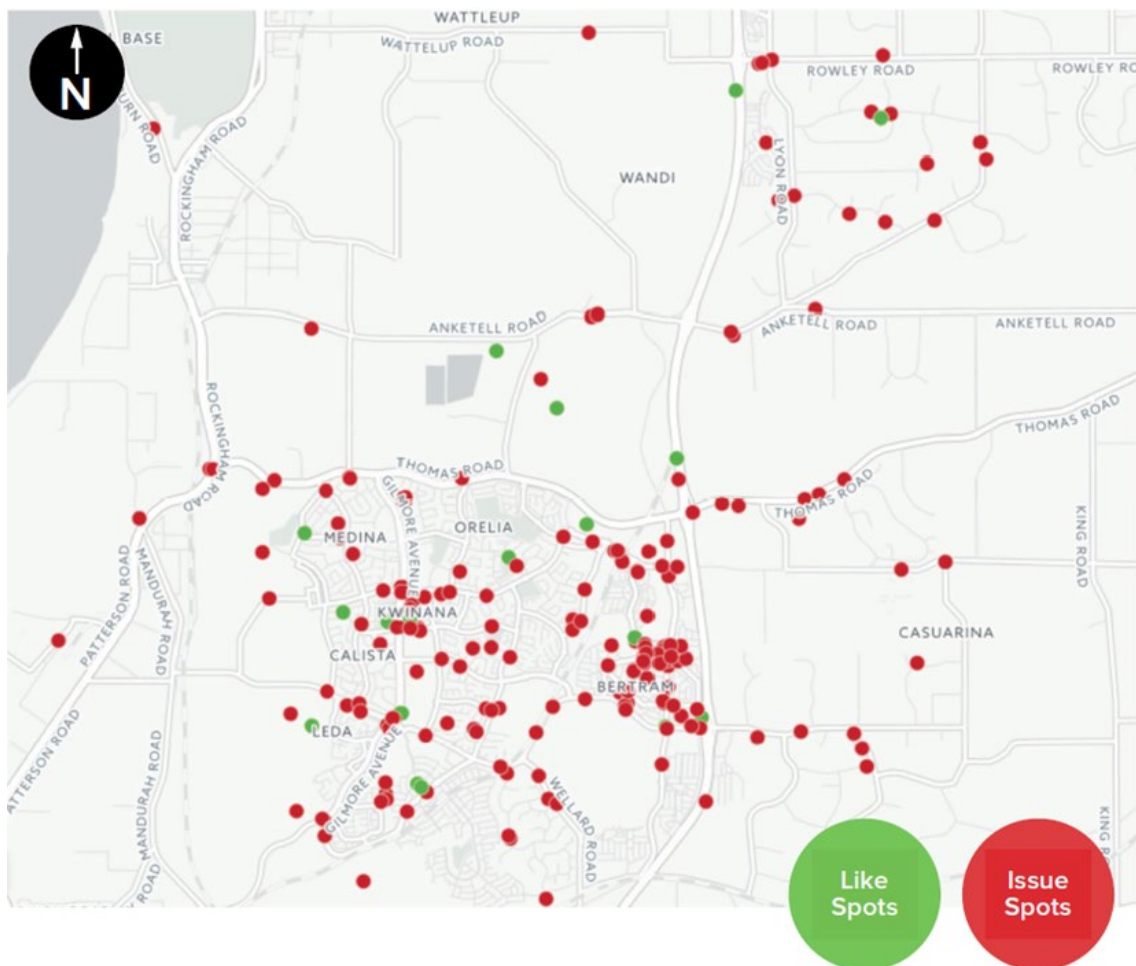
## **2.3 Cyclist and Pedestrian Safety**

The safety of the cycling and walking network is paramount so that people are not deterred from cycling and walking to local destinations and are likely to drive instead. According to most recent crash data from Main Roads Western Australia, between 2011 and 2015, there were 2,558 reported crashes within the City. Eighteen of the recorded crashes involved pedestrians causing two pedestrians fatalities and twenty crashes involved cyclists.

### 3. Community Consultation

Prior to preparing the draft Plan, the City conducted an interactive online community survey enabling residents and other stakeholders to identify locations where they liked to walk and ride and where there are cycling and walking issues (eg. the need for a walking path, or maintenance to an existing path) (Figure 3). The issues raised in the online survey assisted the City and GTA to understand the strengths and weaknesses of the existing cycling and walking routes and who is using the network.

**Figure 3 Spatial distribution of locations identified in the Online Community Survey**





### **3.1 Outcomes of the Online Community Survey**

The online survey was available during May and June 2017. A total of 137 people provided active input into the survey, providing approximately 500 comments in relation to 199 locations within the City. Sixty percent of the comments were in relation to walking issues and forty percent were in relation to cycling issues.

Slightly more women (53%) than men (48%) participated in the survey and the majority of participants were aged between 35 and 49. Only four percent of participants were under the age of 24. Women identified the majority of locations concerned with walking issues and men submitted the majority of locations concerned with cycling issues. The majority of people who responded to the survey (88%) live within the City.

The issues raised in the online survey have assisted in the City's understanding of the existing cycling and walking network, however, more importantly, the survey results have been used by the City to plan the long term cycling and walking network.

#### **3.1.1 Cycling Issues**

Cycling issues represented forty percent or 69 spots submitted on the map. As shown on Figure 4, cycling issues are dispersed across the City.

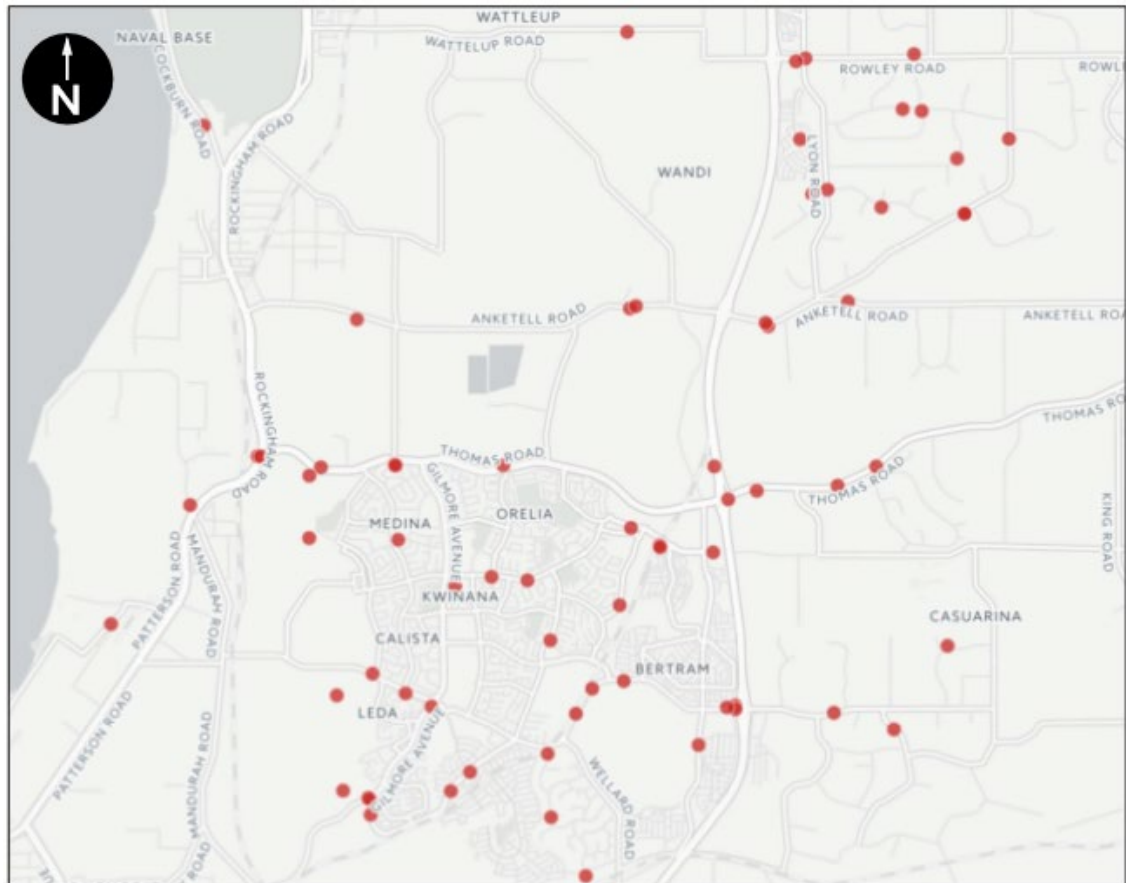
Some common issues were lack of connectivity of cycle networks and poor quality of cycle paths.

The survey results were considered by GTA and City Officers who have identified the need to:

- consider new safe cycle lanes along and connecting to Thomas Road;
- explore opportunities to widen existing narrow cycling lanes; and
- pave a number of cycling connections to improve connections between cycle routes.

These comments have been integrated into the draft Plan.

**Figure 4 Location of Cycling Issues identified in the Online Community Survey**



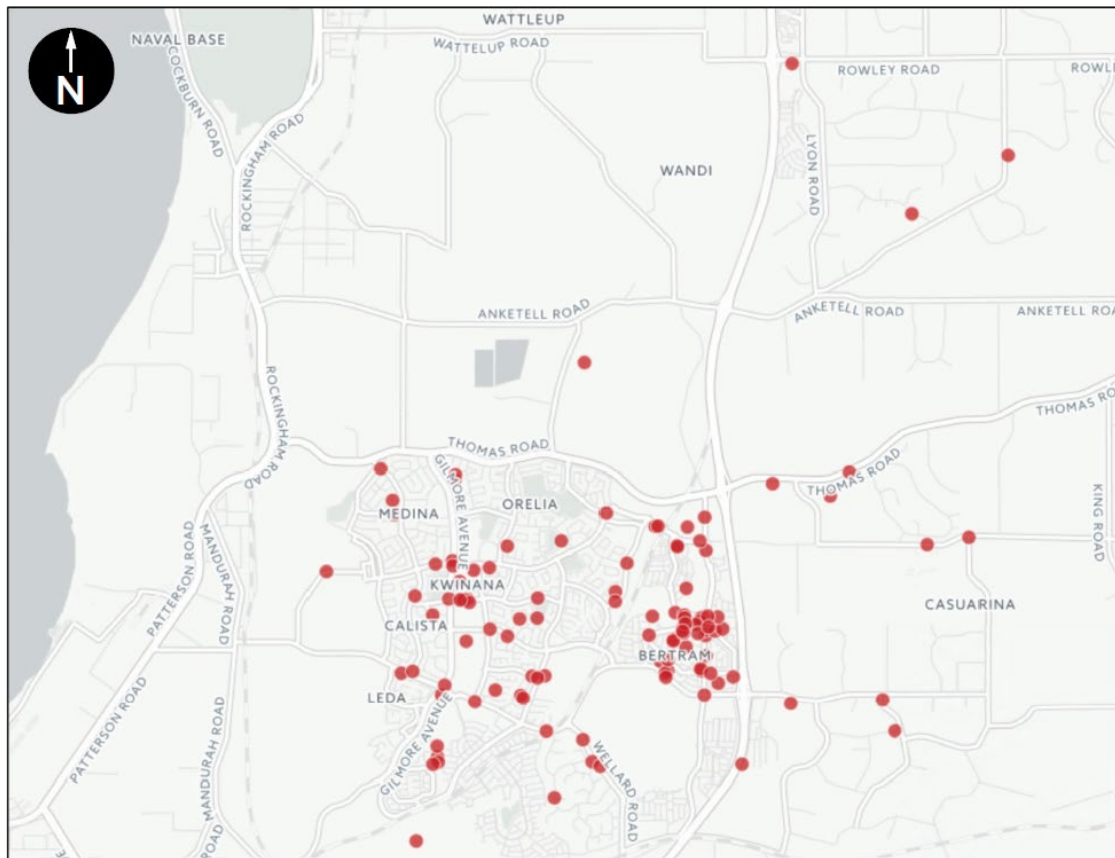
### **3.1.2 Walking Issues**

A large proportion (43%) of the walking issues raised in the online survey were concerned with problems, such as a lack of footpaths or pedestrian crossings in particular areas, including:

- a need for more footpaths in Bertram and the Kwinana City Centre (Figure 5);
- additional signalised crossings required on Chisham Avenue; and
- requests for improved maintenance of the existing network of footpaths (uneven surfaces).



**Figure 5** Location of Walking Issues identified in the Online Community Survey



## 4. Encouragement and Education

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The City of Kwinana has a high rate of obesity and some of the highest rates of Type II diabetes and cholesterol in Australia (Curtin University, 2015). Although people are aware incorporating walking and cycling into daily travel will provide regular exercise and help improve long term health, few people actively cycle or walk as an everyday transport option.

The City's investment in providing and maintaining safe and conveniently located walking and cycling paths, good quality facilities such as signage, seating, shade, lighting, drinking fountains and bicycle parking, supported by a continuous encouragement and education program will have a positive impact on the overall health and wellbeing of the community.

### 4.1 Behaviour Change Approach

There are many ways to encourage behaviour change and the methods proposed by the City are:

- Raise awareness of cycling and walking by including information regarding these activities on the City's website, newsletter and social media;
- Ensure route maps are easily accessible, on the City's website;
- Provide cycling and walking education courses;
- Ensure that the infrastructure and supporting facilities (ie bicycle parking) are well maintained, safe, legible and convenient; and
- Encourage existing cyclists and walkers to keep riding and using the City's network of cycle routes and footpaths.

### 4.2 Targeted Education Program

The City will collaborate with the DoT, Main Roads Western Australia, and the Road Safety Commission to implement a Driver and Cyclist Education Program.

### 4.3 Schools Program

The early exposure of children to cycling and walking as an enjoyable way to spend their leisure time and to get to/from school has been proven to contribute significantly to children continuing to cycle into adulthood. The opportunities for encouraging school aged children to ride bicycles and/or walk include:

- Cycling and walking to and from school;
- Encouraging parents to cycle or walk to school with their children;
- Receiving cycling lessons at school, covering the basics of riding a bicycle and safety on and around the roads;



- Participating in the *Your Move* Program ([yourmove.org.au](http://yourmove.org.au)), where schools can earn points by sharing stories regarding active transport. Points can be redeemed for items and services such as bicycle and scooter education sessions.

## 5. Designing the Bike and Walk Network

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The draft Plan utilises the cycling network hierarchy described in the Western Australian Bicycle Network Plan (DoT, 2017). The cycling network hierarchy is described as follows:

- **Primary Routes** are regional routes such as the existing Primary Shared Paths (PSPs) along the Kwinana Freeway that connect to major destinations. These paths provide safe cycling connections separated from road traffic and form the spine of the regional cycle network.
- **Secondary Routes** provide safe and direct connections between primary routes and major trip generators within the City such as train stations, shopping centres, and community facilities.
- **Local Routes** provide safe cycling and walking routes in neighbourhood areas between local facilities such as local shops, schools, parks, bus stops and train stations.

The draft Plan has been based on the following design principles:

- **Safety** - Well designed and lit cycling routes and walking paths will improve the safety of cyclist and pedestrians, particularly children and the elderly. Separation of vehicles, cyclists and pedestrians will improve safety in busy areas such as around schools.
- **Directness** - a convenient network of local cycling routes and walking paths that uses direct routes to connect schools, shops, parks, bus stops, train stations for use by people of all ages and abilities.
- **Connectivity** – Ensure connections to key destinations are well serviced by interconnected pedestrian and cycle routes, designated crossings, and suitable ramps and that there is clear directions or signage.
- **Attractiveness** - Cycling and walking routes around natural landscapes can add to the enjoyment and increase the use of the infrastructure.
- **Comfort** – Ensure that pedestrian crossings, drinking fountains, street trees (shade), seating and bike racks are provided along frequently used cycle and walking routes and at key destinations so that cyclists and walkers feel safe and more comfortable.

GTA has used its expertise to develop a network of cycling and walking routes for the draft Plan, taking into account advice provided by City Officers and information provided in the online community survey. GTA also conducted surveys of potential cycling and walking routes taking into account existing infrastructure, maintenance considerations, travel distances and ease of movement between travel destinations at different hierarchical levels.



## 5.1 Primary Routes

The Western Australian Bicycle Network Plan (DoT, 2017) identifies five primary routes within the City as shown in Appendix 1 and listed in Table 1. In addition to these Primary routes, the draft Plan identifies the Kwinana Freight Line as a potential long term primary route providing an uninterrupted safe connection to cycle routes in the City of Cockburn and Fremantle.

Primary routes can be in the form of high quality cycle only or shared paths, located adjacent to the freeway, major roads and rail corridors.

**Table 1 Primary routes identified in the Long Term Network for Cycling and Walking**

Route	Location
1. Kwinana Freeway (existing)	Freeway reserve
2. Kwinana Train Station to Rockingham Train Station	Rail reserve
3. Rockingham Road	Road reserve
4. Kwinana Freight Line	Rail reserve
5. Fremantle Rockingham Controlled Access Highway	Road reserve
6. Mundijong Road	Road reserve

### 5.1.1 Kwinana Freeway

There is an existing primary route on the western side of the Freeway between Perth City and South Yunderup. This is one of the more frequently used cycle routes in the City.

The Western Australian Bicycle Network Plan also suggests providing a primary route on the eastern side of the Freeway, in the long term. This route is identified in Appendix 1.

### 5.1.2 Kwinana Train Station to Rockingham Train Station

A long term primary route is proposed in the Perth and Peel@3.5million – The Transport Network along the rail line to connect the Kwinana, Wellard and Rockingham trains stations. This route is unlikely to be completed for many years, therefore, an alternative on-road secondary route is proposed to link these train stations. This route is described in more detail in Section 5.2.2.

### **5.1.3 Rockingham Road**

A primary route is proposed in the Perth and Peel@3.5million – The Transport Network along Rockingham Road to provide access between the City of Kwinana and Rockingham; and also to connect to the future Fremantle-Rockingham Controlled Access Highway.

This route is shown in Appendices 1 and 2.

### **5.1.4 Kwinana Freight Line and Fremantle Rockingham Controlled Access Highway**

While not identified in the Perth and Peel@3.5million – The Transport Network, the draft Plan identifies a long-term opportunity for a primary route along the freight line to provide an uninterrupted safe connection between the City of Kwinana to areas within the Cities of Fremantle and Cockburn and the Shire of Serpentine-Jarrahdale.

This route is identified in Appendices 1 and 2.

### **5.1.5 Mundijong Road**

A primary route is proposed in Perth and Peel@3.5million – The Transport Network along Mundijong Road to provide access between the City of Kwinana, Tonkin Highway and Mundijong.

This route is identified in Appendix 1.

## **5.2 Secondary Routes**

Ten secondary routes are identified in the draft Plan as shown in Appendices 1 and 2 and Table 2. These routes connect key destinations within the City such as the Wellard and Kwinana Train Stations, Kwinana City Centre, Wellard to the Kwinana City Centre, Darius Wells, Kwinana Adventure Park and community centres.

Secondary routes can be in the form of high quality shared paths, protected bike lanes and safe active streets.

**Table 2 Secondary routes in the Long Term Secondary Network for Cycling and Walking**

Project	Destination	Figure
Kwinana City Centre to Kwinana Train Station	Kwinana	6
Kwinana Train Station to Wellard Road (Kwinana Section Stage 1)	Kwinana	7
Wellard Road to Gilmore Avenue (Kwinana Section Stage 2)	Kwinana	8
Kwinana City Centre to Rockingham Beach	Rockingham	9
Kwinana City Centre to Wellard Centre	Kwinana	10
Wellard Train Station to Cockburn Central	Cockburn	11
Hope Valley to Armadale	Armadale	12
Kwinana City Centre to Coogee	Cockburn	13
Kwinana City Centre to Rockingham City Centre	Rockingham	14
Kwinana Train Station to Byford	Serpentine - Jarrahdale	15
Kwinana City Centre to Mundijong	Serpentine - Jarrahdale	16
Tramway Reserve Trail	Kwinana	17



### 5.2.1 Kwinana City Centre to Kwinana Train Station

The draft Plan is proposing an important secondary route between the Kwinana City Centre and the Kwinana Train Station to link these two high profile destinations. Residents in Parmelia and Orelia will benefit from this route which will encourage travel to the train station and City Centre by cycling or walking.

Instead of adopting a one-route alignment, a number of alternative routes have been selected to provide people with a choice (Figure 6). Sulphur Road, the most direct route, utilises sections of access roads with additional shared path sections and bicycle symbols proposed.

**Figure 6 Secondary route – Kwinana City Centre to Kwinana Train Station**

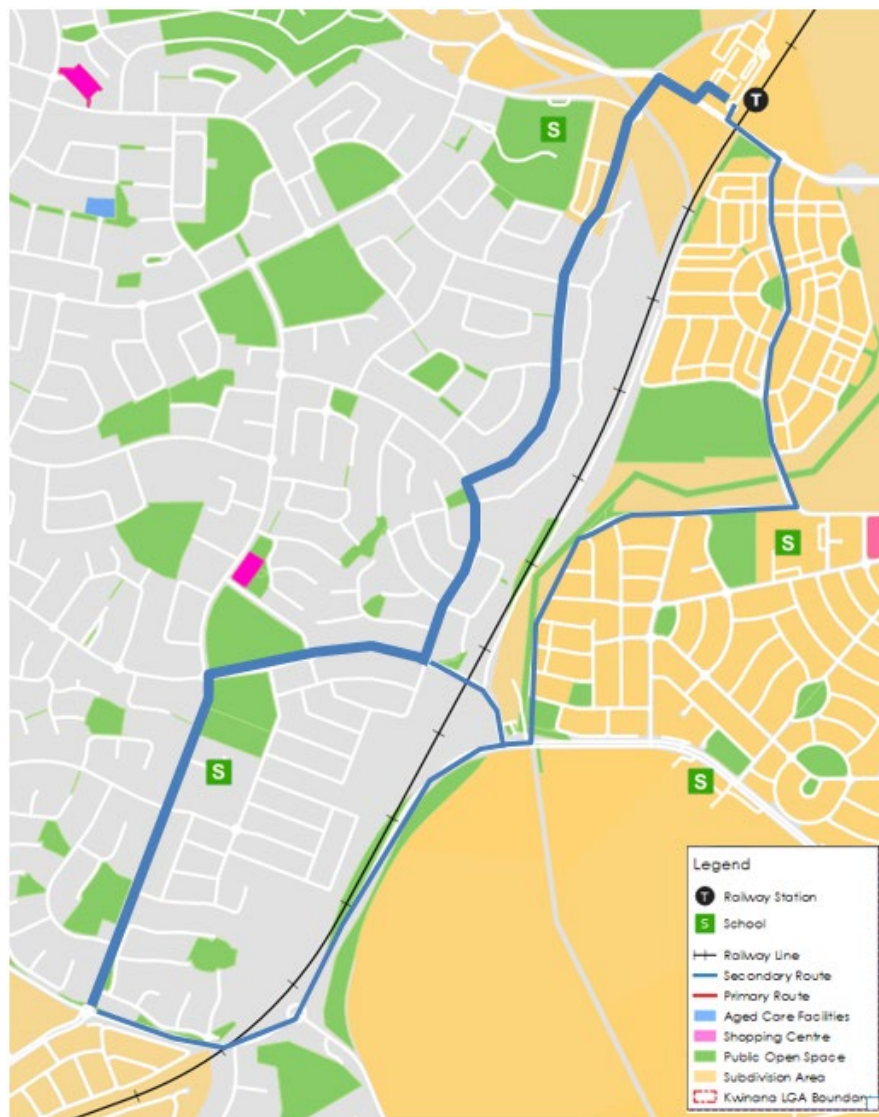


### 5.2.2 Kwinana Train Station to Rockingham Train Station

A long term primary route is proposed in the Perth and Peel@3.5million – The Transport Network along the rail line to connect the Kwinana, Wellard and Rockingham train stations. This route is unlikely to be completed for many years, therefore, an alternative on-road alignment is proposed in the draft Plan as a secondary route to link the two train stations. This route is described in more detail in Figures 7 and 8.

Residents in Parmelia and Wellard will benefit from this route which will encourage travel to the train station by cycling or walking.

**Figure 7 Secondary Route – Kwinana Train Station to Wellard Road (Kwinana Section Stage 1)**



**Figure 8 Secondary Route – Wellard Road to Gilmore Avenue  
(Kwinana Section Stage 2)**





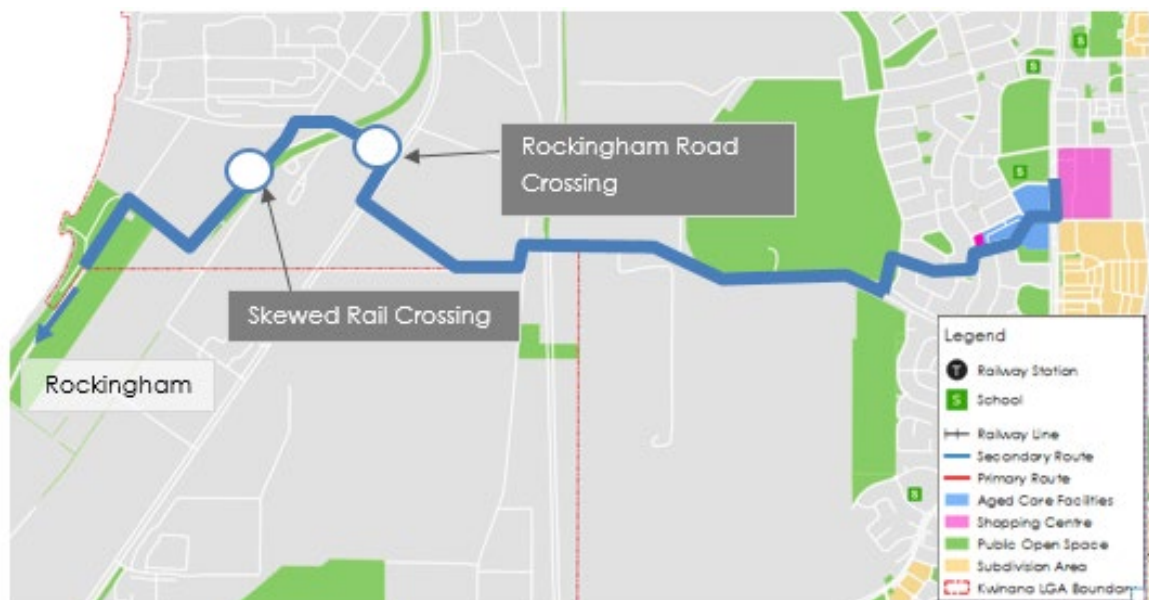
### 5.2.3 Kwinana City Centre to Rockingham Beach

A popular cycle route is between the Kwinana City Centre to Rockingham Beach, along Wellard Road (Figure 9).

Key issues associated with this route are the crossing of the freight rail tracks on Kwinana Beach Road and the Rockingham Road intersection. Further detailed design work and consultation with stakeholders is required prior to modifying and upgrading this crossing to improve cycling safety.

The exact route through Calista will be explored in consultation with local residents and cyclists to consider low speed boulevards on the internal road network as well as a direct route on the Wellard Road shared path.

**Figure 9 Secondary Route – Kwinana City Centre to Rockingham Beach**



#### 5.2.4 Kwinana City Centre to Wellard Neighbourhood Centre

This north-south secondary route is proposed to connect the two activity centres in the City (Figure 10).

There are two routes options, a western option on Gilmore Avenue to Henley Boulevard, and an eastern option on Meares Avenue and Abingdon Park. The route should provide connections to the Kwinana Adventure Park on the western side of Gilmore Avenue.

**Figure 10 Secondary Route – Kwinana City Centre to Wellard Neighbourhood Centre**



### 5.2.5 Wellard Train Station to Cockburn Central

This secondary route is actually a series of local routes (Figure 11). People travelling to Cockburn Central are likely to do so on the Kwinana Freeway, but people accessing destinations on the east will need a north-south route. This route will run through the future residential areas situated on the eastern side of the freeway from Wellard through to Honeywood, and eventually connect to Cockburn Central using the cycle network through Atwell.

The western part of the route from Wellard to the Kwinana Freeway uses Lambeth Circle and Leda Boulevard. It is expected to provide connections to Homestead Ridge from this route, as well as the developments in Baldivis to the south.

**Figure 11 Secondary Route – Wellard Train Station to Cockburn Central (Kwinana Section to Rowley Road)**

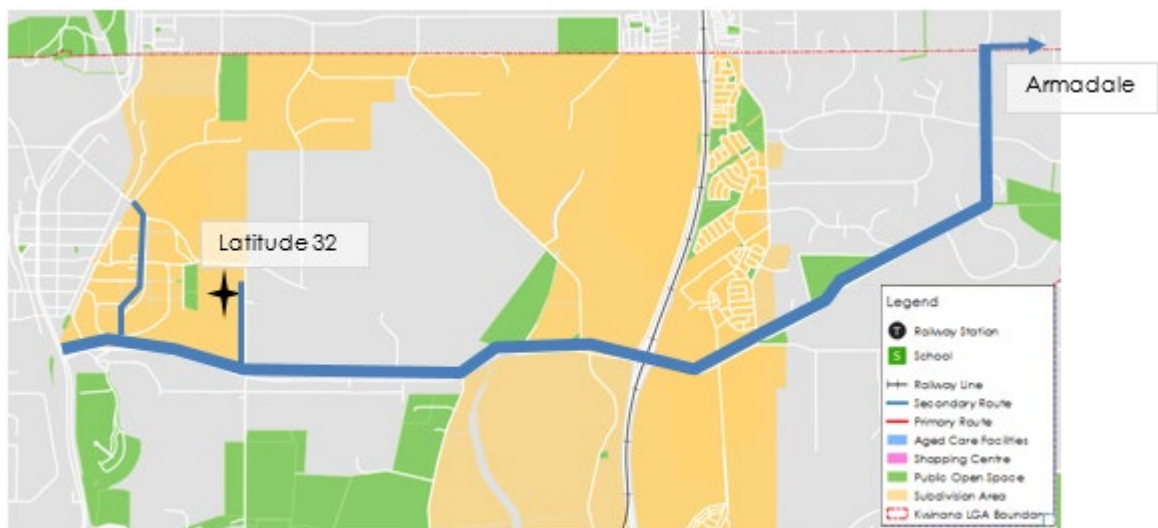




### 5.2.6 Hope Valley to Armadale City Centre

This east-west secondary route runs to the north of the City of Kwinana and will form the main arterial cycle route for new developments in this region (Figure 12). This route will also provide connections to the Kwinana Industrial Area and Latitude 32.

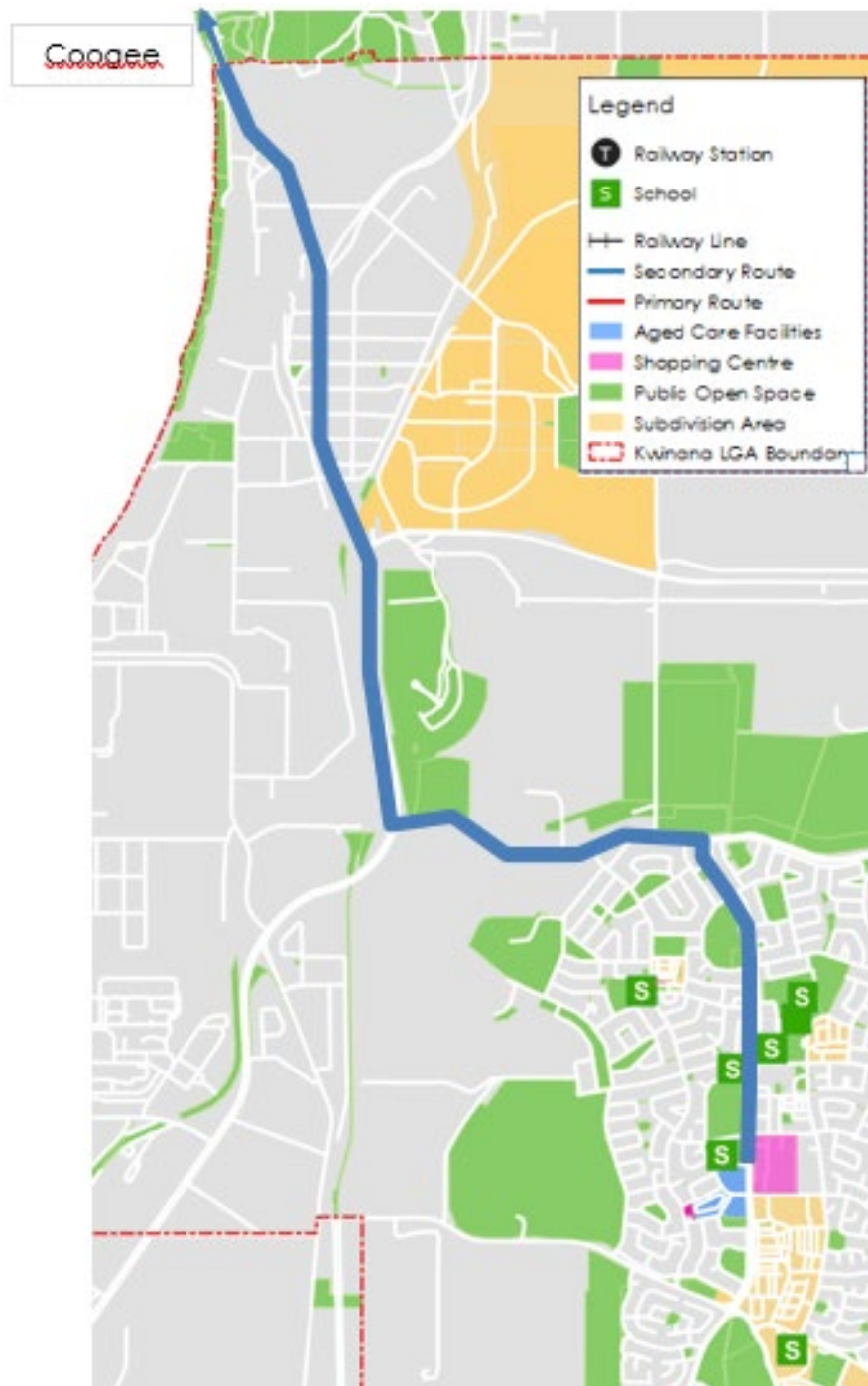
**Figure 12 Secondary Route – Hope Valley to Armadale (Kwinana Section to Rowley Road)**



### **5.2.7 Kwinana City Centre to Coogee**

This north-south secondary route uses Gilmore Avenue, Thomas Road, Rockingham Road (Thomas Road to Cockburn Road), and Cockburn Road (Figure 13). This route is expected to ultimately link up with the coastal recreation path north of Coogee to Fremantle and provides an off-road link into Kwinana from the coastal areas to the north of the City.

Figure 13 Secondary Route – Kwinana to Coogee

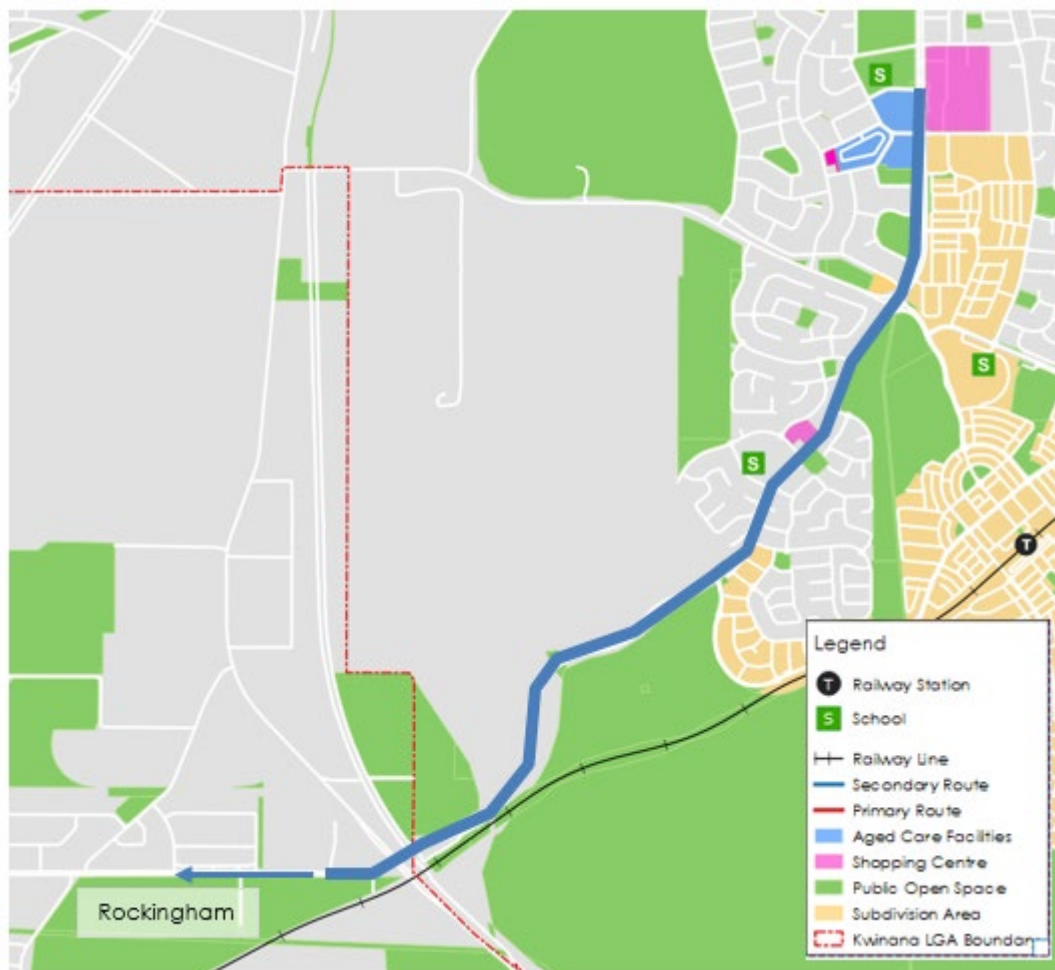




### 5.2.8 Kwinana City Centre to Rockingham City Centre

While the more popular route to Rockingham is via the foreshore (see Section 5.2.3), a secondary route is proposed to connect the Kwinana City Centre from the Rockingham City Centre. This route uses Gilmore Avenue and Dixon Road (Figure 14). The exact alignment into Rockingham will require consultation with the City of Rockingham and Department of Transport. Note some overlap exists between this route and the secondary route between the Kwinana Train Station and Rockingham Train Station (see 5.2.2).

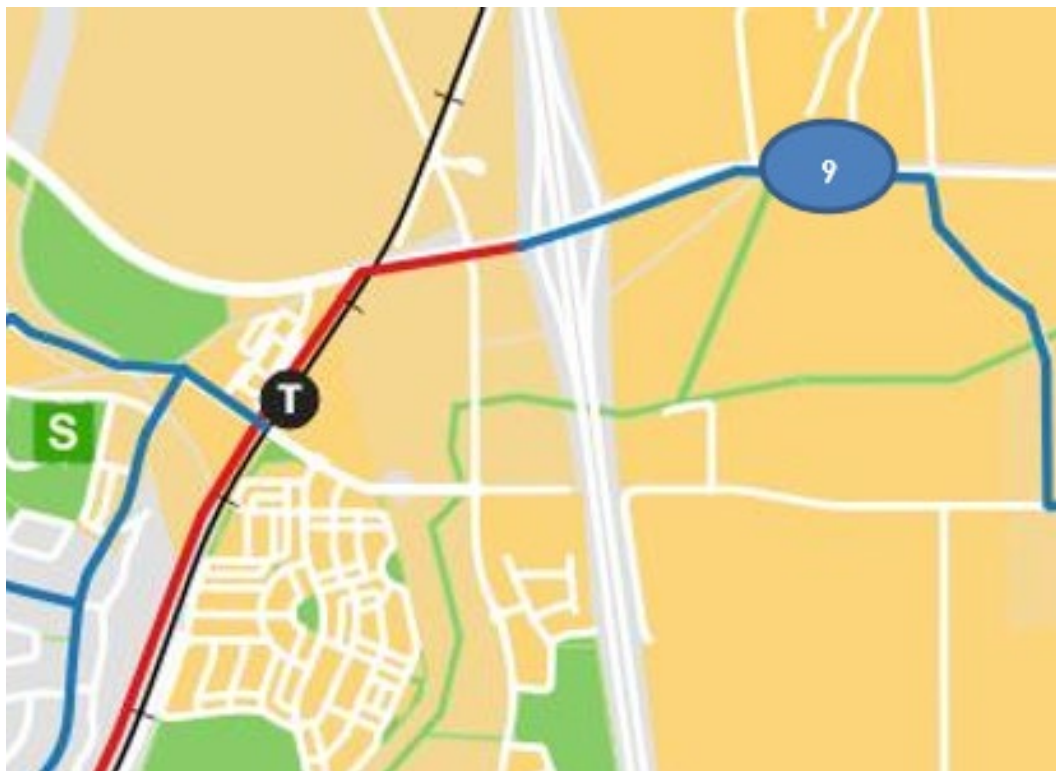
**Figure 14 Secondary Route – Kwinana City Centre to Rockingham City Centre**



### 5.2.9 Kwinana Train Station to Byford

A secondary route is proposed towards Byford using the shared path facilities on the Thomas Road overpass of the Kwinana Freeway then along Orton Road (Figure 15). Further consultation between the City and the Shire of Serpentine Jarrahdale and DoT is required regarding the alignment of this route, with Thomas Road requiring a principal shared path, and Orton Road providing a more direct connection into Byford on a low volume but high-speed road.

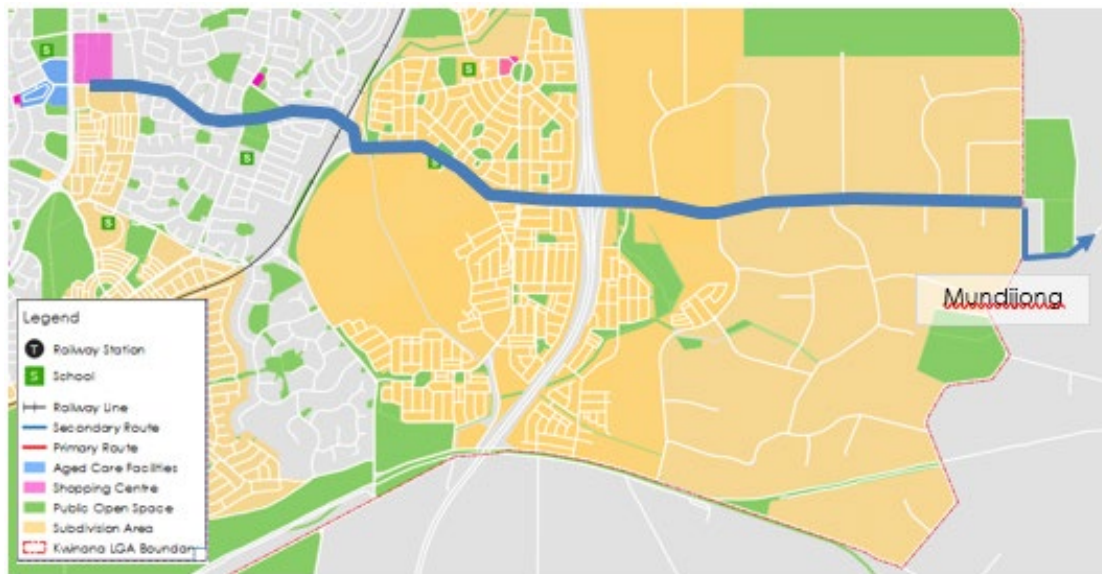
**Figure 15 Secondary Route – Kwinana Freeway to Byford (Casuarina Road)**



### 5.2.10 Secondary Route - Kwinana City Centre to Mundijong

Another east-west secondary route connects Kwinana City Centre to Mundijong via Challenger Road, Bertram Road and Mortimer Road (Figure 16). Implementation of this route will require additional consultation with the Shire of Serpentine-Jarrahdale and Department of Transport.

**Figure 16 Secondary Route – Kwinana to Mundijong (Coyle Road)**

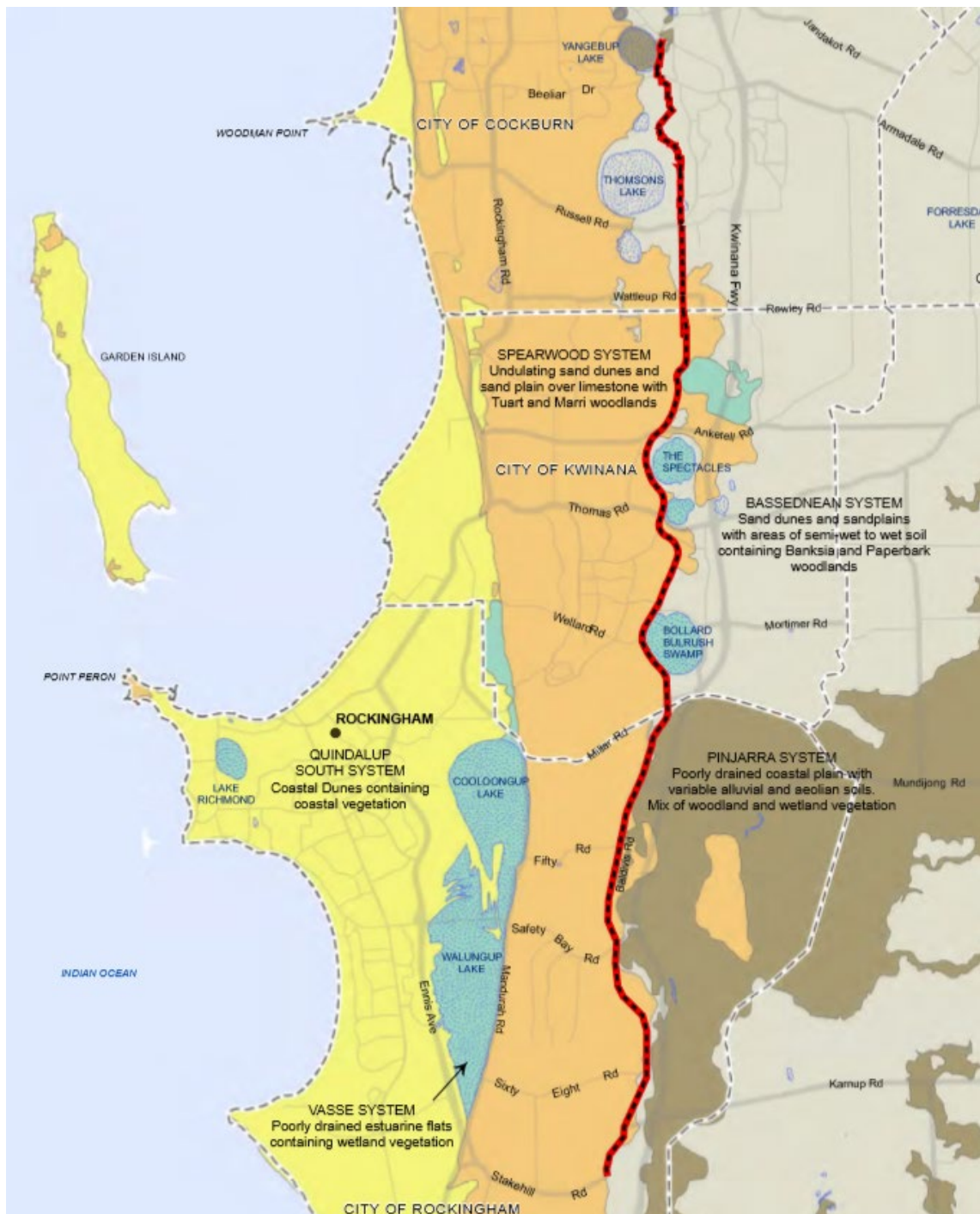




### 5.2.11 Trails Network

The trail network includes the Kwinana Loop Trail and the Tramway Reserve Trail which runs between Lake Yangebup in the City of Cockburn to Karnup in City of Rockingham (Figure 17). Sections of the trail in Kwinana utilise the Kwinana Loop Trail alignment, while the portion north is important in its connectivity to Cockburn between the Spectacles and the proposed Mandogalup development.

**Figure 17 Tramway Reserve Trail**



## 5.3 Local Routes

Local routes are structured around the residential neighbourhoods within the City and focus on providing access to schools, shops, parks and bus stops for people of all ages and abilities. The draft Plan includes detailed local route plans as part of Neighbourhood Plans for Bertram, Leda, Kwinana City Centre and Calista as priorities, as a result of the analysis and online community consultation undertaken to date.

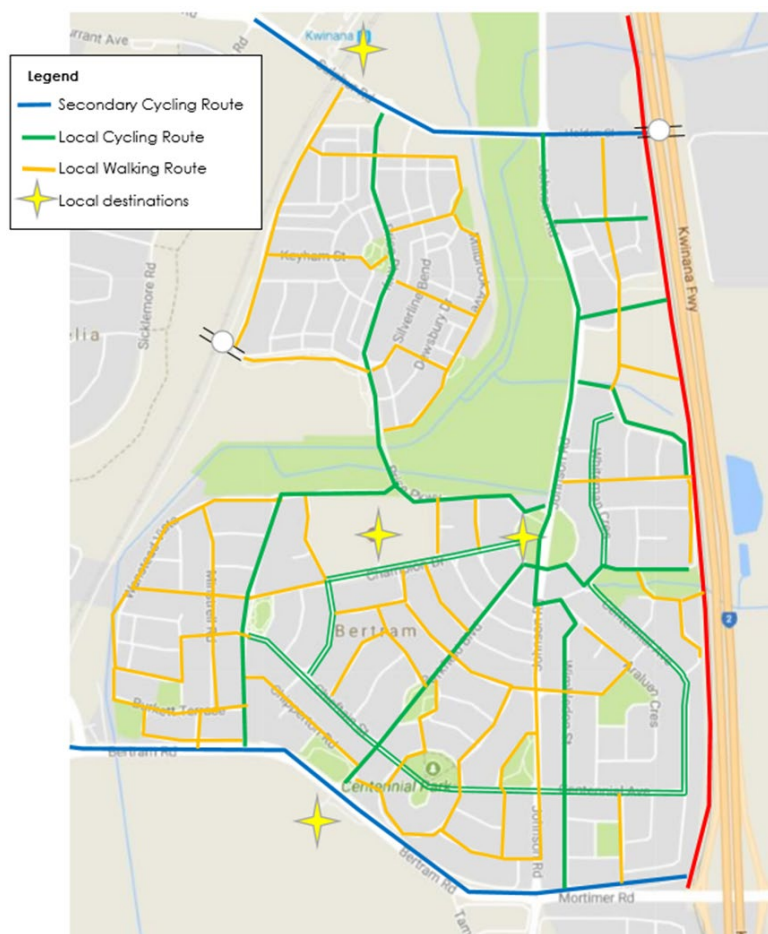
It is anticipated that more detailed local route planning will be required for Parmelia, Wellard and Orelia in the future. Nonetheless, implementation plans have been prepared for these areas outlining upgrades and improvements that are required as a priority (refer to Sections 15, 16 and 17 of the draft Plan).

Local routes can take various forms such as shared paths, protected bike lanes and safe active streets.

### 5.3.1 Bertram Local Route Plan

A local route plan has been prepared for Bertram (Figure 18) that responds to the issues raised in the online community survey. The Bertram local route plan focuses on improving walking paths to the Bertram Primary School and Bertram Community Centre and general improvements to kerb ramps at pedestrian crossings.

**Figure 18 Bertram Long Term Local Route Plan**



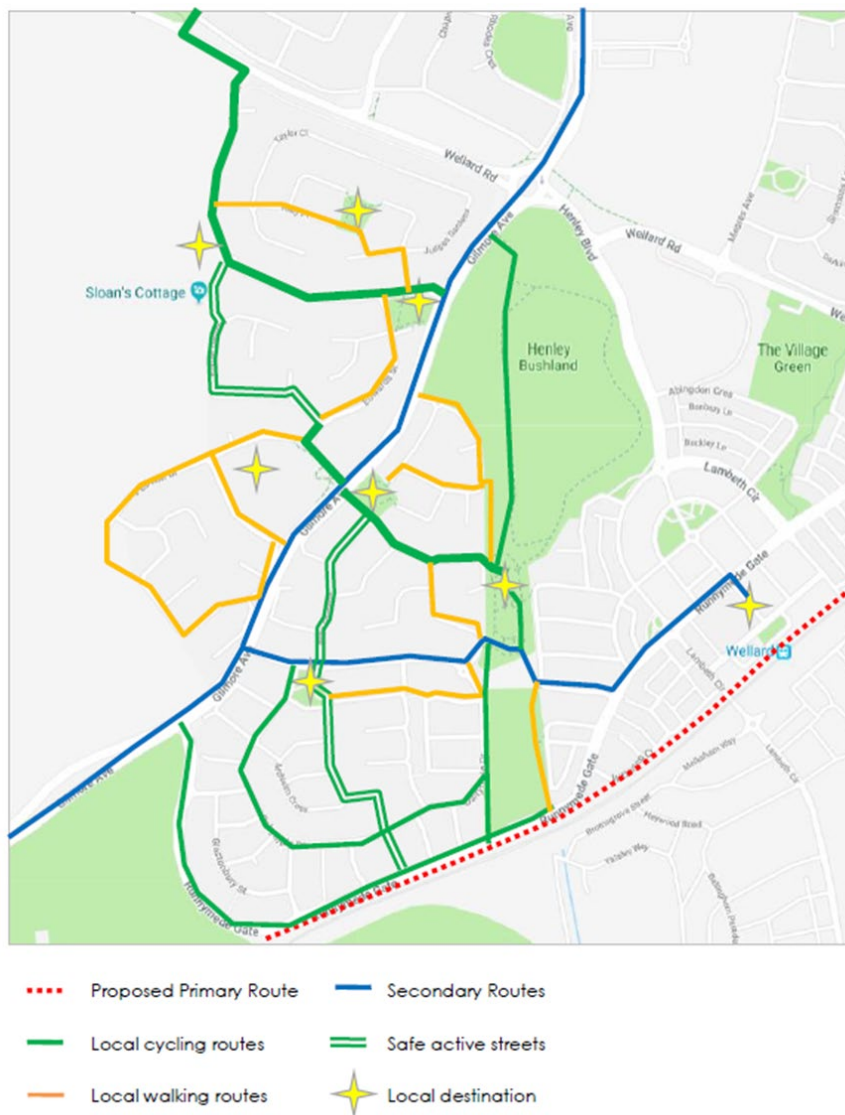
### 5.3.2 Leda Local Route Plan

A local route plan has been prepared for Leda (Figure 19) that responds to the issues raised in the online community survey, particularly the need for additional walking paths and pedestrian crossings.

The Leda local route plan focuses on:

- improving walking paths to Sloan's Cottage Park, Leda Shopping Centre, Riley Park and Rogan Park;
- providing east west cycling and walking access from Sloan's Reserve to Gilmore Avenue, and Gilmore Avenue to Djilba Reserve; and
- providing walking paths around Riley Park and Rogan Park to enable community interaction.

**Figure 19 Leda Long Term Local Route Plan**

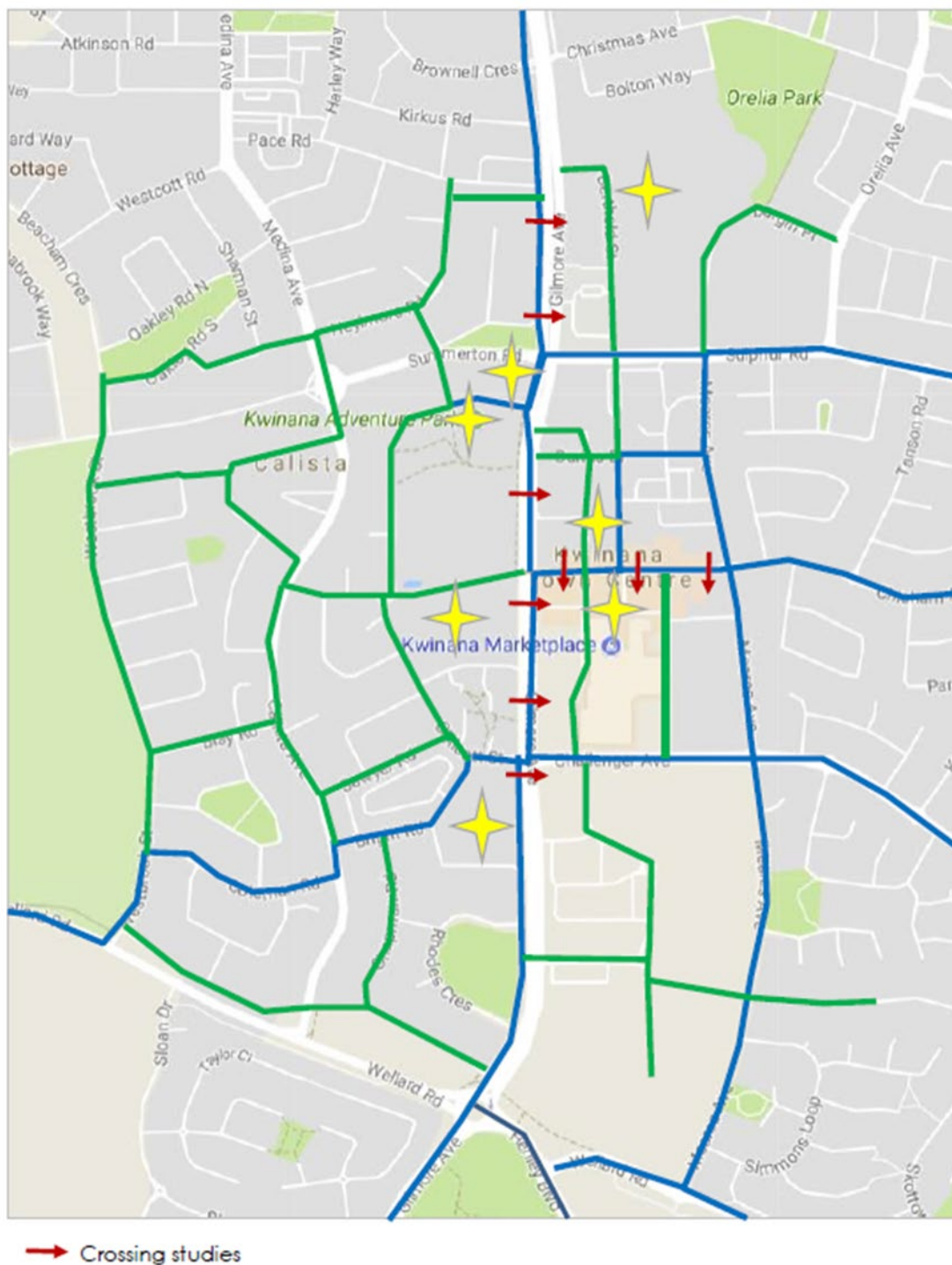




### 5.3.3 Kwinana City Centre and Calista Local Route Plan

The Calista / Kwinana City Centre local route plan (Figure 20) identifies the need to improve pedestrian crossings on Chisham and Gilmore Avenues which requires a separate study and further consultation to determine the exact treatments.

**Figure 20 Kwinana City Centre and Calista Long Term Local Route Plan**



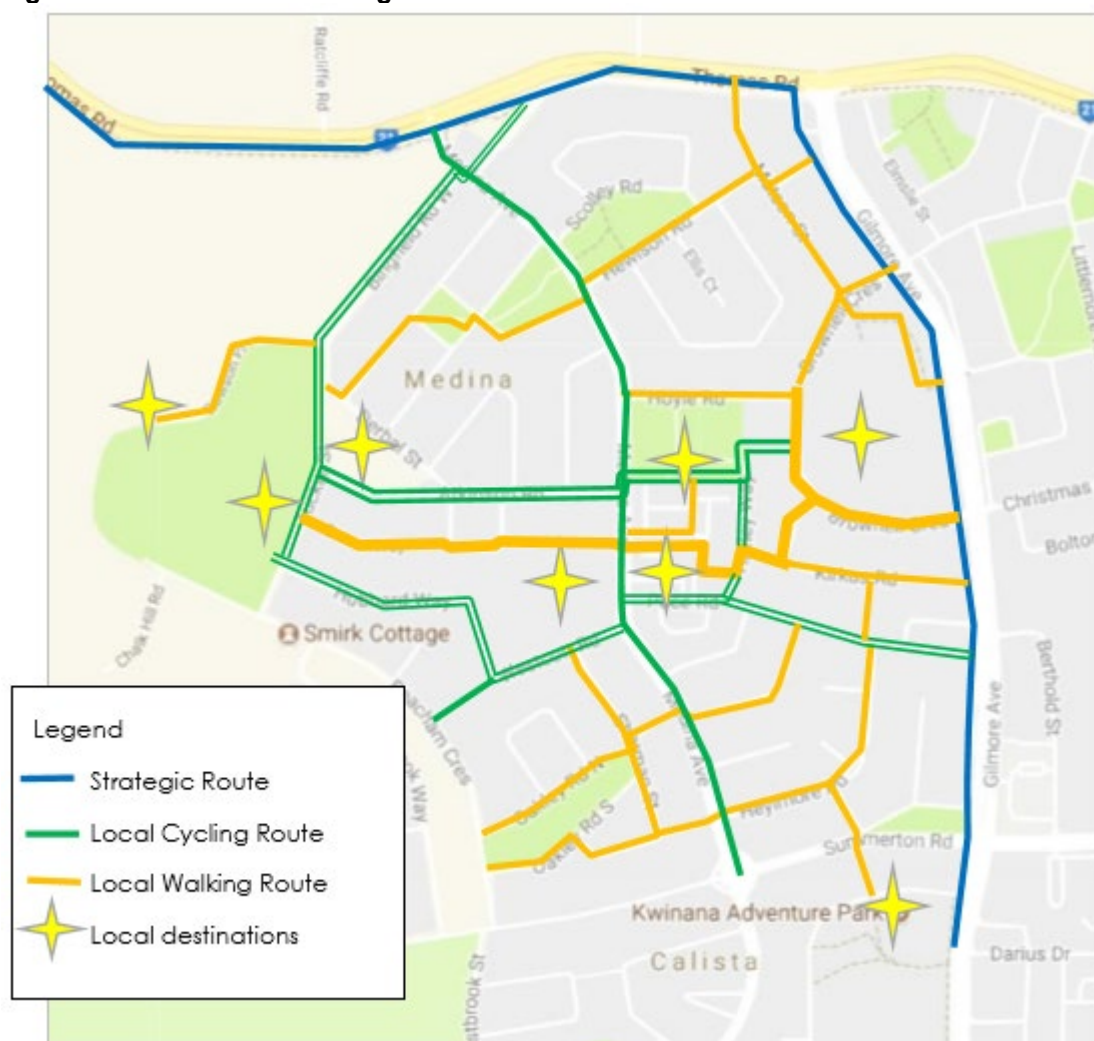
### 5.3.4 Medina Local Route Plan

A local route plan has been prepared for Medina (Figure 21) as a potential Safe Active Streets project to create streets that provide safe environments for cycling and walking to the shopping centre, primary school, Thomas Oval and Medina Oval.

The State Government's Safe Active Streets program is designed to make cycling safer and easier in Western Australia, by designing low speed roads called bicycle boulevards. Bicycle boulevards are located on local streets with low traffic volumes (less than 3,000 vehicles per day) and speeds (30km/hour or less), providing cyclists with safe and comfortable cycle routes with priority over cars, and are linked to local destinations or primary routes.

The local route plans are only a guide to future planning for local cycling and footpaths. Further consideration and consultation will be necessary as part of the City's intended Place Making Program and long term financial planning.

**Figure 21 Medina Long Term Local Route Plan**



## 6. Implementing the Bike and Walk Plan

The draft Plan outlines a number of projects for implementation. A complete list of these projects is provided in section 1.4 of the draft Plan. Sections 19 and 20 also provide further recommendations regarding the implementation of the draft Plan.

The priority projects to be implemented as part of the draft Plan are listed in Table 3 below:

**Table 3 Priority projects identified in the draft Plan**

Priority	Route	Destination
1.	Tranby Way, Bertram – 440m footpath (220m on each side) 2m wide for entire length	Bertram Primary School
2.	Walgreen Crescent, Calista – 160m footpath from Moulton St to Gilmore Ave 2m wide (south side)	Kwinana Adventure Park
3.	Rowley Road, Wandi – 300m shared path Lyon St to Freeway 2.5m wide (south side)	Freeway primary route
4.	Thomas Road, Casuarina – 2km shared path Marri Park Dr to Kwinana Freeway 2.5m wide (south side)	Marri Park
5.	Wellard Road, Wellard – 1.8km shared path from Bertram Rd to Leda Blvd 2.5m wide (west side)	Providence Estate

The key recommendations of the draft Plan are listed in Table 4 below:

**Table 4 Key recommendations of the draft Plan**

	Recommendations
1.	Liaise with Department of Transport about the long-term priority to construct a shared path on east side of freeway.
2.	Liaise with Department of Transport about the provision of a primary route on the freight route for the long-term regional cycling network
3.	Implement Kwinana Train Station to Kwinana City Centre secondary route
4.	Implement the Kwinana Train Station to Rockingham Train Station secondary route subject to Department of Transport funding
5.	Prepare a separate Bike and Walk Plan for the industrial areas of Kwinana
6.	Implement all neighbourhood plans identified in the draft Plan
7.	Ensure all new developments are built to incorporate the local and secondary networks, and connect to the City of Cockburn's cycling and walking network
8.	Develop an active transport behaviour change policy and strategy and work with the Department of Transport to implement a 'Your Move' program
9.	Investigate the feasibility and routing options for potential cycle or walking tours
10.	Undertake annual crash investigation study for key hotspot cycle pedestrian crash areas to understand causality, making cycling/pedestrian safer



11. Develop a counting and monitoring strategy for cyclist and pedestrians
12. Work with the South West Group to investigate an electric bike route
13. Implement behaviour change initiatives
14. Coloured surfacing for on-road cycling. Providing Green at conflict points and use the cycle symbol pavement marking on all on-road routes.

## 7. How to have your say on the draft Bike and Walk Plan

---

The City is seeking community and stakeholders comment and feedback to ensure that the interests and concerns of the community and other stakeholders are considered in the finalisation of the Bike and Walk Plan.

Matters that you might wish to comment on are:

- Are the proposed cycle and walking routes shown in the draft Bike and Walk Plan situated in the most convenient locations?
- Will the draft Bike and Walk Plan make it easier for you to cycle or walk to local destination in your area?
- Have the best routes been selected or can the proposed routes be improved, for example are there routes that are less hilly?

### **Ask us a question online**

You can submit a question or comment online on the City's web page at [kwinana.wa.gov.au](http://kwinana.wa.gov.au) (click on Say It).

### **Give us a call**

Call the City on 9439 0200 and ask to speak to a staff member about the Bike and Walk Plan.

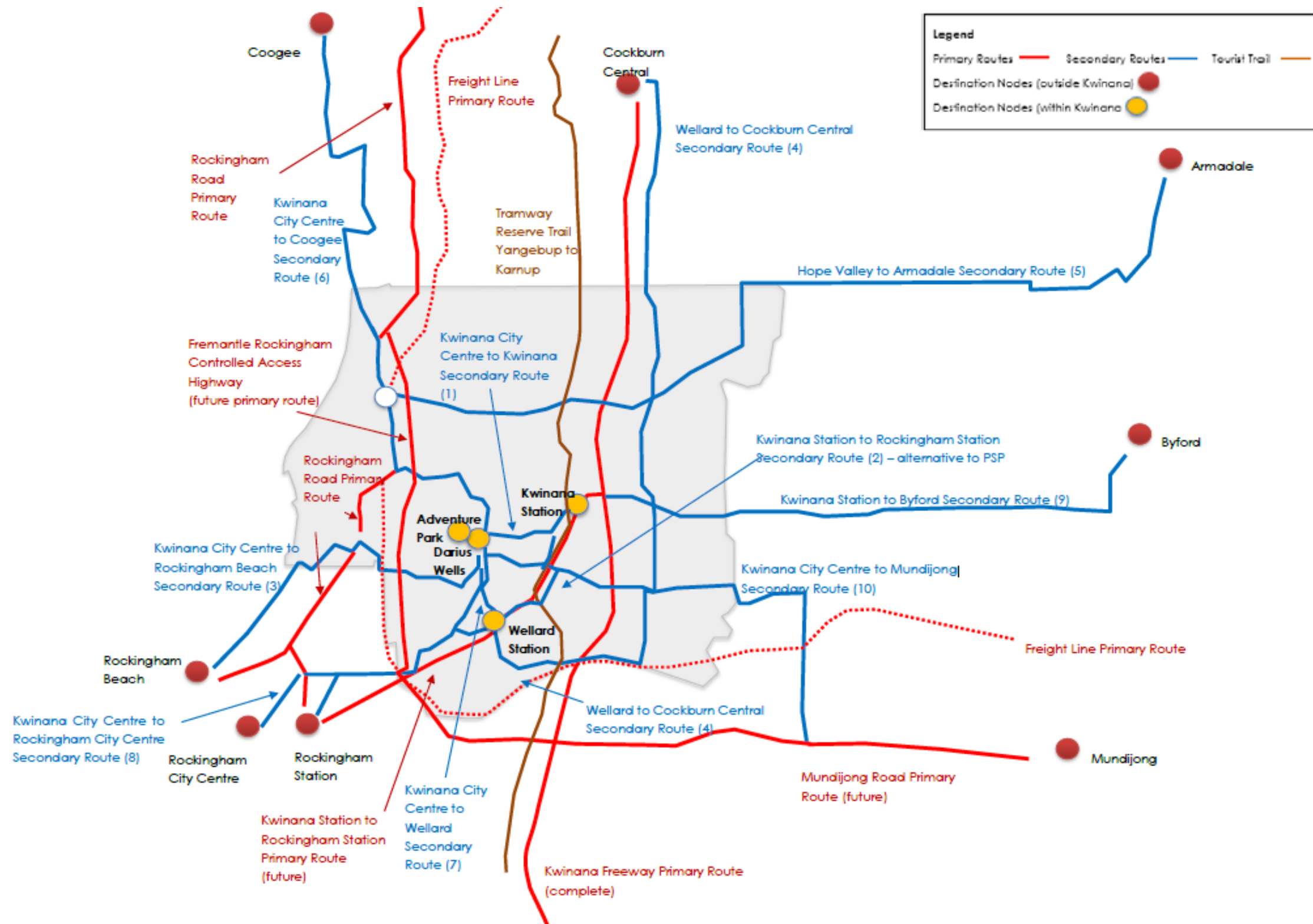
### **Write or email your ideas to the City of Kwinana**

- Postal address - City of Kwinana, PO Box 21, Kwinana WA 6966
- Email address - [admin@kwinana.wa.gov.au](mailto:admin@kwinana.wa.gov.au)

# City of Kwinana

## Long Term Primary and Secondary Cycling and Walking Network

## Appendix 1



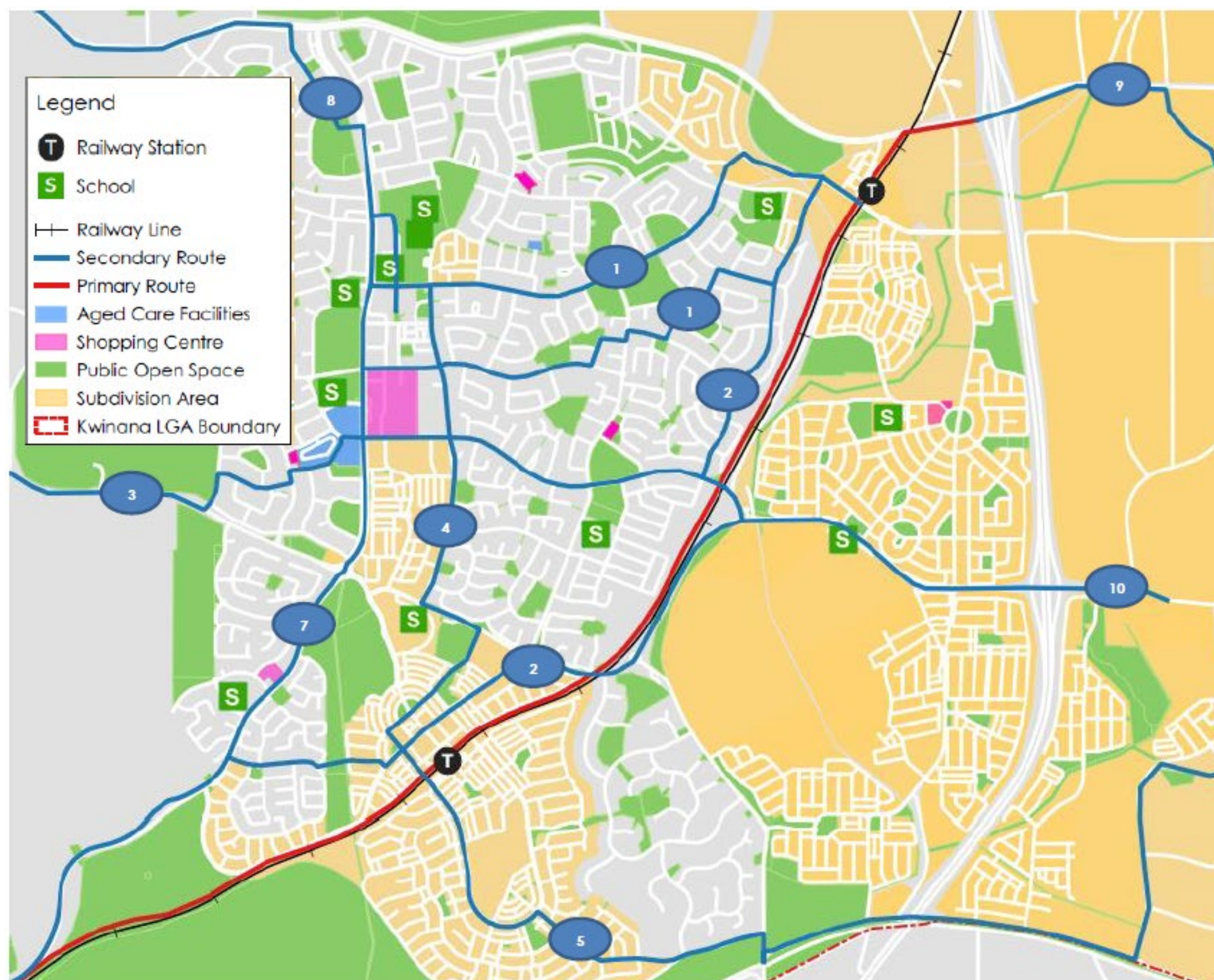


# City of Kwinana

## Long Term

### Secondary Cycling and Walking Network

## Appendix 2



Secondary Route priority for implementation:

- 1 – **Kwinana City Centre to Kwinana Train Station**  
(Bicycle boulevard proposed through Parmelia) Note: Sulphur Road is an alternative route between these destinations
- 2 – **Kwinana Train Station to Rockingham Train Station**  
(Secondary route alternative – Section 9.4.2)
- 3 – **Kwinana City Centre to Rockingham Beach**  
(bicycle boulevard through Calista / Wellard Rd / Beach St / Kwinana Beach Rd / Rockingham Beach Rd)
- 4 – **Kwinana City Centre to Wellard Town Centre**  
(Meares Ave / shared path through Abingdon Park / Runnymede Gate)
- 5 – **Wellard to Cockburn Central**  
(through new and future developments)
- 6 – **Hope Valley to Armadale**  
(Anketell Rd / De Haer Rd / Rowley Rd – beyond scope of this map)
- 7 – **Kwinana City Centre to Rockingham Town Centre**  
(Gilmore Ave largely completed with shared path – Rockingham section to be determined)
- 8 – **Kwinana City Centre to Coogee**  
(Gilmore Ave / Thomas Rd / Rockingham Rd / Cockburn Rd)
- 9 – **Kwinana Train Station to Byford**  
(Thomas Road / Orton Road – to confirm with Department of Transport and Shire of Serpentine Jarrahdale)
- 10 – **Kwinana City Centre to Mundijong** (Challenger / Bertram Rd)

The proposed principal route from Kwinana Station to Rockingham Station on the railway reserve is a long-term objective to be built in conjunction with the State Government priorities. In the meantime, an alternative route is proposed as a strategic route option between Sicklemore Rd and Gilmore Ave (shown dashed on the map).

Kwinana Freeway Principal route is completed. Rockingham Rd and the freight line principal routes are long term objectives of the State Government.





# City of Kwinana Draft Bike and Walk Plan

**Client //** City of Kwinana  
**Office //** WA  
**Reference //** W107020  
**Date //** 30/08/18

City of Kwinana

## Draft Bike and Walk Plan

Issue: A 30/08/18

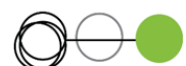
Client: City of Kwinana

Reference: W107020

GTA Consultants Office: WA

### Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	30/08/18	Draft	DS	TJ	TJ	



**GTA** consultants

Melbourne | Sydney | Brisbane  
Canberra | Adelaide | Perth  
Gold Coast | Townsville



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# 1. Executive Summary

The City of Kwinana (City) engaged GTA Consultants in February 2017 to undertake a bike and walk plan that developed both a long-term network that fulfils the Department of Transport's objectives for the region, and a network and an implementation plan that is tailored to the local conditions, appreciating the needs of the individual communities within Kwinana.

Neighbourhood plans have been developed for each of the individual communities in Kwinana to compliment the long-term regional network plan.

There is recognised concern about people's health in the Kwinana community which can be addressed through regular exercise, obtainable with 1-2km cycling trips and walking in local neighbourhoods. A socio-economic study has been undertaken as part of this plan to aid the understanding of these issues in the local context (refer to Hames Sharley report in Appendix C).

Two aspects were discovered in Kwinana which provide an opportunity to improve the health and well-being of the Kwinana community:

- i the extensive array of parks, reserves and natural bushland blooming with wildflowers in season, create local destinations for neighbourhoods, within an accessible distance to cycle and walk and to be physically active within;
- ii its position as a separate urban area buffered from neighbouring localities of Rockingham and Cockburn with nature reserves and semi-rural land. The major road corridors of Thomas Road, the Kwinana Freeway, Rockingham Road and Mandurah Road surround the townsite meaning through-traffic does not need to traverse the residential township, creating an environment tailored towards local movement across neighbourhoods rather than regional movement across local government boundaries.

The City of Kwinana's *Bike and Walk Plan 2018-2023* is not an attempt to solve every active transport related issue within the City. Constraints to the City's budget and external funding sources required the plan to concentrate on locations where achievable results would be obtained. To streamline this process, the plan has divided the local government into:

- i the residential area (which itself is separated into individual neighbourhoods);
- ii the surrounding area of industrial, bushland, developing semi-rural land.

## 1.1 Kwinana Neighbourhoods

Kwinana is defined as the residential area south of Thomas Road and west of Kwinana Freeway, and excludes the bushland and industrial zones that surround the residential area. Kwinana has been separated into 9 neighbourhoods, each is unique with a sense of self-identity within Kwinana described in Table 1.1.

The neighbourhood plan concept defined a long-term network and implementation priorities for each neighbourhood. The strategic network plan for the City of Kwinana was formed by combining the network plans for each of the neighbourhoods.

The plan concentrates project implementation within neighbourhoods to increase measurable benefits for local communities rather than implementation of projects distributed across the entire local government. Bertram, Medina and Leda have been recommended the focus for implementation as outlined in Table 1.1.

**Table 1.1: City of Kwinana Neighbourhoods**

Neighbourhood	Description
Bertram	Despite being a newer suburb, consultation revealed deficiencies in the footpath network and pedestrian crossings particularly around Bertram Primary School and Bertram Community Centre. In response to this, a Bertram Pedestrian Improvement Plan has been prepared to address the most pressing issues for implementation. Kings College receives significant catchment from Bertram with potential for cycling and walking trips, and therefore has been included in the plan for Bertram.
Medina	The first suburb of Kwinana and closest to the industrial area, Medina is to become an active community through east-west links from the Loop Trail to Gilmore Avenue enhancing the network to the Shopping Centre, Primary School, Thomas Oval as well as Medina Oval. Medina is to become a demonstration neighbourhood for safe active streets and has an environmentally conscious community expected to be supportive.
Leda	Leda is not well connected and highly deficient in footpaths. The focus is on enhancing the footpath network to parks to provide central meeting points for the community and encourage physical activity. Leda Primary School is another important local destination.
Calista / Kwinana Town Centre	Calista and Kwinana City Centre are combined as a neighbourhood for this plan. The focus is on crossing improvements for Chisham Avenue and Gilmore Avenue as identified in the consultation. Long-term network priorities focus on Gilmore College, the Adventure Park and Aged Care facilities. Crossing improvements require a separate study and further consultation to determine the exact treatments.
Parmelia	Large neighbourhood with focus on a secondary bicycle route from Kwinana Train Station to Kwinana City Centre (Darius Wells Library). Other minor projects are proposed that have been raised in the consultation and determined in the existing network evaluation. Future cycling and walking plans should consider separating Parmelia into four neighbourhoods (detailed in Figure 15.1).
Wellard – "Homestead Ridge"	A special residential zoned estate in a picturesque setting constructed without footpaths requiring people with prams or in wheel chairs to use the road. Consultation revealed a need for footpath construction. Focus on connections to Wellard Oval to the north of the estate. Liaison with Homestead Ridge Progress Association required.
Wellard – "The Village"	Limited focus for implementation for the main Wellard town centre area and residential estate referred to as "The Village" with neighbourhood connectors identified for further development in subsequent plans.
Wellard – "Providence"	The new estates of Wellard include Providence, Emerald Park and Sunrise. Neighbourhood connectors are identified with guidance for development of Bollard Bulrush.
Orelia	An older suburb with limited focus for implementation to ensure investment is concentrated on the other neighbourhoods where the benefit has been identified for specific projects.

The long-term network and implementation plan for each neighbourhood are to be updated every five-years with each update to the Kwinana bike and walk plan. Individual neighbourhood plans are detailed in Chapter 10.

## 1.2 Surrounding Area

The areas surrounding the Kwinana residential areas include industrial land, new developing land and bushland. The industrial area is not a priority in the *Bike and Walk Plan* due to the uncertainties around the current State Government planning for the area and to allow the City to concentrate on residential neighbourhoods. As part of the long-term regional cycling network in the surrounding area, a primary route is proposed along the freight line running north from Hope Valley, running to the west of Kwinana and then east towards Mundijong. This route also connects into a similar proposal within the City of Cockburn Bike and Walk Plan. Table 1.2 describes the surrounding area and its context which is predominately long-term focused, with the short-term focus limited to the provision of cycling in new subdivisions.

**Table 1.2: City of Kwinana Surrounding Area**

Surrounding Area	Description
Industrial Area (Kwinana Beach, Naval Base, Hope Valley, Postans)	<p>Kwinana Beach (west and east of Rockingham Road), Naval Base and Hope Valley require a separate study to design the pedestrian and cycling network in conjunction with the industries involved to ensure employees can cycle to work and walk to lunchtime delicatessens etc. without the need to walk on roads frequented with heavy vehicles. In general, there is a need for shared paths on roads such as Mason Road and Donaldson Road however these are not included in the implementation plan.</p> <p>The development of Latitude 32 in Hope Valley needs to incorporate adequate off-road facilities for people walking and cycling. Postans has less demand for a walking or cycling study.</p> <p>A secondary cycling route between Kwinana and Rockingham is proposed to run through the Kwinana industrial area (Kwinana Beach Road).</p>
Future Development (Wandi, Mandogalup, Casuarina, Anketell, Wellard East) (Section 18 of main report)	<p>Kwinana's semi-rural land to the east and north-east is presently undergoing development into housing estates, where the population of Kwinana is expected to more than double in the next 20 years. The opportunity to design a pedestrian and cycling network is a focus of this plan.</p> <p>Honeywood Estate is an example of the transformation of parts of Wandi from semi-rural to residential housing. Connections between Honeywood and Aubin Grove, and between Mandogalup's new development and Hammond Park are necessary, along with the connections to the principal shared path adjacent to the Kwinana Freeway.</p>
Surrounding Bushland (e.g. Leda Nature Reserve, The Spectacles)	<p>This land incorporates the Kwinana Loop Trail, along with the Tramway Reserves Trail<sup>1</sup> proposed from Yangebup to Baldivis, and a long-term proposal for a cycling and walking facility on the Dampier to Bunbury Natural Gas Pipeline corridor.</p>

<sup>1</sup> <http://www.southwestgroup.com.au/wp-content/uploads/2016/12/Tramway-Trail-Development-Plan-2015-FINAL-lr.pdf>



## 1.3 Long-Term Regional Cycling Network

Cycling corridors have been identified to inform the consultation with State Government on the long-term regional cycling network. These routes can be implemented as opportunities arise such as road resurfacing or widening, or land redevelopment. However, there is a focus on shorter local trips for a larger proportion of the population rather than accommodating for commuter cycling of longer distances which requires significant investment to a smaller proportion of the population.

Six routes are proposed that form the primary cycling network. These routes use major road and rail reserves and are to be grade separated (Table 1.3).

**Table 1.3: City of Kwinana Primary Routes**

Route	Location	Status
Kwinana Freeway	Freeway reserve	Existing
Kwinana Train Station to Rockingham Train Station	Rail reserve	Future
Rockingham Road	Road reserve	Future
Kwinana Freight Line	Rail reserve	Future
Fremantle Rockingham Controlled Access Highway	Road reserve	Future
Mundijong Road	Road reserve	Future

Ten routes are proposed to form the secondary cycling network, connecting key destinations in Kwinana and to destinations of adjacent local governments (Table 1.4). These have been prioritised based on potential demand to the destinations.

**Table 1.4: City of Kwinana Secondary Routes**

Priority	Route	Adjoining Local Government
1	Kwinana City Centre to Kwinana Train Station	-
2	Kwinana Train Station to Rockingham Train Station (alternative route to principal shared path in reserve)	Rockingham
3	Kwinana City Centre to Rockingham Beach	Rockingham
4	Wellard Square to Cockburn Central	Cockburn
5	Kwinana City Centre to Coogee	Cockburn
6	Kwinana Beach to Armadale City Centre	Armadale
7	Kwinana City Centre to Wellard Square	-
8	Kwinana City Centre to Rockingham City Centre	Rockingham
9	Kwinana Train Station to Byford	Serpentine Jarrahdale
10	Kwinana City Centre to Mundijong	Serpentine Jarrahdale

## 1.4 Implementation 2018-2023

The implementation plan identified 5 key projects for priority action (Table 1.5). These are the most important projects for the City of Kwinana (some programmed at the time of this plan).

**Table 1.5: City of Kwinana implementation plan key projects**

Priority	Project	Destinations
K1	Tranby Way, Bertram – 440m footpath (220m on each side) 2m wide for entire length	Bertram Primary School
K2	Walgreen Crescent, Calista – 160m footpath from Moulton St to Gilmore Ave 2m wide (south side)	Kwinana Adventure Park
K3	Rowley Road, Wandi – 300m shared path Lyon St to Freeway 2.5m wide (south side)	Freeway PSP
K4	Thomas Road, Casuarina – 2km shared path Marri Park Dr to Kwinana Freeway 2.5m wide (south side)	Marri Park
K5	Wellard Road, Wellard – 1.8km shared path from Bertram Rd to Leda Blvd 2.5m wide (west side)	Wellard Park Providence Estate

### Secondary Routes

Three secondary routes are proposed in the implementation plan (Table 1.6).

**Table 1.6: Secondary Routes to Design**

Priority	Project
S1	Design of Kwinana Train Station to Kwinana Town Centre secondary route (years 1-2 design – refer to Table 1.7 for construction)
S2	Design of Kwinana Train Station to Rockingham Train Station secondary route as an alternative route to railway line PSP (years 2-3 design)
S3	Design of Kwinana City Centre to Rockingham Beach secondary route together with City of Rockingham (years 3-4 design)

The secondary route from Kwinana Train Station to Kwinana City Centre (Station to Centre route) is the priority to implement. Some suggested works are provided in Table 1.7.

**Table 1.7: Station to Centre Route – suggested works to implement**

Priority	Project
S1-1	Sulphur Road – 180m bicycle lane (westbound Nottingham Parkway to Durrant Avenue)
S1-2	Sulphur Road – 180m bicycle lane (westbound Parmelia Avenue to Kirkland Way)
S1-3	Pavement marking on all access roads (bicycle stencils)
S1-4	Chisham Avenue – 1.1km bi-directional lane (north side Meares Ave to Parmelia Ave)
S1-5	Path upgrade through Hunt Park (Chisham Ave to Hunt Place)
S1-6	Safe active street (SAS) treatment – 420m on Hunt Place and Cowling Way
S1-7	Upgrade crossings of Parmelia Avenue at Chisham Avenue and Cowling Way (raised plateau crossings)
S1-8	Parmelia Avenue – 650m bi-directional lane (east side Chisham Avenue to Sulphur Road)
S1-9	Warner Road – 650m shared path (south side Parmelia Avenue to Sicklemore Road)
S1-10	Safe active street treatment – 1.5km Preston Road, Adamson Road (east of Preston), Sicklemore Road (north of Adamson)
S1-11	Adamson Road – 300m shared path (north side Sulphur Road to Preston Road)
S1-12	Optional: Connection to North Parmelia Primary School to be explored through liaison with school and residents (local bicycle boulevard or shared path treatment on Dawson Way and path upgrade and lighting between Dawson and school)
S1-13	Liaise with PTA to remove car parking on shared path on Sulphur Road at station (bollards and or enforcement)

## Neighbourhood Implementation Plans

Projects identified within the neighbourhood plans that are a priority in the implementation plan are provided in Table 1.8 to Table 1.17. Where practical, the City will aim to complete projects within a neighbourhood before progressing to the next neighbourhood plan.

**Table 1.8: Neighbourhood plans – implementation priority**

Priority	Project	Destinations
N1	Bertram pedestrian improvement plan (see Table 1.9 for details) 2018/19 to 2019/20	Bertram Community Centre Bertram Primary School Kings College
N2	Medina neighbourhood plan (Table 1.10) 2019/20 to 2020/21	Medina Shopping Centre Medina Primary School Harry McGuigan Park Thomas & Medina Ovals
N3	Leda neighbourhood plan (Table 1.11) 2020/21 to 2021/22	Riley, Rogan Parks Sloan's Cottage & Reserve, Djilba Reserve
N4	Kwinana City Centre and Calista neighbourhood priorities (Table 1.12) 2021/22	Adventure Park Darius Wells Kwinana Marketplace
N5	Parmelia neighbourhood priorities (Table 1.13)	Skottowe Park Kwinana Train Station
N6	Homestead Ridge (Wellard) neighbourhood priorities (Table 1.14)	Wellard Park
N7	The Village (Wellard), Providence and Orelia neighbourhood priorities (Table 1.15 to Table 1.17)	Wellard Town Centre Abingdon Park Orelia Shopping Centre

## Bertram Pedestrian Improvement Plan

**Table 1.9: Bertram neighbourhood – implementation plan**

Priority	Project
Key Project	Tranby Way (footpath on both sides) – 440m total
B1	Trusty Way (crossing at Price Parkway)
B2	Sulphur Road – 230m of shared path from Sicklemore Road to existing path over bridge (south side) <sup>2</sup>
B3	Johnson Road crossing (Ascot Parkway north / and Ascot Parkway south)
B4	Johnson Road crossing (Whiteman Crescent)
B5	Chieftain Street 450m footpath from Moombaki to Parkfield (south side)
B6	Eliza Street – 200m footpath (north side)
B7	Unicorn Street – 220m footpath (east side)
B8	Yelka Street – 250m footpath (east side)
B9	Chipperton Road – 400m footpath from Moombaki to Parkfield
B10	Orient Way – 100m footpath from Parkfield to Westmoreland including pedestrian crossing of Parkfield
B11	Parkfield Boulevard crossing (install kerb ramp at east side of Ganges)
B12	Moombaki Avenue crossing (redirect crossing of Champion Drive terminating in roundabout)
B13	Trusty Way – 100m footpath on west side through car park) * liaise with Primary School about location and crossing points of car park entry / exit
B14	Daintree Loop – 250m shared path from Whiteman Crescent to Principal Shared Path (south side)

<sup>2</sup> Although the project location is in Parmelia, this project benefits the Bertram community rather than Parmelia community due to its location east of the train station



Priority	Project
B15	Daniels Place (install kerb ramps near Greenham Way and at cul-de-sac to connect to Bertram Road shared path)
B16	Lotus Court (provide footpath connection from cul-de-sac to existing path for a more direct link to Bertram Road shared path)
B17	McKenzie Corner (install kerb ramp at cul-de-sac to Bertram Road's shared path)
B18	McKenzie Corner (install kerb ramp at 90-degree bend to Bertram Road's shared path)
B19	Greenham Way (install kerb ramp to Bertram Road's shared path just west of path intersection)
B20	John Forrest Circuit west (install kerb ramp and small path connection to Bertram Road's shared path)
B22	Millbrook Avenue crossing (path connection and kerb ramp at Camborne App)
B23	Safe Active Streets – design and construction of 550m of treatments incl. 30km/h speeds on Champion Drive (Mangart Road to Hero Crescent)

### 1.4.1 Medina

**Table 1.10: Medina neighbourhood – implementation plan**

Priority	Project	Destinations
M1	Brownwell Crescent – 600m footpath (2m) on east side from car park to Gilmore Avenue (south)	Medina Oval
M2	Medina bicycle parking – relocate Cora racks in laneway to IGA entrance and replace with U-rails; add designed U-rails to Green Barista Café entrance with planter boxes in consultation with owner; add U-rail in front of bakery	Medina Shopping Centre
M3	Budden Way – 230m footpath (2m) on southern side from Grover Way to Medina Avenue (liaison with Medina school required with implications on street parking)	Medina Primary School Medina Shopping Centre
M4	Safe Active Streets (stage 1) – design and construction of 1km of treatments incl. 30km/h speeds on Atkinson Road, Wheelock Road, Harley Way (north of Wheelock)	Thomas Oval Medina Shopping Centre Medina Oval
M5	Safe Active Streets (stage 2) – design and construction of 1.6 km of treatments incl. 30km/h speeds on Bingfield Road W, Tucker Street, Hubbard Way, Westcott Road	Kwinana Loop Trail Thomas Oval Medina Shopping Centre
M6	Safe Active Street (stage 3) – design and construction of 900m of treatments incl. 30km/h on Pace (west of Harley), Harley Way, Kirkus Road	Medina Shopping Centre Medina Oval
M7	Design proposal for Medina Avenue – potential for boulevard cycling route to continue through centre of Medina and Calista, to be considered in comparison to a separate path facility raised at intersections or protected bicycle lanes (all through traffic to use Gilmore Avenue, noting Medina is a local bus route, with opportunity for innovative treatments at Summerton roundabout such as a raised pedestrian / cyclist crossings)	Medina Shopping Centre Medina Primary School
M8	Pace Road pedestrian crossing on the main street of Medina and undertake design project	Medina Shopping Centre
M9	Walkability Enhancement Plan (Stage 2) – more detailed consultation and network analysis to determine deficiencies and improvements especially the standard of crossings, e.g. path condition, kerb ramps and tactile ground surface indicators	-
M10	Create neighbourhood wayfinding strategy in consultation with Medina Progress Association to local destinations such as Kwinana Loop Trail, Medina Primary School, Harry McGuigan Park, Medina Shopping Centre, Medina Oval, Kwinana Adventure Park, Darius Wells Library, Kwinana Marketplace	-
M11	Medina Avenue – repair footpath damaged by tree root (maintenance)	-

## 1.4.2 Leda

**Table 1.11: Leda neighbourhood – implementation plan**

Priority	Project
L1	Crossing of Edwards Street at Dixon Mews – 50m of footpath to connect path in English Retreat Park to path on west side of Edwards and create crossing points)
L2	Edwards Street – 50m footpath from Feilman to shopping centre entrance (on east side) – require suitable crossing to path on west side, or preferably continue to English Retreat park (350m total)
L3	Porter Gardens – 230m of footpath from existing path termination to pedestrian access way to Edwards Street (on south side)
L4	Riley Place – 280m of footpath from Sloan to Riley Park (on south side, liaise with residents to confirm)
L5	Dymond Place / Moretti Retreat / Shaw Mews – 220m of footpath from Riley Park to Sloan Drive (on east side Dymond, north side Moretti and west side Shaw) – liaise with residents to confirm sides
L6	Djilba View, Werloo Court and Bilya Gardens – 300m of footpath from Rogan Park to Djilba Reserve (on north side)
L7	Whitebread Way – 250m of footpath from Rogan Park to existing path (on west / south side)
L8	Proctor Gardens – 160m of footpath from Rogan Park to Whitebread Way (liaise with residents to determine the side)
L9	Bilya Gardens – 350m of footpath from Rogan Park to Dalrymple Drive (on west side, include crossings of all legs of Dalrymple roundabout to access Gabor Park)
L10	Whyatt Green / McNairn Cross / Kooden View / Fitzsimmonds Place – 400m of footpath from Gabor Park to Dalrymple Drive south (on east side)
L11	Yeovil Way – 70m of footpath from Dalrymple Drive south to Runnymede Gate Gabor Park to Dalrymple Drive south (on west side)
L11	Djilba View – 50m of footpath from Dalrymple Drive to Reserve footpath (on east side)
L12	Sloan Drive – 1km of footpath on east side and north side (Wellard Road to Gilmore Avenue)
L13	Robbins Retreat – 180m footpath on east side (Riley Place to Riley Park)
L14	Shaw Mews – 170m of footpath on east side (Riley Park to Moretti Retreat) – liaise with residents to confirm side and necessity of path
L15	Taylor Close – 400m of footpath on east and south side (Riley Place to pedestrian access way to Judges Gardens – liaise with residents to confirm side and necessity of path)
L16	Judges Gardens – 400m of footpath on south and west side (Shaw Mews to pedestrian access way to Taylor Close) – liaise with residents to confirm side and necessity of path
L17	Safe Active Streets – design and construction of 1.5km of treatments incl. 30km/h speeds on Porter Gardens, Bilya Gardens, McNairn Cross, Yeovil Way
L18	Henley Reserve – 1km hard surfacing of trail to create north-south shared path (2.5m) from Wellard Road to Runnymede Gate (sections in Djilba Reserve already footpath and no change recommended)

## 1.4.3 Kwinana City Centre (incl. Calista)

**Table 1.12: Kwinana City Centre – implementation plan**

Priority	Project
KC1	Study of Chisham Avenue to improve crossing permeability between Robbos to Peel with consideration of Gilmore to Meares
KC2	Study of Gilmore Avenue crossing between Sulphur and permeability to Adventure Park, Darius Wells Library, Kwinana Bus Station and Marketplace
KC3	Improve crossing of Meares Avenue and Chisham Avenue roundabout for students to access Gilmore College with raised treatments (potential to incorporate with KC1 above)
KC4	Remove guardrail at Robbos Way and Darius Drive to allow for crossing movements
KC5	Chilcott Street and Bright Street – 270m shared path (2.5m wide) Gilmore Avenue to Isaac Way (south / west side)

#### 1.4.4 Parmelia

**Table 1.13: Parmelia neighbourhood – implementation plan**

Priority	Project
P1	Meares / Sulphur intersection (extend shared path 30m to connect to cycle lanes on east side of Meares Avenue)
P2	Parmelia Avenue – 220m shared path (2.5m wide) from Tunnicliffe St to northern entrance to St Vincent's school (east side)
P3	Parmelia Avenue – 300m shared path (2.5m wide) from The Ramble to Tuart Ridge (east side)
P4	Sicklemore Road – 850m shared path upgrade (2.5m wide)
P5	Skottowe Park – 30m footpath to connect to Skottowe Parkway
P6	Parmelia Avenue – 1.2km shared path (2.5m wide) from Challenger Avenue to Chisham Avenue (east side) to connect to secondary route
P7	Tunnicliffe Street – widen footpath around power pole

#### 1.4.5 Wellard – Homestead Ridge

**Table 1.14: Homestead Ridge implementation plan**

Priority	Project
HR1	Wellard Road, Wellard – 1.6km shared path (2.5m wide) from Wellard Oval car park to Millar Road (western side)
HR2	Silversmith Street – 550m of footpath from Wellard Road to Homestead Drive (liaise with residents to confirm demand and determine the side)
HR3	Stonemason Rise – 230m of footpath from Silvermith Street to pedestrian accessway to Mason Mews (liaise with residents to confirm demand and determine the side)
HR4	Connection from path network behind Mason Mews to path network in Wellard Park – 120km footpath (liaise with residents to confirm demand)
	<b>Total 1.6km shared path; 900m footpath</b>

#### 1.4.6 Wellard – The Village / Providence / Emerald Park

**Table 1.15: Wellard implementation plan**

Priority	Project
W1	Bicycle parking on The Strand – install 2 U-rails in front of Woolworths, one U-rail in front of Bliss & Momos Café, one U-rail at Wellard Square entrance (liaise with shop owners regarding location)
W2	Bicycle parking in Abingdon Park – one U-rail at playground equipment
W3	Mortimer Road, Wellard – 400m shared path from Johnson Road to Kwinana Freeway (south side))
W4	Study of cycling and walking access to new Wellard Primary school
	<b>Total 400m shared path</b>

#### 1.4.7 Orelia

**Table 1.16: Orelia implementation plan**

Priority	Project
O1	Orelia Avenue – resurface 850m cycle lanes from Thomas Road to Christmas Avenue
O2	Orelia Shopping Centre bicycle parking
O3	Langridge Crescent – 150m footpath from Butt Place to Littlemore Road (south side)



## 1.4.8 Infrastructure Summary

**Table 1.17: Distances – implementation plan**

Project	Bertram	Medina	Leda	City Centre	Parmelia / Orelia	Homestead Ridge	Wellard	Total
Shared Path (2.5m wide)	480m	-	1,000m	270m	4,550m	1,600m	400m	<b>8.3km</b>
Footpath (1.8-2m wide)	2,100m	830m	4,600m	-	30m	900m	150m	<b>8.6km</b>
Safe Active Street	550m	3,500m	1,500m	-	1,900m	-	-	<b>7.5km</b>
Bi-directional lane	-	-	-	-	1,750m	-	-	<b>1.7km</b>
Bicycle lane	-	-	-	-	1,210m	-	-	<b>1.2km</b>
<b>Total</b>	<b>3.1km</b>	<b>4.3km</b>	<b>7.1km</b>	<b>0.3km</b>	<b>9.4km</b>	<b>2.5km</b>	<b>0.6km</b>	<b>27.3km</b>

## 1.5 Recommendation Summary

A list of recommendations of the Bike and Walk Plan are provided in Table 1.18.

**Table 1.18: Recommendations for Kwinana Bike and Walk Plan**

Recommendations	
1	Liaise with Department of Transport about long-term priority to construct shared path on east side of freeway at local standard (3m wide)
2	Liaise with Department of Transport about provision of a Principal Shared Path (PSP) on the freight route for the long-term regional cycling network
3	Implement Kwinana Train Station to Kwinana Town Centre secondary route in the implementation plan
4	Implement Kwinana Train Station to Rockingham Train Station secondary route in the implementation plan subject to Department of Transport funding (City of Kwinana section)
5	Prepare a separate Footpath and Cycling Plan for the industrial areas of Kwinana
6	Implement all neighbourhood plans
7	Ensure all new developments are built to incorporate the local and secondary networks, and connect to Cockburn's network
8	Develop an active transport behaviour change policy and strategy. And work with DoT to implement a 'Your Move Kwinana' program
9	Investigate the feasibility and routing options for potential cycle or walking tours
10	Undertake annual crash investigation study for key hotspot cycle pedestrian crash areas to understand causality, making cycling/pedestrian safer
11	Develop a counting and monitoring strategy for cyclist and pedestrians
12	Work with the South West Group to investigate an E-Bike Route
13	Implement Behaviour Change Initiatives and Way Finding Signage Strategy including around Railway Stations
14	Coloured surfacing for on-road cycling. Providing Green at conflict points as a minimum. Use the cycle symbol pavement marking on all on-road routes.

## 2. Introduction

The City of Kwinana (the City) aims to create communities where cycling and walking are an integral part of daily life for all types of trips enabling people to lead healthier lifestyles and stay more active and independent for longer. Cycling and walking can also reduce travel costs for individuals.

The City of Kwinana *Bike and Walk Plan* (plan) has been developed with input from the local community and the Department of Transport, so that it meets the needs of the local community. It updates and improves upon the Kwinana Bike Plan prepared by the City in 2010.

The plan provides a clear aim for the provision of cycling and walking facilities within the City, incorporating current standards for the design and implementation of cycling and walking infrastructure to accommodate and encourage active travel behaviours. To assist with this, a socio-economic study has been undertaken to identify the key areas where active transport needs to be promoted within the City allowing infrastructure and travel behaviour change programs to have a more focused approach.

The initial implementation plan concentrates on achieving a network of cycle and walking paths around schools, train stations and shopping centres. The intent is to provide a cycle network for the daily short distance cycling needs of the local community as well as identifying key infrastructure to improve the walking environment so that active transport can be a part of daily life. The plan also integrates with the greater Perth area coordinating the Perth and Peel @3.5 million Transport Plan cycling network for longer distance commuter and sport riders.

The City foresees that providing facilities for safe and convenient cycling and walking can be a catalyst for creating a community that is healthy and active and uses active travel for short to medium journeys.

The main functions of the plan include:

- Evaluating the existing cycling network in the City;
- Identifying local opportunities to integrate cycling and walking into daily life;
- Consulting with key stakeholders (State Government and local community);
- Planning the expansion of the cycling and walking network;
- Encouraging and promoting cycling and walking;
- Developing an action schedule of works for attaining improvements to the cycling and walking network focused on individual neighbourhoods; and
- Developing a longer-term active travel network for the continued development and promotion of cycling and walking.

## 2.1 Why do we Need to Encourage People to Become More Active?

The City of Kwinana *Bike and Walk Plan* is part of the City's coordinated approach to addressing the physical, social, cultural and economic factors that impact on the local community's health and wellbeing. The City's *Strategic Community Plan (2017 – 2027)* and its *Healthy Lifestyle Plan (2015 – 2018)* also aim to ensure that a broad range of local residents can benefit from leading a healthier lifestyle.

The promotion of active transport provides many benefits for individuals, the community, the economy and the environment. The main benefits of a connected and integrated cycle and pedestrian network can be surmised and categorised for both the individual (local community) and for the wider community. As depicted in Figure 2.1, there are a range of benefits to be gained from cycling and walking for daily journeys. However, not all of these are significant in an outer urban area such as the City. For example, one of the commonly promoted benefits of cycling in inner urban areas is reducing traffic congestion and the need for parking, however, this is not a major issue in the City presently.

### Health and Wellbeing

Information provided by the City stated that residents within the City have the highest rate of Type II diabetes and the highest rate of cholesterol in Western Australia.

Providing pathways and facilities for cycling and walking, combined with a program to encourage the use of these facilities, can help to improve the health and wellbeing of the community.

The importance of having a network of cycle routes and footpaths in place to enable healthy living is recognised in the City of Kwinana's *Strategic Community Plan (2017 – 2027)* which aims to implement a safe and efficient integrated network of footpaths and cycle routes.

### Save time and money

Cycling and walking are low cost forms of travel which combine necessary daily journeys with daily exercise thus combining two activities into one and saving money on travel.

Cycling also enables young people to independently travel around their community without having to be chauffeured by a parent.

### Improved accessibility for more people

A network for cycling and walking allows young people and others without access to a car to move around the community safely and conveniently and be more independent.

The City has seen a change in its demographics and employment and a growth in population. The population of Kwinana is set to double in the next ten to fifteen years with population growth being fuelled by available land for housing development, affordable housing and increased accessibility to Perth City via the Kwinana Freeway and southern railway, with stations at Kwinana and Wellard. There remains great potential for an attractive walking and cycling environment, utilising the Indian Ocean coastline and proximity to the Principal Shared Path (PSP) network along the Kwinana Freeway. As well as its close links to the neighbouring authorities, where use of the lakes networks (running north-south through the south-western metropolitan area) and wider semi-rural areas allow for a great recreational cycle and walking potential.



Figure 2.1: How does Cycling and Walking benefit you and the community?

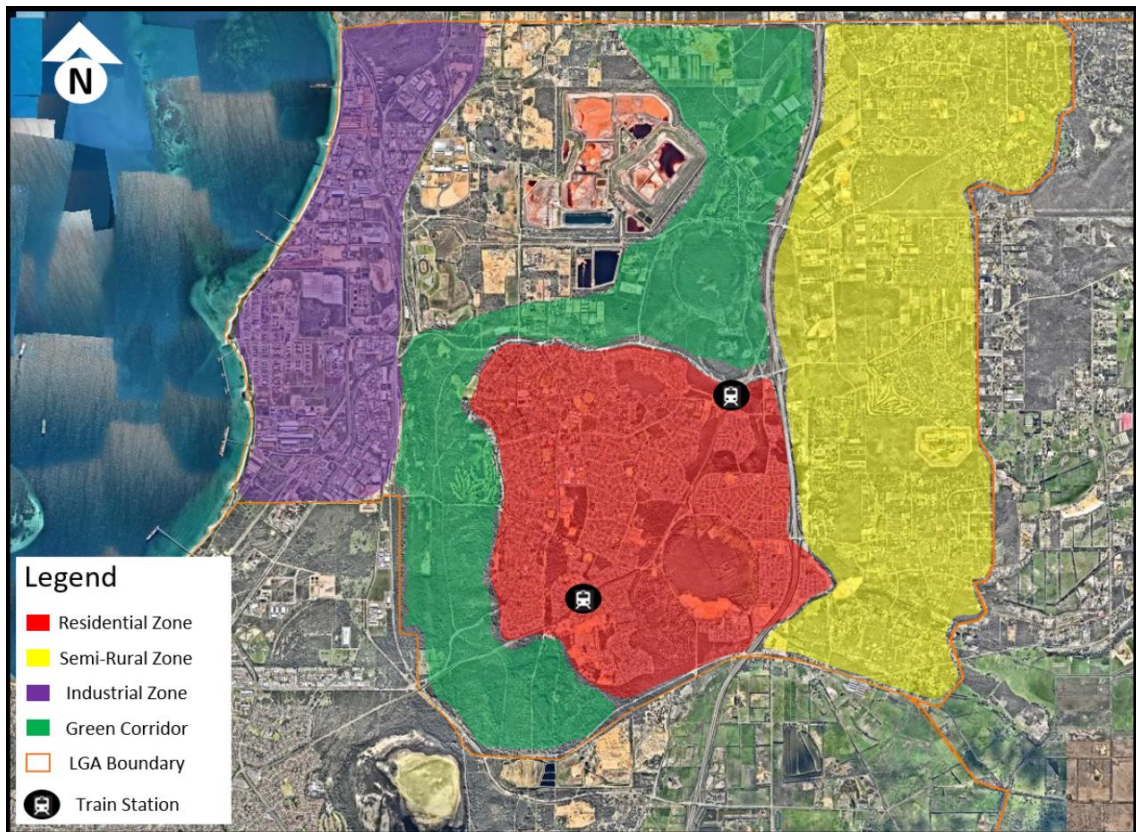
## How does Cycling and Walking benefit you and the community?

Individual Benefits	Transportation System Benefits	Community Benefits
<ul style="list-style-type: none"> <li>✓ Convenient door to door access without parking hassles in busy urban areas</li> <li>✓ Improved mental and physical health and fitness – evidence suggests that the health benefits of cycling outweigh the associated risks</li> <li>✓ Increased independence, particularly for school children</li> <li>✓ Access to a vehicle which is much cheaper to own and operate than a car</li> <li>✓ Increased opportunities to observe, experience and enjoy the scenery and environment</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cycling can reduce the number of trips made by cars, thereby reducing congestion and freeing up road space for essential motor vehicle trips</li> <li>✓ Cycling can reduce costs for construction and maintenance of roads</li> <li>✓ Cycling can reduce costs for provision of parking facilities</li> <li>✓ Cycles can move large numbers of people relatively quickly and conveniently over moderate distances</li> <li>✓ Cycling can be combined with public transport, making both cycling and public transport more accessible</li> </ul>	<ul style="list-style-type: none"> <li>✓ Greater social interaction amongst neighbours is likely to occur</li> <li>✓ Personal security and crime prevention are enhanced with more "eyes on the street"</li> <li>✓ Provision of improved facilities for cyclists can also improve the amenities available to local residents for walking (such as paths through parks)</li> <li>✓ Provision of cycling facilities can reduce traffic speeds and volumes in urban areas, improving the quality of life in our City</li> <li>✓ Cycling can reduce the amount of space we devote to roads and car parking thereby enabling the enhancement of the urban amenity</li> <li>✓ Provision of cycling facilities promotes civic pride</li> </ul>

Health Benefits	Economic	Urban Lifestyle	Environment	Road Safety
<ul style="list-style-type: none"> <li>✓ Healthy weight and physical activity are major contributors to good health</li> <li>✓ Poor diet and inactivity directly contribute to chronic diseases including cardiovascular disease, diabetes and cancer</li> <li>✓ Access to good cycling and pedestrian networks supports a more active population</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cycling is relatively low cost for the initial purchase and to operate</li> <li>✓ Walking is Free</li> <li>✓ Providing opportunities for people to cycle and walk for their everyday transport needs does not impose on them the economic burden of having to use a motorised transportation or pay for public transport</li> <li>✓ Cycling and walking reduces road congestion and associated costs caused by delays</li> <li>✓ Cycling and walking encourages local shopping</li> <li>✓ Peak Oil will impact on the availability and price of fuel, further highlighting cycling and walking as attractive and cost effective modes of transport</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cycling is a mode of transport that takes up little space, is very flexible and enables riders to converse with each other and passers-by</li> <li>✓ Cycling is social and contributes to improved residential amenity</li> <li>✓ Cycling does not threaten the lives of pedestrians, pets or wildlife to the same extent as motor vehicles</li> <li>✓ Cycling is generally unrestricted by age or competence, enjoyable and fun</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cycling and walking emits no greenhouse gas or other pollutants. Cycling and walking trips can replace short car trips, which are the most polluting</li> <li>✓ Cycling trips can replace public transport trips, freeing up space for others on public transport</li> <li>✓ While walking forms a part of all transport trips across all modes and should be the highest priority mode, connected and safe cycling network designed around the user's requirements has a greater potential to replace driving trips</li> <li>✓ Increasing the amount of cycling and walking is highest priority action that the Council can take to improve transport sustainability</li> <li>✓ Cycling and walking reduces the need for vehicle parking spaces and frees up roads for alternative uses. As well as allows existing parking spaces to be converted to cycle parking – 'One Car Park Space can allow for XXX cycles to park'</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cycling and walking has less of a local road safety threat to other road users, compared to motor vehicles</li> <li>✓ Converting driving trips to cycling and walking trips will improve road safety outcomes</li> <li>✓ Studies world wide<sup>(1)</sup> have shown that the higher the bicycle use, the safer it is for cyclists. This is due in part to: higher bicycle use leading to modified road user conduct as cyclists are more dominant and more drivers are also cyclists with a greater appreciation and respect for other road users, higher bicycle use leads to less car use and lower potential conflicts, and higher bicycle use creates more support so more is invested in a safer bicycling infrastructure</li> </ul>

<sup>1</sup> "Cycling in the Netherlands" – Ministerie van Verkeer en Waterstaat

Figure 2.2: Identified Land Use within the City of Kwinana



The previous *Bike Plan (2010)* proposed several recommendations which Council has since implemented, including constructing missing links and the installation of signs and pavement markings.

More recently, substantial progress made in bicycle route planning at a state level as shown in the development of the *Western Australian Bicycle Network Plan (2017)*.

The Disability Services Commission reports that in 2003 there were 4,390 people with a disability living in Kwinana, with a total of 20.6 % of the Western Australian population with a disability<sup>3</sup>. Disability Services Commission projected that as the population of Western Australia increases and ages this will be reflected in the number of people with a disability.

The City of Kwinana has experienced significant growth from the period 2003 to 2012; the City now has close to 40,000 residents and is projected to have a population of 84,000 by 2036. It is expected that there will be an increase in the number of people with a disability living in the City as a result of population growth, the aging of the current population and those who take up residency in the City.

A key issue for the City of Kwinana is that 7 out of 10 people within the City are overweight or obese, and 3 out of 5 people are not active enough. Due to these issues, Kwinana has the highest rate of Type II diabetes, cholesterol and behavioural problems in Australia (Curtin University, 2015).

<sup>3</sup> Disability Services Commission, 2003. *Profile of Disability: Perth Statistical Division City of Kwinana*

A measure to combat this, as noted within the *Healthy Lifestyle Kwinana Plan (2015-2018)*, is a **safe and efficient integrated network of roads, footpaths and cycle routes** supported by a good public transport system.



Income levels for the population of Kwinana indicate that there are a higher percentage of people within the low, medium to low, and medium to high category than for greater Perth, with a lower percentage of people within the high category when compared to greater Perth.

The new *Bike and Walk Plan* seeks to provide a clear strategic direction for the development of cycling and walking in City of Kwinana to assist in reducing obesity levels, creating a healthier and more active population. To assist with this, a socio-economic study has been undertaken to identify the key areas where active transport needs to be promoted within the City, allowing infrastructure and travel behaviour change programs to have a more focused approach. The new plan addresses new priorities and incorporates contemporary best practice for the continued design and implementation of bicycle infrastructure, as well as a pedestrian network across the City to accommodate and encourage active travel behaviours. While the plan will work towards providing for a broad range of potential users, those between 8 to 80, the focus of the plan will be on the lower socio-economic areas and ensuring the right infrastructure is proposed.

As a tool, the network plan will contribute to the development of a safe, connected and attractive cycling network, available for all, and providing not only a viable alternative transport mode, but also recreational, tourism and health opportunities for the community.

Both cycling and walking have the potential to become an integral part of the transport network. Walking is an integral part of every mode of travel and cycling is not just for the dedicated "cyclist" commuters, but for everyday "bike riders", who can travel short distances to destinations, or, as part of multimodal transportation with public transport.



### 3. The City's Active Travel Vision

As noted previously, the plan provides a clear strategy for the design and implementation of cycling and walking infrastructure across the City to accommodate and encourage active travel behaviours by ensuring the right infrastructure is proposed within each neighbourhood within the City. The focus of the plan is to encourage 1-2km trips to destinations frequently visited to improve the health and well being of the community.

In this regard, the Vision and Objectives are as follows.

#### Vision

*Develop a safe, connected and attractive cycling and walking network so that active travel becomes an integrated part of daily life for all types of trips, enabling people to lead healthier lifestyles and stay more active and independent for longer.*

#### Objectives

- To have an interconnected continuous and well-maintained bicycle and pedestrian network that cyclists and pedestrians of all abilities feel comfortable using;
- To be a city where walking and cycling is the first choice for transport (for all ages) for short trips (1 - 2 km);
- To have a network of safe roads designed to Safe Active Street principles to encourage the short trip journeys;
- To improve the City's health issues by actively promoting new cycle and walking infrastructure as it is implemented; and
- To improve walking and cycle access to schools, train stations, parks and recreational facilities.

#### Key Initiatives

The following key initiatives together will work toward achieving the proposed objectives.

- Plan and deliver a connected network of slow speed, safe cycle and walking routes that achieves:
  - A safer route to schools' program;
  - improved access to stations; and
  - connects people to shops and community facilities.
- On-street bicycle parking to be increased as well as more trip end and during trip facilities;
- The City to assess the possibility of bicycle maintenance stations at key locations within the City;
- Working to reduce the number of cyclists or pedestrians killed or seriously injured within the City through improved crossing facilities and protected on and off-road cycle infrastructure;
- The City to assess the possibility of a local planning policy that requires all developers to provide a travel plan for their development;
- Increase awareness of the principles of the Strategy within Council to assist in education of the wider community; and
- Increase awareness of the principles of this *Bike and Walk Plan* within Council to assist in education of the wider community.

## 3.1 Process Engaged

GTA undertook the following activities to design the long-term network and implementation plan in conjunction with the City's project coordination team.

- Documentation review, evaluation of data relating to demographics, user counts, crashes, Census information, STRAVA heat maps, Super Tuesday count data, Main Roads crash data etc.
- Socio-economic study prepared by Hames Sharley (engaged as sub-consultant for the project).
- Consultation with the local community through on-line platform CrowdSpot to reveal deficiencies.
- Consultation with Department of Transport, Main Roads WA, adjacent local government authorities and relevant stakeholder groups to agree on the secondary network and approach of the cycling and walking plan.
- Preparation of a cycle route network plan based on the draft cycling network of the State Government's Perth and Peel @3.5 Million Transport Plan (PPTP), a desktop study and a saddle survey.
- Consultation with City of Kwinana regarding its cycle network and agreement on the approach to focus on routes to improve health, as well as the neighbourhood plan approach.
- Detailed analysis of the specific neighbourhoods to determine the long-term network plan and implementation plan associated with each individual area.
- Consultation with the City of Kwinana regarding project prioritisation.
- Submission of the draft report for review then finalisation of the cycling and walking plan for Council endorsement.

## 3.2 Literature Review

### 3.2.1 Strategic Guidance

To inform the *Bike and Walk Plan* and ensure its vision and objectives align with other City of Kwinana policy's and strategy's as well as state and national government cycling policies and strategies, a review of key documentation has been undertaken, and is presented in Appendix A.

The review of each level of government strategic documents (Local, State and National) is summarised below.

### 3.2.2 City of Kwinana Strategic Document Review Summary

The various local government reports have a common theme with each one noting the requirement for the City to provide a **connected** and **safe** network for cyclists and pedestrians. As well as planning for active travel and ensuring provision of cycling and walking infrastructure is allowed for in newly developed areas. The *Town Centre Masterplan* notes a number of corridors identified for cycling and walking priority.

### 3.2.3 Western Australia Strategic Document Review Summary

The common theme through the documents released by State Government is the importance of encouraging cycling and walking to build a more active and healthy community, specifically identifying **connections to schools** and **stations** and providing the right infrastructure for the right end user. The PPTP has identified various road proposals as well as new cycle links that have been considered as part of the long-term network. The WABN notes specific infrastructure actions to which the *Kwinana Bike and Walk Plan* will respond to.

### 3.2.4 National Strategic Document Review Summary

Federally released documents require state and local governments to improve accessibility within their jurisdiction in order to **reduce the dependence on private motor vehicles** and reduce social isolation. The **active transport networks should be continuous, convenient and connected** providing a **safe** environment for pedestrians and cyclists.



## 4. Socio-Economic Study

To aid the understanding of the City of Kwinana’s Socio-Economic and Health issues a Socio-Economic Study has been undertaken. The Socio-Economic Report is provided in full in Appendix B. A summary of the process undertaken, and the key findings are presented below.

### 4.1 Social Infrastructure Review Process

Following the review of a community’s social infrastructure, it is important to understand the requirement for both ‘hard’ and ‘soft’ elements. ‘Hard’ elements include health facilities and centres, education facilities, art and cultural facilities, recreational grounds and connections between. Ensuring good quality design outcomes within these elements is important for maximising the potential benefits to the community and value for money outcomes. As found within the review of major infrastructure, Kwinana has a good supply of facilities accommodating a range of activities and services. However, there is a gap in understanding of how well connected and well used these facilities are in terms of the ‘soft’ programming and the quality of design to suit their purpose.

**Figure 4.1: Social Infrastructure as both hard and soft elements**



‘Soft’ elements may include programs, resources and services, as well as public art and cultural events that complement ‘hard’ elements and contribute to the formation of community. ‘Hard’ elements do not work successfully unless ‘soft’ elements accompany them. Public and private investment in social infrastructure is essential to build the social capital and fabric of the community. This enables active living, learning opportunities, social interactions and supporting programs that help people innovate, express themselves and adapt to major life events. It is social capital that makes the community liveable, inclusive, competitive and diverse (WAPC, State Planning Strategy 2050). In this regard, a detailed Social Services Review for Kwinana is a priority to understand the alignment of ‘hard’ and ‘soft’ elements, and where the future needs and provisions will be to provide for its social infrastructure.

No two places are the same and therefore there is no single blueprint for creating liveable, inclusive, competitive and diverse communities; it arises from an understanding of context and place. Often this is best delivered by outcome-based policy rather than by traditional planning models that focus on hard rather than soft infrastructure outcomes. An outcomes-based approach requires those designing and assessing strategies and proposals to have a holistic understanding of community wellbeing and place-making. Spaces and places are public areas which reflect the community needs, purpose and identity. Collaboration with the Kwinana

community and the application of an appropriate response and design outcomes will be essential to the future prosperity of the City.

**RECOMMENDATION 1:** Undertake a detailed Social Services Review for Kwinana to understand where future needs and provision will be for social infrastructure

## 4.2 Social and Economic Initiatives

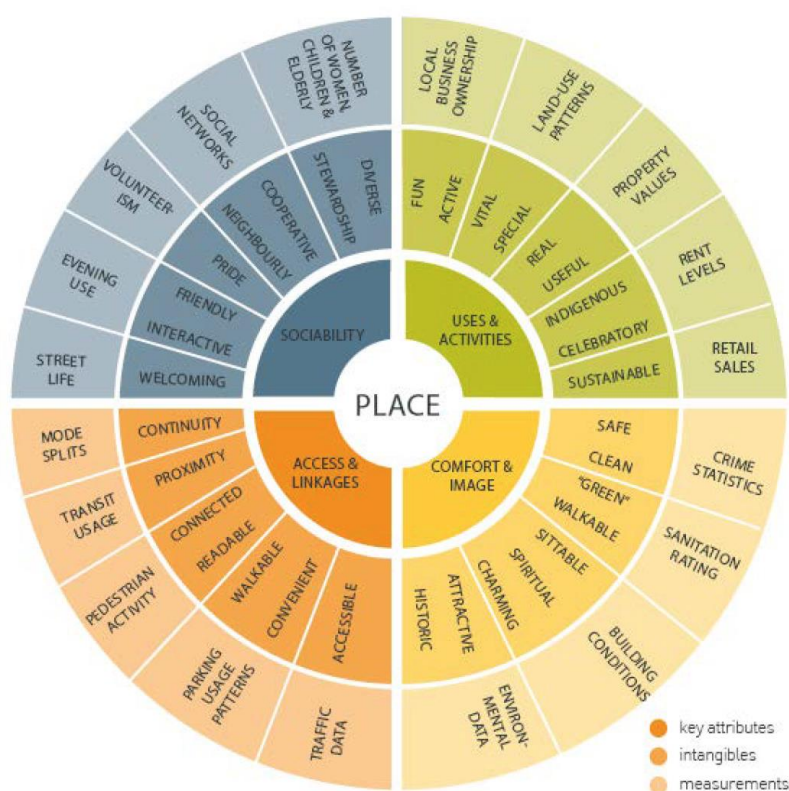
This review is an overview or spotlight on health and liveability issues in Kwinana. As such, it has been framed around liveability themes and initiatives that respond broadly to the overarching place-based lens.

### 4.2.1 Measuring liveability: The Place Lens

Measuring liveability can be very challenging as people look for and value different things when searching for 'a place to call home'. Liveability is closely linked to place. It is therefore valuable to reference a place lens that considers both the intangible qualities of place and the measurable quantitative aspects to enable a more comprehensive assessment of the success of a place as a liveable community. This is depicted in Figure 4.2.

Capturing data for both the quantitative and qualitative aspects of liveability and place will enable the success of Kwinana as a place to live to be more clearly measured. This in turn will provide justification for future funding and service provision.

**Figure 4.2: Place Lens**



Source: Projects for Public Spaces, [www.pps.org](http://www.pps.org), 2016

There are many initiatives and programmes already in place across government agencies and other responsible parties that are aimed at improving liveability in Kwinana. The initiatives

emerging from this review are those which came into sharper focus through both the liveability indicators and a review of recent community consultation. The 'spotlight' nature of the project and short timeframe has constrained the ability to refine, deepen and articulate implications of findings. As such, further work is recommended to confirm the initiatives proposed.

In proposing the initiatives there has been a focus on:

- **Diversity** – Linking local destinations to positively influence neighbourhood walkability and encourages residents to enjoy physical activity and social connections.
- **Access** – Ensuring a selection of destinations within walkable distance from households facilitates active transport, such as walking, cycling or use of public transport as more viable and makes it easier to reduce car use.
- **Design** - The design of the public realm is important in determining how people reach the destination, how they move and interact with it, as well as how it can enable a strong connection to the community and the environment.
- **Connectivity** - Movement can be enhanced through the provision of safe, connected, convenient, continuous, easily navigated and attractive links.
- **Infrastructure** - The inclusion of safe, functional and highly visible infrastructure encourages a range of travel options.
- **Streetscape Design** - Greater movement is encouraged in streets which have been designed to accommodate all transport users.
- **Function** - Open spaces assist in meeting the physical, recreational and social needs of a community.
- **Consultation** - Encouraging both current and future communities to participate in design and development decisions contributes to a sense of place and builds ownership and respect.
- **Composition** - The layout or position of community facilities that enable multiple uses can provide health and socio-economic and economic benefits.
- **Flexibility** - Facilities that can accommodate multiple functions may better serve the community and encourage greater use.
- **Context** - Well-designed buildings can improve health outcomes by engaging with their surrounds.
- **Local Participation** - Combination of hard and soft initiatives with a priority for low capital expenditure and optimum community participation.
- **Choice of Housing** – Ensuring a mix of dwelling types to increase density and attract a broad demographic, creating a resilient neighbourhood that caters for a diverse range of household structures, ages and tenures.

## 4.3 Priority Actions

The priority actions as presented within the Socio-Economic Study have been categorised into Health Check, Sense of Place, Public Open Space, Movement Networks, Community Facilities and Key Destinations and Housing Diversity and are presented within Table 4.1.



**Table 4.1: Socio-Economic Study priority actions**

Health Check	
Connectivity	Access
<p>The way we design and build our neighbourhoods and communities' affects resident's social connections, sense of community and social capital and thus their levels of physical activity and mental health.</p> <ul style="list-style-type: none"> <li>○ Ensure parks and other areas of public open space provide attractive local destinations for people of all ages to walk and cycle to and be active in.</li> <li>○ <b>Ensure continuity of access within and through adjacent neighbourhoods, and to the wider networks – particularly in less connected, older neighbourhoods of Calista-Medina, Orelia and Parmelia.</b></li> <li>○ <b>Promote greater physical activity and community interactions by establishing good access along a defined active transport network of footpaths and cycle ways - connecting the range of uses and destinations such as the Kwinana Recquatic Centre, train station, local schools and surrounding public open spaces</b></li> <li>○ Review opportunities to densify neighbourhoods, particularly Wellard, Leda and Wandi, and offer a diverse mix of co-located destinations (including employment, education, retail and recreational uses) to encourage and sustain active modes of transport.</li> </ul>	<p>A selection of destinations that are a walkable distance from home makes active transport, such as walking, cycling or use of public transport more viable.</p> <ul style="list-style-type: none"> <li>○ <b>Ensure community and recreational facilities are well serviced by linked pedestrian and cycle routes, designated crossings, and suitable ramps to encourage regular physical activity and social interaction.</b></li> <li>○ Within developing neighbourhood areas, such as Wellard and Bertram ensure a range of uses that promote physical activity and community interactions.</li> <li>○ Ensure all community members have access to at least one open space within a 400m - 800m walk – enhancing opportunity for walking and cycling as well as mental health benefits and greater social interaction.</li> </ul>

Sense of Place	
<p><b>Personal and Community Safety</b></p> <p>The design of the public realm and network of connections are important in determining perceptions of safety, how people reach the destination, as well as how they move and engage within spaces and places.</p> <ul style="list-style-type: none"> <li>○ Ensure open spaces and supporting infrastructure are well managed and maintained – creating attractive environments and a positive sense of place.</li> <li>○ Review key destination to ensure public spaces encourage activity and interaction across the community.</li> <li>○ Ensure the design of spaces and connections put the pedestrian first and are of a comfortable scale – particularly within the city centre and new local centres.</li> <li>○ Identify opportunities to attract night-time activation, particularly within the city centre – creating vibrant and inviting centres.</li> <li>○ Ensure adequate street lighting and illumination across footpaths, at key entrances to buildings and at bus stops and train stations.</li> </ul>	<p><b>Local Participation</b></p> <p>A good sense of place can foster a positive emotional attachment to a neighbourhood and community, levels of interaction between members of the community and formal participation or involvement in neighbourhood and community organisations.</p> <ul style="list-style-type: none"> <li>○ <b>Ensure community consultation has been employed to determine infrastructure needs, gaps and desires into the future.</b></li> <li>○ Identify opportunities for the community to be engaged and involved in the design of the public realm, civic spaces and public art.</li> <li>○ Ensure design choices have been informed by the cultural identity of the city and local areas - based on the social, economic, environmental and indigenous histories.</li> <li>○ Identify strategies to encourage a diverse mix of destinations integrated in close proximity to residential dwellings – providing greater opportunity to fulfil daily activities and needs (live, work, play) within existing and newer neighbourhoods.</li> </ul>
Public Open Space	
<p><b>Function</b></p> <p>For children and young families, public spaces and parks provide places to meet and to participate in physical and social play. The provision of public open spaces is thus a key factor in promoting active living and providing important physical, psychological and social health benefits for individuals and the community.</p> <ul style="list-style-type: none"> <li>○ Consider the roles and functions within public open spaces holistically to resolve needs to cater for a variety of users across the open space network.</li> <li>○ <b>Enhance pedestrian and cycle linkages to public open spaces – particularly new attractions such as the Adventure Playground in Calista Park.</b></li> </ul>	<p><b>Quality of spaces</b></p> <p>Open space designs that respond to their surrounds can enable a strong connection to the community and the environment.</p> <ul style="list-style-type: none"> <li>○ Ensure public open spaces and linkages offer attractive environments and quality design outcomes – increasing visitation and physical activity levels.</li> <li>○ <b>Ensure pedestrian and cycle connections most frequently used provide protected and comfortable environments.</b></li> <li>○ Ensure public spaces respond to existing environmental conditions such as drainage, slopes and retaining trees where appropriate.</li> <li>○ Ensure new development is designed to contribute to street activation and allow natural surveillance of the surrounding community and public spaces.</li> </ul>

Movement Networks	
<p><b>Infrastructure</b></p> <p>The inclusion of safe, functional and highly visible infrastructure encourages a range of travel options.</p> <ul style="list-style-type: none"> <li>○ <b>Ensure end of trip facilities, such as bike racks, drinking fountains, change rooms and lockers, shade/ shelter, seating and lighting, are provided within the city, local centres and key destinations.</b></li> <li>○ <b>Ensure facilities are designed for all users, including the young, the elderly and those with disabilities.</b></li> <li>○ Ensure public transport stops are provided within suitable proximity to dwellings and destinations.</li> <li>○ <b>Prioritise walking and cycling as the preferred means of travel within the city centre. Address wait times at traffic lights, the size of footpaths compared to roadway widths and prioritising pedestrian/cycle crossing points.</b></li> <li>○ Modes of transport will continue to evolve over time. Ensure future transport needs are accommodated in new street design.</li> </ul>	<p><b>Streetscape Design and Integration</b></p> <p>Streets which have been designed to accommodate all transport users will encourage more movement. Movement is enhanced through the provision of safe, connected, convenient, continuous, easily navigated and attractive links.</p> <ul style="list-style-type: none"> <li>○ <b>Ensure connections to key destinations are well lit, provide clear directions or signage to encourage greater use and accommodate shade and shelter at key stops and destinations.</b></li> <li>○ <b>Link more than one route between destinations to provide variety in active transport options and experiences.</b></li> <li>○ <b>Identify opportunities to narrow streets near schools with footpaths becoming wider with crosswalks and pedestrian crossing points connecting movement networks.</b></li> <li>○ <b>Ensure streets are connected and designed in response to their surrounds – reducing speeds along primary pedestrian and cycle networks, increasing perceptions of safety and comfort.</b></li> </ul> <p><b>Integration</b></p> <ul style="list-style-type: none"> <li>○ <b>Ensure pedestrian and cycle networks optimise access and routes to community spaces and key destinations, such as the city and local centres, railway stations and schools.</b></li> <li>○ <b>Provide continuity and cohesion of walking, cycling and public transport movement networks across adjacent neighbourhoods – particularly for integrating older neighbourhoods of Calista, Orelia and Medina linkages to the city centre and railway station.</b></li> <li>○ Encourage greater density around key centres to increase public transport numbers required for regular service routes.</li> <li>○ <b>Ensure good access to regional cycle routes and networks – enabling greater choice of active transport.</b></li> </ul>



Community Facilities and Key Destinations	
<p><b>Flexibility</b></p> <p>Mixed-use planning and the presence of a variety of destinations promotes greater walking and cycling which in turn increases the sense of community or social capital through the facilitation of interaction between residents.</p> <ul style="list-style-type: none"> <li>○ Within developing areas such as Wellard, ensure community facilities are organised to allow for interim uses while the area is established.</li> <li>○ Review community and recreational facilities to ensure these offer a range of activities that meet the needs of the community.</li> <li>○ Identify the opportunity for facilities to accommodate multiple functions, better servicing the community and encouraging greater use.</li> </ul>	<p><b>Diversity of Users</b></p> <p>Social interaction is critical for creating and maintaining community cohesion and building social capital. An interesting choice of local destinations positively influences neighbourhood walkability and encourages residents to enjoy physical activity and social connections.</p> <ul style="list-style-type: none"> <li>○ <b>Promote active modes of travel to and from schools – increasing physical levels of activity and fostering perceptions of safety in the area, particularly in the Wellard (west) development of a new school on Johnson Road.</b></li> <li>○ Ensure destinations offer a mix of uses that will encourage consistent attendance and use – within walking distance to homes.</li> <li>○ Identify opportunities where usage can be enhanced through the provision of community and cultural facilities, open spaces or sporting activities.</li> <li>○ Address opportunities for creating 'walkable' and sustainable neighbourhoods by offering key destinations such as employment, education, retail and recreation land uses.</li> <li>○ <b>Design car parking within the City and local centres to reduce unnecessary car travel – with a focus on linking safe, attractive and comfortable pedestrian and cycle pathways as convenient alternatives.</b></li> </ul>
Housing Diversity	
<p><b>Choice of Housing</b></p> <p>A mix of dwelling types can increase density and attract a broad demographic, creating a resilient neighbourhood that caters for a diverse range of household structures, ages and tenures.</p> <ul style="list-style-type: none"> <li>○ Review policy to ensure new neighbourhoods offer a range of dwelling choices that are suited to the needs and character of the area.</li> <li>○ Identify opportunities within existing neighbourhoods to provide for a diverse community and enable residents to remain within their community across each stage of life.</li> <li>○ Review the strategic locations of affordable housing in close proximity to local amenities such as public transport, employment, shops and schools.</li> </ul>	<p><b>Context</b></p> <p>The design of a dwelling can have a positive influence on its surroundings and inhabitants and can lead to safer and more engaged communities and healthier lifestyles.</p> <ul style="list-style-type: none"> <li>○ Ensure new dwellings are designed to engage with the street and/or adjacent open space.</li> <li>○ Provide guidance for dwellings to provide passive surveillance by locating active spaces such as living areas and balconies overlooking streets and open spaces.</li> <li>○ Identify opportunities for new dwellings sited on the lot to allow for future intensification.</li> </ul>

## 5. What Is The Data Telling Us?

### 5.1 Kwinana Census

The method of travel to work is recorded in each census. Table 5.1 shows the preferred mode of travel people make within the City of Kwinana area.

**Table 5.1: Travel to work modes in City of Kwinana**

Method of travel to work							
City of Kwinana - Employed persons (Enumerated)							
	2011			2006			Change
Main method of travel	Number	%	Greater Perth %	Number	%	Greater Perth %	2006 to 2011
Train	1,109	9.0	6.7	37	0.4	4.1	+1,072
Bus	213	1.7	3.7	375	4.1	4.1	-162
Tram or Ferry	0	0.0	0.0	4	0.0	0.0	-4
Taxi	10	0.1	0.2	5	0.1	0.2	+5
Car - as driver	7,844	63.4	62.2	6,120	66.5	63.0	+1,724
Car - as passenger	788	6.4	5.3	616	6.7	5.8	+172
Truck	122	1.0	0.8	123	1.3	1.0	-1
Motorbike	83	0.7	0.6	68	0.7	0.6	+15
<sup>a</sup> Bicycle	22	0.2	1.1	26	0.3	1.0	-4
<sup>a</sup> Walked only	113	0.9	2.2	111	1.2	2.0	+2
Other	172	1.4	1.5	287	3.1	1.1	-115
<sup>a</sup> Worked at home	234	1.9	3.5	212	2.3	3.6	+22
Did not go to work	1,448	11.7	10.9	1,031	11.2	11.6	+417
Not stated	218	1.8	1.3	182	2.0	1.7	+36
<b>Total employed persons aged 15+</b>	<b>12,376</b>	<b>100.0</b>	<b>100.0</b>	<b>9,197</b>	<b>100.0</b>	<b>100.0</b>	<b>+3,179</b>

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011. Compiled and presented by id., the population experts.

<sup>a</sup> People who travelled to work by car  
<sup>a</sup> People who travelled to work on public transport

Please refer to the specific data notes for more information

The data presented in Table 5.1 notes that for the Kwinana local government area in 2011, the use of the car was higher than the metropolitan average at 63.4% rising to 69.8% when car passengers are included. However, this is a slight reduction in car use since 2006 reducing by approximately 2% since the 2006 survey. The number of respondents who chose cycling or walking as their travel method (while overall is small in number) has actually decreased between 2006 and 2011.

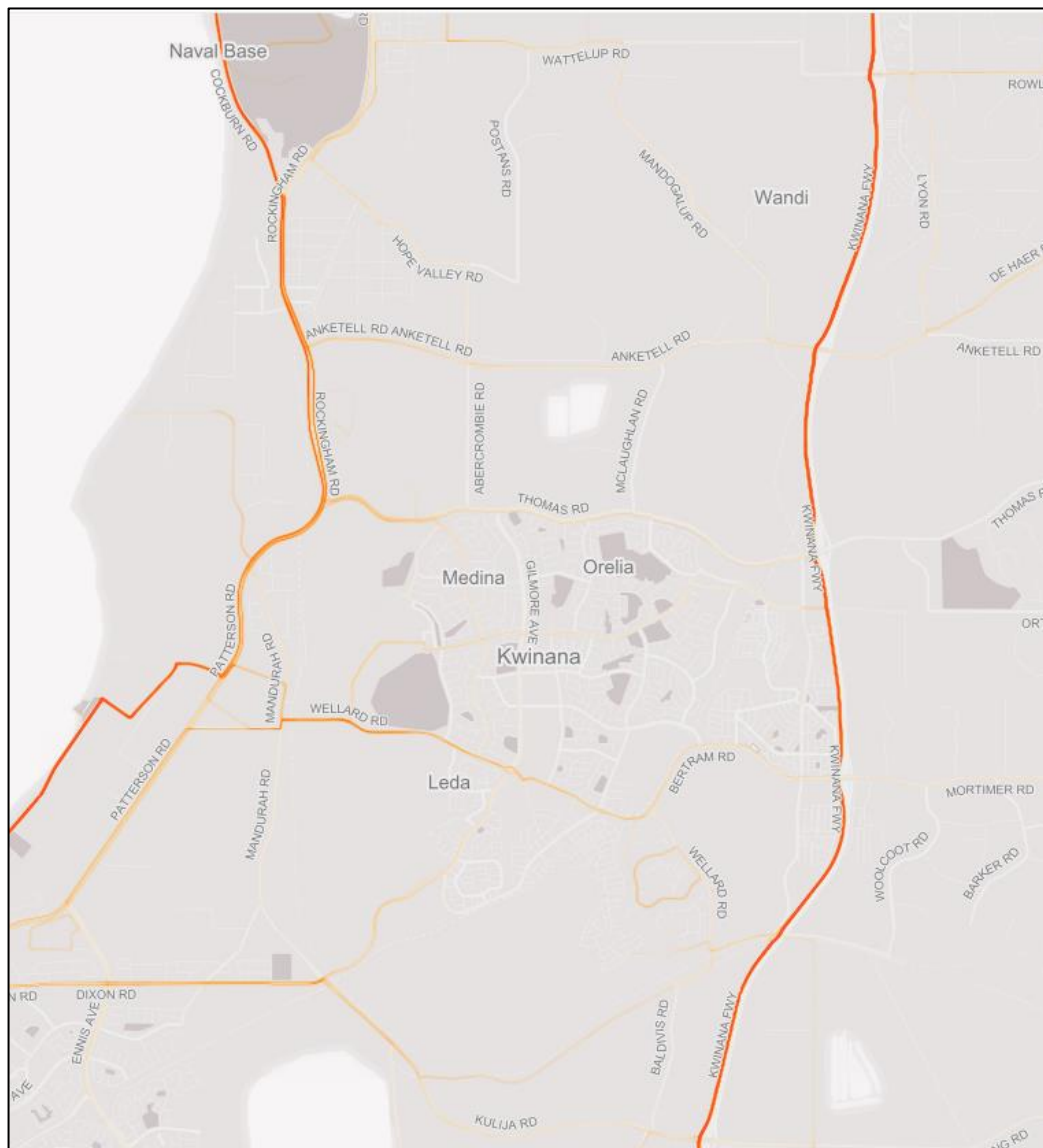
## 5.2 Where are our existing riders, riding?

Figure 5.1 and Figure 5.2 below illustrates the data collected through the 'STRAVA' application which tracks cycling and walking routes used most frequently by STRAVA users. The data indicates that the highest proportion of cyclists using the STRAVA application occur on the:

- Kwinana Freeway Principal Shared Path; and
- Cockburn Road/Rockingham Road/Patterson Road approaching Kwinana Beach Road to connect to Rockingham via Rockingham Beach Road (this is in lieu of a coastal recreational route).

The data also indicates the Kwinana is frequently accessed more from the west than the east and Wellard Road from the south west is a connection both to Rockingham Beach (via Rockingham Beach Road) and to Patterson Road to the north.

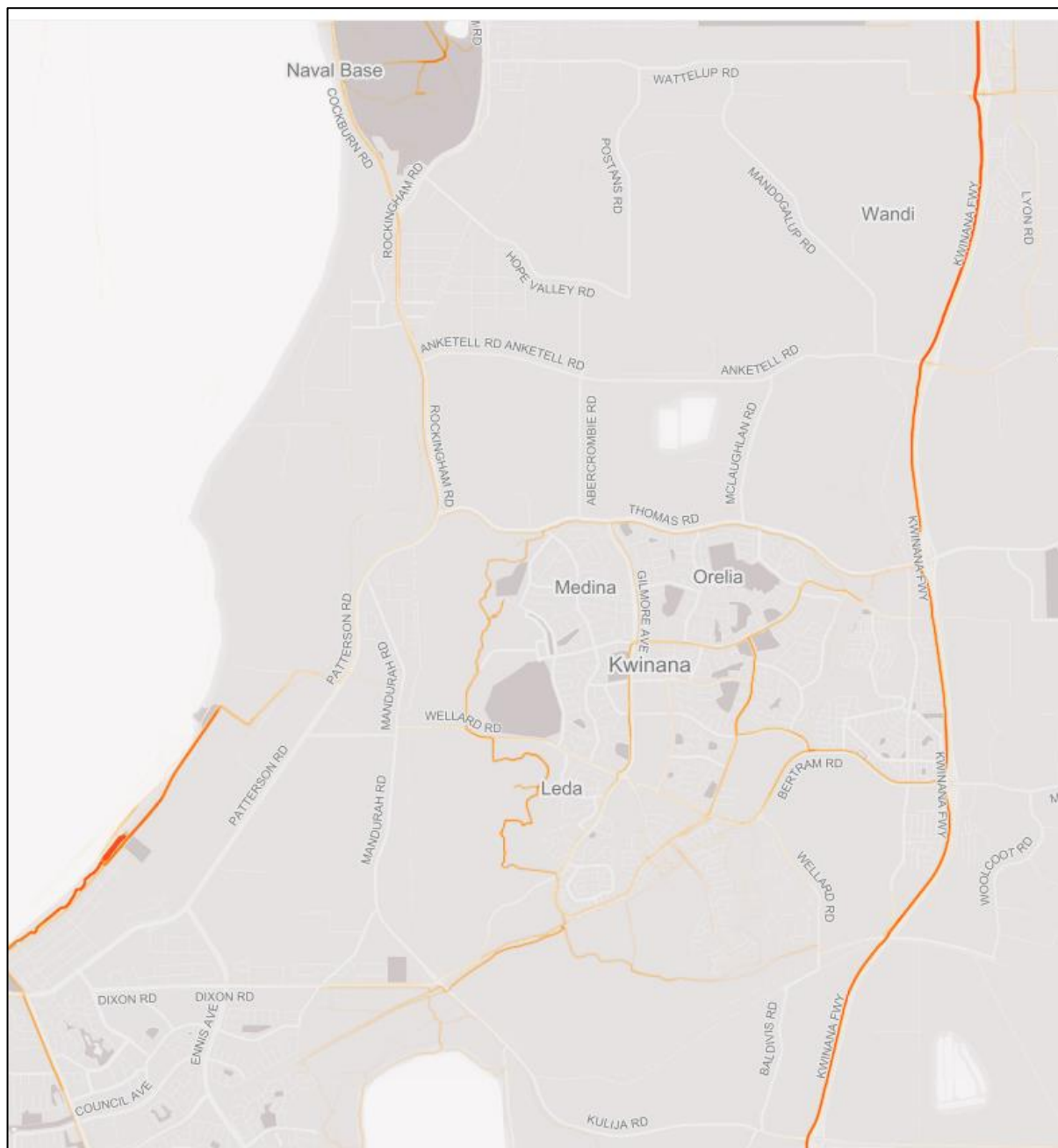
**Figure 5.1: Kwinana STRAVA cycling data**





The Kwinana Freeway PSP corridor also experiences a high proportion of people walking. Runners/walkers also tend to be more concentrated around the Kwinana Loop Trail which runs around the Kwinana City Centre.

**Figure 5.2: Kwinana STRAVA walking data**



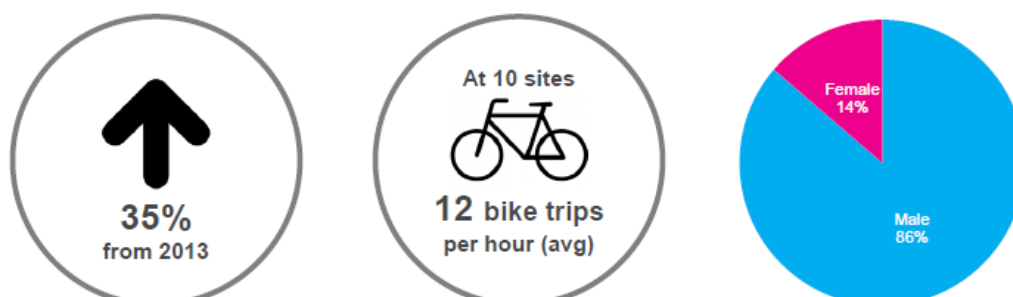
These findings helped to define the cycling network defined in Section 9.

Super Tuesday Bike Count (Super Tuesday) is the world's biggest and longest running visual bike count. It measures bicycle commuter flows in the morning peak from 7am to 9am. The ninth annual Super Tuesday was conducted on Tuesday 3<sup>rd</sup> March 2015. The results showed a 3% increase compared to the same locations in 2014. The Super Tuesday results for Kwinana are present in Table 5.2.

Table 5.2: Super Tuesday 2015 Kwinana cycle count data

Site ID	Site Description	Total Female	Total Male	Total Unknown	Total 2015	Total 2014	% Change
6055	Freeway PSP [N], Thomas Rd Bridge [E], Freeway PSP [S], Thomas Rd [W]	3	53	0	56	4	1300%
6057	Rockingham Rd [N], Thomas Rd [E], Rockingham Rd [S]	0	5	0	5	11	-55%
6058	Cycle Path [N], Mortimer Rd [E], Underpass [S], Mortimer Rd [W]	5	37	0	42	39	8%
6059	Gilmore Ave [NE], Mandurah Rd [SE], Dixon Rd [SW], Mandurah Rd [NW]	0	5	0	5	10	-50%
6061	Gilmore Ave [NE], Wellard Rd [SE], Gilmore Ave [SW], Wellard Rd [W]	2	14	0	16	9	78%
6064	Rockingham Beach Rd [NE], Rockingham Beach Rd [SW]	3	18	0	21	32	-34%
6067	Hope Valley Rd [E], Cockburn Rd [S], Cockburn Rd [N]	0	5	0	5	3	67%
6073	Thomas Rd [E], Gilmore Ave [S], Thomas Rd [W]	0	2	0	2	5	-60%
6692	Freeway PSP [N], Freeway PSP [S], Rowley Rd [W]	16	50	0	66		
6693	Chiswick Pde [NE], Train Station Entrance [SE], Chiswick Pde [SW], The Strand [NW]	4	19	0	23		

- Super Tuesday Bike Count 2015 showed a 35% annual growth compared to the same locations counted in 2014.
- In 2015, an average of 12 bicycle trips per hour was counted at all 10 intersections in Kwinana during the 7am - 9am morning peak period.
- The busiest site in Kwinana was on the Freeway Principal Shared Path at Rowley Road with 66 bicycle riders. This ranked 28th among 33 participating major cities.
- Female riders represented 14% of bicyclists across the municipality. This is below the average female ridership (23%) of all the surveyed areas.
- The busiest count site in Kwinana was Site no. 6692, Freeway PSP [N], Freeway PSP [S], Rowley Rd [W], where 66 bicycle commuters were recorded during the 2-hour survey. The peak hour was 7:15–8:15 with 41 riders and there were more male riders observed at this intersection.



### 5.3 How safe is the network?

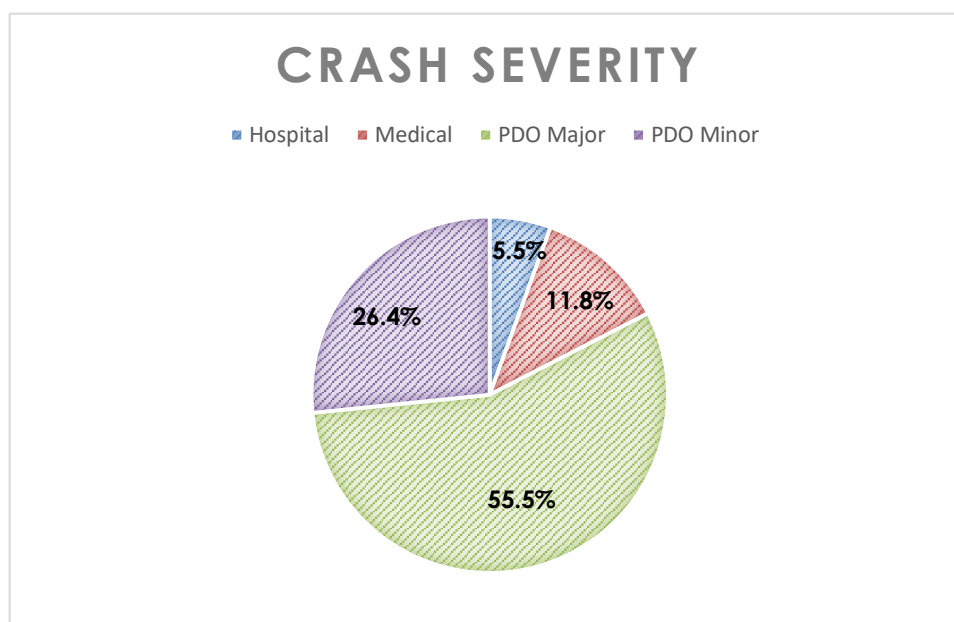
Crash analysis has been undertaken using the latest available crash data (2011 to 2015) from the Main Roads Western Australia Crash Reporting System. There were 2,558 reported crashes within the City between 2011 and 2015 with 10 of these crashes resulting in a fatality (2 of these were pedestrians). A summary of the crash type commonly occurring within the City of Kwinana is presented in Table 5.3.

**Table 5.3: City of Kwinana five-year crash data by crash type (2011-2015)**

Crash Type	Total Crashes	Percentage
Rear End	1,088	42.5%
Right Angle	446	17.4%
Sideswipe Same Direction	244	9.5%
Right Turn Thru	101	3.9%
Hit Object	426	16.7%
Hit Pedestrian	18	0.7%
Head On	40	1.6%
Non Collision	70	2.7%
Hit Animal	8	0.3%
Other	117	4.6%
<b>Total</b>	<b>2,558</b>	<b>100%</b>

The assessment of the severity of crashes within the City is presented in Figure 5.3 and notes **that less than 1% of the crashes ended in a fatality** (hence it does not show within Figure 5.3). Over three quarters of the crashes were Property Damage Only (PDO) crashes.

**Figure 5.3: Crash severity within City of Kwinana**



From the recorded crashes, **only around 1% of crashes involved a pedestrian or cyclist**. Figure 5.4 and Figure 5.5 represent the locations of the pedestrian and cycle crashes respectively.



Figure 5.4: Pedestrian crash locations within City of Kwinana

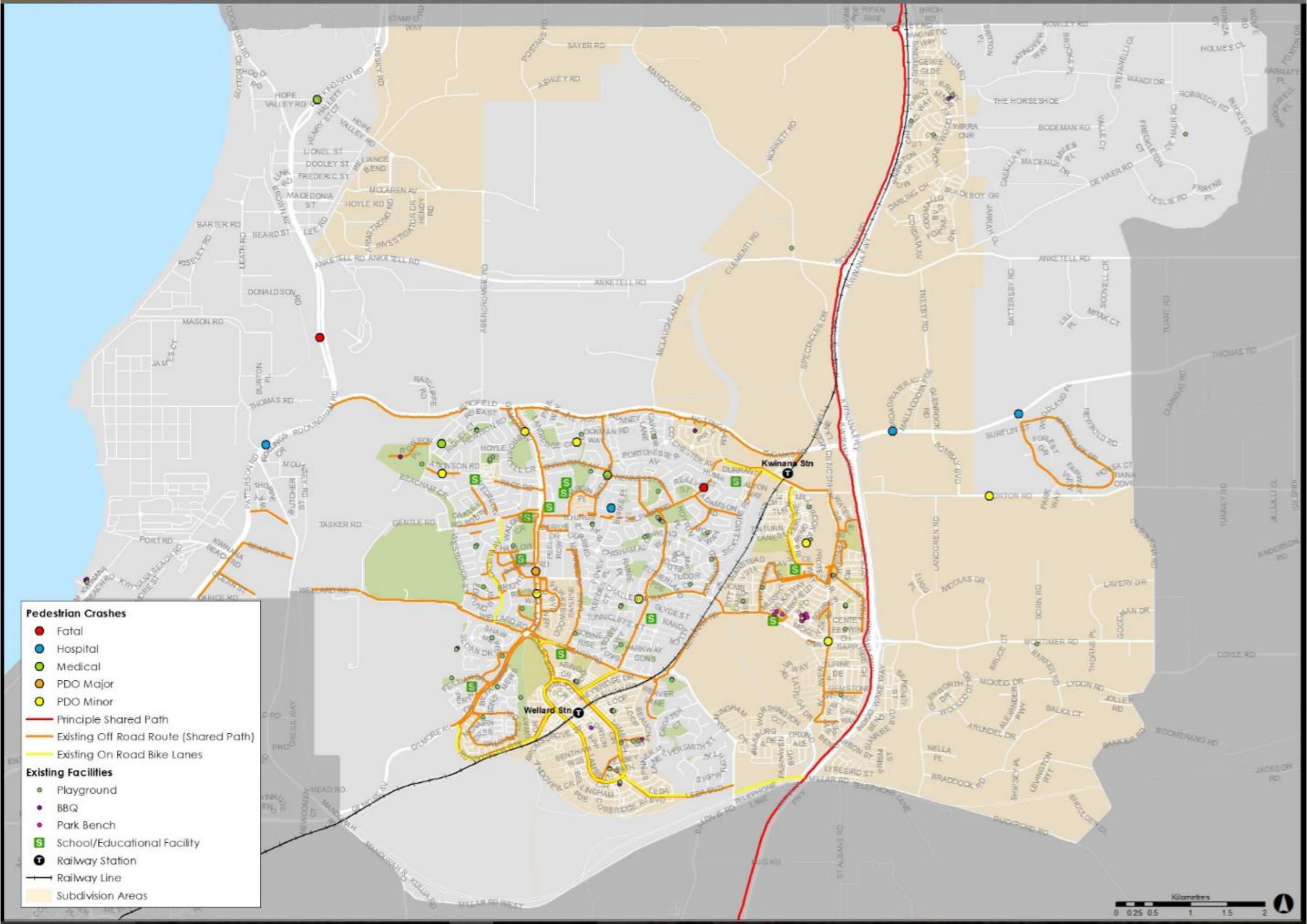
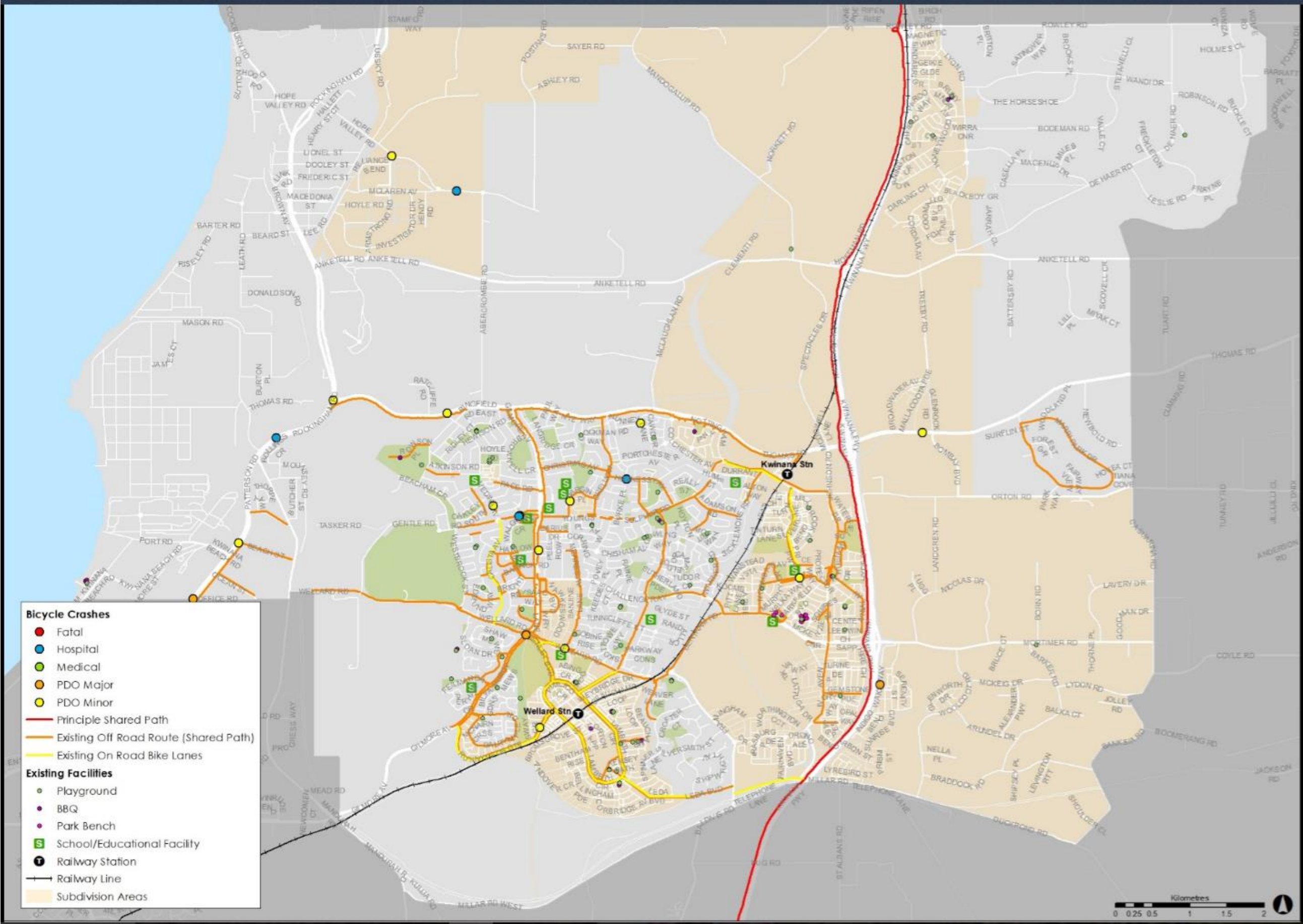




Figure 5.5: Cycle crash locations within City of Kwinana



Between 2011 and 2015, there were 18 crashes recorded as involving pedestrians within the City of Kwinana area, of these, 2 accidents resulted in a fatality.

**Table 5.4: City of Kwinana pedestrian crashes by severity and year**

Severity of Crashes Involving Pedestrians					
	2011	2012	2013	2014	2015
Fatality	1	1	0	0	0
Hospital	1	1	2	0	0
Medical	1	0	0	1	1
Property Damage	5	1	1	1	1
<b>Total</b>	<b>8</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>

There was a reduction in crashes involving pedestrians after 2011. While there is no specific pattern of crashes involving pedestrians or clusters of areas where they repeatedly occur, it is noted that two crashes occurred within the Kwinana City Centre and three occurred along Patterson and Rockingham Roads.

Over the five-year period there were 20 recorded crashes within the City involving bicycles, none of these resulted in a fatality.

**Table 5.5: City of Kwinana cycle crashes by severity and year**

Severity of Crashes Involving Cyclists					
	2011	2012	2013	2014	2015
Fatality	0	0	0	0	0
Hospital	0	1	1	1	1
Medical	0	0	0	0	0
Property Damage	1	3	5	4	3
<b>Total</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>4</b>

There was a similar number of crashes involving cyclists occurring in each year between 2012 and 2015.

There are several cycle crashes occurring either along Patterson and Thomas Roads, or, at or near to local schools, indicating a potential issue with traffic speeds around school locations.

### Data Summary

It is evident from the data that the number of cyclists and pedestrians currently traveling within City of Kwinana is low for overall mode share for transport within the City. Of those that do currently cycle and walk, the predominate routes are the existing shared use facilities that are separated from traffic (such as the freeway PSP) with the predominant cyclist type being commuter or recreational. Cyclist were evident on other roads, such as the on-road/sealed shoulder along Cockburn and Rockingham Roads as well as the existing shared path along a section of Thomas Road, although in lower numbers. Pedestrians were more evident in locations of higher activity land uses such as the Kwinana City Centre, utilising the Kwinana Loop Trail with fewer numbers of pedestrians evident around suburban streets and local community facilities.



#### Crash Data Summary:

- 2,558 crash recorded (2011 to 2015)
- 10 crashes (all modes) resulted in fatality within the same time period
- Of these 10 fatal crashes, 0 included a bicycle and 2 included pedestrians

The safety of the network is paramount to ensure people can be encouraged to cycle and walk more as a viable mode of transport. The crash data indicates that while only around 1% of crashes within the City involved either a cyclist or pedestrian, half of the pedestrian crashes resulted in a fatality or someone requiring medical or hospital treatment. The majority of crashes involving a cyclist resulted in property damage only (to the bicycle or vehicle) and not an injury.

A number of cyclist crashes occurred along Patterson Road where there is existing on-road infrastructure and perhaps indicates where off-road infrastructure should be provided. Also, several cyclist's crashes occurred at or nearby local schools.

## 6. Community and Stakeholder Engagement

### 6.1 Purpose

Engagement with both the local community and relevant stakeholders is essential to understand the deficiencies in the existing network, and to develop a cycling and walking strategy to ensure its outcome reflect expectations of both the network users and those whose decisions will aid or impede its development.

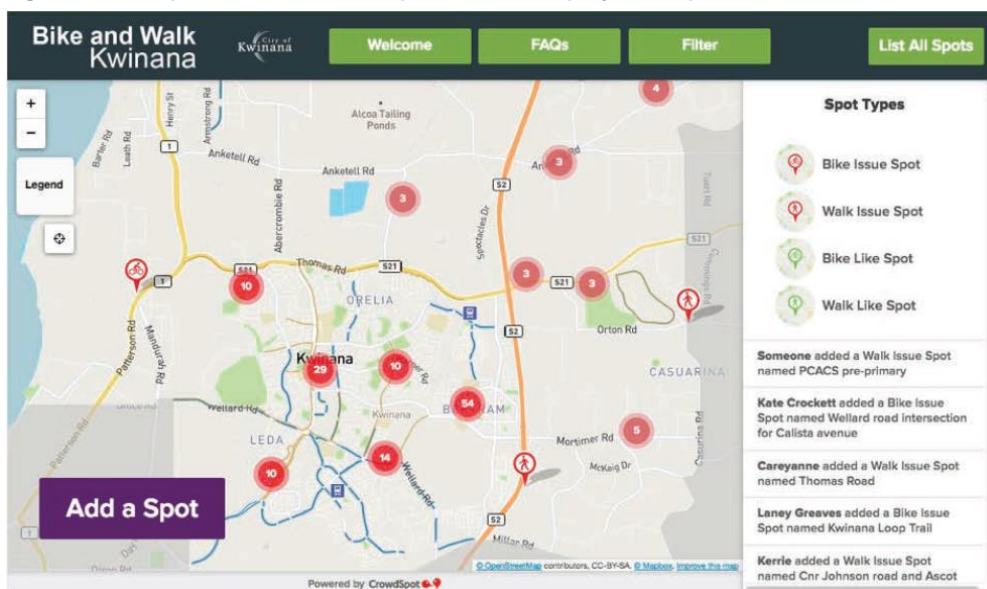
### 6.2 Process Undertaken

The development of the *Bike and Walk Plan* has sought to build upon existing consultation work undertaken by the City.

#### 6.2.1 Online Engagement

The City engaged with the community through an interactive project map developed by CrowdSpot (Figure 6.1). The digital map was accessible via the City of Kwinana website or via CrowdSpot <http://bikeandwalkkwinana.crowdspot.com.au/> between 15 May and 30 June 2017 (6-week period). The map allowed users to identify locations where they like walking and riding their bicycle (Like Spots) or where they encounter walking and bicycle issues (Issue Spots).

Figure 6.1: City of Kwinana CrowdSpot interactive project map



The survey form contained a combination of location specific questions e.g. issue or like in addition to demographic questions of the participant e.g. Connection to the City of Kwinana, Age and Gender (Figure 6.2). People could actively contribute their input to the map either by:

- 'Adding a Spot' to the map via the survey form (four Spot types);
- Commenting on existing spots already on the map; or
- Voting on existing spots already on the map by clicking the 'support' button (Figure 6.3)

Figure 6.2: Inserting information into CrowdSpot interactive project map

**Bike and Walk Kwinana**

Welcome FAQs Filter

**Tell us about riding and walking in Kwinana..**

What is the name of this spot?

What type of Spot is this?  
 Choose One  
☒ Bike Issue Spot  
☐ Walk Issue Spot  
☐ Bike Like Spot  
☐ Walk Like Spot

What is the bike issue at this spot?

Please tell us more about your experience at spot or if you have any ideas on how to improve at this spot or route..

What is your primary connection to the City of Kwinana?

Your gender

Figure 6.3: Example of issue supported on CrowdSpot interactive project map

**Bike and Walk Kwinana**

Welcome FAQs Filter

**Rockingham rd junction with Thomas Road**

13 Support

Charlie Jenkins added this Bike Issue Spot

a month ago - 4 comments

Bicycle lane ends unexpectedly

**Description:** Travelling north on Rockingham Rd turning right onto Thomas Road is a death trap

4 comments [Leave a Comment](#)

I agree this is a major issue I have, with my journey home from work. Avoiding this right hand turn adds 3.5km to my journey. I would be happy if I could just cross those lights as a pedestrian from the bike lane. Too stressful and dangerous to tackle the right hand turn on the road as it is.

Nick



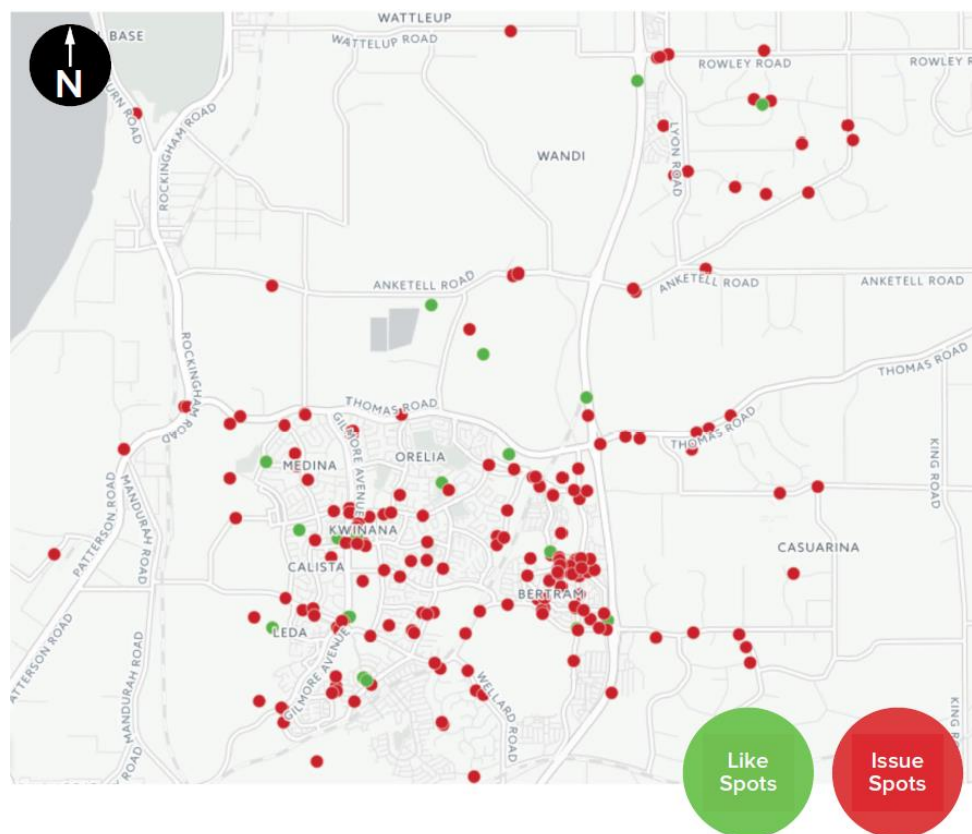
Data obtained from the CrowdSpot survey has been mapped and informed the development of the Cycling and Walking network, specifically the prioritisation of the implementation program. City of Kwinana's work with the community over several years provided insight into the priorities for cycling and walking and has been incorporated into this plan. Information gathered from the community fed into the design of a draft network plan that was presented to relevant stakeholders at a workshop held on 28 September 2017.

### 6.2.2 What did the community tell us?

The data collected through the CrowdSpot mapping indicated:

- 137 people provided active input into the survey, either adding a spot, comment or support. In addition, there were 662 passive participants who came to the website, explored the map, or viewed and read various contributions, but did not make a submission.
- There were slightly more women than men who submitted a spot on the map (53%)
- 48% of all participants were between the ages of 35-49. Of note, only 4% of participants were under the age of 24.
- People who live within the City represented 88% of people who submitted a spot on the map (the remaining participants work within the City of Kwinana or visit the City for other reasons).
- A total of 199 spots were created (91% were Issues and 9% were Likes). In addition to the 199 spots were 72 comments and 423 supports, meaning a total of 694 submissions.
- 60% were for walking and 40% for cycling.

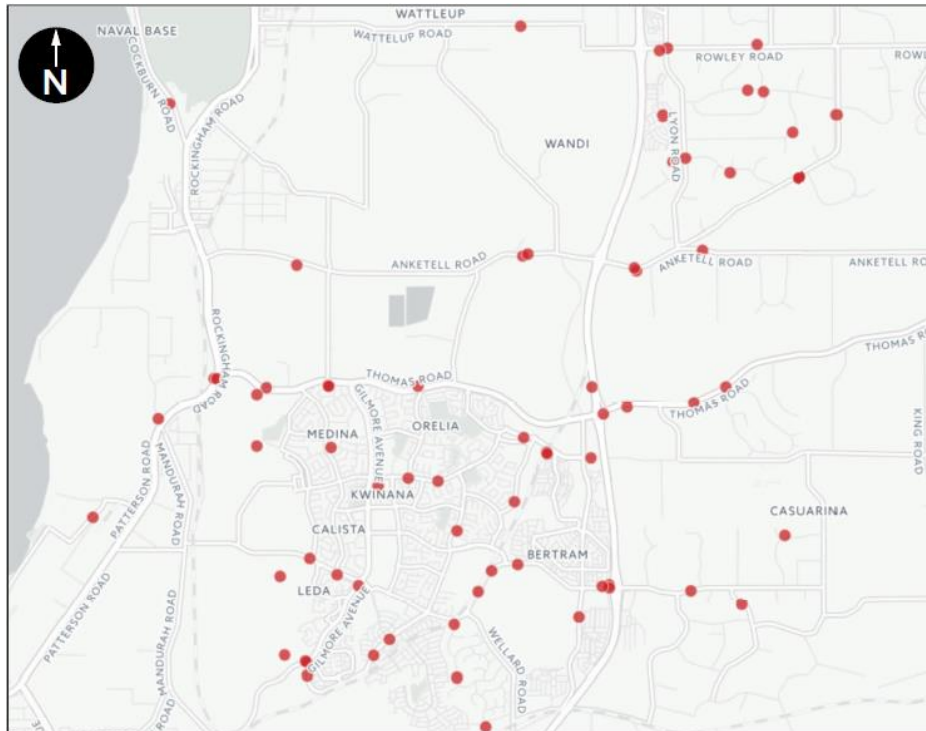
**Figure 6.4: Spatial distribution of spots**



### 6.2.3 Cycling Issues

Cycling issues were scattered across the City (Figure 6.5) and the top cycling issues determined from the CrowdSpot data are summarised in Table 6.1.

**Figure 6.5: Cycling issue spots**



**Table 6.1: City of Kwinana top cycling issues identified**

Location	Suburb	Issue
<b>Thomas Road</b> (Freeway to Marri Park)	Casuarina	No bicycle lanes (Supported 27 times)
<b>Rockingham Road / Thomas Road</b> intersection (turning right into Thomas from south)	Kwinana Beach (Main Roads)	Bicycle lane ends (Supported 27 times)
<b>Cockburn Road</b> (Hogg Rd to Sutton Rd)	Naval Base (Main Roads)	Unsafe bicycle lanes (Supported 17 times)
<b>Sulphur Way</b> (Parmelia Av to Orelia Av)	Parmelia	No bicycle lanes west bound, uphill (Supported 13 times)
<b>Rowley Road</b> (Lyon intersection)	Wandi (Honeywood)	Bicycle lane ends (Supported 11 times)
<b>DeHaer Road</b> (Lyon to Rowley)	Wandi (Honeywood)	No bicycle lanes or shared path (Supported 11 times)
<b>Magenup Road</b> (Lyon to Da Haer)	Wandi (Honeywood)	No bicycle lanes or shared path (Supported 10 times)
<b>Wandi Drive</b> (Lyon to Da Haer)	Wandi (Honeywood)	No bicycle lanes (Supported 9 times)
<b>Mason Road &amp; Donaldson Road</b> (entire length)	Kwinana Beach	No path and heavy vehicles (Supported 9 times)
<b>Anketell Road</b> (Rockingham Rd to Freeway) <sup>4</sup>	Postans	No bicycle lanes or shared path (Supported 8 times)
<b>Anketell Road</b> (Freeway to Lyon)	Wandi	No bicycle lanes or shared path (Supported 7 times)

All items in Table 6.1 are proposed in the implementation plan except for the following:

- Rockingham Road / Thomas Road – Main Roads WA project (liaison required)
- Cockburn Road – Main Roads WA project (liaison required)
- De Haer Road – long term project on secondary route, cost to construct is significant and should be paid for with developer contributions
- Wandi Drive – as per Da Haer Road above
- Mason and Donaldson Roads – separate study for industrial area required
- Anketell Road – Main Roads WA project (liaison required)

Other locations with fewer support but notable for defining the deficiencies were:

- Mortimer Road (Freeway to Casuarina Rd) – no bicycle lanes or shared path
- Sicklemore Road (Sulphur to Warner) – no bicycle lanes or shared path
- Holden Close (connection to PSP) – pavement condition is poor and covered with glass
- Johnson Road – no bicycle lanes (developer to provide)
- Kwinana Loop Trail (Gilmore Ave to Sloans Reserve & opposite Blacksmith Dr) – poor surface
- Wellard Road crossing at Calista Avenue – no shared path connection south
- Kwinana Beach Road – crossing train tracks at dangerous angle
- Medina Shopping Centre – no bike parking
- Parmelia Shopping Centre – no bike parking

<sup>4</sup> Section between Clementi and Mandagolup was specifically mentioned



Maintenance issue locations:

- Thomas Road – sand covering path & general maintenance (33 supports)
- Magenup Road – street signs missing / tampered with (10 supports)
- Mortimer Road / Freeway PSP – overgrown vegetation
- Bertram Road – broken glass on path
- Sulphur Road – broken glass on bicycle lane (particularly around Kwinana station)
- Runnymede Gate – gumnuts on bicycle lane

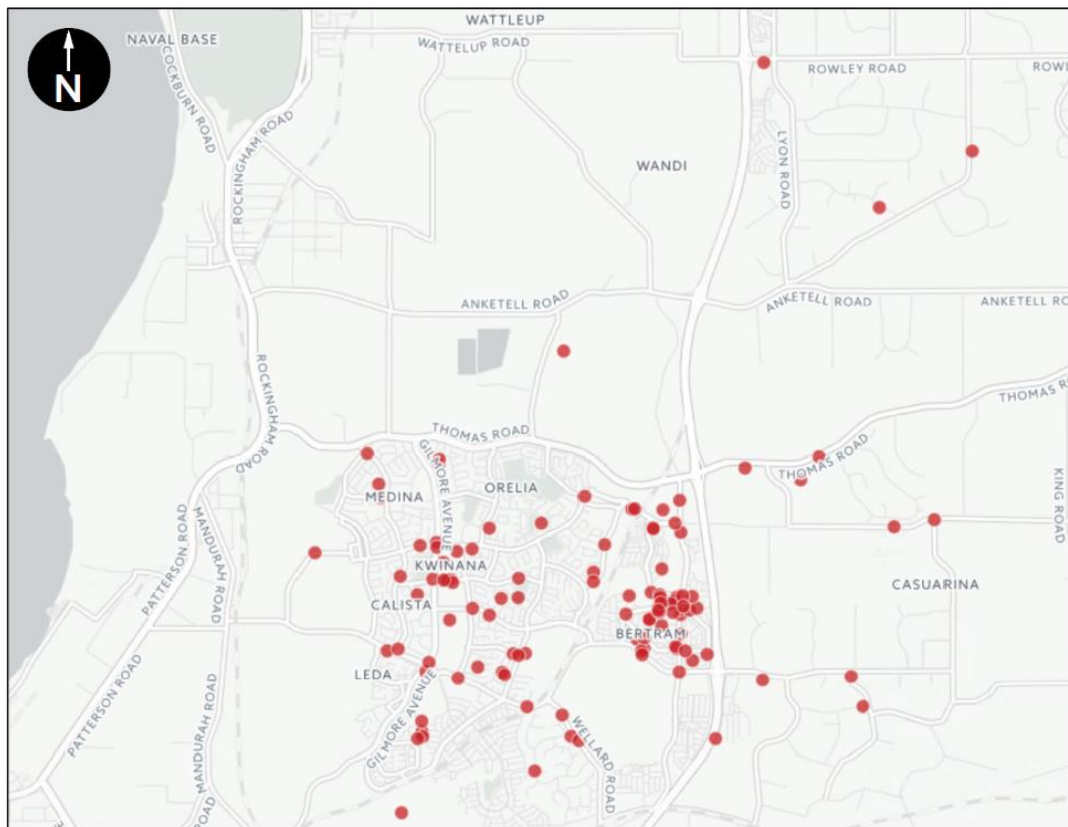
To discuss with City of Cockburn:

- Wattleup Road – no bicycle route from Honeywood Estate / Aubin Grove to the coast.

## 6.2.4 Walking Issues

Walking issues were concentrated around Bertram and Kwinana City Centre. A large portion of issues were related to deficiencies in infrastructure (no footpath or no crossing) made up 43% of the spots and poor maintenance (14%). The Bertram issues were verified with the Saddle Survey of 25 August 2017.

**Figure 6.6: Walking issue spots**



The top walking issues determined from the CrowdSpot data are summarised in Table 6.2.

**Table 6.2: City of Kwinana top walking issues identified**

Location	Suburb	Issue
<b>Tranby Way</b> (Champion Dr to Johnson Rd)	Bertram	No footpath on either side (Bertram Primary School) (19 supports)
<b>Trusty Way</b> (crossing at Price Parkway)	Bertram	No median island at crossing (17 supports)
<b>Chisham Avenue</b> (crossing at Pastacup)	Kwinana Town Centre	Pedestrian crossings between Robbos and Peel to be improved (15 supports)
<b>Rowley Road</b> (Lyon Road to Freeway)	Wandi (Honeywood)	No footpath to PSP (6 supports)
<b>Sicklemore Road</b> (near Warner)	Parmelia	Badly damaged footpath (6 supports)
<b>Sulphur Road</b> (near train station)	Parmelia	Cars parking on path blocking access to station (6 supports, note an additional comment disagreed it was an issue requesting more car parking)
<b>Homestead Ridge</b> (entire estate)	Wellard (Homestead Ridge)	No footpath in entire estate (4 supports)
<b>Gilmore Avenue crossing</b> (Calista Primary School)	Calista / Kwinana TC	Inadequate time to cross at signals (4 supports)
<b>Mortimer Road</b> (Johnson to Freeway)	Wellard (Emerald Park)	No footpath south side (developer constructing) (3 supports)
<b>Parkfield Boulevard / Orient Way</b> intersection	Bertram	No crossing of Parkfield to access Orient (6 supports)
<b>Bertram Road</b> (Guard crossing to Kings College entrance)	Bertram	No footpath to Kings College entrance (6 supports)
<b>Unicorn Street</b> (Eliza to Parkfield)	Bertram	No footpath (5 supports)
<b>Chieftain Street</b> (Moombaki to Parkfield)	Bertram	No footpath on south side (5 supports)
<b>Yelka Way</b> (Chieftain to Unicorn)	Bertram	No footpath (4 supports)
<b>Champion Drive / Moombaki Avenue</b> intersection	Bertram	Path and ramp lead to centre of roundabout instead of across (3 supports)
<b>Caroline Crescent</b> crossing of Parkfield Blvd	Bertram	No kerb ramp on north of Parkfield (4 supports)
<b>Whiteman Crescent</b> (crossing of Johnson Rd)	Bertram	No crossing facilities (kerb ramp missing) (3 supports)
<b>Trusty Way</b> (adjacent to school carpark)	Bertram	No footpath (2 supports)

All items in Table 6.2 are proposed in the implementation plan except for the following:

- Homestead Drive footpaths – some projects are identified towards the north of the estate to connect to Wellard Oval (see Table 16.1). Budget constraints prevent all roads in the estate receiving footpaths in the implementation phase and further consultation is required to ascertain the community's position of footpaths on every street in the rural setting.

Other locations with fewer support but notable for defining the deficiencies are:

- Chipperton Road, Bertram – no footpath.
- Johnson Road, Bertram – no crossing facilities at Ascot Parkway.
- Millbrook Avenue, Bertram – no crossing facilities at Camborne App.
- Parkfield Boulevard, Bertram – no kerb ramp at Ganges Way.
- Djilba View, Leda – no footpath.
- Langridge Crescent (Littlemore to Butt), Orelia – no footpath.
- Chipperton Road, Bertram – no footpath.
- Gilmore Avenue (Sulphur Rd to Wellard Rd) – inadequate pedestrian crossings especially between Kwinana Adventure Park and Town Centre.
- Simmons Loop – no footpath.
- Skottowe Park, Parmelia – no footpath connecting park to Skottowe parkway (users navigate carpark).
- Casuarina Road (Mortimer to Orton), Casuarina – no footpath.
- Magenup Drive, Wandi – no footpath (to access new primary school).
- Farmer Way, Parmelia – no footpath.
- Johnson Road (Sulphur to Thomas), Parmelia – no footpath (developer to provide).
- Barker Road, Wellard East – no footpath.
- Spectacles Drive, Spectacles – no footpath (Tramway Reserve Trail).
- Woodley Way, Parmelia – no footpath.

Maintenance issue locations:

- Magenup Road, Wandi – street signs missing / tampered with (10 supports).
- Moombaki Avenue extension to Price Parkway – safety for children pickup.
- Bertram Road – overgrown maintenance obstructing view to cross Parkfield Blvd.
- Chisham Avenue, Parmelia – sand and tree debris on path.
- Munday Way, Medina – sand on path near kindergarten and debris outside house #19.
- Centennial Avenue, Bertram (no specific location provided) – broken pole edges hazard to children.
- Kwinana Loop Road at Gentle Road, Calista – weeds and litter.
- Leasham Court, Medina – overgrown vegetation.
- Sulphur Road (Johnson Rd to Station), Parmelia – broken glass on path.
- Johnson Road (Sulphur Rd to Brixton Gate), Bertram – broke glass on path
- Bertram Medical Centre, Bertram – damaged residential bin in adjacent vacant land.
- Medina Avenue, Medina – tree root damaged footpath (neighbourhood plan).
- Henley Reserve, Wellard – damaged path.
- Jeffers Court path connection, Orelia – litter.
- Tunnicliffe Street – damaged path and insufficient width; Parmelia Avenue intersection power pole in path (widen path around pole).



Issues for noting:

- Sunrise estate connectivity to Wellard Primary School in Emerald Park.
- Wellard Road / Meares Avenue roundabout – congestion challenging for traffic. wardens helping kids cross to Peter Carnley Anglican Community School.
- Moombaki Avenue – Speed of cars through roundabout dangerous for kids walking home from Bertram Primary School.
- Bertram Road / Johnson Road – difficult crossing for pedestrians.
- Shannon Corner / Centennial Avenue – dangerous intersection without give way sign.
- Lighting around Wellard Station – poor lighting for people walking home towards Calista at night.
- Lighting of Calista Avenue – poor lighting.
- Lighting of Sulphur Road – poor lighting on path next to Kwinana Train Station.
- Lighting of Djilba Park – poor lighting.
- Ascot Parkway – poor lighting.
- Everglades Park, Bertram – dog business regularly in park (requires dog bags).
- Robbos Way / Darius Drive – guard rail installed blocks crossing of both roads.
- Meares Ave / Chisham Ave roundabout – difficult crossing for pedestrians, blind spots reported and concern for students walking to Calista Primary or Gilmore College.
- Parsons Avenue – poor lighting.
- Kwinana Loop Trail – signage and promotion to be improved.
- Medina – desire from community to make environmentally friendly “green” community with landscaping.
- Thomas Road was picked up as requiring a footpath east of freeway to Marri Park Drive but has been included in cycling.
- Everglades Park – no bins for dog business.

### 6.2.5 Incorporating into Long-Term and Neighbourhood Plans

The issues raised in the *CrowdSpot* survey helped to understand the existing network (Chapter 7), however more importantly, the results will be used to guide the long-term network and implementation plans for the overall City of Kwinana area, and the individual neighbourhoods (Chapter 10). For example, due to the issues raised in Bertram, the area has been considered for a pedestrian improvement plan and is presented in Chapter 11.

## 6.3 Consultation with neighbouring local authorities

During the development of this plan, individual meetings have been held with each of the City's neighbouring councils (Cockburn, Rockingham and Serpentine Jarrahdale). The following is a summary of the key links identified with each local authority that this bike plan should ensure connects across boundaries.

### 6.3.1 City of Cockburn key routes

Key cycle routes identified within the City of Cockburn Bicycle and Walking Network Plan, 2017 are as follows:

- |  |  |
|--|--|
| ○ Kwinana Freeway - Eastern side (PSP) | ○ Freight Railway Line (Secondary Route) |
| ○ Rowley Road (Secondary Route)        | ○ Rockingham Road (PSP)                  |
| ○ Mandogalup Road - (Local Route)      | ○ Ocean Recreational Path (Local Route)  |
| ○ Tramways Trail                       |  |

It is noted that none of the above noted routes are planned to be delivered by the City of Cockburn within the next five-year period (2017 – 2022). However, this may change as priorities or demand changes and so need to be planned on the City of Kwinana's side of the LGA boundary.

Hammond Park and Aubin Grove, including the new Vivente estate under construction are to be connected by Honeywood estate and Qube development in Kwinana (further details are provided in Chapter 18). As mentioned in Section 6.2.3, Wattleup Road is a secondary route with demand from the community in Honeywood estate to reach the coast by bicycle, which would also benefit people in Hammond Park and Aubin Grove.

### 6.3.2 City of Rockingham key routes

Key Routes identified within the City of Rockingham Bike Plan, 2013 are as follows:

- Rockingham to Kwinana Beach Recreational Path (Local Route)
- Paterson Road (Secondary Route)
- Dixon Road-Mandurah Road-Millar Road (PSP)

Discussion with the City of Rockingham noted that they have no schedule of works to implement these routes.

### 6.3.3 Shire of Serpentine Jarrahdale

Through discussion with the Shire of Serpentine Jarrahdale it was evident that the current Bike Plan, 2012 only identifies strategic links that may connect into Kwinana. However, through discussion additional routes were identified as follows:

- |                               |  |
|-------------------------------|--|
| ○ Anketell Road (Local Route) | ○ Mortimer Road – Coyle Road (Local Route) |
| ○ Thomas Road (PSP)           | ○ Freight Railway Line (Secondary Road)    |
| ○ Orton Road (Local Route)    |  |

As with the City Rockingham the Shire noted that they have no schedule of works to implement these routes.

## 7. Understanding the Existing Network

The City has a high number of existing designated shared paths as well as wide footpaths suitable for cycling. However, within the network there are a lot of missing sections. There are a smaller number of existing on-road cycle lanes within Kwinana, again with missing sections. Some of these projects have been constructed by the City and guided by previous bicycle plans, while others were implemented by developers and are now required to be maintained by the City.

The two existing railway stations and the schools within Kwinana are all served by shared paths or on-road routes. However, the paths are not always connected, and the road environment does not provide a safe cycle environment.

It is also clear that there is a lack of infrastructure east of the freeway and along the freight line corridor.

### 7.1 The Existing Regional Cycle Network

Within the context of regional cycling infrastructure, Kwinana benefits from having a Primary Route in the form of a Principal Shared Path (PSP) running along the western side of the Kwinana Freeway. However, as the Mandurah railway line leaves the freeway reserve just north of Thomas Road, the PSP continues along the freeway and therefore does not provide access to the two railway stations, Kwinana and Wellard, except for a small section approaching from the north.

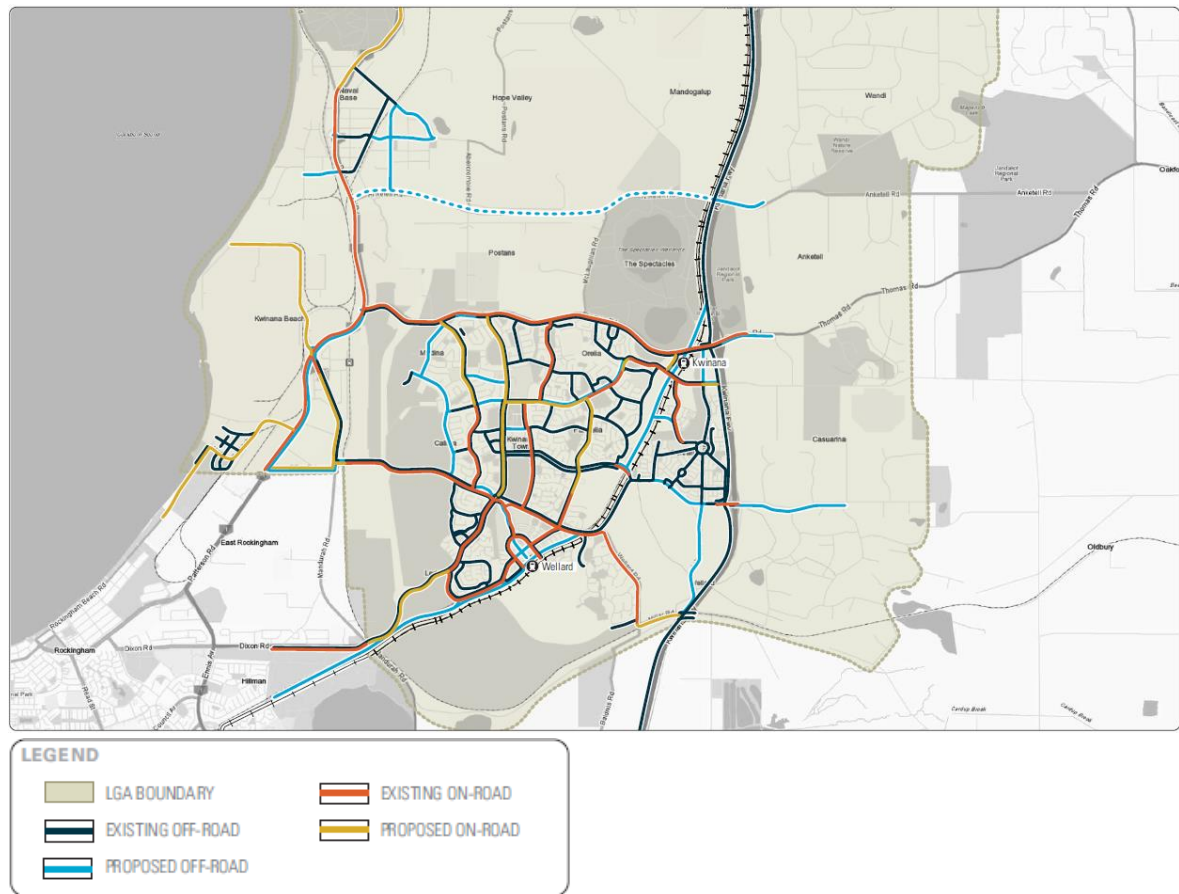
The Recreational Path network stops at Rockingham East (within the City of Rockingham) to the south of Kwinana, and at Henderson (within the City of Cockburn) to the north of Kwinana. The gap in the RSP between these two points is largely due to the large industrial area within Kwinana which is situated between Rockingham Road and the coast.

### 7.2 The Existing Local Cycle Network

This neighbourhood cycle and walking network plan is the fourth plan undertaken by the City of Kwinana, with the most recent in 2010. The cycling network proposed in the Kwinana Bike Plan for 2010 is shown in Figure 7.1. An enlarged map of Kwinana is provided in Appendix C.



Figure 7.1: Proposed cycling network 2010



The Kwinana Bike Plan (2010) proposed 43 projects. Figure 7.2 shows the location and status of the projects recommended in 2010. The detail of each proposal and whether it has been or is planned to be implemented is presented in Appendix C.

- 14 projects were implemented
- 8 projects are either underway or will be completed by Main Roads WA or land developers
- 13 projects are outstanding and were considered as part of the development of this 2017 plan
- 8 projects were deemed unfeasible or not required by the City and are not recommended in the 2017 plan unless requested in the Crowd spot survey.

It is noted that the outstanding projects tend to be focused around Medina, Orelia and Pamelia, while the completed projects are generally in the newer suburbs of Bertram, Leda and Wellard (reflected in projects constructed by developers). The outstanding projects have been considered as part of the development for the long-term network and the implementation plan.

**Table 7.1: 2010 Plan outstanding projects**

#	Project	Status	Comment
3	Beard St Shared Path	Outstanding	Industrial connections not priority of 2017 plan
5	Rockingham Rd / Thomas Rd intersection	Under Construction	Project identified in Crowd Spot (27 times)
7	Patterson Rd / Mandurah Rd intersection	Outstanding & Programmed	Future PSP alignment (ensure standards met)
11	Bingfield Rd W, Tucker St, Beacham Cr, Westbrook St Shared Path	Partially Complete	Local Route network
12	Medina Ave Cycle Lanes	Outstanding	Low priority (path or cycle lanes)
14	Gilmore Ave Cycle Lanes (Thomas Rd – Wellard Rd)	Outstanding	Alternative alignment considered
16	PSP Design Wellard Rd - Rockingham Stn	Outstanding	Continue design and progress alternative route
19	Thomas Rd / Johnson Rd intersection	Outstanding & Programmed	PSP connection
20	PSP Design Kwinana Stn - Wellard Rd	Outstanding	Developer to construct to PSP standard
23	Mortimer Rd Shared Path (Freeway - Barker)	Programmed	Developer to construct (check standard)
26	Johnson Rd Shared Path (Sulphur - Thomas)	Programmed	Low priority – developer to construct
27	Holden Cl Shared Path & Cycle Lanes	Not Proceeding	Bike Boulevard (quiet street)
29	Sulphur Rd Cycle Lanes (Durant-Nottingham)	Outstanding	Proposed in 2017 (consider two-way cycle track)
30	Cycle Lane Design Sulphur Rd (Parmelia – Gilmore)	Outstanding	Reconsider project; signage of present treatment
31	Orelia Ave Cycle Lanes (Menli – Thomas)	Outstanding	Consider two-way cycle track
32	Parmelia Ave (Sulphur – Tunncliffe)	Outstanding	Consider two-way cycle track
35	Pace Rd Path upgrade (Medina – Gilmore)	Outstanding	Consider bike boulevard
37	Rockingham Rd / Frederick St intersection	Outstanding & Programmed	Check status with Main Roads
38	Rockingham Rd Cycle Lanes (Cockburn – LG Boundary)	Partially complete	Check location / PSP
39	Rockingham Rd / Beard St intersection	Outstanding	Check status with Main Roads
40	Rockingham Rd / Cockburn Rd intersection	Programmed	Check status with Main Roads
43	Anketell Rd Shared Path	Outstanding	Secondary route (Naval Base to Armadale)

**Table 7.2: 2010 Plan recommended projects considered unnecessary or unfeasible**

#	Project	Status	Comment
4	Mason Drive Shared Path	Not Proceeding	Northern section part of Local Route network
8	Mandurah Road Cycle Lanes	Not Proceeding	PSP on freight line preferred option for network
9	Office Road Cycle Lanes	Not Proceeding	Beach & Ocean recommended route options
10	Thomas Rd Shared Path (at Bingfield Rd E)	Not Proceeding	Consider bike boulevard on Bingfield Road East
13	Calista Avenue Path upgrade	Not Proceeding	Focus on secondary route Coleman-Bright
18	PSP Design Thomas Road - Freeway PSP	Not Proceeding	Current connection Thomas Rd adequate
27	Holden Close Shared Path & Cycle Lanes	Not Proceeding	Bike Boulevard (quiet street)
41	Wellard Road Shared Path (at railway crossing)	Not Proceeding	PSP to progress

Recent developments resulted in new bicycle lanes, especially in Wellard. While this is a positive outcome and developers should be constructing cycling infrastructure in new subdivisions, bicycle lanes on distributor roads is no longer considered best practice either in Western Australia or internationally. Protected or buffered bicycle lanes (see section 18) are now a minimum standard.

The 2010 plan recommends that consideration should be made to modify the requirements for development Planning Scheme to:

- Provide end-of-trip facilities in new developments as suggested in the Austroads Guide to Traffic Engineering Practice;
- Incorporate bicycle lanes into the design of District Distributor level or greater;
- Upgrade the standard for all Neighbourhood Connector and higher order Access Roads to incorporate shared paths; and
- More generally to require consideration of cycling infrastructure within future developments to connect into and extend the proposed bicycle network.

The 2010 bike plan also notes that bicycle parking policies should be implemented as retrofit works for existing government facilities and implemented for all new projects.

An audit of the existing road and pedestrian path networks was completed in 2010. The main findings from this audit, as noted in the 2010 Bike Plan were:

- Good network of off-road paths, however very few are formally designated as shared user paths to allow cyclists to legally use them;
- High quality concrete paths, rather than pavers which are unsuitable for cyclists;
- Most paths at least 2.0 meters wide;
- Existing Kwinana walking routes represent a great opportunity for 'casual' cyclist;
- Great potential for a comprehensive network based upon existing infrastructure;
- Designation signage mostly non-existent;
- Wayfinding difficult as a result of grab rail locations and lack of signage; and
- Intersection design creates additional risks for cyclists in many locations.

The existing cycle network (including footpaths wide enough to safely allow for cycling) have been mapped and presented Figure 7.3.



Figure 7.2: Location and status of project priorities 2010 plan

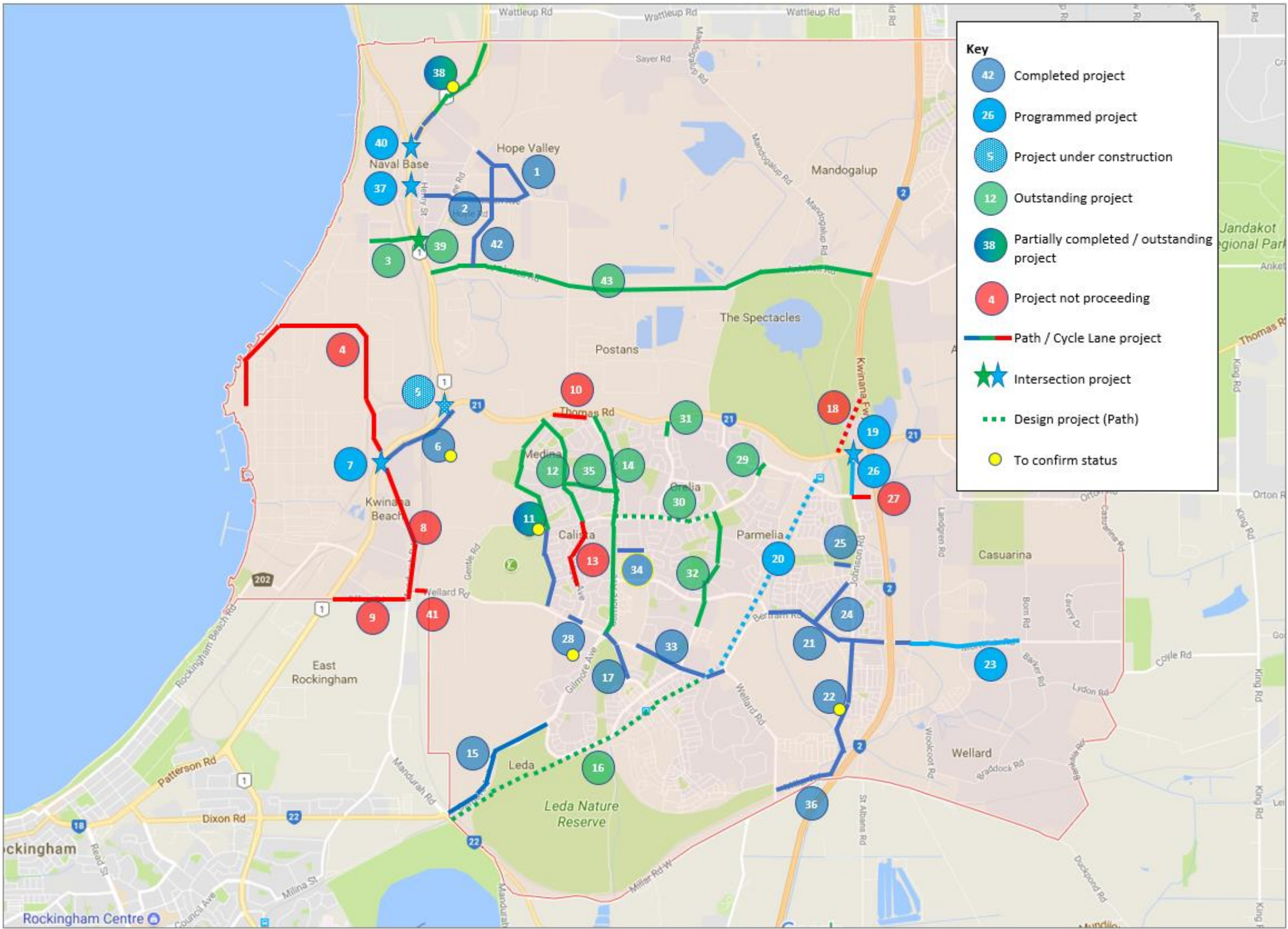
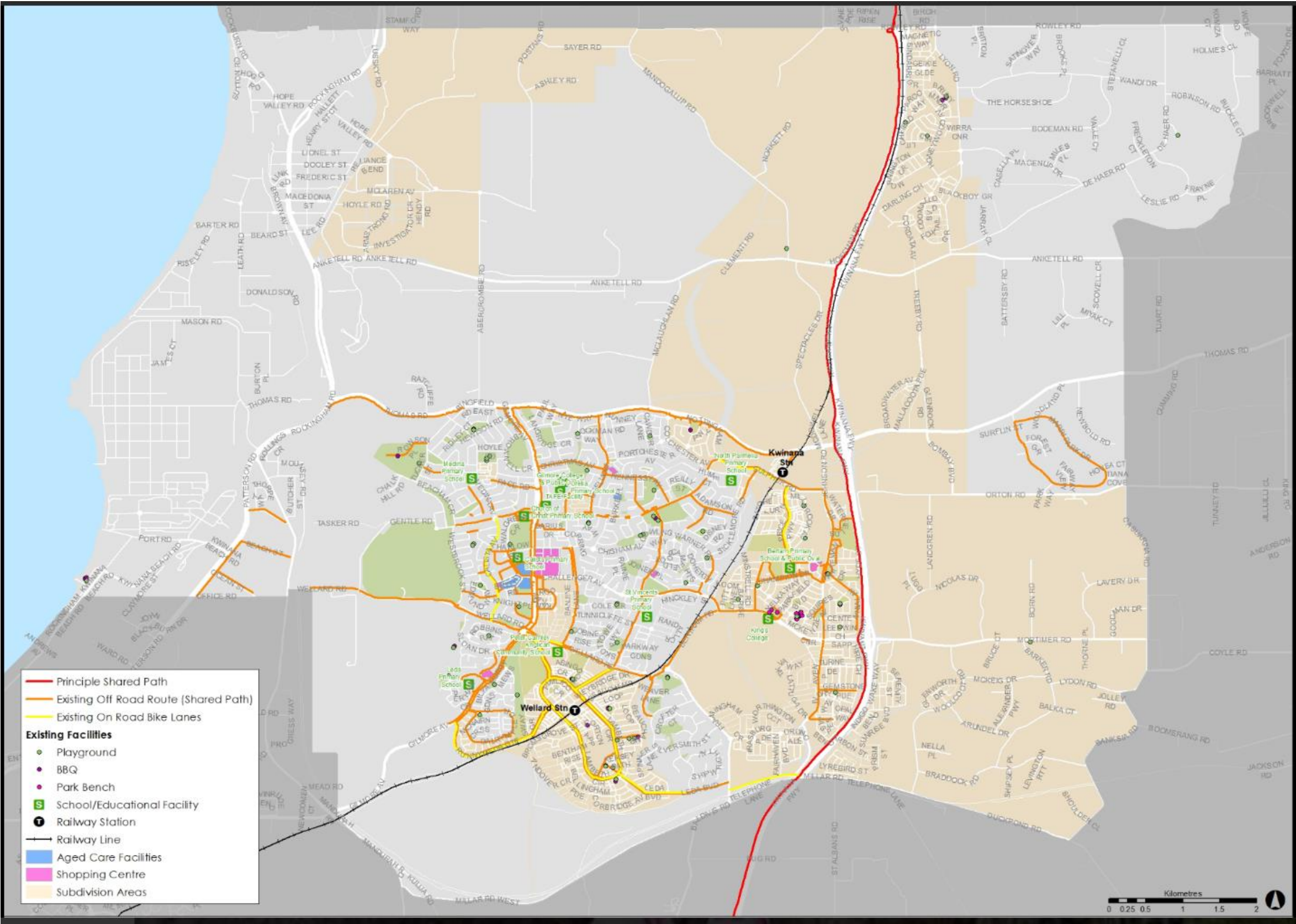




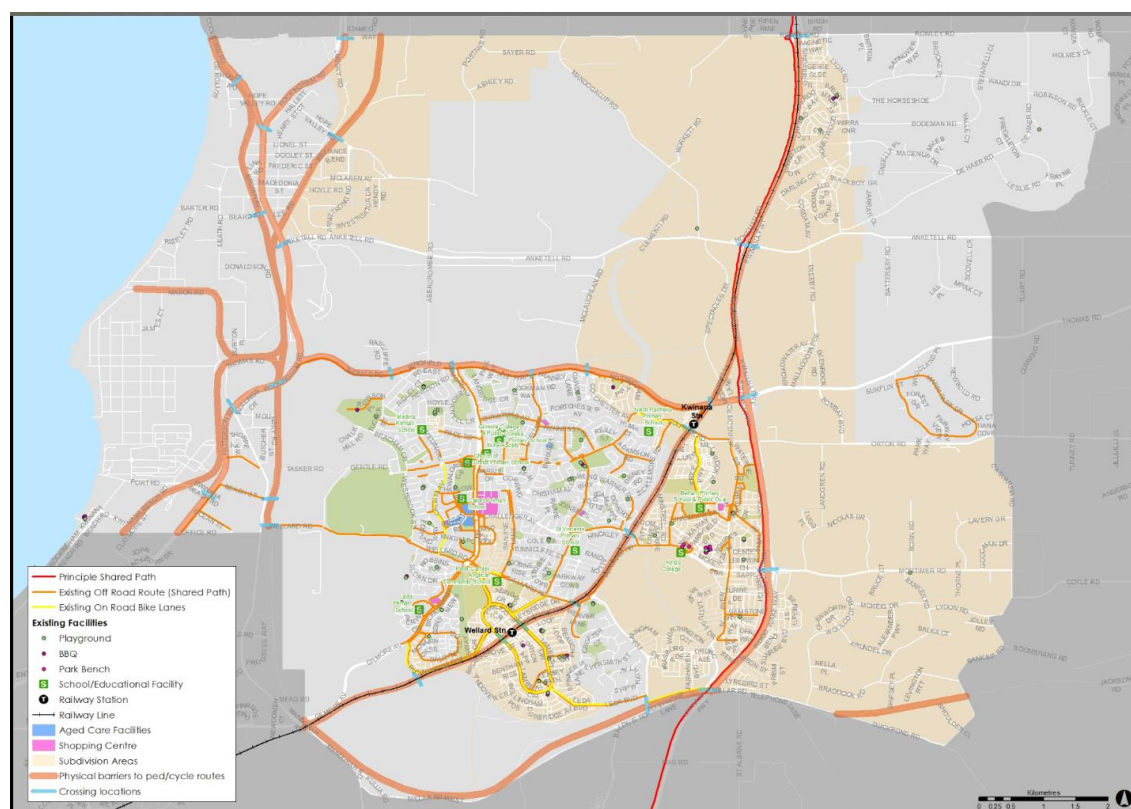
Figure 7.3: Existing cycle network City of Kwinana



## 7.3 Existing Pedestrian Network

While footpaths have been provided within high activity areas (such as Kwinana City Centre, and Wellard Railway Stations and local centres) as well as around schools, there are several residential roads that do not have a footpath on either side of the road. Further, a number of intersections also have inadequate pedestrian crossing facilities, especially facilities that are disability access compliant. There are also several barriers throughout the City that prevent the ease of movement for pedestrians or cyclists – these are illustrated in Figure 7.4.

**Figure 7.4: Existing barriers to cycling and walking**

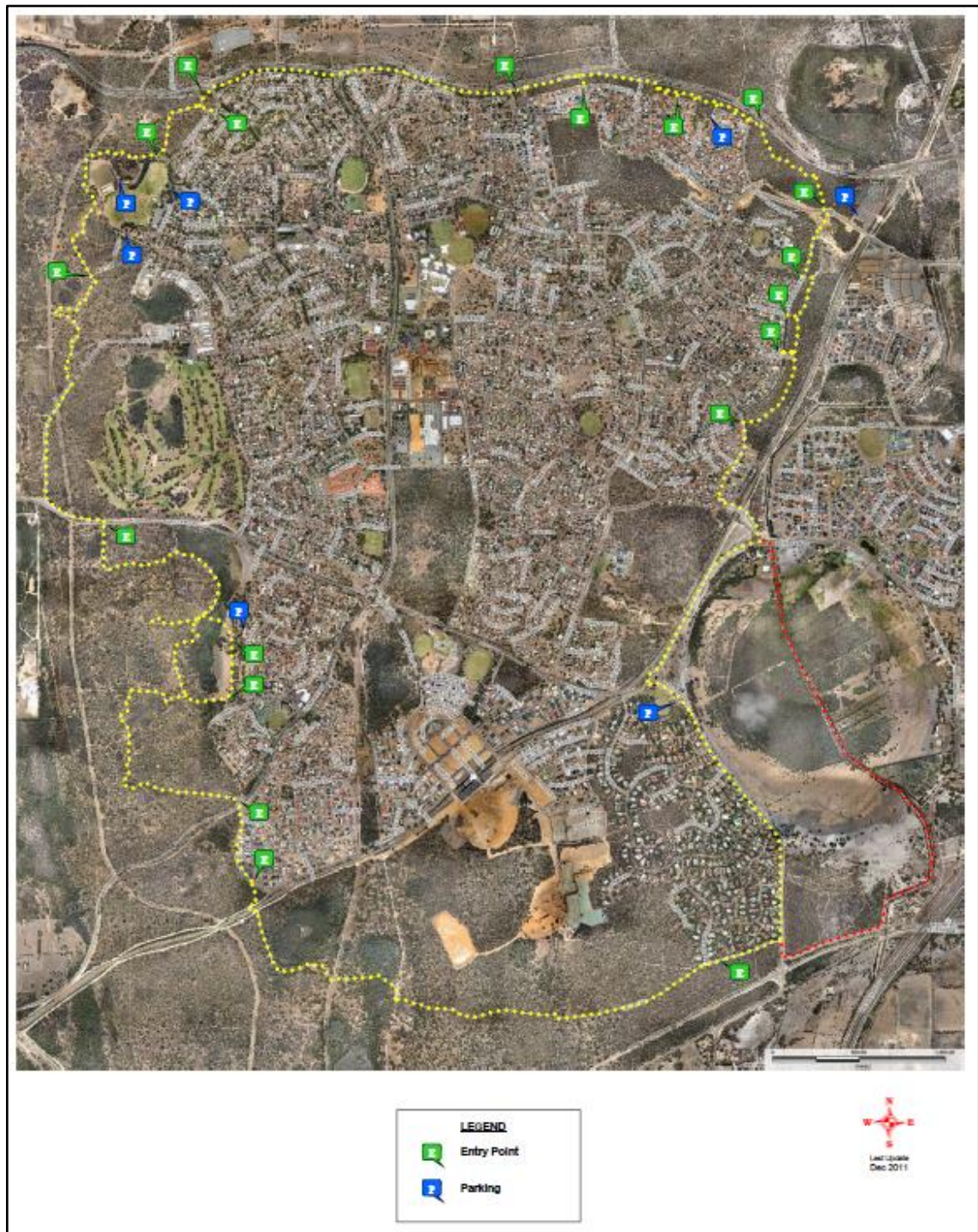


Further to this, to encourage active travel and to get more people walking as a fun, leisurely activity, the City could promote guided walking tours around the main residential area of the City, known as the Kwinana Loop.

The Kwinana Loop utilises a number of existing paved footpaths as well as unpaved paths and 'goat trails' through bush land and nature reserves. It crosses a number of roads and both the passenger and freight railway lines. There are a number of entry points into the trail (clearly defined) as well as nearby parking facilities to aid access. The Kwinana Loop is presented in Figure 7.5.



Figure 7.5: Kwinana Loop Walking Trail



This plan will have a focus on the vulnerable portions of the pedestrian community by assessing existing pedestrian networks to and from local schools and aged care facilities.

## 8. Design principles for the Bike and Walk Plan

### 8.1 High level principles when planning walking and cycling facilities for varying land uses within the City of Kwinana

Facilities will vary depending on adjacent land use and whether the route is through an inner-urban area or a suburb area context. Facilities will also need to match the intended user type and destination.

For instance, cycling and walking facilities linking to a school will need to be safe, convenient and easy to use – thus, off road, shared or separated facilities, bike boulevards or shared spaces will most likely be appropriate. However, for a commercial, office or transport node destination (which is more likely going to attract commuting traffic) on-road or off-road separated facilities to allow for high speed travel will be more appropriate.

Routes are not required to follow road alignments and may be aligned through open space if the alignment provides better grades, directness or attractiveness.

For new subdivisions, the planning for road categories to incorporate Active Travel and have a consideration of facility requirements should influence block layouts and road reserve widths/cross-sections.

High level cycling principles need to include the following:

- Providing on-road cycle facilities on high speed and/ or high-volume roads:
  - Idea is to keep cyclists off these roads as much as possible.
  - May not be always feasible.
  - In such instances, have a protected bike lane as a bare minimum.
- Location of footpaths:
  - State Government is moving to footpaths on both sides.
  - Footpath dimensions to increase to 2m as a minimum.
  - Footpaths may need to be wider closer to schools/ activity centres – consider Shared Paths in these instances.
  - Footpaths are now de-facto Shared Paths as well with the recent change in law.

Types of riders

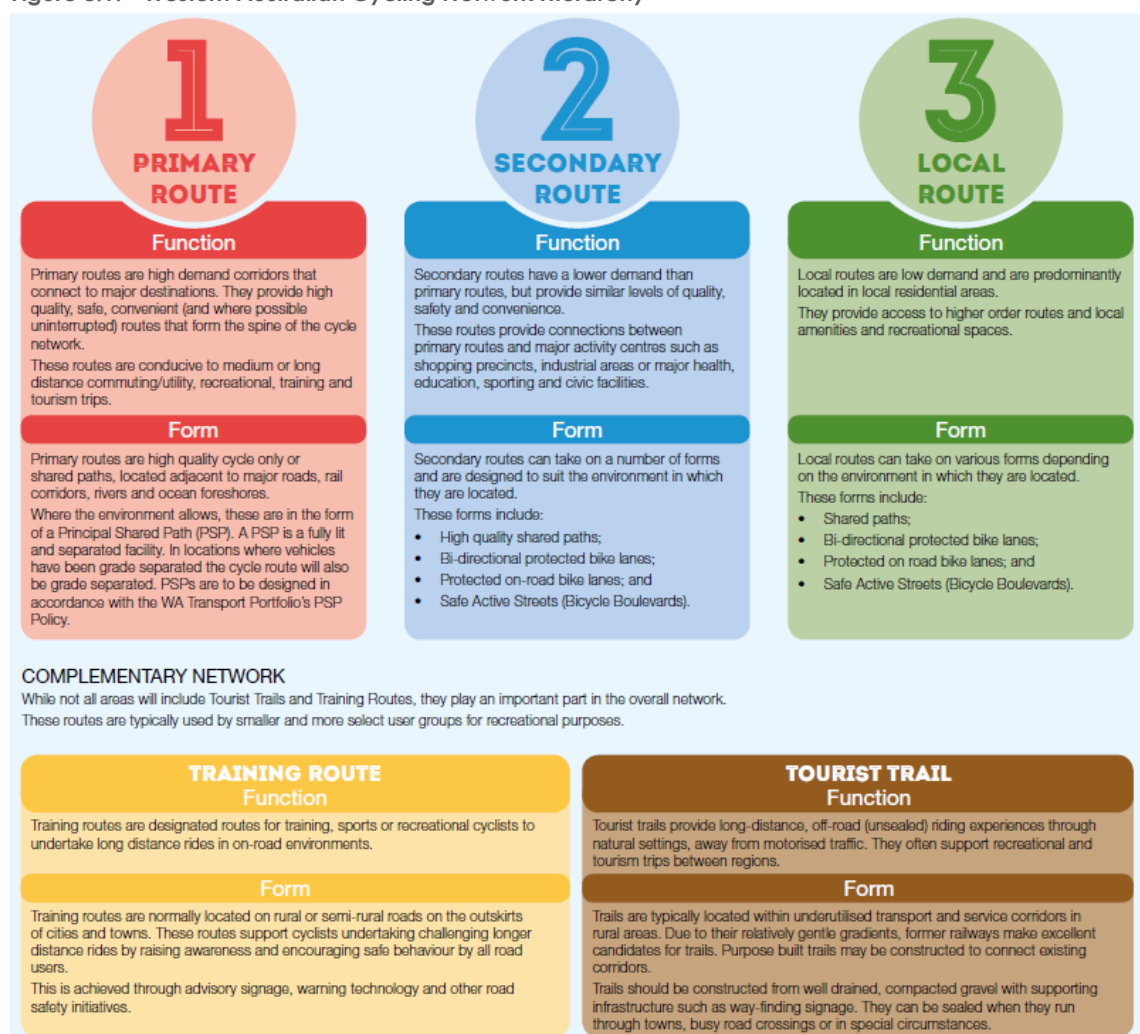




- Separated mode facilities:
  - Purpose is to minimise conflict between pedestrians and cyclists.
  - State Government is looking at rolling these out for the PSP network.
  - One example is on the Fremantle PSP near Subiaco – very short section though (also needs pedestrians and cyclists to merge at intersections – giving way to traffic).
  - Use these as appropriate.
  - Better to have some off-road facility than none.

The *Perth and Peel @3.5 Million Transport Plan* provides a cycling hierarchy to be adopted across Western Australia, presented in Figure 8.1.

**Figure 8.1: Western Australian Cycling Network Hierarchy**



The following descriptions for the differing route hierarchies are to be adopted for the City of Kwinana:

- **Primary Routes**

PSPs will continue to form the backbone of Perth's cycling network. Considered as “freeways for bikes” these routes serve high order, interregional movement purposes. They should be of high standard, with minimal horizontal or vertical curvature. In terms of their built form, PSPs should



ideally be of at least 3.5m in width and grade separated at all intersecting roads/railways. Wherever possible, separation should be provided between pedestrians and cyclists.

#### ○ **Secondary Routes**

Sitting below the PSPs in the route hierarchy are Secondary Routes. The aim of these routes is to provide links between Perth's various strategic, secondary, district and specialised activity centres, as well as train stations. Secondary Routes should be considered as "arterial roads for bikes" allowing safe and direct access to, from and through activity centres. In terms of their built form, it is critical that secondary routes are attractive to all cyclists regardless of their age, confidence or experience level. They can consist of shared paths of PSP standard, separated bi-directional bike lanes or Bike Boulevards. **Unprotected bike lanes or sealed shoulders are considered inadequate for secondary routes.**

In terms of route selection, the philosophy behind secondary routes differs, in general, between newer suburbs and older suburbs. In older, more established suburbs (pre-1965), arterial roads tend to have narrow reservations and are intersected by numerous side roads and driveways. They therefore, tend to be unsuitable for separated or bi-directional facilities. Fortunately, older suburbs are normally laid out in a grid-like pattern which makes it easier to implement Bike Boulevards on adjacent streets.

In newer (post-1965) suburbs, quiet suburban roads are normally of curvilinear nature and often terminate in cul-de-sacs. They are therefore usually unsuitable for secondary cycling routes. However, in these areas arterial roads (in the form of Local Distributors) tend to be reasonably direct and nearly always have sufficient road space available to provide separated cycling facilities that are attractive to all cyclists.

#### ○ **Local Routes**

Sitting below secondary routes in the route hierarchy are local routes. The purpose of local routes is to collect cycling traffic from local roads and distribute it to the Secondary and PSP networks. These routes may consist of on-road cycle lanes, Bike Boulevards, greenways or designated quiet suburban streets (communicated using sharrows and appropriate traffic calming treatments). However, where possible, and particularly in greenfield situations, local routes should provide physical separation from motorised traffic.

#### ○ **Long Distance Trails**

To provide long distance, off road cycling experiences in natural settings, away from motorised traffic. Trails often support recreational and tourism trips between regions.

#### ○ **Training Circuits**

To provide training or sports cyclists with designated routes in which to undertake long distance rides in on-road environments.

Figure 8.2 illustrates the draft cycling network which State Government is anticipated to confirm through consultation with local government by 2020.

Figure 8.2: Cycling network in Perth and Peel @3.5 Million Transport Plan



## 8.2 Five Guiding Cycle and Walking Network Design Principles

Each group has different needs and demands requiring tailored infrastructure solutions, dependent also on their level of confidence as a bike rider. Of utmost importance for any cycle and pedestrian network is the need to ensure the network adheres to the five guiding principles to network planning; Safety, Directness, Coherence, Attractiveness and Comfort.

### Safety

Well-designed cycle network infrastructure improves and enhances the road safety of riders, pedestrians and motorists. Intersections should be designed to explicitly include bicycles as well as other categories of road users. Special intersection designs that include a path for bicycle riders are an important element of integrated network design. Mid-block treatments need to provide safe and easy major roadway crossings for riders and pedestrians. Public lighting and other features that improve personal safety are also crucial. Particularly for routes more likely to be used at night, or for pedestrian crossings (both formal controlled and uncontrolled) which should have appropriate Discrimination Disability Act (DDA) compliant design. Cycle routes past bus stops should be designed for safe accommodation of riders, bus passengers, other pedestrians and vehicles. Where possible cyclists and buses should be segregated in their own lanes, however, at times there may be a requirement for buses and cyclist to share infrastructure. It is also important that laneways used by pedestrians are also well lit.

### Directness

Network infrastructure should be as direct as safely practicable and based on desire lines. Long detours should be avoided but should be balanced against the problems of topography - a slightly longer route may work better because it contours around a hill rather than tackling it at its steepest climb. Delays due to prolonged crossing times of major barriers should be avoided with the aim to ensure that riders and walkers can maintain safe, comfortable and consistent travel throughout the length of the route. Indirect cycle routes or excessive delays may lead cyclists to choose more direct routes with greater risk. Research suggests that some cyclists are unlikely to divert to safer routes greater than 10% extra in length (Hudson, 1982)<sup>5</sup>.

### Coherence

A bicycle and pedestrian network should form a connected network linking people to places via secondary and local routes. The network should be continuous and be very clear to the user where the facility leads. Intersections should provide a clear path for bicycle riders and pedestrians as well as for other modes. The quality of network facilities should also be consistent throughout the length of the route regardless of whether the facility uses a separated or shared road profile. Measures to ensure consistency and coherence include using same coloured surfacing and road way markings throughout (for both on road and off-road cycling) and use the same signage and destination finger posts throughout.

Although consideration should be given to maintenance costs as colour surfacing will need replacing frequently to keep it from looking patchy and worn. Routes should be easy to find from local streets and the network should be of such a density that there is always a choice of nearby routes available to the user.

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<sup>5</sup> Cycle Network and Route planning guide, Land Transport Safety Authority, NZ, 2004 and Hudson, M (1982) Bicycle planning: Policy and practice, The Architectural Press Ltd, London, United Kingdom.



## Attractiveness

Community support exists for cycling and walking provided it is an enjoyable activity. Enjoyable cycling and walking require well designed and located facilities. Clear well-placed signposting should indicate major destinations, while centre lines and edge lines should indicate the serious transport intent of the off-road sections of routes. Cycle routes should also feel like socially “safe” places to be. The community prefers well-lit pathways and open-to-view routes rather than dark and dingy alleyways. Cycling and walking routes around natural landscapes can add to the enjoyment and increase the use of the infrastructure.

## Comfort

The bicycle and pedestrian network must be easy to use for all types of riders and pedestrians. A smooth well-maintained riding surface (free of debris) is essential, both for comfort and operating safety. Depending on the speed and volume of other traffic (motor vehicles or pedestrians), some level of separation is often needed. Clearly marked bicycle facilities that allocate operating space to bicycle users and pedestrians are the most appropriate types of facilities on all but low traffic volume and low speed roads. Effective intersection treatment is critical to ensure comfortable and safe crossing for cyclists and pedestrians. Rain and wind discourage cycling. Measures to reduce their effects and make cycling and walking more enjoyable include:

- considering walls, embankments or suitable hedges next to paths, but being aware of maintaining public surveillance;
- paying attention to exposed paths near foreshores or ridges;
- providing shelter at critical destinations.

### 8.2.1 A connected cycling network

**Route choice** is particularly important to cyclists because the availability of additional routes can often help them to overcome the challenges of difficult terrain or traffic conditions depending on the time of day. Trip purpose (recreational, commuter or with family/children) will also influence user needs and subsequently route choice.

A decision to take a particular route will depend on the riders' own ability and the rider's assessment of prevailing traffic volumes and speeds (pedestrians on paths or vehicles on roads), the number and type of vehicle interaction points, surface conditions, terrain (hills) and the weather. These variables will influence a rider's choice to use sections of either Recreational or Local Routes (using off road facilities or on-road within slow speed environments or travelling on higher speed on-road cycling routes of PSP's to complete a journey).

The road environment is not constant and as a result, people not comfortable riding on an arterial road bicycle lane during weekday peak hours may prefer this type of facility on weekends or early in the morning due to lower vehicle traffic volumes weighted against the perceived higher-risk of using a path where pedestrians have priority. Faster moving cyclists may assess the collision hazard from meandering pedestrians and dogs on paths as a higher risk than the hazards present on the road at that time.

In this regard, a critical aspect of this *Cycle and Walk Plan* is the provision of link paths or transitions wherever possible to allow easy interchange between differing cycling infrastructure.

A key principle of this plan is to enable a cyclist to feel safe complete their journeys. In some arterial and major street corridors, particularly those which run through open space areas, bicycle lanes may be provided paralleling paths within the verge area. Both facilities cater for the needs of the various users and are highly valued by the riders who use them.

This approach is supported by the Austroads study, *Cycling on Higher Speed Roads* which states that "Ideally, all high-speed roads would cater for a range of (rider) abilities with a good quality sealed shoulder or bicycle lane (for roads that are not access controlled (motorways)) and an off-road path."

### 8.2.2 An accessible pedestrian network

An important element of this plan is ensuring that walking is also a viable alternative for short trips. The implementation of a network of shared-use paths will have a huge benefit to pedestrians. As the plan is developed over the long-term, a network of shared use paths, safer intersections and low-speed local-road environments will all benefit the pedestrian. Further, as required, where there is a high pedestrian or cyclist use, separation of cyclists and pedestrians will also be of huge benefit for pedestrians.

A key part of the development of this plan is to ensure the two key user groups that are most vulnerable, children and the elderly, are adequately provided for. This can be undertaken through the implementation of a **Safer Routes to School** program and planning and design for **Accessible Pedestrian Routes**, both of which are discussed in more detail within this plan.

## 8.3 Defining the user

There is recognition that the plan should cater for all types of bicycle users and to achieve this, there needs to be a commitment towards providing separation between cyclists and vehicles as well as cyclists and pedestrians where possible and as required. This will ensure the greatest level of accessibility to the network for all users.

International studies and surveys have noted that the substantial majority of the population prefer to cycle fully separated from traffic, these being the "Interested but Concerned" and likely the "Enthusied and Confident" cyclists. However, the "Strong and Fearless" and possibly some "Enthusied and Confident" cyclist prefer to cycle on higher speed roads with space in the form of lanes and sealed shoulders (Figure 8.3).

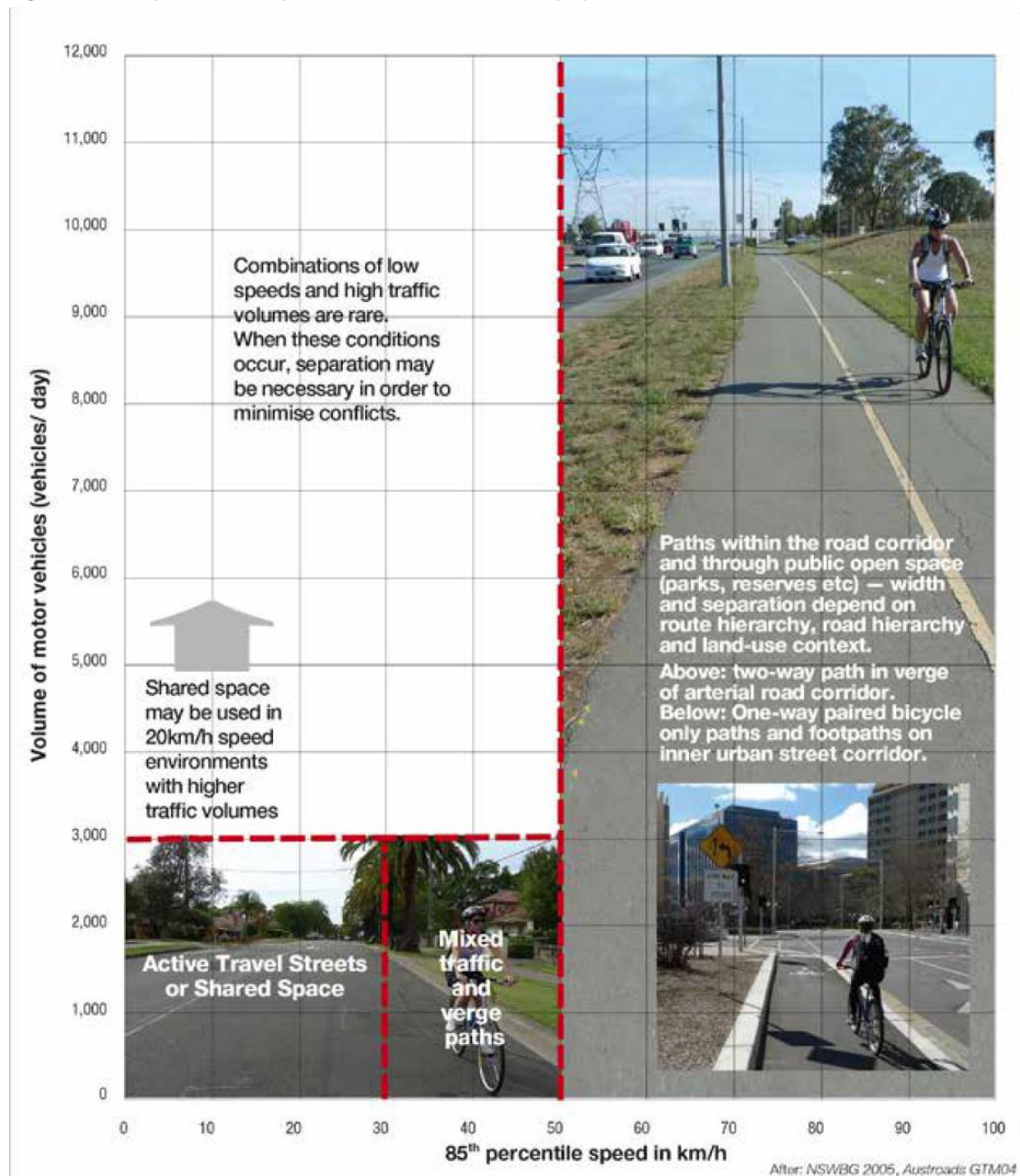
Figure 8.3: Four types of cyclists by proportion of population (Portland, USA)



To assist in understanding how and when separation should occur, Figure 8.4 and Figure 8.5 provides the acceptable thresholds upon which separation is required.

Separation (either for vehicles and cyclists or cyclists and pedestrians) can be considered as “physical separation” such as grade separation, or shared paths separated from road traffic, or cycle only and pedestrian only paths or, “visual separation” through the use of signing and lining.

**Figure 8.4: Separation of cyclists and motor vehicles by speed and volume**



Source: Draft ACT Guidelines Figure 5.3



Figure 8.5: Separation of cyclists and pedestrians by speed and volume

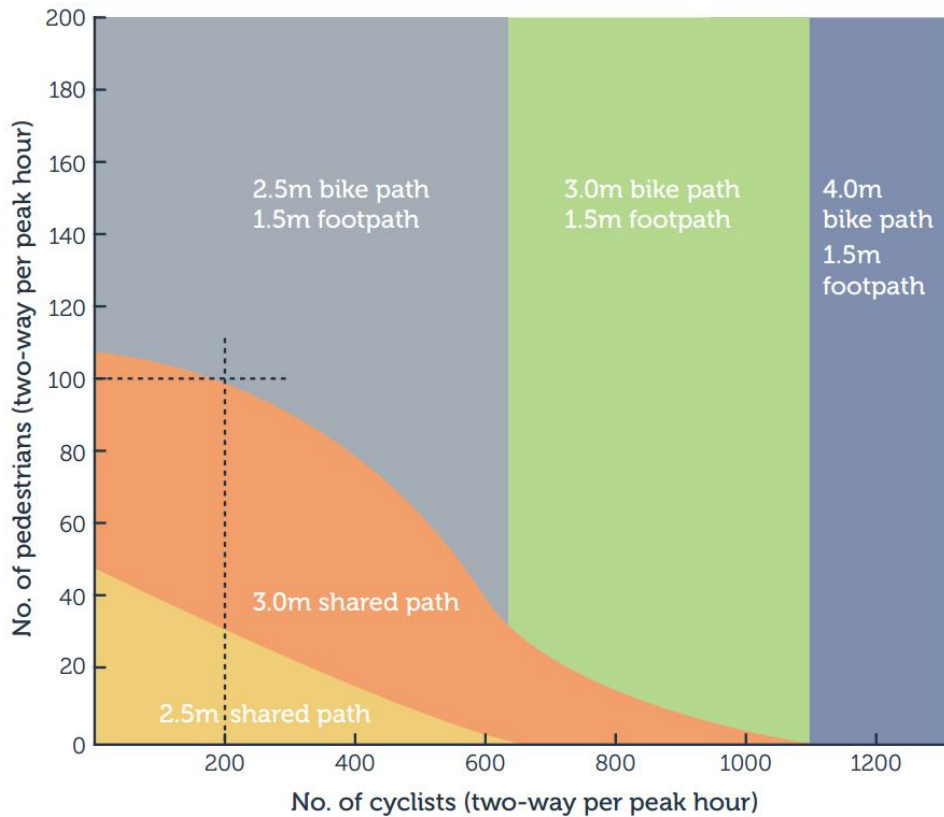


Figure 4 - Path capacity for paths with 50/50 directional.

Source: VicRoads Cycle Note 21.

### 8.3.1 Land use type and accessibility

Land uses within Kwinana vary between residential areas, semi-rural areas, industrial area and a bushland area. Within the residential and semi-rural areas, the land use can be further broken down into commercial and office areas, retail areas, schools, railway stations and community places.

It is important to identify the land use types existing within the project area before determining the appropriate level of accessibility or the appropriate type of infrastructure for the intended user. Key land use types within the City have been mapped along with the travel distance typically conducive for cycling and walking. This was taken as:

- 3km cycle distance for railway stations
- 1km cycle distance for retail precincts (shopping centres)
- 1km distance for schools (noting High School children can cycle further than 1km), however, the last 1 kilometre is the critical section of a route. Often this is where there is the highest concentration of cars and vulnerable road users.

The mapping in Figure 8.6 to Figure 8.8 provide focus areas for baseline accessibility review of existing infrastructure adjacent key land uses.

The cycling and walking catchment for the two railway stations at 3km are shown in Figure 8.6. It notes that there is a large proportion of residents within acceptable catchment that have the choice of either cycling or walking to either Kwinana or Wellard stations. While there is existing infrastructure within these catchments there are still gaps in the on-road network and an

incomplete off-road network. The existing networks take a person close to the stations but do not deliver the “last mile” for entry into the stations.

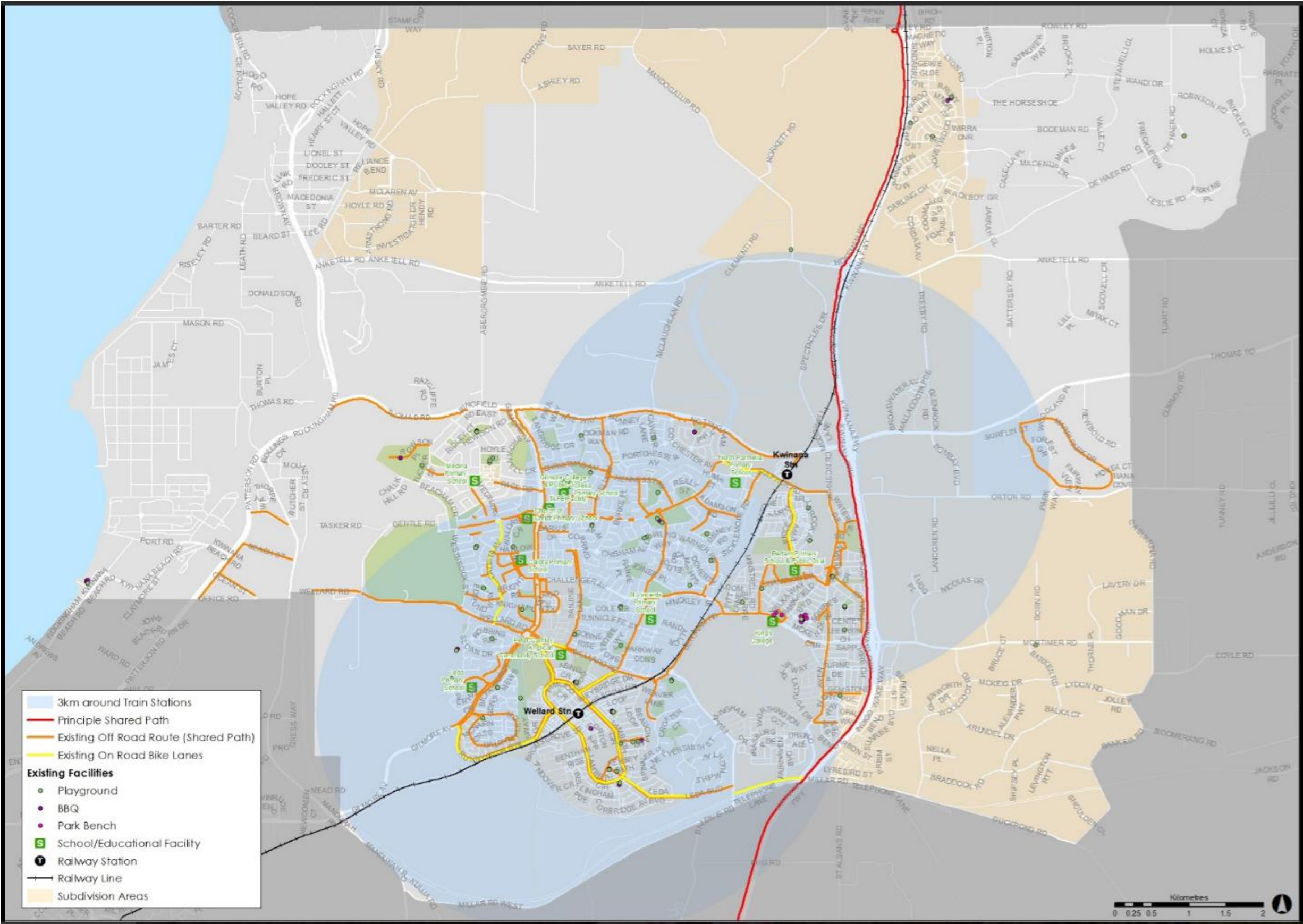
The catchment for the retail locations were taken as 1km as shown in Figure 8.7, with 1km being a more realistic distance for cycling or walking demand for local centres. This shows that the majority of the residential area within Kwinana has access to one or more local centres within 1km cycle distance. As with the railway stations, while there is some existing infrastructure within these catchments, there are still gaps in the on-road network and an incomplete off-road network. There is also a lack of cycle parking facilities at some of the centres.

Further to this, improved pedestrian accessibility, particularly for the ageing population, needs to be considered for the immediate surrounding road environment for each retail precinct, including through the precincts.

Catchment for schools within the City of Kwinana area have been mapped as 1km. While research does suggest 2km is an achievable measure, concentration around each school can be a first stage in a wider “Safer Routes to School” operation.

It is evident that through a “Safer Routes to School” program, lowering speeds around schools and improving pedestrian and cycle accessibility and safety, large areas of Kwinana will benefit from an overall improved and safer active transport network. As depicted in Figure 8.7 and Figure 8.8 there is a clear lack of accessibility and infrastructure to the south of Wellard Station and east of the freeway, as well as within the large industrial area to the west.

Figure 8.6: Land use with cycling and walking catchment – railway stations





**Legend:**

- 1km around Shopping Centres
- Principle Shared Path
- Existing Off Road Route (Shared Path)
- Existing On Road Bike Lanes

**Existing Facilities**

- Playground
- BBQ
- Park Bench
- School/Educational Facility
- Railway Station
- Railway Line
- Shopping Centre
- Subdivision Areas

**Map Labels:**

Kwinana  
Welland

**Scale:** 0 0.25 0.5 1 1.5 2 Kilometres



**Legend**

- 1km around Schools
- Principle Shared Path
- Existing Off Road Route (Shared Path)
- Existing On Road Bike Lanes

**Existing Facilities**

- Playground
- BBQ
- Park Bench
- School/Educational Facility
- Railway Station
- Railway Line
- Subdivision Areas

**Scale:** 0 0.25 0.5 1 1.5 2 Kilometres

## 9. Regional Network Plan

### 9.1 The Long-Term Network Plan 2050

The plan has balanced between designing a network that combines the strategic objectives of the State Government for the City of Kwinana's portion of a metropolitan bicycle network, together with the local objectives of a series of neighbourhood plans that are intended to activate the local population to address the serious health challenges of the community.

In the consultation and analysis phases of the plan development, the destinations within the City that have the potential to attract the most people towards cycling and walking, instead of the use of private motor vehicle were determined to be:

- Darius Wells Library & Resource Centre;
- Kwinana Adventure Park;
- Wellard "The Strand" Precinct / Wellard Train Station; and
- Kwinana Train Station.

For the purposes of the secondary network, both Darius Wells and Kwinana Adventure Park are considered as the Kwinana City Centre secondary destination, with routes feeding into either one, based on the direction of the movement. Wellard Town Centre and the Kwinana Train Station are the other secondary destinations. The regional network has been designed to facilitate connections from the surrounding secondary destinations into the destinations above within the City of Kwinana. The surrounding destinations considered in the secondary network

are: Rockingham Beach, Rockingham City Centre, Rockingham Train Station (Rockingham);

- Coogee, Cockburn Central (Cockburn);
- Armadale City Centre (Armadale); and
- Byford, Mundijong (Serpentine – Jarrahdale).

Local destinations of Hammond Park, Aubin Grove and Baldivis are connected to the City of Kwinana via the local network and need to be reviewed in context of the neighbourhood plan for that area (see section 18). The connection points are shown on the same plan as the connection points with the secondary network (Figure 9.1). Also, of note is the Tramway Reserve Trail project, spanning Yangebup Lake to Karnup and dissecting the City of Kwinana through Mandogalup, The Spectacles, Parmelia, and Providence estate in Wellard.

Primary routes (red) are shown as per the *cycling network* of the Perth and Peel @ 3.5 Million Transport Plan, with the additions being the proposed primary route on the freight line identified as a potential long-term route as well as the proposed Fremantle to Rockingham Controlled Access Highway which is expected to have a high standard principal shared path (Section 9.3).

Thomas Road secondary route is suggested to be shifted to Anketell Road based on community priorities for facilities on Anketell Road and the more direct access to Armadale from the north from Latitude 32 (recognising separated provision will be required). Thomas Road is important for a local context as well as forming part of the Kwinana Loop Trail.



Figure 9.1: City of Kwinana long-term regional cycling network – surrounding destinations

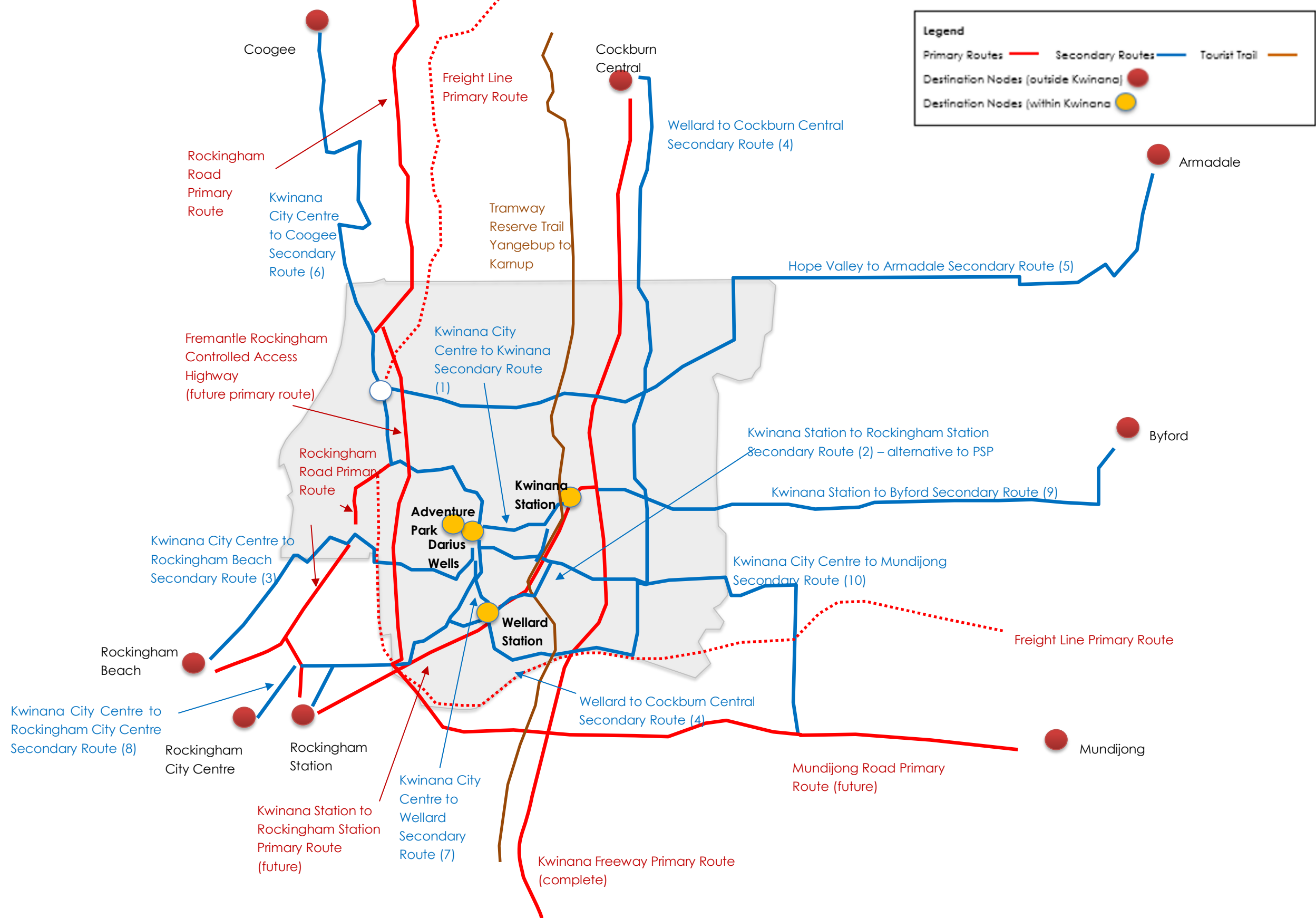
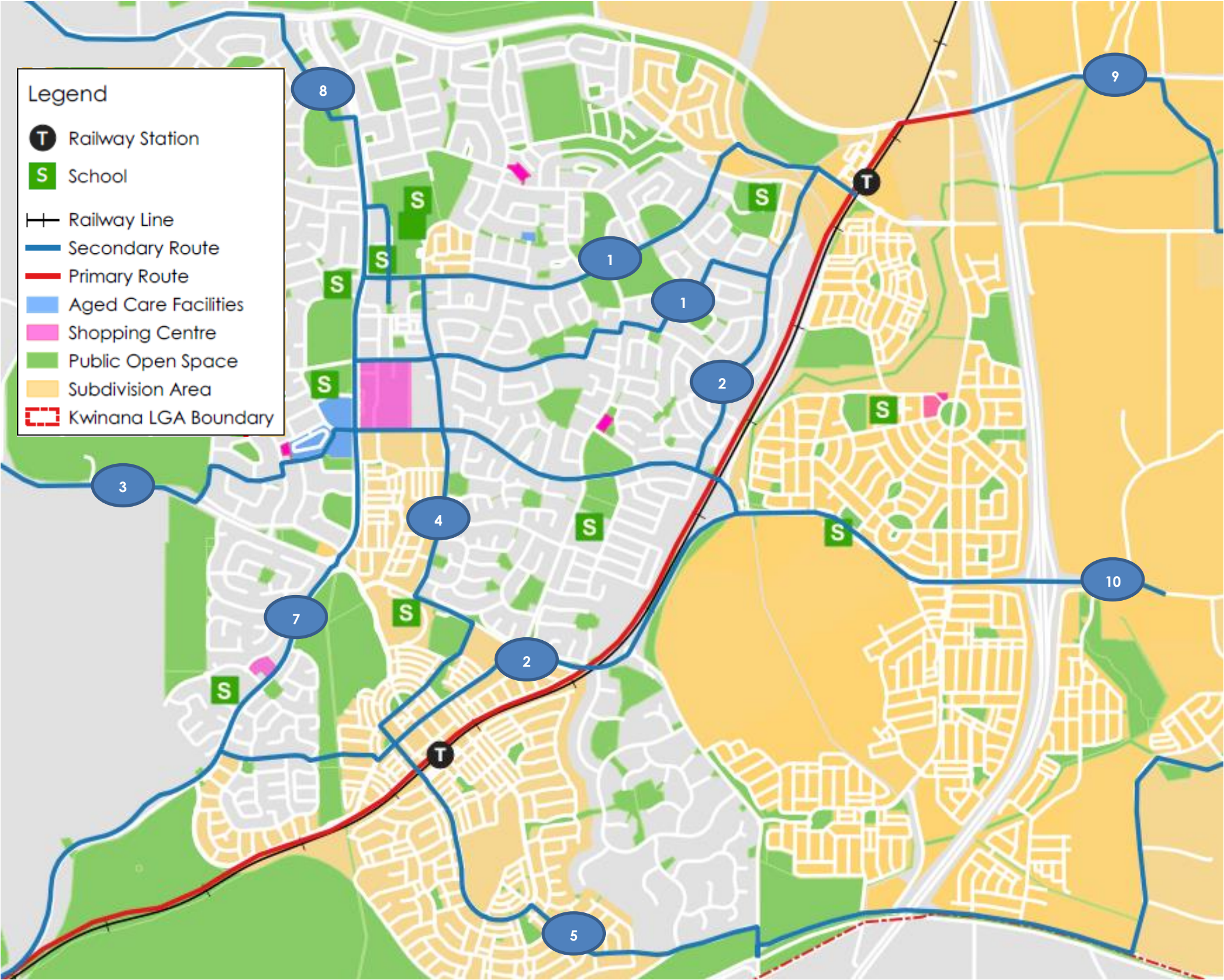


Figure 9.2: City of Kwinana long-term cycling network – Kwinana



Secondary Route priority for implementation:

- 1 – **Kwinana City Centre to Kwinana Train Station**  
(Bicycle boulevard proposed through Parmelia) Note: Sulphur Road is an alternative route between these destinations
- 2 – **Kwinana Train Station to Rockingham Train Station**  
(Secondary route alternative – Section 9.4.2)
- 3 – **Kwinana City Centre to Rockingham Beach**  
(bicycle boulevard through Calista / Wellard Rd / Beach St / Kwinana Beach Rd / Rockingham Beach Rd)
- 4 – **Kwinana City Centre to Wellard Town Centre**  
(Meares Ave / shared path through Abingdon Park / Runnymede Gate)
- 5 – **Wellard to Cockburn Central**  
(through new and future developments)
- 6 – **Hope Valley to Armadale**  
(Anketell Rd / De Haer Rd / Rowley Rd – beyond scope of this map)
- 7 – **Kwinana City Centre to Rockingham Town Centre**  
(Gilmore Ave largely completed with shared path – Rockingham section to be determined)
- 8 – **Kwinana City Centre to Coogee**  
(Gilmore Ave / Thomas Rd / Rockingham Rd / Cockburn Rd)
- 9 – **Kwinana Train Station to Byford**  
(Thomas Road / Orton Road – to confirm with Department of Transport and Shire of Serpentine Jarrahdale)
- 10 – **Kwinana City Centre to Mundijong** (Challenger / Bertram Rd)

The proposed principal route from Kwinana Station to Rockingham Station on the railway reserve is a long-term objective to be built in conjunction with the State Government priorities. In the meantime, an alternative route is proposed as a strategic route option between Sicklemore Rd and Gilmore Ave (shown dashed on the map).

Kwinana Freeway Principal route is completed. Rockingham Rd and the freight line principal routes are long term objectives of the State Government.



## 9.2 Implementation of the Long-Term Network

The long-term network has been prepared to ensure the City of Kwinana, Department of Transport, land developers and relevant stakeholders are aware of the priority primary and secondary routes for the long term. The extent of works required make it unfeasible to implement the secondary routes in the next 5 years. However, where possible, routes or sections of the routes should be implemented as part of land developments or major projects such as road upgrades.

Primary routes (red) are the responsibility of the State Government and City of Kwinana will advocate for strategic connections to influence the timing of their implementation. However, they form an important part of the overall network and liaison with Main Roads WA and Department of Transport is recommended over the coming years with updates to be incorporated in the next instalment of the bicycle and walking plan for 2023 and beyond, as well as all future bicycle and walking plans. Secondary routes (blue) are the responsibility of the City and consist of a combination of local bicycle boulevard treatments on quiet roads, and shared paths on the busier roads. Individual routes and priorities are detailed in sections 9.3 and 9.4 below.

## 9.3 Primary Route Network

Six routes have been proposed that will form the primary network to be agreed with the Department of Transport. These routes use major road and rail reserves and will be grade separated in the long term.

**Table 9.1: City of Kwinana primary routes**

Route	Location	Status
Kwinana Freeway PSP	Freeway reserve	Constructed
Kwinana Train Station to Rockingham Train Station	Rail reserve	Future
Rockingham Road	Road reserve	Future
Kwinana Freight Line	Rail reserve	Future
Fremantle Rockingham Controlled Access Highway	Road reserve	Future
Mundijong Road	Road reserve	Future

### 9.3.1 Kwinana Freeway Primary Route

The Principal Shared Path (PSP) on the western side of the freeway is complete between Perth City and South Yunderup. The *Perth and Peel @ 3.5 Million Transport Plan* suggests duplication of the primary route on the eastern side from the City down to Rowley Road, the Kwinana boundary, therefore no provision is proposed on the eastern side within the City of Kwinana.

Extensive subdivisional development on the eastern side of the freeway is proposed between Rowley Road and Millar Road and commenced with Honeywood and Sunrise estates. It would be beneficial to implement a shared path on the eastern side, constructed by developers during the subdivisional phase. The path should be 3m red asphalt. Discussion with MRWA and Department of Transport about construction in the road reserve will need to take place. It is likely the path will progress if constructed on private land and crossing the major roads e.g. Thomas Road, Anketell Road, and Rowley Road at grade, in which case the route will more likely be suitable as a secondary route.

**RECOMMENDATION 2:** Liaise with Department of Transport about long-term priority to construct shared path on east side of freeway (3m red asphalt)



### 9.3.2 Kwinana to Rockingham Train Stations Primary Route

Due to the train line separating from the Kwinana Freeway to the north of Thomas Road, a primary route is proposed on the rail line to connect the important destinations of Kwinana, Wellard and Rockingham stations.

Any opportunity to construct a portion of the principal shared path adjacent to the rail line should be taken. It is preferred to construct the path on the western side of the railway, but this is not essential and to be considered at the time of construction in consultation with all relevant parties. The opportunity to construct a principal shared path or future proof the alignment for one at the time of the Perth to Mandurah rail construction in 2007 was missed, due to budget constraints. Consequently, the cost of retrofit construction of a principal shared path will be significantly higher and not a priority for the State Government in the short term.

#### Kwinana Train Station to Rockingham Train Station Strategic Route Alternative

In response to this situation, an alternative on-road alignment is proposed that will form a secondary route between the train stations using adjacent streets. The design of the route between Kwinana Train Station to Rockingham Station is proposed in the implementation plan. Liaison with the City of Rockingham will be required to implement the route in its entirety. The alignment is obvious in its directedness in the City of Rockingham, and a concept has been proposed for discussion with the City of Rockingham and appropriate stakeholders.

### 9.3.3 Rockingham Road Primary Route

The cost to construct a principal shared path facility in a constrained environment is considerable, especially when a grade separation or structural modification is required. That said, the Rockingham Road alignment is preserved as a primary route and becomes important at least until the Fremantle Rockingham Highway is constructed (see 9.3.4 below). City of Kwinana and Main Roads must coordinate to ensure sections are constructed at opportune times, and where possible, crossings of Rockingham Road be improved. These were mentioned numerous times in the *CrowdSpot* survey, most notably the Thomas Road intersection.

### 9.3.4 Freight Line and Fremantle Rockingham Highway

While not identified in the cycling network of the *Perth and Peel @ 3.5 Million Transport Plan*, there is opportunity for a primary route along the freight line to be reserved. Due to the uninterrupted nature of these alignments, every opportunity is to be taken to ensure a principal shared path can be constructed. Long-term the demand for pedestrians and cyclists is expected to increase and additional primary routes required. This proposal corresponds with the same recommendation within the City of Cockburn Bike Plan.

The line runs through the industrial area of Hope Valley and behind Kwinana Beach before moving east towards Mundijong to the south of Leda and Wellard. The route will double up the Fremantle to Rockingham Controlled Access Highway primary route, and it is expected there will be some discussion about the need for two primary routes adjacent to each other. The section to the south of Leda and Wellard is the most important as Mundijong Road is not easily accessed from Kwinana. The section to the west of the townscape should be preserved for future decisions to be made.

The Fremantle Rockingham Highway and Mundijong Road future upgrade to extend to Tonkin Highway are noted in the cycling network of the *Perth and Peel @ 3.5 Million Transport Plan* as a primary cycling route and needs to be preserved.

**RECOMMENDATION 3:** Liaise with Department of Transport about provision of a Principal Shared Path (PSP) on the freight route for the long-term regional cycling network

### 9.3.5 Local Roads Transferring to Main Roads

MRWA has advised the City of Kwinana that roads once the responsibility of the City of Kwinana will be transferred to MRWA to maintain. Some of these form routes on the primary and secondary network:

- Cockburn Road
- Anketell Road
- Mandurah Road
- Thomas Road
- Mundijong Road

## 9.4 Secondary Route Network

Ten strategic routes were proposed to cover the regional network to connect key destinations in Kwinana to key destinations of Rockingham, Serpentine-Jarrahdale, Cockburn, and Armadale (Table 9.2). These routes use the road network and represent the blue routes of the Department of Transport regional route hierarchy. These have been prioritised based on the STRAVA data and potential demand to the destinations.

**Table 9.2: City of Kwinana secondary cycling routes**

Priority	Project	Adjoining Local Government
1	Kwinana Train Station to Kwinana City Centre	-
2	Kwinana Train Station to Rockingham Train Station (alternative route to principal shared path in reserve)	Rockingham
3	Kwinana City Centre to Rockingham Beach	Rockingham
4	Kwinana City Centre to Wellard Town Centre	-
5	Wellard Train Station to Cockburn Central (through new development)	Cockburn
6	Hope Valley to Armadale (Anketell Road and Da Haer Road)	Armadale
7	Kwinana City Centre to Coogee	Cockburn
8	Kwinana City Centre to Rockingham City Centre	Rockingham
9	Kwinana Train Station to Byford	Serpentine Jarrahdale
10	Kwinana City Centre to Mundijong	Serpentine Jarrahdale

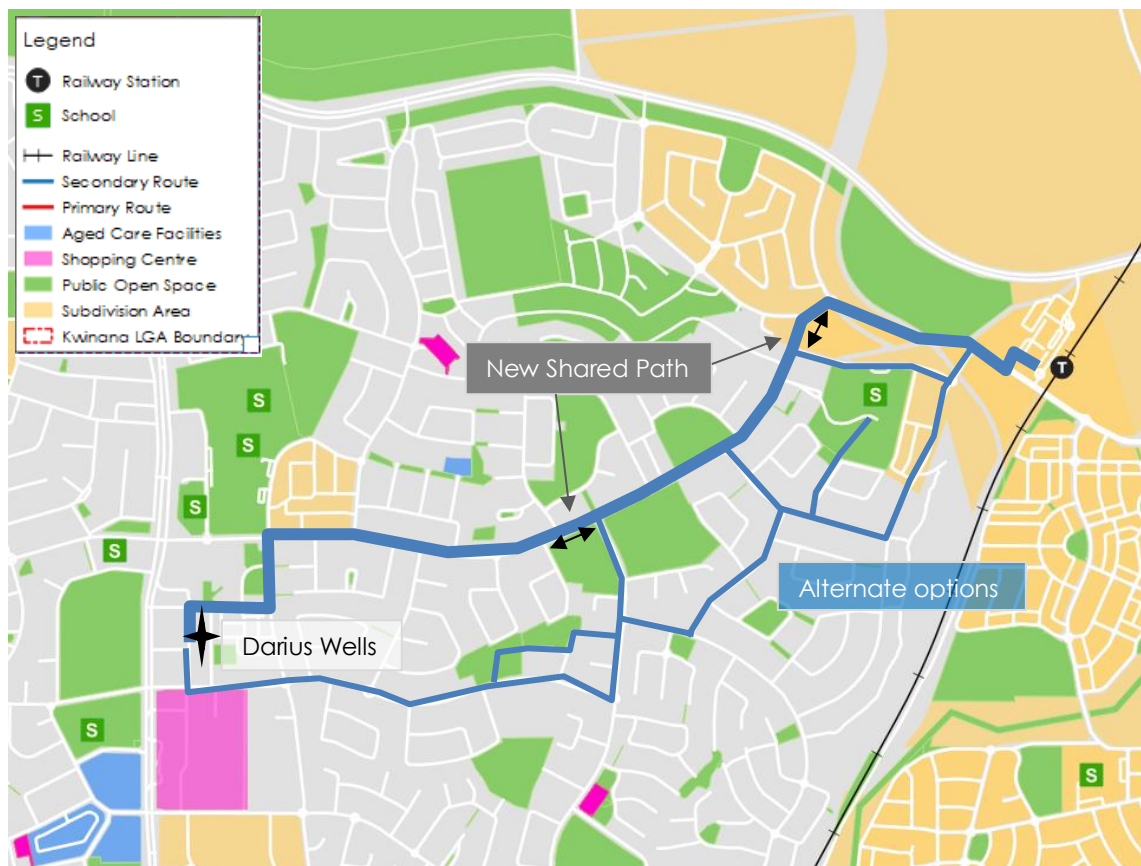
The long-term network priority for the City of Kwinana is to design and implement the secondary routes 1-3, namely:

- i Kwinana Train Station to Kwinana City Centre.
- ii Kwinana Station to Rockingham Station (road alternative route).
- iii Kwinana City Centre to Rockingham Beach.

#### 9.4.1 Kwinana Train Station to Kwinana City Centre

The Kwinana Train Station to Kwinana City Centre (Station to Centre) route is the most important of the secondary routes and links two high profile destinations in the township of Kwinana. Residents in Parmelia and Orelia are expected to benefit from this route which will encourage their travel to the train station and town centre by walking or cycling. Future neighbourhood planning for Parmelia and Orelia should focus on local connections to the secondary route. Instead of adopting one-route alignment, the proposal considers multiple roads in the corridor from the Train Station to the City Centre as some may choose to ride on Sulphur Road, a more direct route but is a bus route with high traffic volumes. Others may choose a more meandering route on Chisham Avenue, Warner Road, Preston, Adamson and Sicklemore Roads. Others again may choose to detour through Hunt Park. Meares Avenue, Parmelia Avenue and Adamson Road provide connections between the main route options. For these reasons, all the routes are shown on the route map (Figure 9.3) with Sulphur Road given the most prominence.

Figure 9.3: Secondary route – Kwinana Town Centre to Kwinana Train Station



This secondary route should be designed with public consultation. It is expected the route will be established with shared paths, bicycle lanes and wayfinding signage as the first phase, and the desirable treatments of bi-directional cycle lanes and local boulevard treatments explored for enhancement in future phases. As with secondary routes that use the local street network in other parts of Perth, *Safe Active Street* principles to prioritise bicycle and pedestrian movement should be explored. These include 30km/hr traffic speeds and restricted forward visibility (e.g. Shakespeare Road, North Perth). Items proposed for the secondary route from Kwinana Train Station to Kwinana City Centre (Station to Centre) are provided in Table 9.3.



**Table 9.3: Secondary route implementation projects (Station to Centre)**

Item	Project
S1-1	Meares Avenue shared path (east side Sulphur Road to bicycle lane)
S1-2	Sulphur Road bicycle lane (westbound Nottingham Parkway to Durrant Avenue)
S1-3	Sulphur Road bicycle (westbound Parmelia Avenue to Kirkland Way)
S1-4	Pavement marking access roads (bicycle stencils)
S1-5	Chisham Avenue bi-directional lane (north side Meares Avenue to Parmelia Avenue)
S1-6	Path upgrade through Hunt Park (Chisham Ave to Hunt Place)
S1-7	Bicycle boulevard treatment Hunt Place and Cowling Way)
S1-8	Upgrade crossings of Parmelia Avenue at Chisham Avenue and Cowling Way (raised plateau crossings)
S1-9	Parmelia Avenue bi-directional lane (east side Chisham Avenue to Sulphur Road)
S1-10	Warner Road shared path (south side Parmelia Avenue to Sicklemore Road)
S1-11	Bicycle boulevard treatment Sicklemore Road and Preston Road (entire lengths)
S1-12	Adamson Road shared path (north side entire length)
S1-13	Optional: Connection to North Parmelia Primary School to be explored through liaison with school and residents (local bicycle boulevard or shared path treatment on Dawson Way and path upgrade and lighting between Dawson and school)
S1-14	Liaise with PTA to remove car parking on shared path on Sulphur Road at station (bollards and or enforcement)

It should be noted that bicycle lanes without protection are no longer supported by the Department of Transport and are proposed here as an interim measure for consistency. Wayfinding signage should be adopted for the route according to the principles outlined in Chapter 19.4.

Bicycle stencils on the access roads to Sulphur Road (item S1-4) are important to indicate to people cycling the designated route alignment and to alert car drivers of the presence of cyclists and prominence of the route. These should be spaced at 200m intervals and face the direction of traffic westbound and eastbound of the adjacent Sulphur Road lane.

**Figure 9.4: Sulphur Road access road bicycle stencil locations**



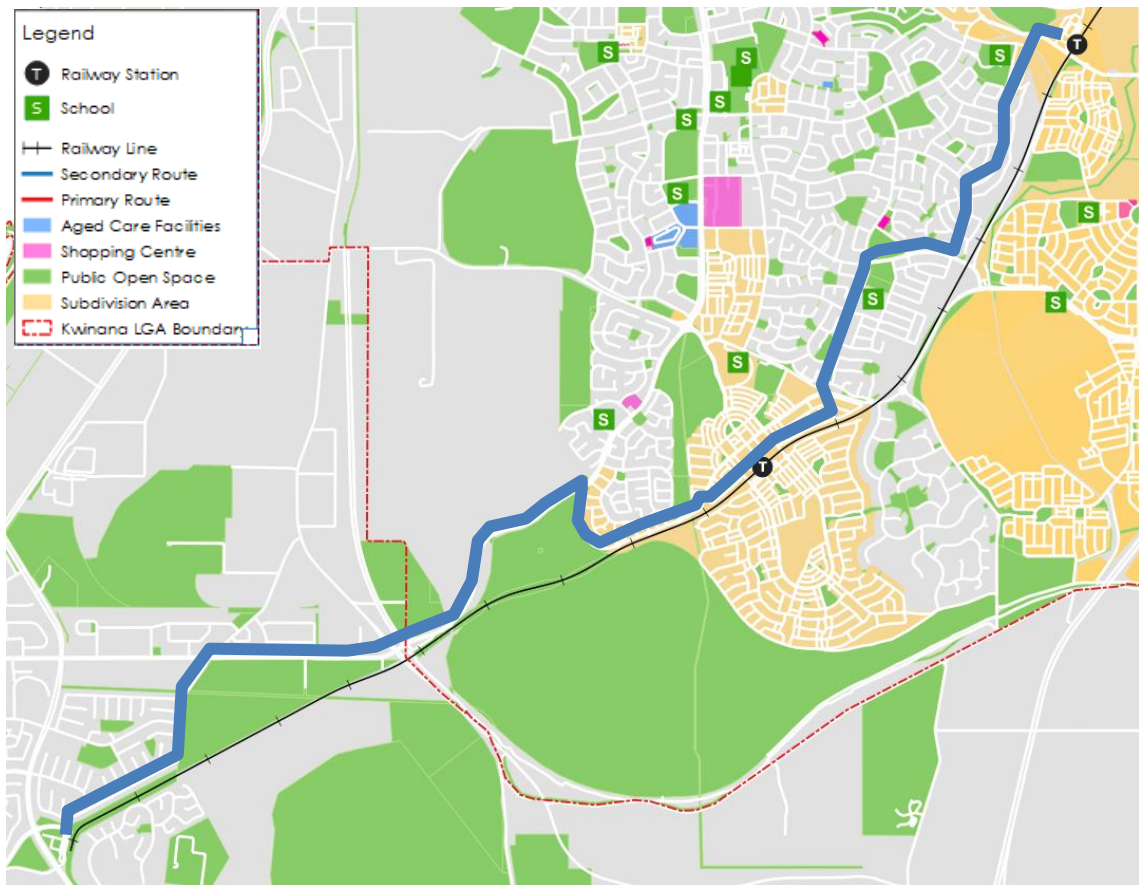
Transitions between the access roads should be designed to enable the safe cycle movement between them but deter car movements known as 'Filtered Permeability'. The Sulphur Road route should consider pavement marking treatments to the existing environment and signage to indicate the destinations of Kwinana City Centre and Train Station, and treatments to distinguish between on-road shoulder and the access road and paths used (detailed further in Section 19.3). Similar treatments have been used on South Terrace in Fremantle.

### 9.4.2 Kwinana Train Station to Rockingham Train Station

As mentioned in Section 9.3.2, the expected construction of the primary route on the rail line between Kwinana, Wellard and Rockingham is not likely for some time, therefore, an alternative route is proposed using the road network.

This secondary route has been indicated on Figure 9.5 below and should be developed in conjunction with the City of Rockingham, with treatments considered based on consultation with residents and neighbourhood community groups.

**Figure 9.5: Secondary route – Kwinana Train Station to Rockingham Station**



The total route is about 12km and a 45min bike ride. The section within Kwinana between Sulphur Road and Wellard Road is shown in Figure 9.6 and the section between Wellard Road and Gilmore Avenue is shown in Figure 9.7.

Figure 9.6: Secondary route – Kwinana Train Station to Wellard Road (Stage 1)

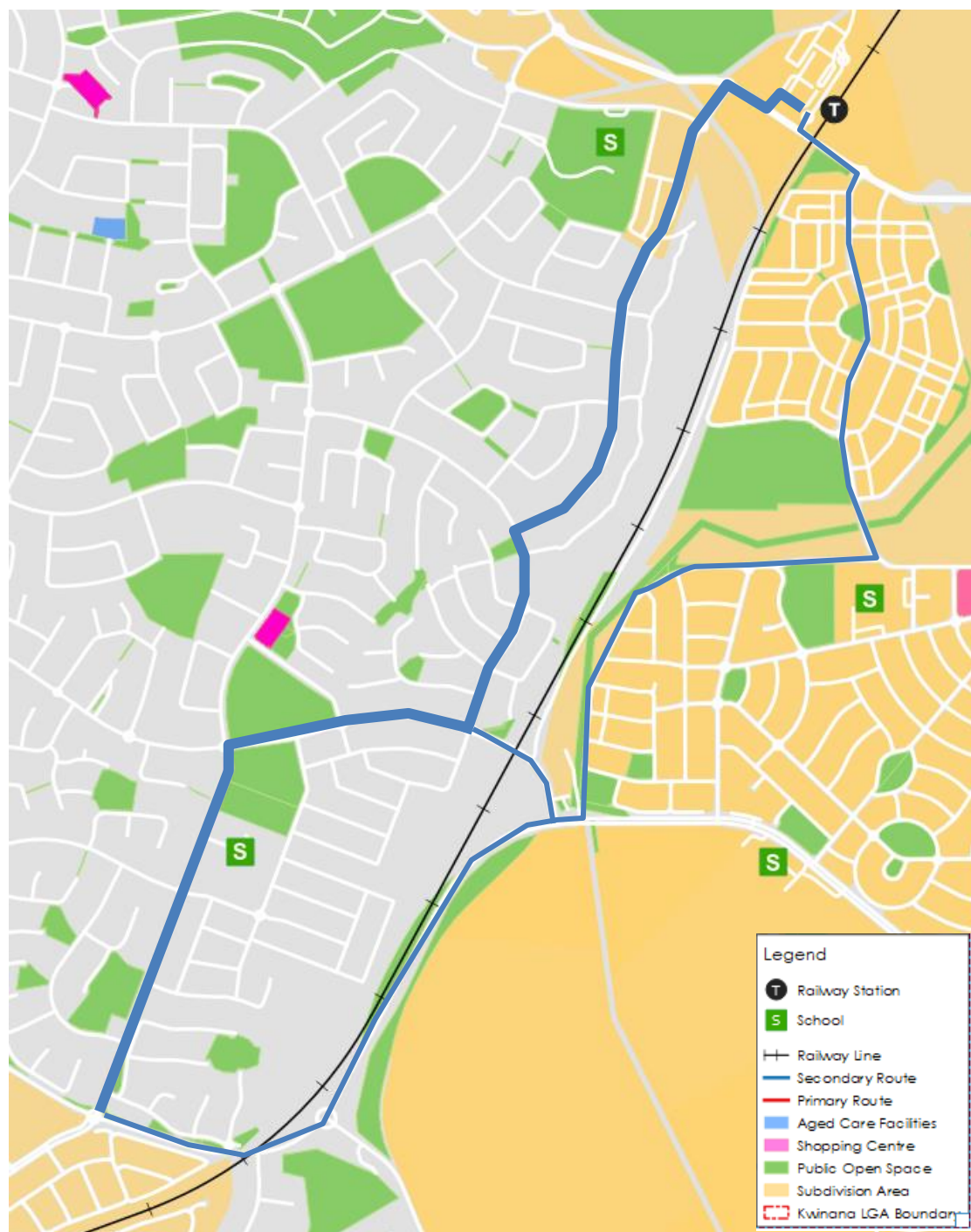
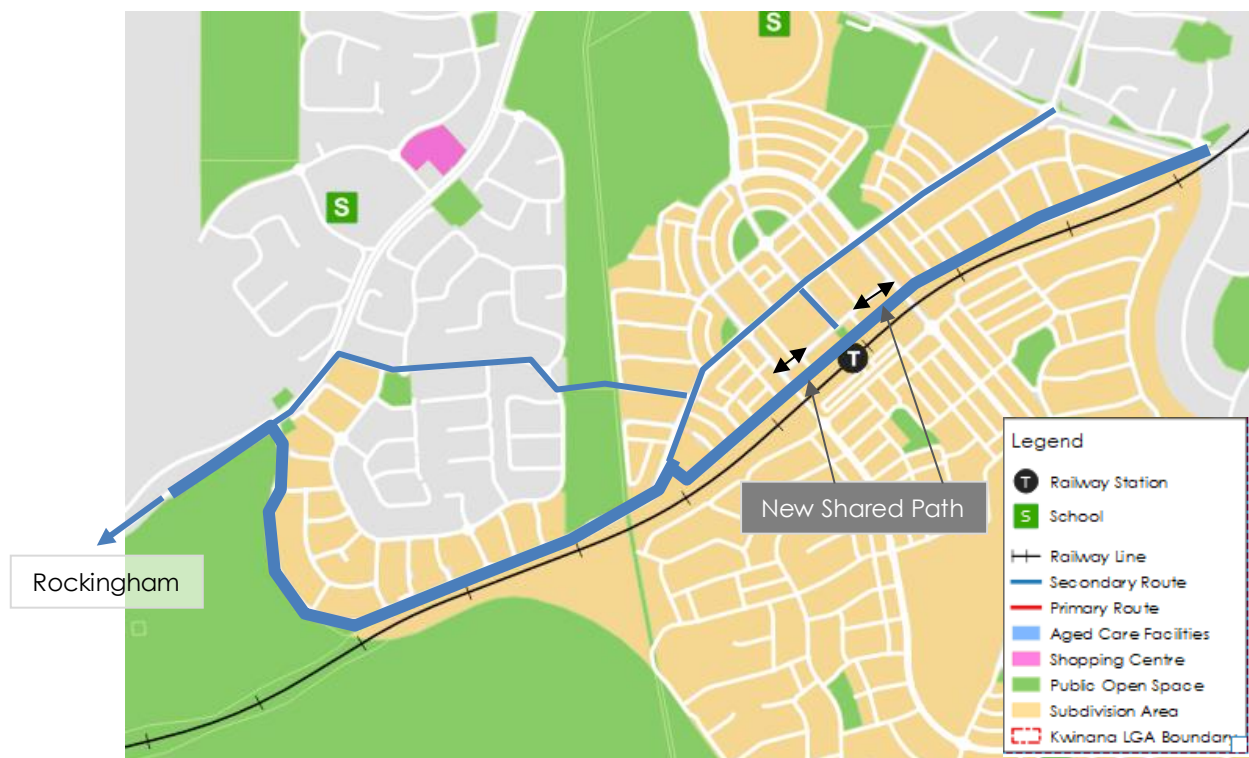




Figure 9.7: Secondary Route – Wellard Road to Gilmore Avenue (Stage 2)

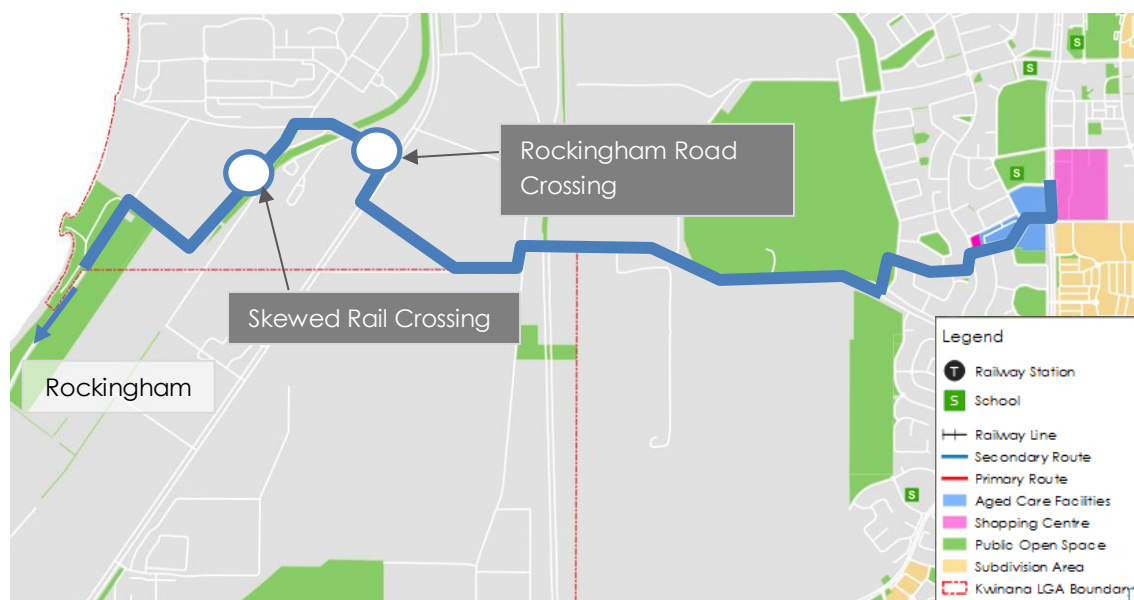


### 9.4.3 Kwinana to Rockingham Beach

One of the most popular routes in the STRAVA heat map (Figure 5.1) is noted as Rockingham Beach and along Wellard Road into the City Centre from the western side. Due to the limited number of entry points into Kwinana, this route becomes particularly important. For that reason, it is proposed to be designed in the implementation program and constructed as funding allows.

The route between the City Centre and Rockingham boundary is shown in Figure 9.8. The exact route through Calista should be explored with consultation and consider low speed boulevards on the internal road network as well as the direct route on the Wellard Road shared path.

**Figure 9.8: Secondary route – Kwinana Town Centre to Rockingham Beach**



One of the key issues of this route is the crossing of the freight rail tracks on Kwinana Beach Road that run at an angle to the road and are slippery under wet conditions (Figure 9.9). There is a similar situation on Railway Parade in Bassendean where numerous accidents have occurred. This will need to be addressed for safety of the route when it is promoted. International best practice indicates pavement marking to encourage movement at 90 degrees is suggested (Figure 9.10). This would mean Kwinana Beach Road should be widened to encourage this movement to occur outside the road carriageway.

Another issue is the crossing of Rockingham Road itself which will need to involve significant modification, and consultation with MRWA. Appropriate protection with pedestrian and cycling lanterns at traffic signals should be provided.

Figure 9.9: Kwinana Beach Road angled rail crossing



Figure 9.10: Rail angled crossing treatment example





#### 9.4.4 Kwinana City Centre to Wellard Neighbourhood Centre

This north-south secondary route is proposed to connect two important centres in the City. It is not proposed for design in the implementation plan, to allow for the previous three routes to progress, however, opportunities should be taken whenever roads are modified.

Route options include a western option on Gilmore Avenue to Henley Boulevard, and an eastern option on Meares Avenue and Abingdon Park (Figure 9.11). The route should provide connections to Kwinana Adventure Park on the western side of Gilmore Avenue. One of the challenges is the crossing of Wellard Road. This was raised in the consultation phase as being particularly difficult at the roundabout with Meares Avenue with the volume of cars being used to drop students to the Peter Carnley Anglican Community School.

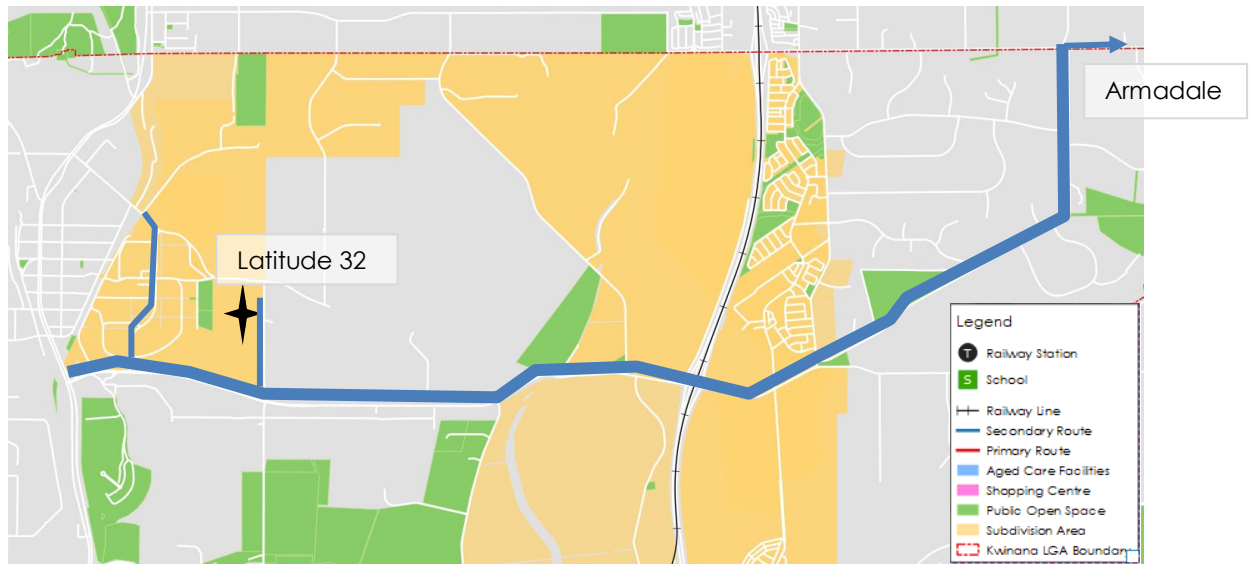
**Figure 9.11: Secondary route – Kwinana Town Centre to Wellard Town Centre**



#### 9.4.5 Hope Valley to Armadale

This east-west secondary route runs in the north of the City of Kwinana and will form the main arterial cycle route for new developments in this region. This route will also provide connection to the Kwinana Industrial Area and Latitude 32 (Figure 9.12).

**Figure 9.12: Secondary route – Hope Valley to Armadale**



There is demand for the route on Anketell Road, as indicated in *CrowdSpot* (Table 6.1). De Haer Road was also picked up in the *CrowdSpot* consultation as a road used for cycling that needed improvements for safety. Anketell Road is proposed to become a MRWA asset, meaning construction of the proposed facility on Anketell Road for this secondary route will be largely outside the City's control. However, the City should ensure the facility has adequate provision at the time of upgrades and highlight the route's role and demand in the community.

The industrial areas of Kwinana Beach and Hope Valley (Latitude 32) are frequently accessed destinations within the City of Kwinana, and strategic from an overall transport perspective. This route will provide connection to these destinations, and to the north-south primary routes on Rockingham Road and the future Controlled Access Highway and Freight Line primary routes. The north-south Tramway Reserve Trail and potential trail on the Dampier Bunbury Natural Gas Pipeline alignment (Sections 9.5 and 9.6 respectively) also dissect this secondary route.

It is not proposed to construct works items to establish this route in the implementation plan, but opportunities should be taken as part of developments or road upgrades to ensure adequate cyclist provision through a principal shared path on Anketell Road, and a shared path or bi-directional cycling facility on De Haer Road. The connection to Honeywood estate on Wandii Road is proposed in the long-term network as part of works on De Haer Road to ensure the link is effective to link the new populations close to the freeway. These are proposed beyond the implementation plan to form part of the long-term network.

#### 9.4.6 Wellard Train Station to Cockburn Central

This secondary route is actually a series of local routes. People travelling to Cockburn Central are likely to do so on the Kwinana Freeway, but people accessing destinations on the east will need a north-south route. This route will run through the future residential areas situated on the eastern side of the freeway from Wellard through to Honeywood, and eventually connect to Cockburn Central using the cycle network through Atwell. The western part of the route from Wellard to the Kwinana Freeway uses Lambeth Circle and Leda Boulevard. It is expected to provide connections to Homestead Ridge from this route, as well as the developments in Baldivis to the south. This route would need to be developed as part of the subdivisional development on the eastern side of the freeway from Wellard East subdivisions through to Honeywood estate, and eventually connect to Cockburn Central using the City of Cockburn's Lyon Road through Atwell.

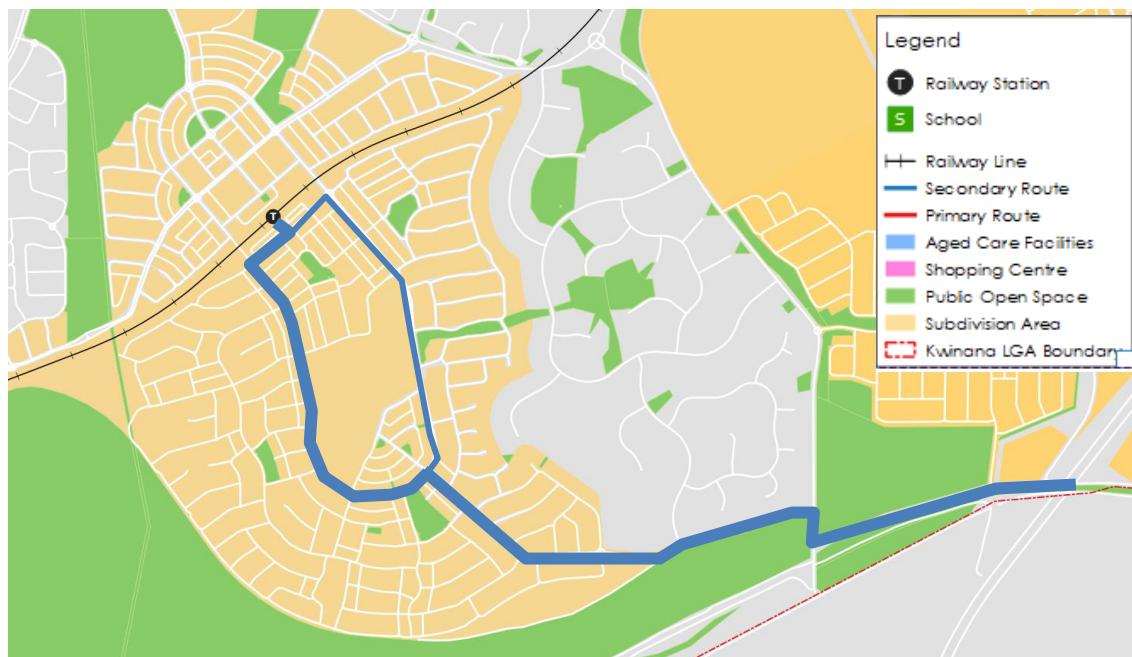
Figure 9.13: Secondary route – Wellard to Cockburn Central (entire route)





The western part of the route from Wellard to the Kwinana Freeway uses Lambeth Circle and Leda Boulevard. It is expected to provide connections to Homestead Ridge from this route, as well as the developments in Baldivis to the south (in the City of Rockingham).

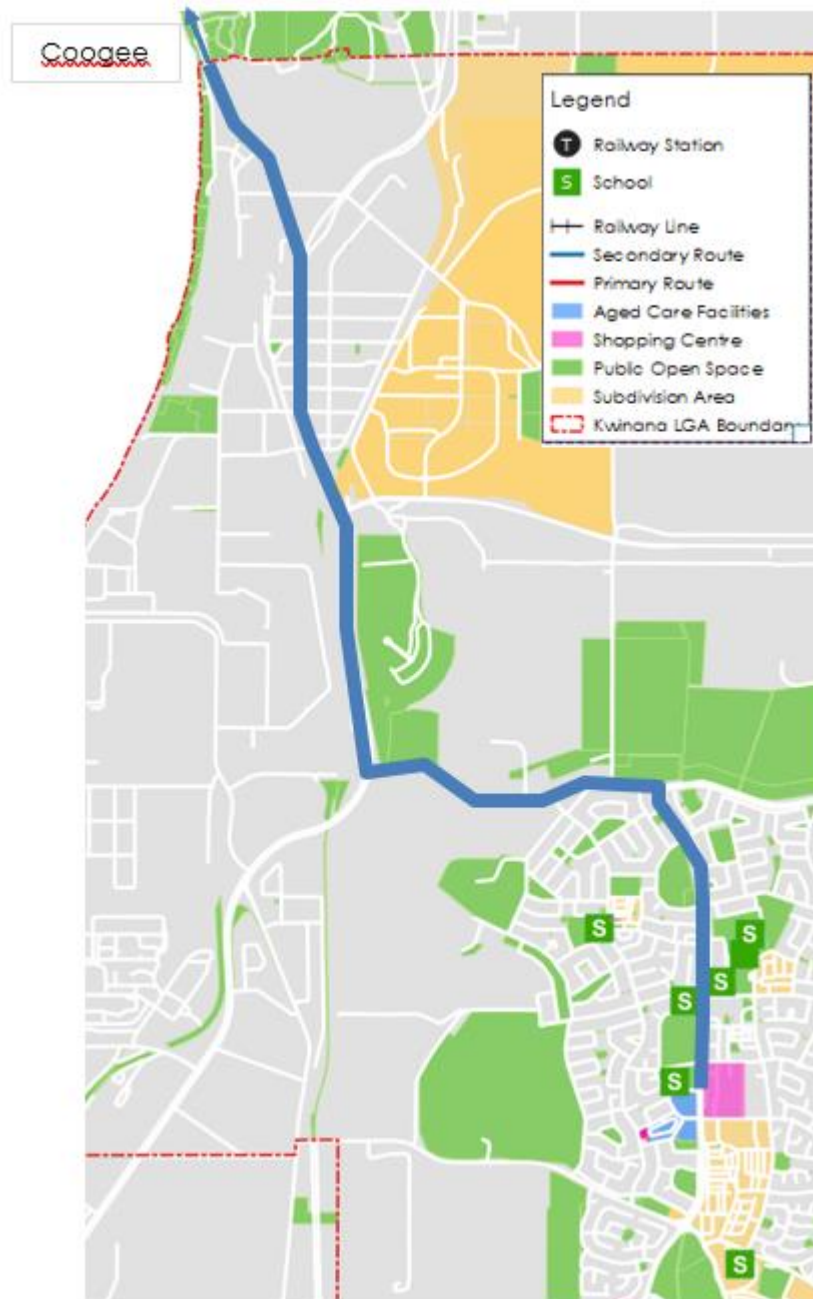
**Figure 9.14: Secondary route – Wellard to Cockburn Central (Wellard to Freeway)**



#### 9.4.7 Kwinana City Centre to Coogee

The north-south secondary route is an off-road route using Gilmore Avenue, Thomas Road, Rockingham Road (Thomas Road to Cockburn Road), and Cockburn Road (Figure 9.15). This route is expected to ultimately link up with the coastal recreation path north of Coogee to Fremantle and provides an off-road link into Kwinana from the coastal areas to the north of the City.

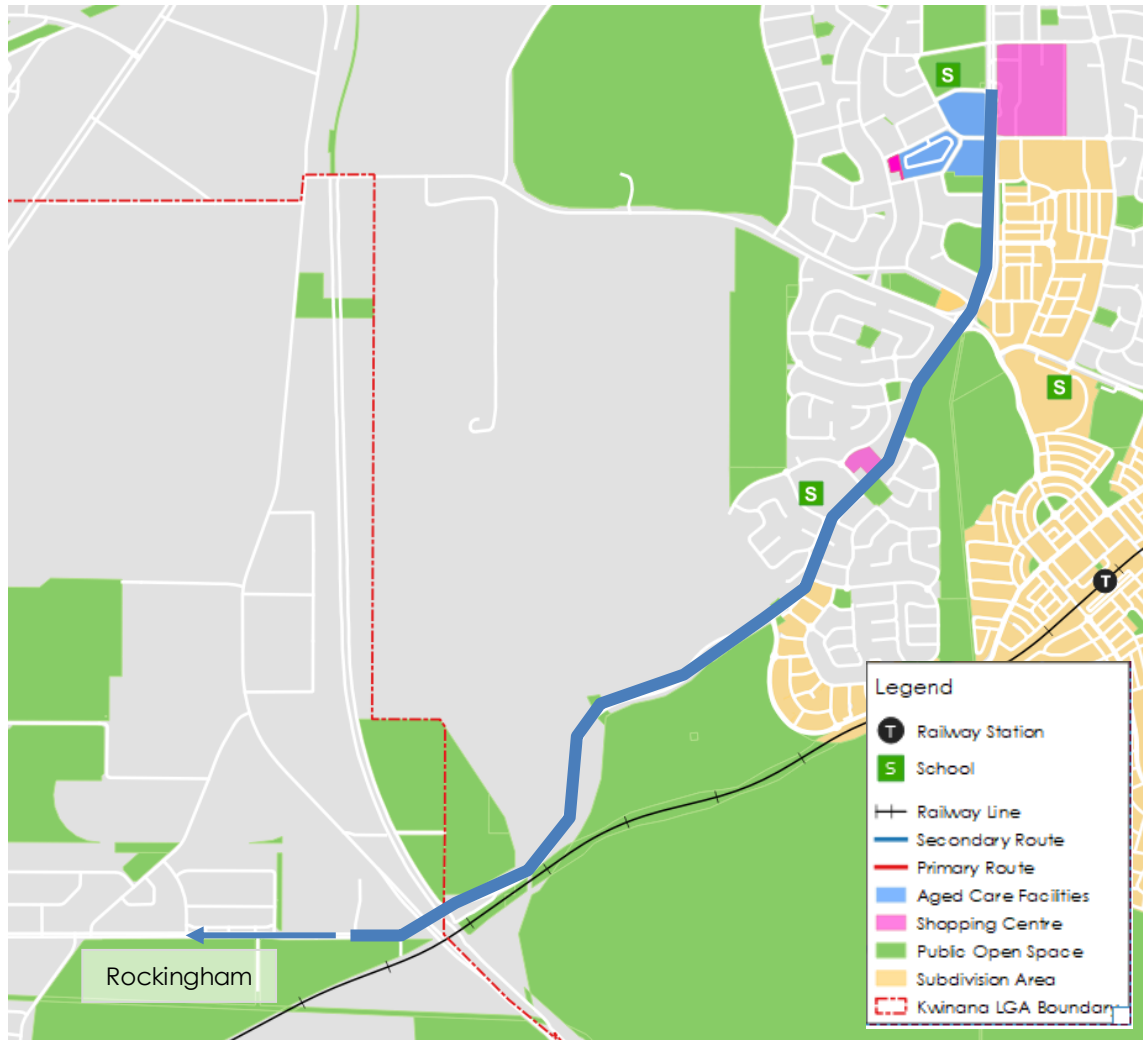
Figure 9.15: Secondary route – Kwinana to Coogee



#### 9.4.8 Kwinana City Centre to Rockingham City Centre

While the more popular route to Rockingham is via the foreshore (see Section 9.4.3), a secondary route is proposed to connect the Kwinana City Centre from the Rockingham City Centre (shopping centre). This route is also off-road and uses Gilmore Avenue and Dixon Road. The exact alignment into Rockingham will require consultation with the City of Rockingham and Department of Transport. Note some overlap between this route and the secondary route between Kwinana Train Station and Rockingham Train Station (see Section 9.4.2) exists.

**Figure 9.16: Secondary route – Kwinana to Rockingham City Centre**



#### 9.4.9 Kwinana Train Station to Byford

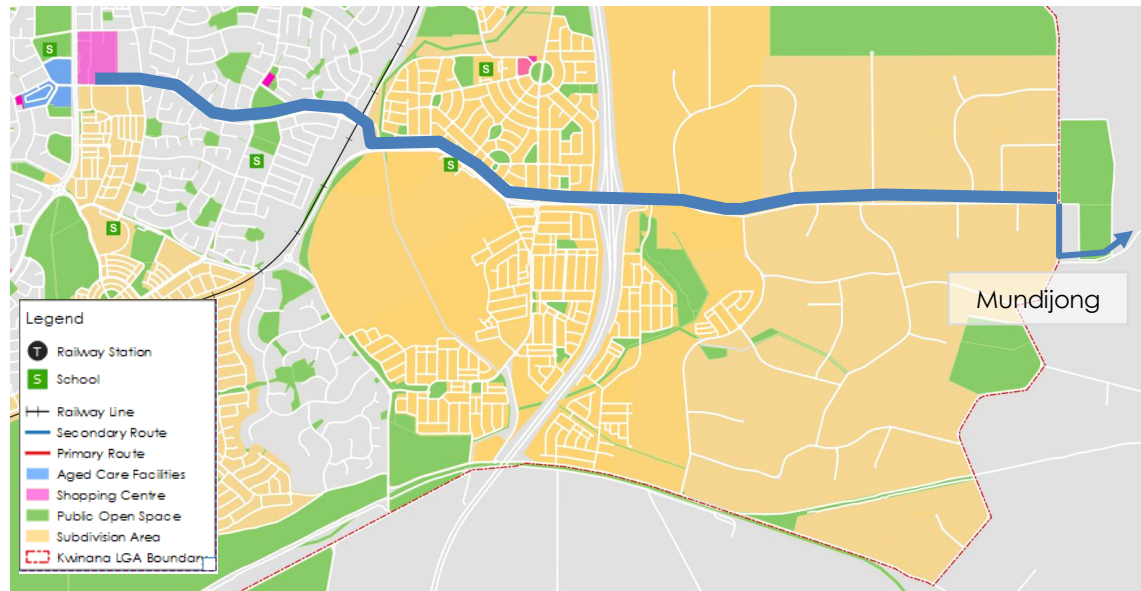
Using the shared path facilities on the Thomas Road overpass of the Kwinana Freeway, a secondary route is proposed east towards Byford. Further consultation between the City and the Shire of Serpentine Jarrahdale and Department of Transport is required regarding the alignment of this route, with Thomas Road requiring a principal shared path, and Orton Road providing a more direct connection into Byford on a low volume but high-speed road.



#### 9.4.10 Kwinana City Centre to Mundijong

Another east-west secondary route connects Kwinana City Centre to Mundijong via Challenger Road, Bertram Road and Mortimer Road (Figure 9.17). Connecting to Mundijong itself will require additional consultation with the Shire of Serpentine-Jarrahdale and Department of Transport.

**Figure 9.17: Secondary Route – Kwinana to Mundijong (Coyle Road)**



### 9.4.11 Secondary Route Network Implementation

The long-term network has been prepared to ensure its objectives are on track for future instalments of the plan, as well as to ensure road improvement projects and developments incorporate the ultimate network design and opportunities to construct the network are not missed.

Limited funds are available in the City of Kwinana's annual budget and the primary focus of the plan is establishing local 'neighbourhood' networks that address well known hotspots or missing links identified as barriers to cycling and encourage short 1-2km trips for cycling for health. For the secondary network it is proposed to proceed with three routes with specific items of the Kwinana Station to City Centre route separated in Table 9.4 and Table 9.5.

**Table 9.4: City of Kwinana secondary route plan (design)**

Priority	Project
S1	Design of Kwinana Train Station to Kwinana City Centre secondary route
S2	Design of Kwinana Train Station to Rockingham Train Station secondary route as an alternative route to railway line PSP
S3	Design of Kwinana City Centre to Rockingham Beach secondary route together with City of Rockingham

**Table 9.5: City of Kwinana strategic route implementation plan (Station to Centre)**

Priority	Project
S1-1	Sulphur Road – 180m bicycle lane (westbound Nottingham Parkway to Durrant Avenue)
S1-2	Sulphur Road – 180m bicycle lane (westbound Parmelia Avenue to Kirkland Way)
S1-3	Pavement marking on all access roads (bicycle stencils)
S1-4	Chisham Avenue – 1.1km bi-directional lane (north side Meares Ave to Parmelia Ave)
S1-5	Path upgrade through Hunt Park (Chisham Ave to Hunt Place)
S1-6	Safe active street (SAS) treatment – 420m on Hunt Place and Cowling Way
S1-7	Upgrade crossings of Parmelia Avenue at Chisham Avenue and Cowling Way (raised plateau crossings)
S1-8	Parmelia Avenue – 650m bi-directional lane (east side Chisham Avenue to Sulphur Road)
S1-9	Warner Road – 650m shared path (south side Parmelia Avenue to Sicklemore Road)
S1-10	Safe active street treatment – 1.5km Preston Road, Adamson Road (east of Preston), Sicklemore Road (north of Adamson)
S1-11	Adamson Road – 300m shared path (north side Sulphur Road to Preston Road)
S1-12	Optional: Connection to North Parmelia Primary School to be explored through liaison with school and residents (local bicycle boulevard or shared path treatment on Dawson Way and path upgrade and lighting between Dawson and school)
S1-13	Liaise with PTA to remove car parking on shared path on Sulphur Road at station (bollards and or enforcement)

Total: 1.9km Safe Active Street; 1.75km bidirectional lane; 950m shared path; 360m bicycle lane (one-way)

**RECOMMENDATION 4: Implement Kwinana Train Station to Kwinana Town Centre secondary route in the implementation plan**

**RECOMMENDATION 5: Implement Kwinana Train Station to Rockingham Train Station secondary route in the implementation plan subject to Department of Transport funding (City of Kwinana section)**

## 9.5 Trails Network

In addition to the Kwinana loop trail (Figure 7.5) is the Tramway Reserve Trail running between Yangebup Lake in City of Cockburn to Karnup in City of Rockingham. Sections of the trail in Kwinana utilise the Kwinana Loop Trail alignment, while the portion north is important in its connectivity to Cockburn between the Spectacles and the proposed Mandogalup development. One of the key stakeholders in this trail is the South West Group.

**Figure 9.18: Tramway Reserve Trail**





## 9.6 Opportunities – Dampier Bunbury Gas Pipeline

Another opportunity presents itself with the Dampier to Bunbury Natural Gas Pipeline that runs through the City of Kwinana to the west. Further discussion should be had between the City and the Dampier Bunbury Pipeline company to see whether trails could be constructed, particularly in the northern section that runs from Honeywood estate and could connect to a shared path on the eastern side of the freeway in the long term (note: not identified in the Perth Transport Plan).

While no recommendations for the development of this route has been provided within this plan, it should be considered in subsequent cycling and walking plans, to not lose the opportunity if it becomes available, and the authority seeks to activate the area and gain positive community publicity.

Maps of the pipeline alignment are provided in Appendix D.

## 10. A Neighbourhood Cycling and Walking Strategy

10

### 10.1 Background

Kwinana developed in the 1950s has four neighbourhood zones, Medina, Calista, Parmelia and Orelia. Designed by Margaret Feilman, Perth's first female town planner<sup>6</sup>, Kwinana was designed as a garden city, utilising the landscape and topography to connect people within the neighbourhoods. The residential zones were separated from Kwinana's industrial complex by parkland and open spaces.

Kwinana was considered at the time to be a triumph in concept and design, and became Australia's prototype for the future under the new town model of development. Feilman intended to create an Australian town in an attractive landscape, reporting herself that, "a social life with its own organisations is already functioning and has given a very real community identity to the town, which is essentially a social experiment."

It is therefore highly appropriate that now Kwinana is adopting a neighbourhood community model, an innovative approach to carrying out the cycling and walking plan.

The development of Kwinana was built largely by the State Housing Commission which saw Kwinana as vital to the industrial development of the state of Western Australia. The government planned for a town for a population of 40,000<sup>7</sup>. Currently the population is 40,300 according to official ABS data for 2016 (<http://profile.id.com.au/kwinana/population-estimate>). It is therefore at a pivotal time where Kwinana is moving beyond where its early planners envisaged in terms of its size and scope, with forecasts of 84,000 within 20 years predicted<sup>8</sup> (Appendix B).

Nearly 70 years on, the City has developed with Leda, Wellard and Bertram being the prominent suburbs that have been built, with Wellard undergoing significant expansion. New developments are now also springing up over the eastern side of the freeway and northern part of the City.

With the recognised health concerns of the community, the fact physical exercise of 1-2km cycling and walking trips can address them, and the opportunity available due to the way Kwinana has been planned with community in mind, this neighbourhood plan has the potential to be the beginning for a long-term strategy of creating active, healthy, well connected Kwinana communities.

<sup>6</sup>Margaret Feilman (1921-2013), <https://web.archive.org/web/20131021091120/http://www.nationaltrust.org.au/wa/MargaretFeilman>

<sup>7</sup> Practicing Utopia: An Intellectual History of the New Town Movement (page 59) Rosemary Wakeman

<sup>8</sup> Figure 5, Hames Sharley Report (page 17)

## 10.2 The Neighbourhoods

This unique attribute of the City of Kwinana, along with the fact residents have serious health concerns where active travel can be a solution, has formed the basis of this Bike and Walk Plan.

The City is rare in metropolitan Perth. Hidden within the south west portion of the State's capital with clearly definable boundaries, there are limited access points, Kwinana is surrounded by bushland that contains a Loop Trail with historical significance. Significant undeveloped land forms a natural buffer zone from the Kwinana Industrial Area.

The following neighbourhood plans are focused on the destinations that bring the community together such as known popular parks and reserves, shopping centres, community centres, as well as local schools. The plan also seeks to connect the neighbourhoods to the Kwinana Loop Trail and help activate in the minds of the communities what they have available to them.

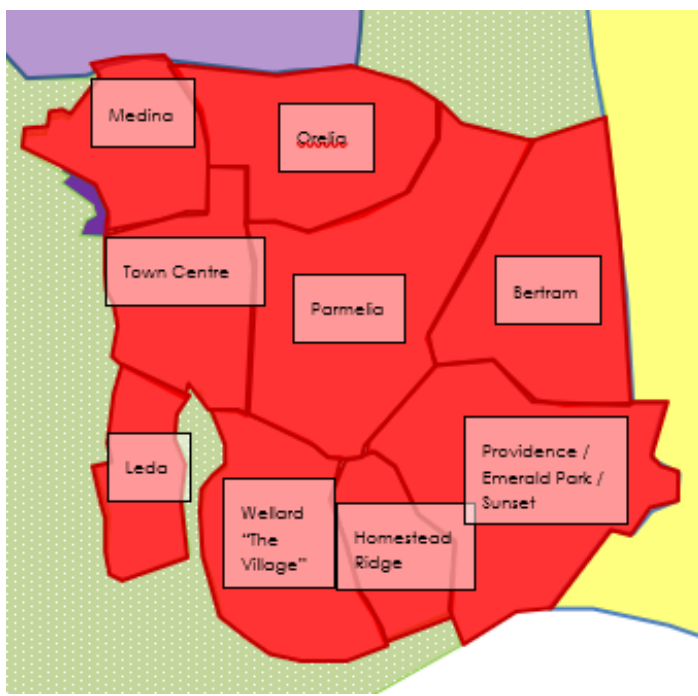
Rather than designing a bicycle and walking plan for a future population of 70,000 people<sup>9</sup>, where few will be expected to benefit from the limited projects that can be built within the next 15-20 years, GTA together with the City have taken the approach of designing individual plans for neighbourhoods that presently have between 1,500 to 2,000 people, that can be rolled out in priority order, and easily adapted to reflect changes on the ground over the coming instalments.

The plans have focused on retrofitting existing neighbourhoods, as well as provide strategic advice for the new developing areas (recognising the potential to adjust agreed structure plans is limited).

Figure 10.1 indicates the neighbourhoods of the townsite considered, with the neighbourhoods in context of the overall local government area.

**RECOMMENDATION 6:** Prepare a separate footpath and cycling plan for the industrial areas of the City

**Figure 10.1: Neighbourhoods**



<sup>9</sup> Kwinana population forecast 2031 (Community Infrastructure Plan)



## 11. Bertram (Pedestrian Improvement Plan)

### 11.1 Background

During the consultation with the local community as part of the CrowdSpot survey, it was discovered the number of walking hotspots in Bertram far surpassed all the other City of Kwinana neighbourhoods. The responses were found to be particularly around Bertram Primary School and Bertram Community Centre. The predominate concerns were the absence of footpaths and crossing points (missing kerb ramps etc.).

Although a newer suburb, Bertram is deficient in pedestrian network infrastructure, significantly hindering the safety of walking in the community, to the extent that it is proposed to be the first neighbourhood plan for implementation.

While it is a newer neighbourhood in the context of the original neighbourhoods of Kwinana, (being developed in the 1990s and 2000s), it requires investment to deal with serious oversights in the development that relate to the pedestrian network. The City of Kwinana has indicated it has focused on retrofitting pedestrian infrastructure to the older suburbs, based somewhat on the assumption that the newer development would have a safe and functional network.

Therefore, it was agreed with the City that the neighbourhood plan for Bertram would focus on a pedestrian improvement plan for initial implementation. Longer term links and projects that relate to cycling will be identified with limited progress proposed in the initial implementation phase.

The neighbourhood planning concept still applies, whereby the community meeting point is identified and linkages to both secondary and local destinations are proposed.

### 11.2 Secondary Destinations

- **Kwinana Train Station** – one of the 4 destinations considered strategic in the City of Kwinana is positioned on the border of Parmelia and Bertram.

The train station is 1.7km from Bertram Community Centre and therefore a local route is proposed to connect people cycling to these destinations for physical activity.

Darius Wells Library and Kwinana Adventure Park are 4.2km and 4.7km respectively from Bertram Community Centre (the centre of Bertram). As these are significantly beyond the 1-2km cycling distance which is the focus of the plan, no routes are proposed, except via the existing secondary route network (e.g. Bertram Road and Sulphur Road).

Wellard Town Centre is 4km from Bertram Community Centre, beyond the 1-2km focus of the plan. A secondary route is proposed on Bertram Road that forms part of the secondary route to Wellard Train Station which will ultimately be superseded by the Primary Route from Kwinana Train Station to Wellard Train Station on the rail reserve. Connections to secondary routes are proposed in 11.5.4.

## 11.3 Local Destinations

- **Bertram Community Centre** -- the community meeting point for Bertram and starting points for which much of routes will connect to.
- **Bertram Primary School** – potential for students to cycle and walk to school who live in Bertram (specific focus of 400m catchment).
- **Kings College** – potential for students to cycle and walk to school, who live in southern part of Bertram (recognising Bertram Road is a barrier).

There are 24 parks, reserves and public open spaces in Bertram with opportunity to link them. The immediate focus for the Bertram Neighbourhood Plan is on pedestrian improvements to address the deficiencies in Bertram, and the connections to the three local destinations mentioned above. Therefore, links to parks and reserves to encourage physical activity is proposed to be considered as a separate exercise or within the next bicycle plan. The connections between parks and reserves in Bertram must not be overlooked in the next cycling and walking neighbourhood plan for Bertram (2023 and beyond).

## 11.4 Bertram Pedestrian Improvement Plan

Based on the local connections, school catchment connections and secondary route connections prescribed, the Bertram Pedestrian Improvement Plan includes the projects in Table 11.1 focused on:

- Footpath improvements to Bertram Primary School and Bertram Community Centre.
- General improvements to kerb ramps to address crossing point deficiencies.

**Table 11.1: Bertram implementation plan (pedestrian improvement)**

Priority	Project	Destinations
K1	Tranby Way (footpath on both sides)	Bertram Primary School
B1	Trusty Way (crossing at Price Parkway)	Bertram Primary School
B2	Sulphur Road (extend footpath on south side from station entrance to existing shared path over bridge) <sup>10</sup>	Kwinana Train Station
B4	Johnson Road crossing (Ascot Parkway north)	Bertram Community Centre Bertram Shopping Centre
B5	Johnson Road crossing (Ascot Parkway south)	
B6	Johnson Road crossing (Whiteman Crescent)	
B7	Chieftain Street footpath (Moombaki to Parkfield) (south side)	Bertram Primary School Kings College
B8	Eliza Street footpath	Bertram Primary School
B9	Unicorn Street footpath	Bertram Primary School
B10	Yelka Street footpath	Bertram Primary School
B11	Chipperton Road footpath (Moombaki to Parkfield)	Kings College
B12	Orient Way footpath (Parkfield to Westmoreland) – include crossing of Parkfield	Kings College
B13	Parkfield Boulevard crossing (install kerb ramp at east side of Ganges)	Bertram Community Centre
B14	Moombaki Avenue crossing (redirect crossing of Champion Drive terminating in roundabout)	Bertram Primary School
B15	Trusty Way (path on west side through car park) * liaise with Primary School about location and crossing points of car park entry / exit	Bertram Primary School

<sup>10</sup> Although the project is in Parmelia this project benefits the Bertram community rather than Parmelia community due to its location east of the train station

Priority	Project	Destinations
B16	Johnson Road (path on one side from Sulphur Road to Thomas Road)	
B17	Daniels Place (install kerb ramp near Greenham Way to connect to Bertram Road shared path)	Secondary route
B18	Daniels Place (install kerb ramp at cul-de-sac to connect to Bertram Road shared path)	Secondary route
B19	Lotus Court (provide footpath connection from cul-de-sac to existing path for a more direct link to Bertram Road shared path)	Secondary route
B20	McKenzie Corner (install kerb ramp at cul-de-sac to Bertram Road's shared path)	Secondary route
B21	McKenzie Corner (install kerb ramp at 90-degree bend to Bertram Road's shared path)	Secondary route
B22	Greenham Way (install kerb ramp to Bertram Road's shared path just west of path intersection)	Secondary route
B23	John Forrest Circuit west (install kerb ramp and small path connection to Bertram Road's shared path)	Secondary route
B24	Path on Daintree Loop (north of drainage channel) to connect to Principal Shared Path	Kwinana Freeway PSP
B25	Path on Daintree Loop (south of drainage channel) to connect to Principal Shared Path	Kwinana Freeway PSP
B26	Millbrook Avenue crossing (path connection and kerb ramp at Camborne App)	Moombaki Park / POS

A significant number of maintenance issues were raised in the CrowdSpot survey and have been tabled for addressing the implementation plan (Table 11.2).

**Table 11.2: Bertram implementation plan (maintenance program)**

Location	Implementation
Bertram Road	Overgrown vegetation obstructing view to cross Parkfield Boulevard
Centennial Avenue	Broken pole edges hazard to children
Johnson Road (Sulphur Road to Brixton Gate)	Broken glass on path
Bertram Medical Centre	Damaged residential bin in adjacent vacant land

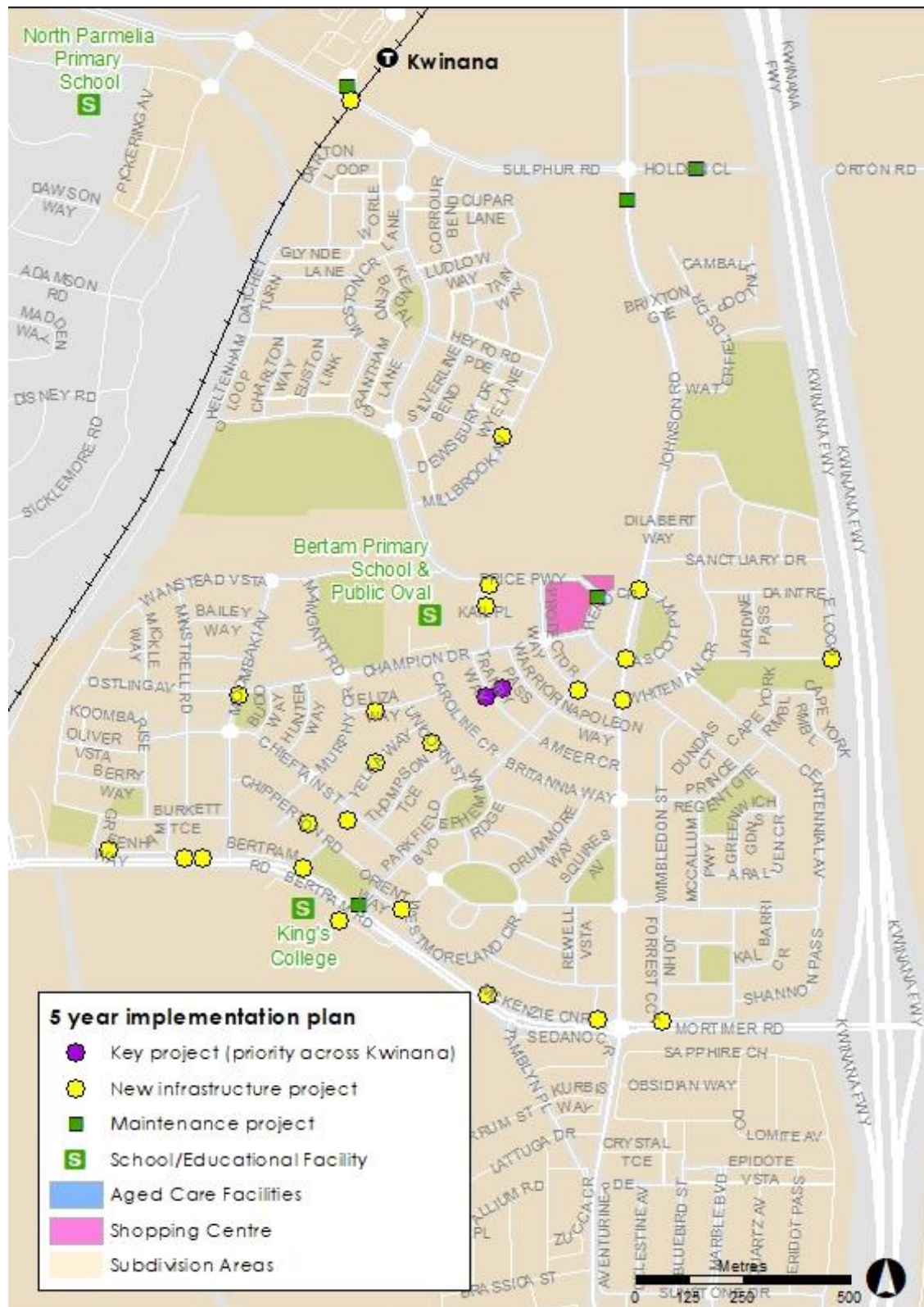
Other issues were raised in the CrowdSpot survey and have been tabled for addressing the implementation plan (Table 11.3).

**Table 11.3: Other issues for consideration in Bertram**

Location	Issue
Moombaki Avenue roundabout	Speed of cars through roundabout dangerous for kids walking home from Bertram Primary School
Bertram Road / Johnson Road	Difficult crossing for pedestrians
Shannon Pass / Centennial Avenue	Dangerous intersection without give way sign
Ascot Parkway	Poor lighting
Everglades Park	Dog business (requires dog bags)
Trusty Way	Cars parking on footpath (consider bollards liaise with school)
Price Parkway / Hero Crescent	Cars parking on footpath (consider bollards liaise with school)



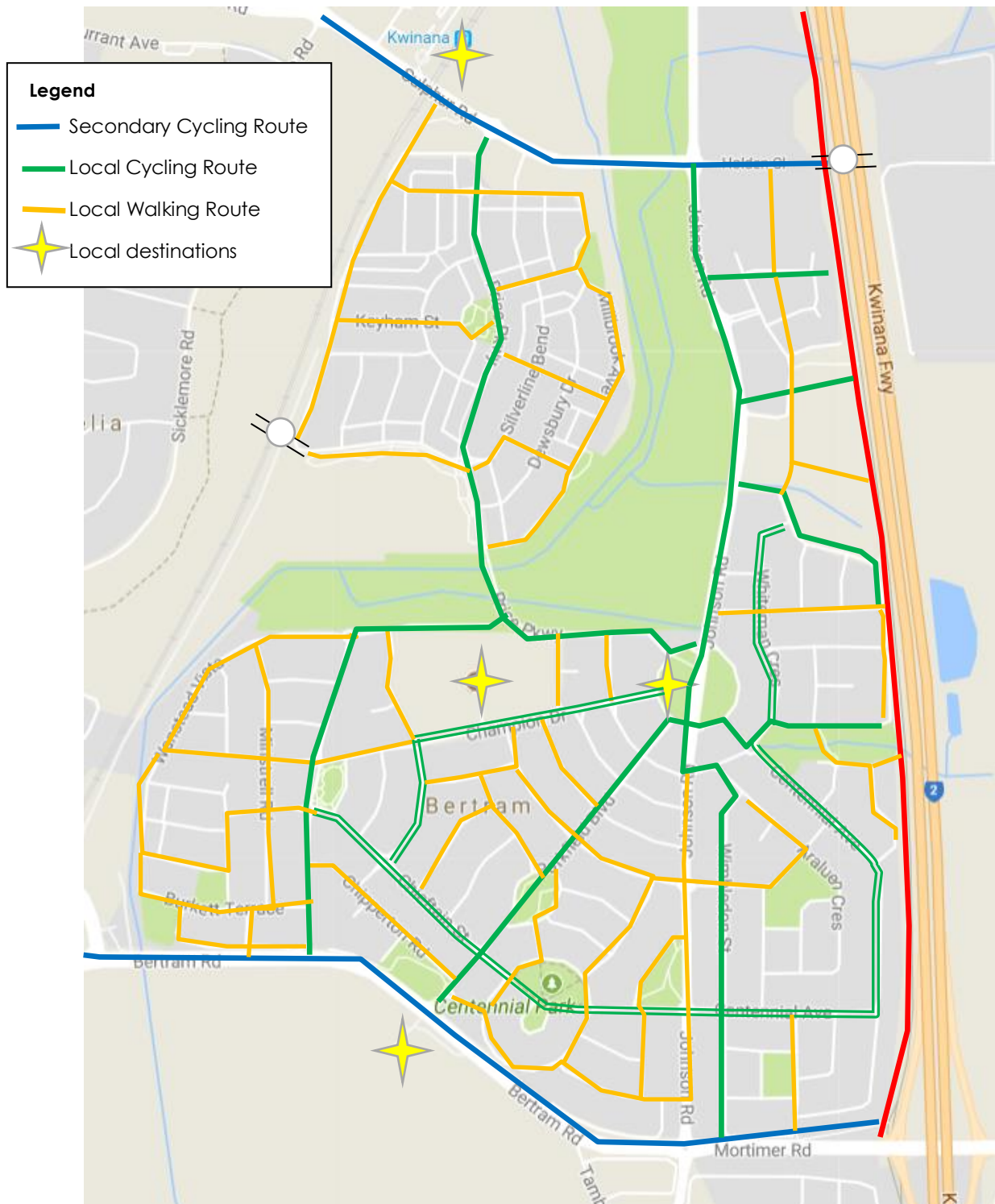
Figure 11.1: Bertram implementation plan



## 11.5 Long Term Neighbourhood Network Plan

Although the focus of the implementation is the pedestrian improvement plan, the neighbourhood plan is proposed for refinement in the 2023 cycling and walking plan. The long-term neighbourhood network is proposed in Figure 11.2.

**Figure 11.2: Bertram long term implementation plan**



The long-term network for cycling in Bertram is focused on the secondary route from Kwinana Town Centre to Kwinana Train Station which runs to the north of Bertram. The links north-south between Bertram and Holden Close / Sulphur Road are important long-term, however will not be developed in the implementation plan due to the focus on pedestrian improvement as prescribed previously. Future subdivisional stages of Bertram need to ensure north-south linkages, as well as east-west connections to the primary route on the Kwinana Freeway (refer to neighbourhood plan in Figure 11.6).

The Bertram Pedestrian Improvement Plan focuses on immediate projects to address serious safety deficiencies (Section 11.4). However, a long-term network is proposed focussing on the two schools: Bertram Primary School and Kings College. The following routes are the focus of the long-term network with some of the projects falling within the implementation plan.

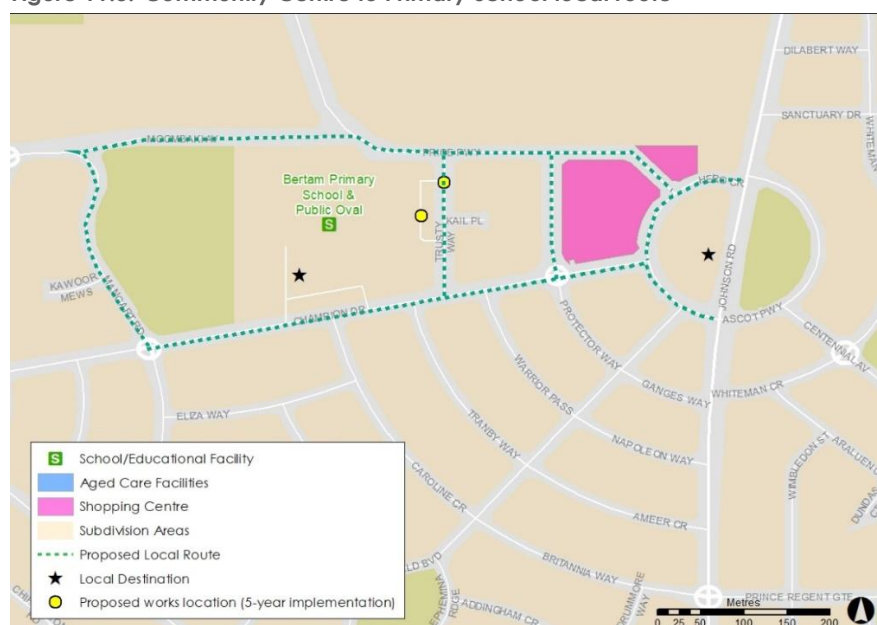
- Bertram Community Centre to Bertram Primary School
- Bertram Community Centre to Kwinana Train Station
- Safe Connections to Bertram Primary School
- Safe Connections to Kings College
- Champion Drive Safe Active Street

### 11.5.1 Bertram Community Centre to Bertram Primary School

The following projects are proposed:

- Champion Drive – footpath network and 30km/hr safe active street to complement other boulevards proposed in Section 11.5.5).
- Trusty Way – requires footpath and crossing (proposed in implementation plan) – potential for 30km/hr safe active street.
- Price Parkway – footpath network and cycle lanes (part of long-term cycling route from Bertram Town Centre to Kwinana Train Station).
- Protector Way and Hero Crescent – footpath network and potential for 30km/hr safe active streets.

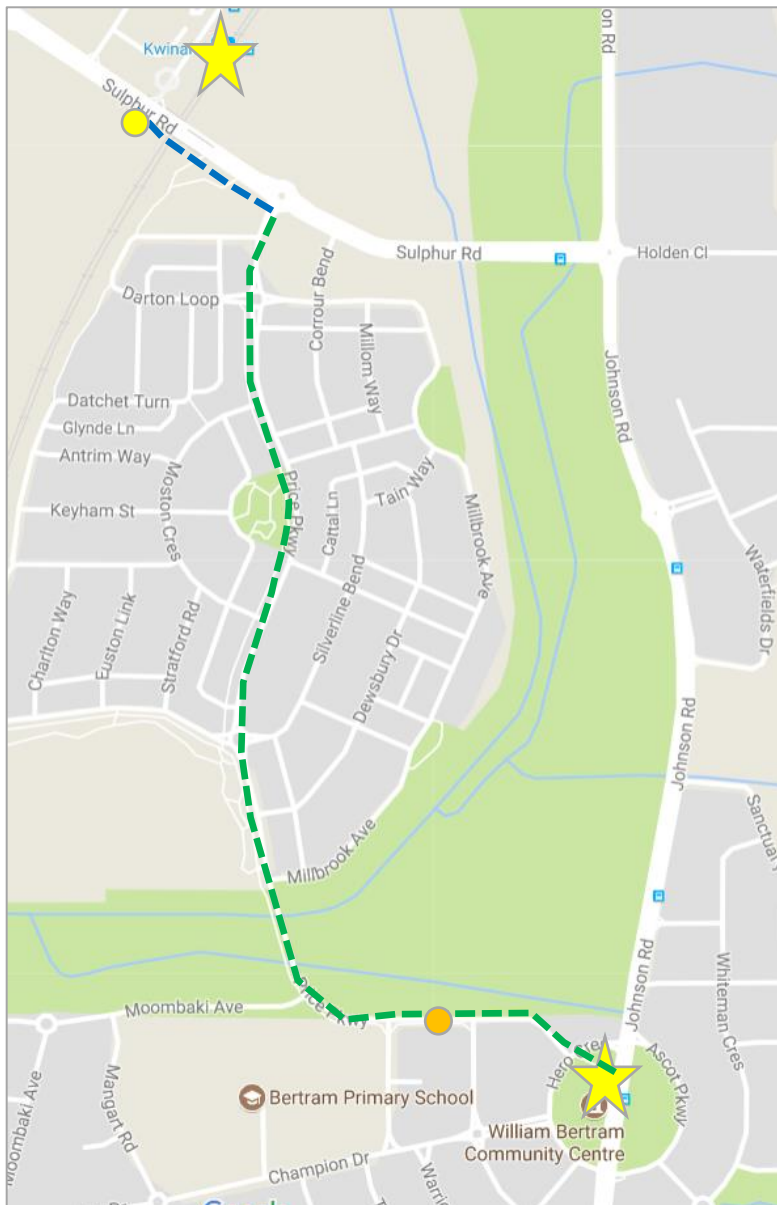
**Figure 11.3: Community Centre to Primary School local route**





## 11.5.2 Bertram Community Centre to Kwinana Train Station

Figure 11.4: Bertram to Kwinana Train Station local route



The following projects are proposed:

- Sulphur Road (secondary route) – cycle lanes and path on both sides, deficient on south side west of rail line, requires additional footpath between bridge over rail line and the bus access including the crossing point of Sulphur.
- Price Parkway – red asphalt cycle lanes, becomes part of local route between Bertram Primary School and Community Centre and deficient of cycle lanes at this location, to be extended as a long-term priority.

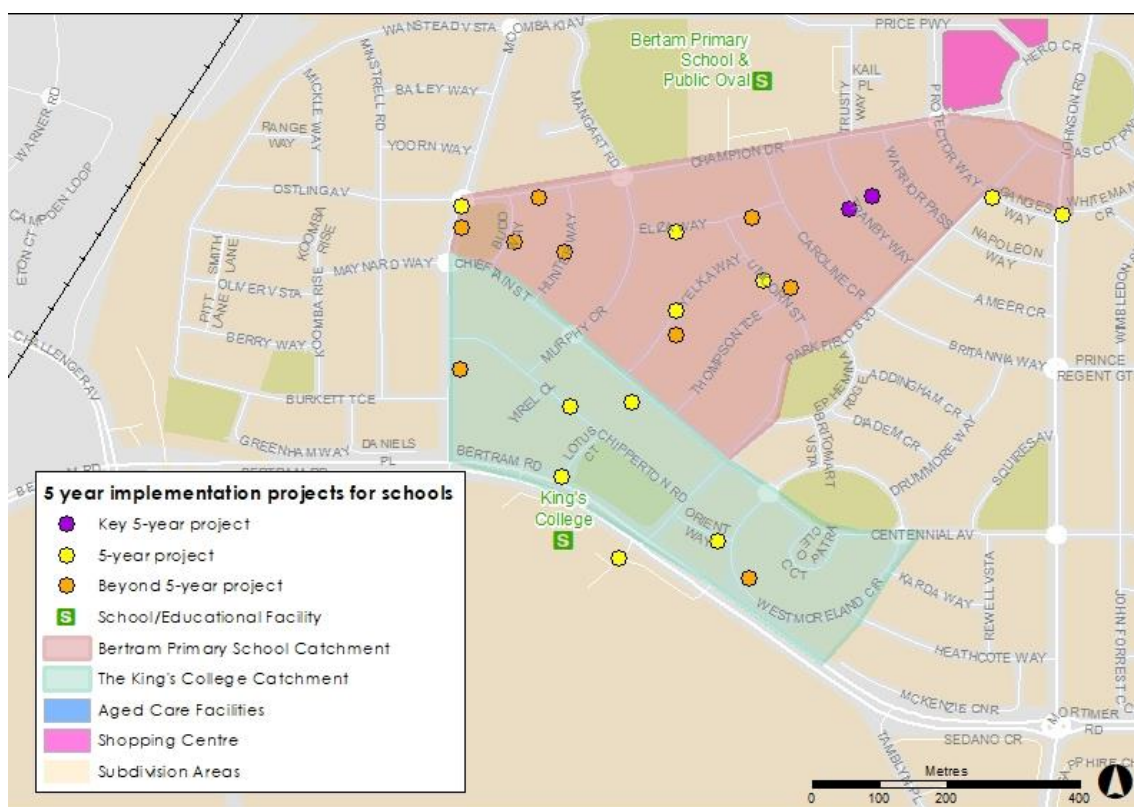
## 11.5.3 Safe Routes to Schools

The policy for the City of Kwinana is to have a footpath on both sides of roads, and long term this is the outcome for Bertram. However, in the short term, the focus is to ensure streets have a footpath on at least one side of every road within 400m of Bertram Primary School and Kings

College. This catchment forms a bandwidth between Champion Drive and Parkfield Boulevard, and south of Centennial Avenue. Locations that came up in the CrowdSpot survey and were confirmed through desktop observation and site saddle survey have become the priority of the implementation plan. Although Kings College is positioned outside the Bertram boundary, its 400m catchment is within Bertram, and has therefore been studied for identified projects in the Bertram neighbourhood.

Tranby Way is proposed to have a footpath on both sides, constructed immediately due to its proximity to Bertram Primary School and observations of cars parking on both sides of Tranby Way to drop children to school. As this project was the number one response across the local government in CrowdSpot, it has been moved to the key project section of the report (project K1 in Table 1.5). The remaining projects are identified in the improvement plan.

**Figure 11.5: Catchment and implementation projects for schools (Bertram)**



#### 11.5.4 Connections to Secondary Routes and Kwinana Freeway PSP

One of the important aspects of a pedestrian plan is the connectivity to the network of secondary (blue) and primary (red) routes, which includes the Kwinana Freeway PSP between Perth and South Yunderup. The connections were analysed, and shortcomings addressed in the implementation plan, with some to be included in future subdivisional development, or in the long term at the City's expense. Locations are shown in Figure 11.6 on the following page.

- **Sulphur Road / Holden Close** – Price Parkway connection is considered adequate and part of the local route network (Section 11.5.2); Johnson Road connection is to be connected with developer contribution; new north-south connection to Holden Close to be developed as part of future subdivision.
- **Kwinana Freeway** – Holden Close adequate (part of secondary route); Sanctuary Drive adequate (part of local route); Mortimer Road adequate; new east-west connections

between Holden and Sanctuary to be developed as part of future subdivision; two additional connections proposed in implementation at Daintree Street Park on the north and south of the drainage channel; another connection at Cape York Ramble is proposed (longer-term) and requires removing a panel of noise well, to be done through consultation with local community; a connection from Shannon Pass is not possible due to house construction without pedestrian access to the freeway path.

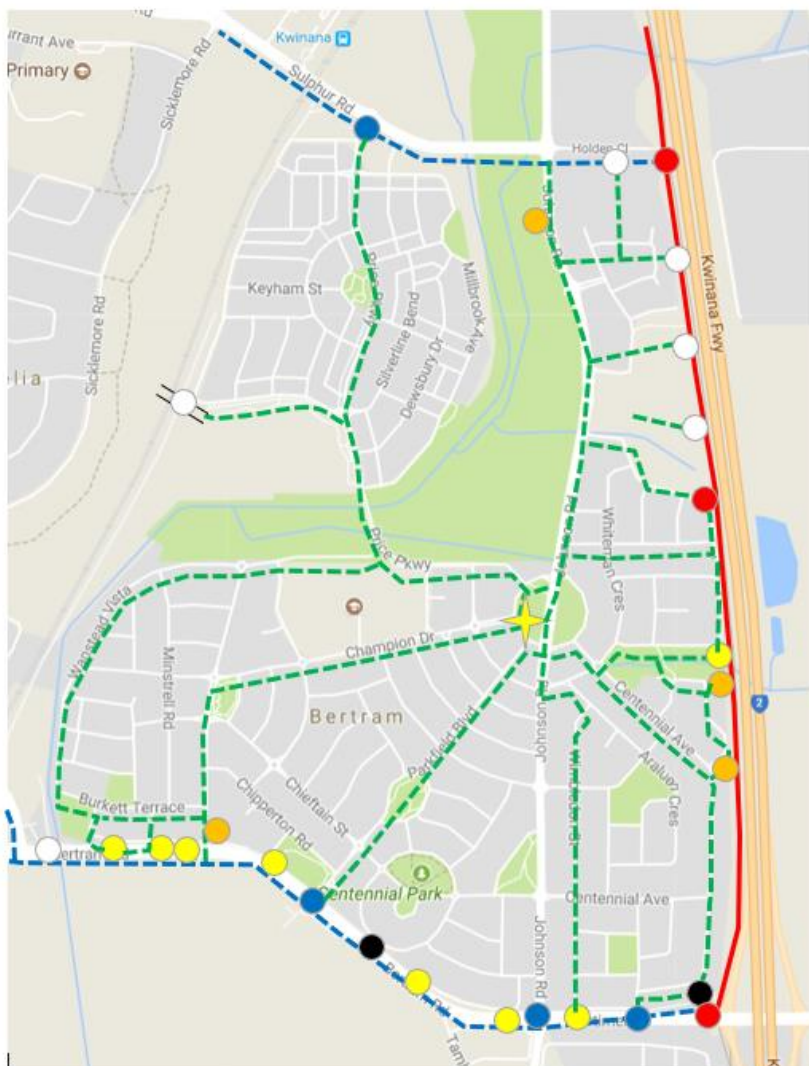
- **Bertram Road / Mortimer Road** – John Forrest Circuit east, Johnson Road and Parkfield Boulevard are adequate; John Forrest Circuit west, McKenzie Corner east and McKenzie Corner west, Lotus Court, Daniels Place, Greenham Way east and Greenham Way west all require connections and proposed in the implementation plan; direct access is not feasible from Westmoreland Circuit without major earthworks and is not proposed in this plan (should future demand require it City of Kwinana should consider in subsequent neighbourhood plans).
- Bertram Road and its extension into Mortimer Road is the only secondary route to be considered for local connections in Bertram area.

**Table 11.4: Local route pedestrian connections to secondary routes**

Road (Section)	Implementation	Long-Term
Bertram Road (Kwinana Town Centre to Mundijong)	Kerb ramp on McKenzie Corner (at 90-degree bend) Kerb ramp on McKenzie Corner (at cul-de-sac) Path connection from Lotus Court to Chipperton Park Kerb ramp on Daniels Place (at cul-de-sac) Kerb ramp on Daniels Place (near Greenham intersection to access bus stop) Kerb ramp on Greenham Way (just west of Bertram Rd shared path)	New shared path on east side of Moombaki Avenue (Chieftain St to Bertram Rd)
Mortimer Road (Kwinana Town Centre to Mundijong)	Path connection from John Forrest Circuit (western side as extension of Wimbledon street)	
Sulphur Road (Kwinana Train Station to Byford)	-	New shared path on west side of Johnson Road
Holden Close (Kwinana Train Station to Byford)	-	Developer to construct north-south route into Holden Close
Kwinana Freeway (Holden Place to Sanctuary Drive)	-	Developer to construct 3x east-west routes into Kwinana Freeway
Kwinana Freeway (Sanctuary Drive to Mortimer Road)	Path and connection north of drainage channel in Daintree Street Park	Path and connection south of drainage channel in Daintree Street Park New shared path and connection including removal of noise wall section to suite (consultation required)



Figure 11.6: Bertram connections to secondary routes and PSP



### 11.5.5 Safe Active Streets

A Proposed Safe Active Streets network to be explored in detail include Champion Drive, Chieftain Street, Centennial Avenue and Whiteman Crescent with Trusty Way, Protector Way and Hero Crescent also potential locations. DoT currently have funding for the design and construction of Safe Active Streets. Within the implementation program, Champion Drive is noted as a project to develop further.

## 11.6 End-of-Trip and Mid-Trip Facilities

Bicycle parking within Bertram was not raised as a deficiency and therefore no proposals have been made for this neighbourhood but should be re-evaluated in subsequent cycling and walking plans, focused on the local shopping centre and community centre.

## 12. Medina

### 12.1 Background

Medina, the first of the Kwinana suburbs developed, was constructed by the then State Housing Commission to meet the housing needs of the newly established Kwinana industrial area in the 1950s. Its streets were named after passengers and crew of The Medina. Medina was one of the first estates built according to the British New Town Model, in Australia.

Through consultation with City of Kwinana community officers, it was discovered Medina is an environmentally conscious community, creating an opportunity to develop a progressive neighbourhood plan to serve as a demonstration for other neighbourhoods (see 12.7).

### 12.2 Secondary Destinations

There are no secondary destinations in Medina itself, however, Kwinana Adventure Park is situated within 1-2km radius of Medina, meaning a large portion of the Medina community is within walking and cycling distance to take their families to this recreational destination. Darius Wells Library and Resource Centre, the other secondary destinations within the City of Kwinana Town Centre, is also within 1-2km of most of the Medina community, and therefore a priority to develop a footpath and cycling network. It is considered a priority within the implementation timetable to connect the Medina community to Kwinana Adventure Park and Darius Wells. Gilmore College and South Metropolitan TAFE are also within 1-2km of a significant portion of Medina and are also needed to be considered in the Medina neighbourhood plan. Way finding signage to these destinations should be developed as part of the neighbourhood plan.

### 12.3 Local Destinations

There most important destinations for the neighbourhood of Medina are understood to be:

- **Harry Mcguigan Park** – central meeting point for Medina community and alternative to adventure park in Calista.
- **Medina Primary School** – central school for Medina community.
- **Medina Shopping Centre** – central meeting point for Medina community.
- **Medina Oval** – home of “The Mighty Knights” football club Medina.
- **Thomas Oval** – well utilised sporting ground including netball courts recently refurbished.

These destinations are proposed to be connected by a demonstration east-west local cycle route to be developed in the implementation plan that also connects to: Thomas Kelly Pavilion, Medina Hall, Southern Districts BMX Raceway, and Kwinana Loop Trail.

### 12.4 Developing a Long-Term Network – Cycling

The long-term network for cycling in Medina is focused on a secondary route from Kwinana City Centre to Coogee which runs to the north and east of Medina. This route is considered a lower priority for implementation and will be considered more in subsequent cycling and walking plans, to focus on the Kwinana Town Centre to Kwinana Train Station route.

The Medina long-term cycling network will be focused on safe active streets (see 12.4.1) in the City Centre and western side of the neighbourhood.

### 12.4.1 Safe Active Streets

Proposed safe active streets identified within this plan are along Bingfield Road West, Tucker Street and Beacham Crescent. Within the neighbourhood centre itself, Hoyle Road, Harley Way, Pace Road (west of Harley), Nannup Street, Wheelock Drive and Medina (Pace to Wheelock) are also potential locations.

These are detailed as a project for concept development in the implementation plan.

## 12.5 End-of-Trip and Mid-Trip Facilities

Bicycle parking within Medina was raised as being deficient in the shopping centre, specifically around IGA and directly in front of The Green Barista Cafe. Existing Cora rack in the side alley appears to be underutilised and could potentially be relocated to IGA and replaced with U-rails that can be expanded as demand requires. Liaison with the shopping centre is required to determine position, to ensure they are convenient within 10m of the entrance doors if practical. Harry Mcguigan Park also requires additional bicycle parking, with water fountains to complement it.

These facilities are important to ensure cycling journeys to the neighbourhood connectors are convenient and not replaced by car trips. Further consultation should be undertaken within the community to determine bicycle parking provision and capacity to provide future growth in the numbers of people cycling.

## 12.6 Developing a Long-Term Network – Pedestrians

It is the long-term objective to ensure footpaths with adequate crossing points exist on both sides of all streets to connect homes to local destinations.

While Bertram will be the recipient of funding for pedestrian facilities as part of its improvement plan (see Chapter 11), some key projects are proposed to enhance pedestrians and at the same time benefit people cycling distances of 1-2km for local trips.

## 12.7 Neighbourhood Plan

Medina is an environmentally conscious community with a desire to “green” the neighbourhood with landscaping, and therefore have potential to be a pioneering community to encourage walking and cycling. Some of the priorities for the neighbourhood plan are as follows:

- Development of a local route from Thomas Oval to Medina Oval spanning east-west across Medina and recommended as a demonstration project in the implementation plan.
- There is potential to develop Harry Mcguigan Park into a mini Kwinana Adventure Park and to promote to residents within the City of Kwinana as an alternative for families than using the very popular park used by people outside the Kwinana area.
- Proximity to secondary destinations of Kwinana Adventure Park, Darius Wells Library and Resource Centre, Gilmore College and South Metropolitan TAFE, to the Medina neighbourhood.
- Utilise the laneway behind Medina Shopping Centre which has undergone a recent redevelopment.
- Promote Medina as a pioneer neighbourhood of its kind in Australia.
- Pace Road – as the main street, there is potential to pedestrian prioritise, creating a low speed 30km/hr street.



- Tucker Road has traffic calming and potential for a Safe Active Street / local bicycle boulevard to connect Thomas Road to Thomas Oval sporting facility as well as access to the Kwinana Loop Trail.
- Promote the access to Kwinana Loop Trail within Medina.

The long-term network plan for Medina is shown in Figure 12.1 below with demonstration east-west routes indicated in bold (see Figure 12.3).

**Figure 12.1: Medina neighbourhood plan**

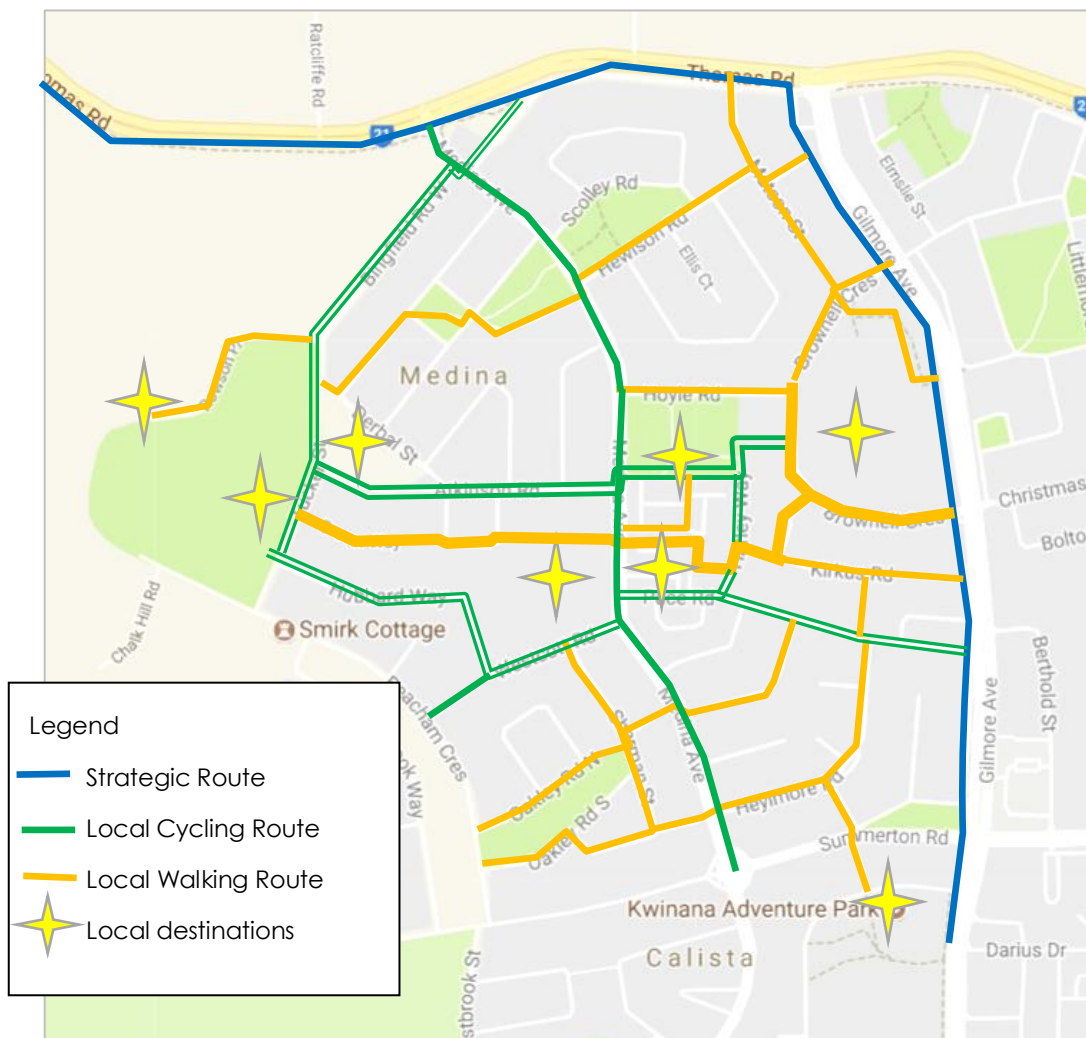
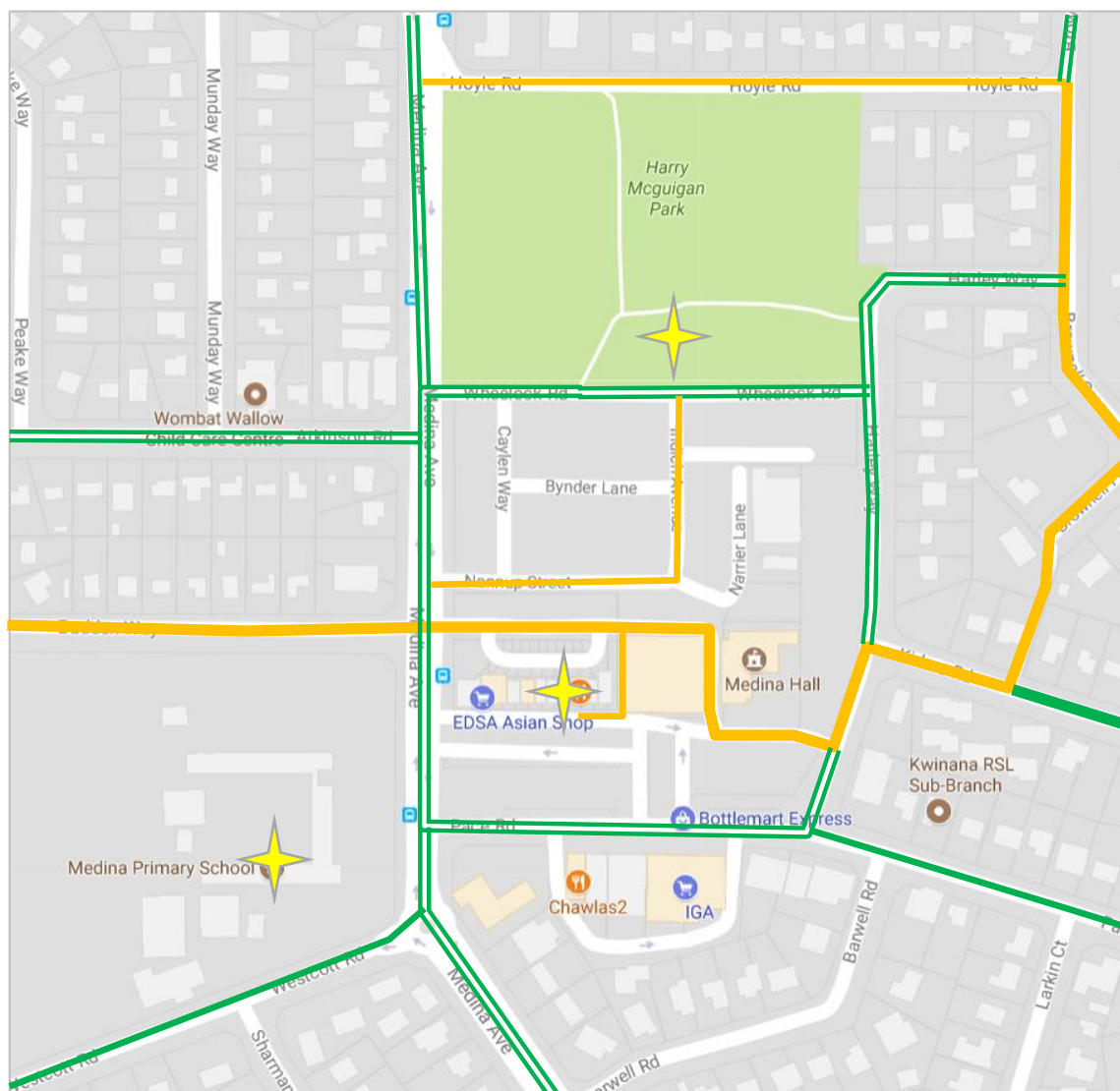


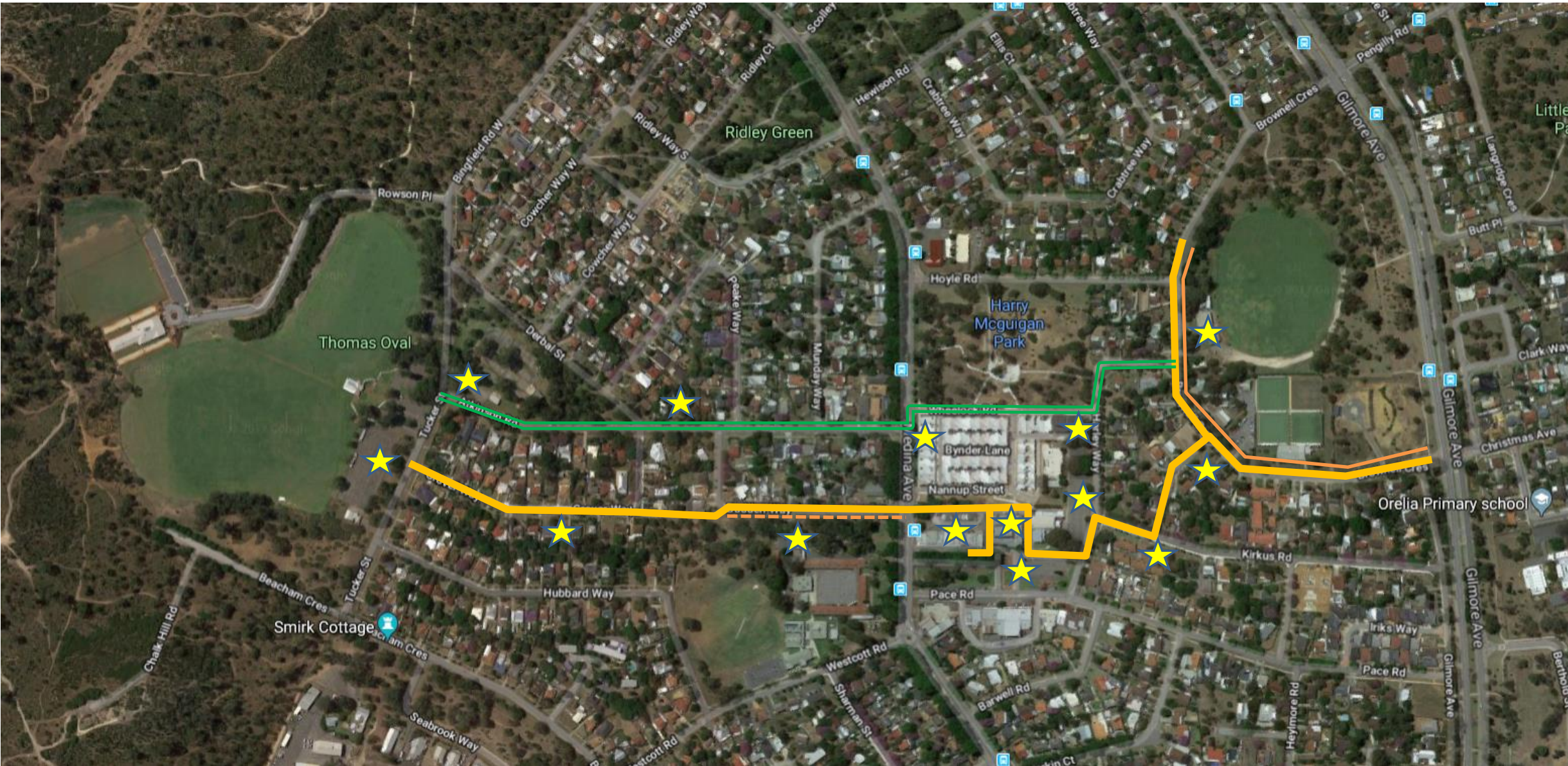
Figure 12.2: Medina neighbourhood plan (neighbourhood centre)



Demonstration east-west local routes are defined in the following page and includes wayfinding in addition to the footpath and safe active street proposals. Consultation is required with the local primary school and should also include discussion with the Medina progress association before implementation.



Figure 12.3: East-west local route (Thomas Oval to Medina Oval)



- ★ Wayfinding signage
- Safe Active Streets East West Route (Implementation Plan)
- Pedestrian East West Route (Implementation Plan)
- Footpath required
- - Footpath location (liaison with school required)



## 12.8 Medina Implementation Plan

**Figure 12.4: Medina implementation plan**

Priority	Project	Destinations
M1	Brownwell Crescent – 600m footpath (2m) on east side from car park to Gilmore Avenue (south)	Medina Oval
M2	Medina bicycle parking – relocate Cora racks in laneway to IGA entrance and replace with U-rails; add designed U-rails to Green Barista Café entrance with planter boxes in consultation with owner; add U-rail in front of bakery	Medina Shopping Centre
M3	Budden Way – 230m footpath (2m) on southern side from Grover Way to Medina Avenue (liaison with Medina school required with implications on street parking)	Medina Primary School Medina Shopping Centre
M4	Safe Active Streets (stage 1) – design and construction of 1km of treatments incl. 30km/h speeds on Atkinson Road, Wheelock Road, Harley Way (north of Wheelock)	Thomas Oval Medina Shopping Centre Medina Oval
M5	Safe Active Streets (stage 2) – design and construction of 1.6 km of treatments incl. 30km/h speeds on Bingfield Road W, Tucker Street, Hubbard Way, Westcott Road	Kwinana Loop Trail Thomas Oval Medina Shopping Centre
M6	Safe Active Street (stage 3) – design and construction of 900m of treatments incl. 30km/h on Pace (west of Harley), Harley Way, Kirkus Road	Medina Shopping Centre Medina Oval
M7	Design proposal for Medina Avenue – potential for boulevard cycling route to continue through centre of Medina and Calista, to be considered in comparison to a separate path facility raised at intersections or protected bicycle lanes (all through traffic to use Gilmore Avenue, noting Medina is a local bus route, with opportunity for innovative treatments at Summerton roundabout such as a raised pedestrian / cyclist crossings)	Medina Shopping Centre Medina Primary School
M8	Pace Road – pedestrian crossing on the main street of Medina (design project)	Medina Shopping Centre
M9	Walkability Enhancement Plan (Stage 2) – more detailed consultation and network analysis to determine deficiencies and improvements especially the standard of crossings, e.g. path condition, kerb ramps and tactile ground surface indicators	-
M10	Create neighbourhood wayfinding strategy in consultation with Medina Progress Association to local destinations such as Kwinana Loop Trail, Medina Primary School, Harry McGuigan Park, Medina Shopping Centre, Medina Oval, Kwinana Adventure Park, Darius Wells Library, Kwinana Marketplace	-
M11	Medina Avenue – repair footpath damaged by tree root (maintenance)	-
<b>Total 3.5km safe active streets; 830m footpath</b>		

## 13. Leda

### 13.1 Background

Leda was developed after the first 4 neighbourhoods of Medina, Calista, Parmelia and Orelia, in the 1970s. Leda is separated into two neighbourhoods by Gilmore Avenue; old Leda to the north and west and newer Leda to the south and east of the major avenue in Kwinana. Old Leda is closer connected to Calista, while new Leda is closer connected to Wellard. However, for the intent of this cycling and walking plan, the neighbourhoods have been combined as one.

Following the consultation with the community and relevant sections of the City, it was discovered the neighbourhood of Leda was particularly deficient in footpaths which created a lack of central community meeting points that other neighbourhoods had. Therefore, it was proposed to focus the neighbourhood plan on constructing footpaths on roads that connect to key parks in Leda.

Connections to parks and reserves serve as central meeting points for the community, as well as provide short cycle trips to encourage residents to be physically active, complimenting the objectives of this plan.

Despite Leda being a fragmented community in the way it was designed, the opportunity is presented because of the extensive pedestrian access ways between cul-de-sacs to overcome this fragmentation with connections to parks and reserves for walking and cycling.

Leda needed central meeting place(s) because of the closure of the IGA in the local shopping centre which has been replaced with a bottle shop. Parks are proposed to become the meeting points and detailed in section 13.3.

Because of the opportunity to address the connectivity concerns, the Leda neighbourhood plan is proposed to be implemented third, after Bertram and Medina.

### 13.2 Secondary Destinations

There are no secondary destinations in Leda, the nearest being Wellard Neighbourhood Centre and Kwinana City Centre. Both centres are connected to Leda through secondary routes. Gilmore Avenue is the secondary connection to Kwinana City Centre and is largely in place. The proposed secondary route between Wellard and Rockingham Stations is to become the connection to Wellard. The protected on-road route is proposed for design and implementation in the implementation plan (as the second most important priority route).

### 13.3 Local Destinations

There most important destinations for the neighbourhood of Leda for this plan are understood to be the following:

- **Riley Park** – a central meeting point for North Leda.
- **Rogan Park** – a central meeting point for South Leda.
- **Gabor Park** – a central meeting point for South Leda.
- **Sloan's Cottage Park** – a potential meeting point for North Leda (reduced catchment due to outer position of suburb).
- **Djilba Reserve** – a potential meeting point for Leda (despite outer position of suburb forms part of secondary connection to Wellard from Rockingham before the Primary Route on the rail line is constructed).
- **Leda Shopping Centre** – minor shopping centre with struggling businesses recent closure of IGA and reduced community connection.
- **Leda Primary School** – a lot of people walk from Leda to school.

### 13.4 Leda Neighbourhood Plan

- Focus on footpath improvements to Sloan's Cottage Park, Leda Shopping Centre, Riley Park and Rogan Park.
- Develop east-west permeability from Sloan's Reserve to Gilmore Avenue, and Gilmore Avenue to Djilba Reserve.
- Integrate communities around Riley Park and Rogan Park with footpaths to enhance the neighbourhood's sense of place.

Sloan's Cottage needs promotion around Kwinana as it's a hidden treasure that people don't know exists. The park next to Sloan's cottage while not central for community, could be promoted and become a point of connection.

English Retreat Park is not well utilised, with potential to improve its function as a central meeting point (beyond the term of this plan) including crossing of Gilmore into Henley Bushland to Wellard.

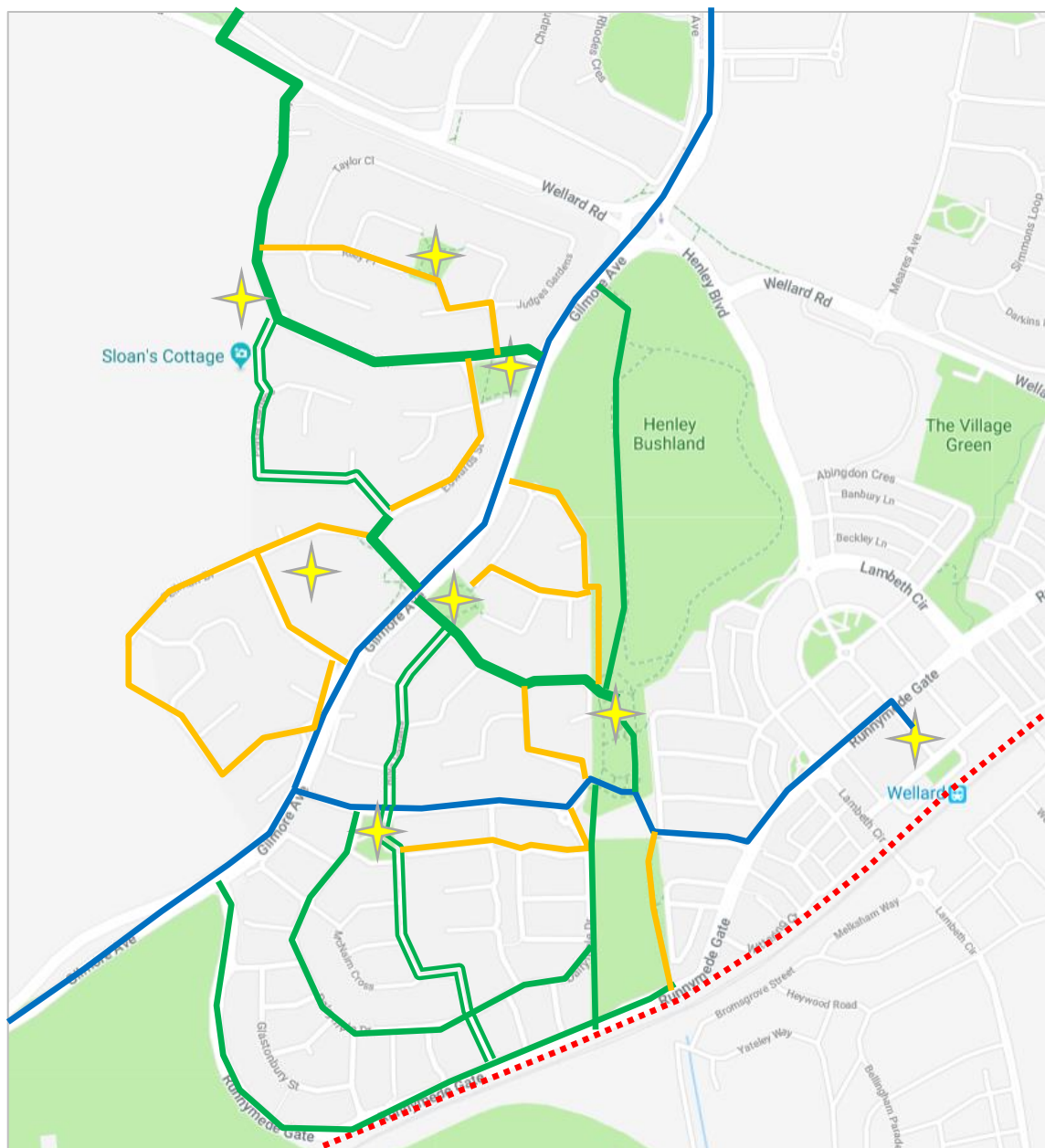
Kwinana Community Share and Imaging Kwinana groups teamed up to do a "Planning Day" for Leda, and the City of Kwinana should partner with these groups to enhance walking and cycling to promote the projects to be constructed in the implementation plan, as well as determine the longer-term network.

It should be noted the potential to connect Leda to Wellard Community Centre and to connect Leda to Medina Shopping Centre via Westbrook Street. These are not proposed in the implementation plan due to other priorities but are recommended to be considered in the longer-term.

None of the top CrowdSpot identified projects were in Leda, however. Djilba View was recommended as needing a footpath. The issue of poor lighting in Djilba Reserve was also raised as a concern. These have been included in the implementation plan for consideration.



Figure 13.1: Leda neighbourhood plan



- ..... Proposed Primary Route
- ..... Secondary Routes
- ..... Local cycling routes
- ..... Safe active streets
- ..... Local walking routes
- ..... Local destination

## 13.5 Leda Implementation Plan

**Table 13.1: Leda implementation plan**

Priority	Project
L1	Crossing of Edwards Street at Dixon Mews – 50m of footpath to connect path in English Retreat Park to path on west side of Edwards and create crossing points
L2	Edwards Street – 50m footpath from Feilman Drive to shopping centre entrance (on east side) – require suitable crossing to path on west side, or preferably continue to English Retreat park (350m total)
L3	Porter Gardens – 230m of footpath from existing path termination point to the pedestrian access way at Edwards Street (on south side)
L4	Riley Place – 280m of footpath from Sloan to Riley Park (on south side, liaise with residents to confirm)
L5	Dymond Place / Moretti Retreat / Shaw Mews – 220m of footpath from Riley Park to Sloan Drive (on east side Dymond, north side Moretti and west side Shaw) – liaise with residents to confirm sides
L6	Djilba View, Werloo Court and Bilya Gardens – 300m of footpath from Rogan Park to Djilba Reserve (on north side)
L7	Whitebread Way – 250m of footpath from Rogan Park to existing path (on west / south side)
L8	Proctor Gardens – 160m of footpath from Rogan Park to Whitebread Way (liaise with residents to determine the side)
L9	Bilya Gardens – 350m of footpath from Rogan Park to Dalrymple Drive (on west side, include crossings of all legs of Dalrymple roundabout to access Gabor Park)
L10	Whyatt Green / McNairn Cross / Kooden View / Fitzsimmonds Place – 400m of footpath from Gabor Park to Dalrymple Drive south (on east side)
L11	Yeovil Way – 70m of footpath from Dalrymple Drive south to Runnymede Gate
L12	Djilba View – 50m of footpath from Dalrymple Drive to Reserve footpath (on east side)
L13	Sloan Drive – 1km of footpath on east side and north side (Wellard Road to Gilmore Avenue)
L14	Robbins Retreat – 180m footpath on east side (Riley Place to Riley Park)
L15	Shaw Mews – 170m of footpath on east side (Riley Park to Moretti Retreat) – liaise with residents to confirm side and necessity of path
L16	Taylor Close – 400m of footpath on east and south side (Riley Place to pedestrian access way to Judges Gardens) – liaise with residents to confirm side and necessity of path
L17	Judges Gardens – 400m of footpath on south and west side (Shaw Mews to pedestrian access way to Taylor Close) – liaise with residents to confirm side and necessity of path
L18	Safe Active Streets – design and construction of 1.5km of treatments incl. 30km/h speeds on Porter Gardens, Bilya Gardens, McNairn Cross, Yeovil Way
L19	Henley Reserve – 1km hard surfacing of trail to create north-south shared path (2.5m) from Wellard Road to Runnymede Gate (sections in Djilba Reserve already footpath and no change recommended)
	<b>Total 4.6km of footpath; 1.5km safe active streets; 1km shared path</b>

## 14. Kwinana City Centre and Calista

### 14.1 Background

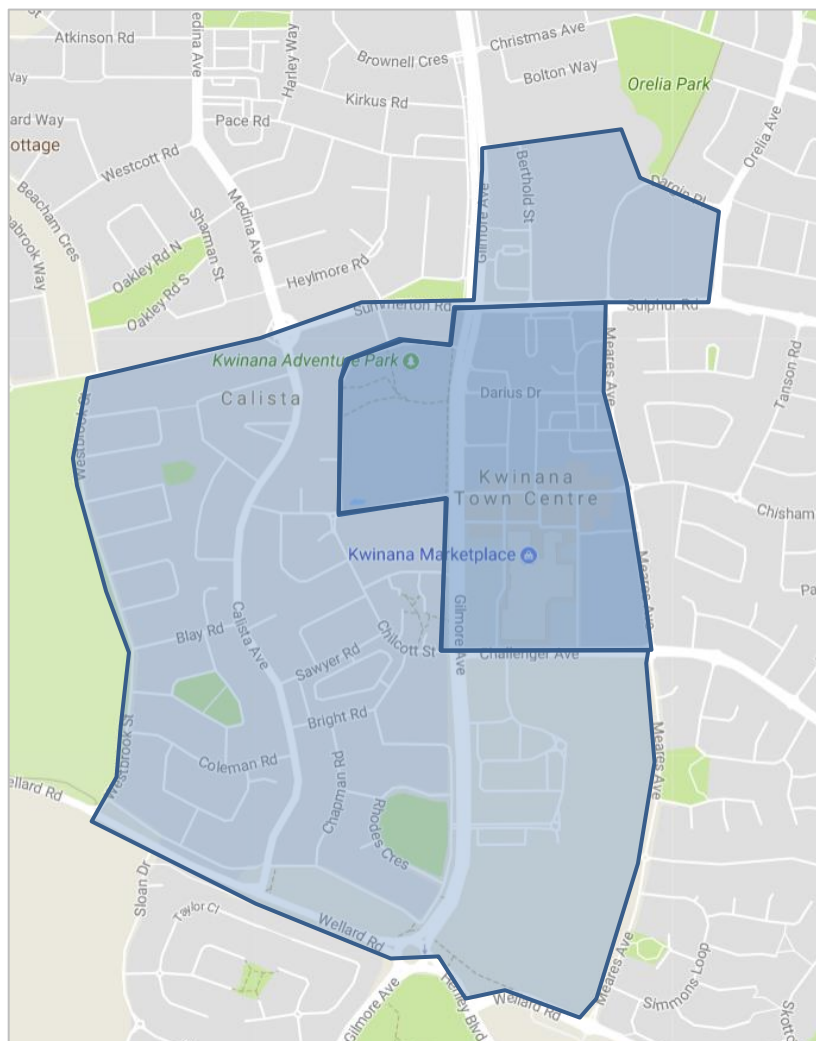
One of the most important aspects of the City of Kwinana is the City Centre, which for the purposes of this report runs between Gilmore Avenue and Meares Avenue, and from Wellard Road to Bolton Way (to incorporate Gilmore College).

Calista has been also included in the Kwinana City Centre neighbourhood area to connect the residential to the commercial and to include the profile destination of Kwinana Adventure Park into the Town Centre (and incorporate the crossing of Gilmore Avenue).

The City Centre originally formed part of Calista, which was one of the original four neighbourhoods developed in the 1950s to accommodate housing for the new Industrial area.

The implementation plan is focused on the central area shown in dark blue in Figure 14.1, between Challenger Avenue and Sulphur Road, and from Meares Avenue to Gilmore Avenue, and extending west to Walgreen Crescent to incorporate Kwinana Adventure Park.

**Figure 14.1: Kwinana City Centre and Calista study plan area**

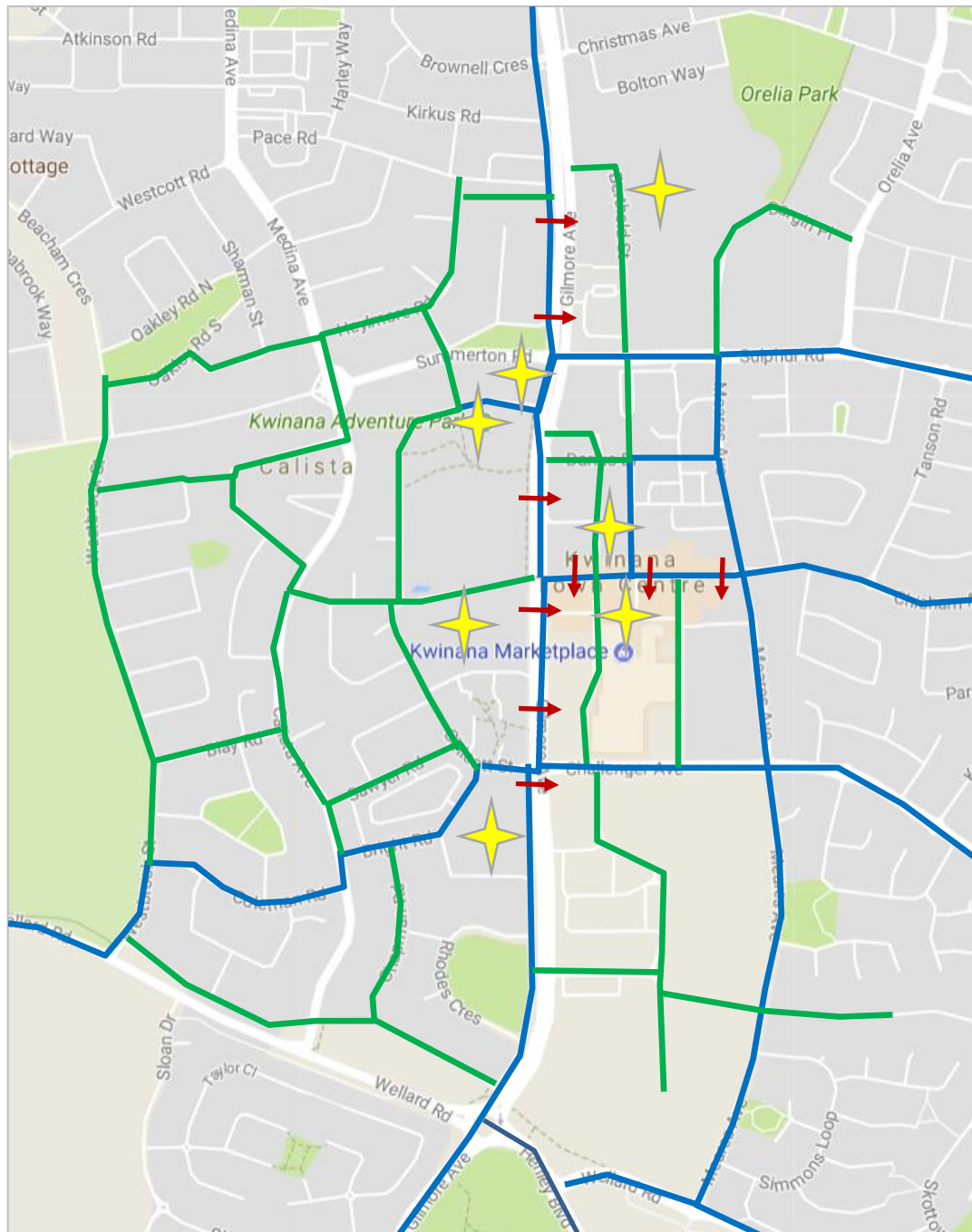




## 14.2 Neighbourhood Plan

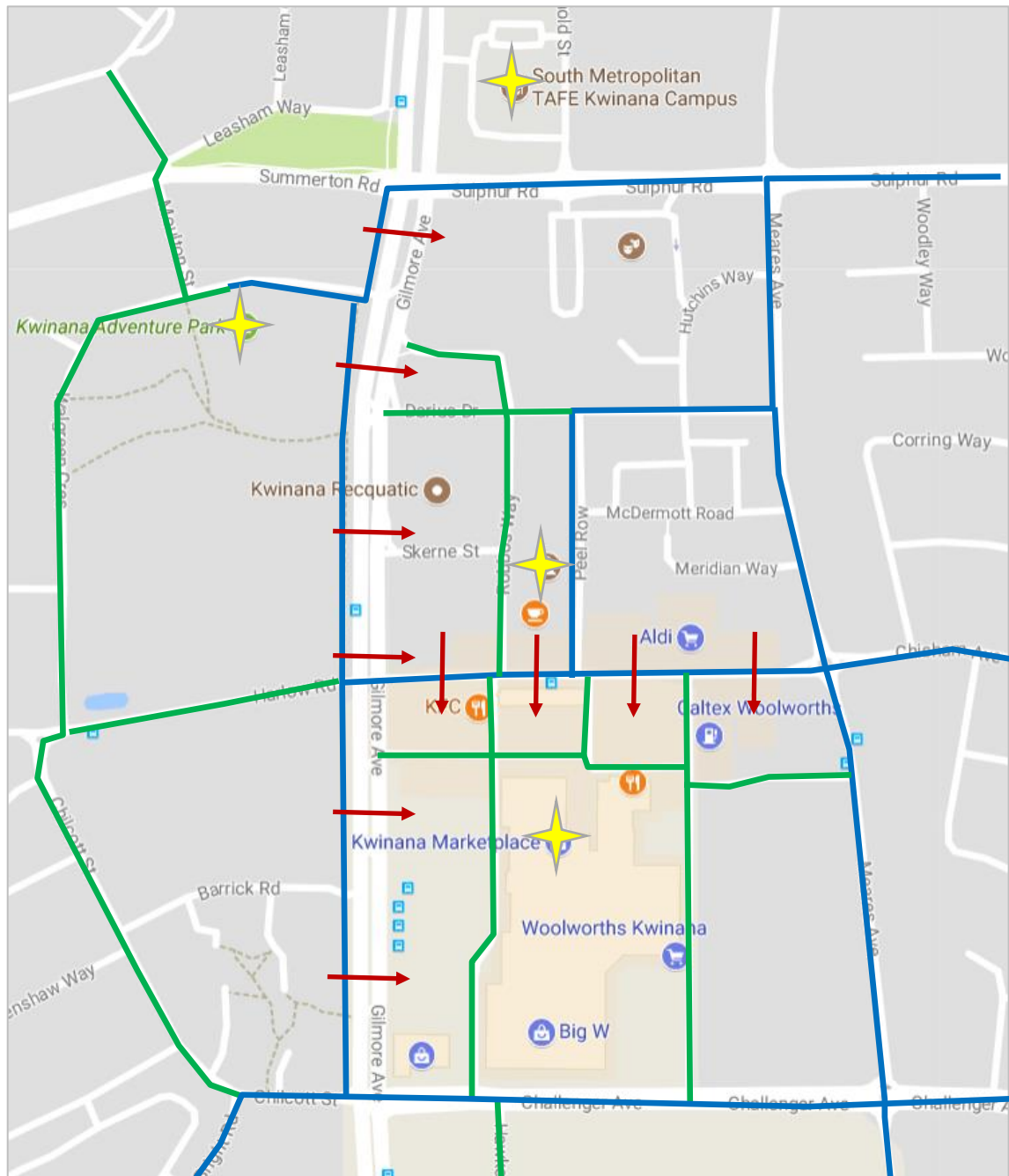
The long-term network plan for Kwinana City Centre including Calista is shown in Figure 14.2 and Figure 14.3 below.

**Figure 14.2: Kwinana City Centre neighbourhood plan**



→ Crossing studies

Figure 14.3: Kwinana City Centre neighbourhood plan (Central)



→ Crossing studies

The CrowdSpot survey highlighted the crossings of Chisham and Gilmore as the primary concerns, with other issues including:

- Robbos Way / Darius Drive – guard rail installed blocks crossing of both roads.
- Meares Ave / Chisham Ave roundabout – difficult crossing for pedestrians, blind spots reported and concern for students walking to Calista Primary or Gilmore College.

These projects are included in the implementation plan in Table 14.1. Options to close traffic through movement to make it a pedestrian mall and bus through-route should be explored.

**Table 14.1: Kwinana City Centre implementation plan**

Priority	Project	Destinations
KC1	Study of Chisham Avenue to improve pedestrian amenity through measures to reduce traffic volumes of unnecessary traffic (include roundabout at Meares Avenue for students accessing Gilmore College)	Darius Wells Library Kwinana Marketplace Gilmore College
KC2	Study of Gilmore Avenue crossing between Sulphur Road and Challenger Avenue for permeability to Adventure Park, Darius Wells Library, Kwinana Bus Station and Kwinana Marketplace	Kwinana Adventure Park Kwinana Bus Station Kwinana Marketplace
KC3	Consider removing guardrail at Robbos Way and Darius Drive to allow for crossings	Darius Wells Library



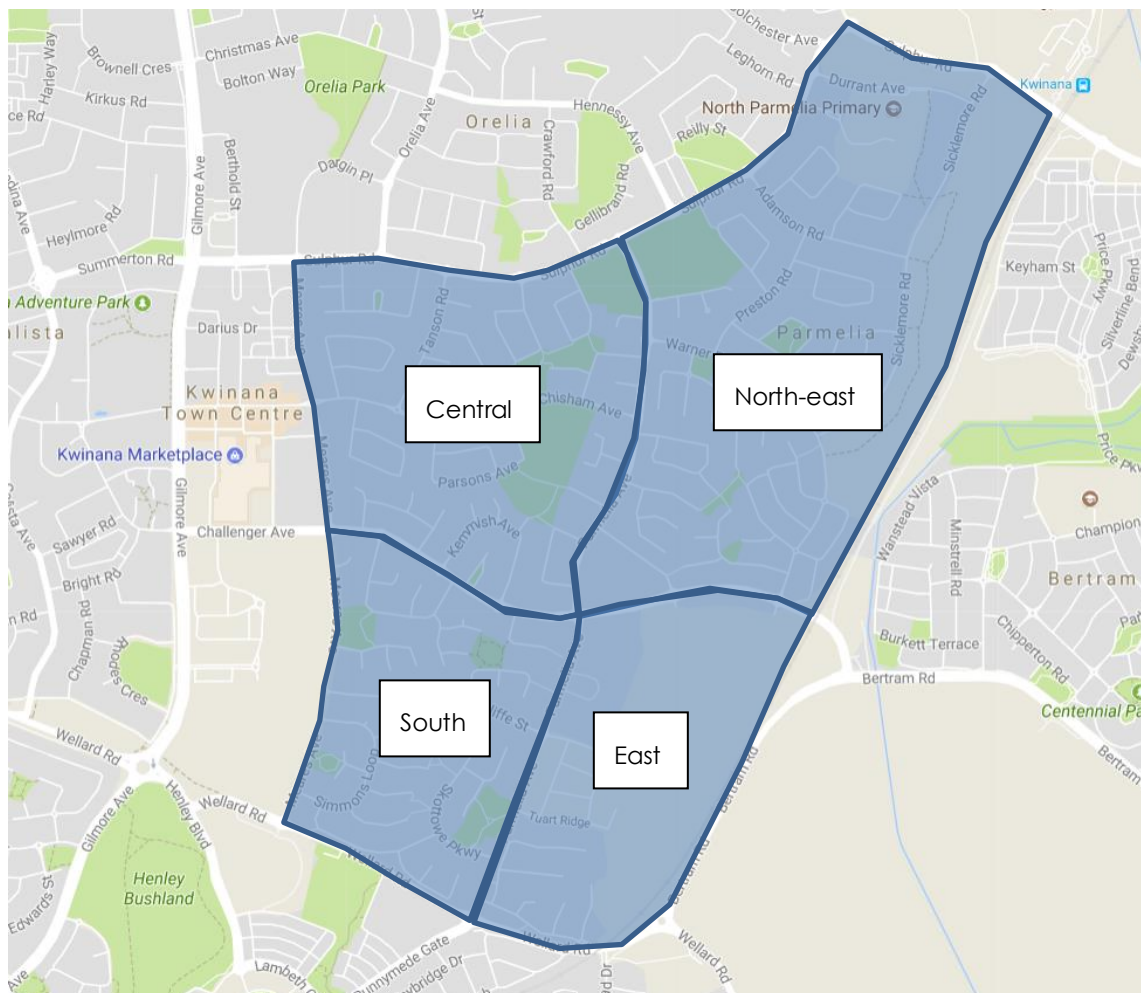
## 15. Parmelia

### 15.1 Background

One of the 4 original Kwinana suburbs, Parmelia, is named after the ship that transported the first civilian officials and settlers of the Swan River Colony to Western Australia in 1829, including Governor Stirling and his wife.

Given its proximity to Kwinana City Centre and Kwinana Train Station, Parmelia is an important location for the development of neighbourhood plans in the longer term, with significant potential for shifting travel modes from private car to walking and cycling. It is one of the larger suburbs in the City of Kwinana and therefore has been separated into 4 neighbourhoods: central, south, east, and north east (Figure 15.1).

**Figure 15.1: Neighbourhoods of Parmelia**



## 15.2 Secondary Destinations

All four of the key secondary destinations in the City of Kwinana are located on the outskirts of Parmelia.

- **Kwinana Train Station** – positioned on the border of Parmelia and Bertram and is 2km from much of the north-east neighbourhood.
- **Darius Wells Library (Kwinana Town Centre)** – this secondary destination is within 2km of the central neighbourhood of Parmelia, as well as a large portion of the south neighbourhood.
- **Adventure Park (Kwinana Town Centre)** – this secondary destination, just west of Darius Wells, is within 2km of most of the central neighbourhood of Parmelia, and some of the south neighbourhood. Considering the overlap with Darius Wells Library, the focus of the neighbourhood plans for Parmelia is to enhance the cycling and walking network to Darius Wells Library which will also enhance the network to the Adventure Park as a result.
- **Wellard Neighbourhood Centre** – this secondary destination is within 2km of a large portion of the south neighbourhood of Parmelia.

The predominant movement through Parmelia is towards the train station at the north-eastern end, and the numerous destinations in Kwinana City Centre to the west. The focus of Parmelia is therefore, the implementation of the secondary route between Kwinana City Centre and Kwinana Train Station which runs through the central neighbourhood and north-east neighbourhood. The second most important route to implement is the secondary primary route from Kwinana Train Station to Wellard Station (the on-road alternative to the future PSP – see Section 9.4.2). This route is in the north-east neighbourhood before crossing to the east side of the rail line to use Bertram Road. The development of the east neighbourhood will include a north-south secondary route on the western side of the rail line (separate to the Kwinana Loop Trail). The high-profile Kwinana Loop Trail runs in the north-east and east neighbourhoods and must be preserved / promoted with links from the north-east and east neighbourhoods.

## 15.3 Local Destinations

Given the significant magnitude of the secondary network in Parmelia and the priority of the other neighbourhoods, the cycling and walking neighbourhood plans for Parmelia prioritised the secondary route design and implementation before planning and implementing local connections, except where they were identified in CrowdSpot or known to be a concern. The local route network, feeding into the secondary routes, is recommended to be developed as a separate project in the implementation plan, or in the next instalment of the cycling and walking plan.

When the project is carried out, the following destinations should be considered, and local routes developed to connect them to the secondary route network:

- **Frank Konecny Community Centre / Skottowe Park** – a community meeting point for Parmelia and starting points for which much of routes will connect to.
- **Parmelia Peace Park** – another well visited park that forms a community meeting point, specifically with its role as a dog park.
- **St Vincent's Primary School** – potential for many to cycle and walk to school who live in the north-east neighbourhood of Parmelia (400m catchment).
- **North Parmelia Primary School** – potential for many to cycle and walk to school who live in the north-east neighbourhood of Parmelia (specific focus of 400m catchment).

- **Chisham Oval** – positioned on the secondary route in the central neighbourhood it has potential to be developed as a community meeting point.
- **Gilmore College** – potential for many to cycle and walk to school who live in the north-east neighbourhood of Parmelia (specific focus of 1km catchment).
- **Peter Carnley Anglican College** – potential for many to cycle and walk to school who live in the southern neighbourhood of Parmelia (specific focus of 1km catchment).
- **Parmelia Shopping Centre** – a local destination to people in the east Parmelia neighbourhood; significant parts of Parmelia would prefer to use Kwinana Marketplace.

The other 26 parks, reserves and public open spaces in Parmelia also have opportunity to link them. The focus is on the 3 mentioned above (Skottowe Park, Parmelia Dog Park and Chisham Oval) for the neighbourhood. These parks represent community meeting points and have the greatest potential to encourage physical activity.

The following actions are proposed to reflect the local opportunities:

- Liaise with Satterley land developer to ensure section of the secondary route, from Challenger Avenue to Wellard Road can be constructed as part of the development in the implementation plan.
- Neighbourhood connections to parks and reserves in Parmelia to be designed in the implementation plan.
- Design and implement connections to the secondary routes from local destinations.

## 15.4 Parmelia Neighbourhood Plan

A number of issues were raised in the *Crowdpot* survey as follows:

- Sickemore Road – badly damaged footpath
- Sulphur Road – cars parking on path blocking access to station
- Simmons Loop – no footpath
- Skottowe Park – no footpath connecting park to Skottowe parkway
- Farmer Way – no footpath
- Woodley Way – no footpath

Maintenance issue locations:

- Chisham Avenue, Parmelia – sand and tree debris on path
- Sulphur Road (Johnson Rd to Station), Parmelia – broken glass on path
- Tunnicliffe Street – damaged path and insufficient width; Parmelia Avenue intersection power pole in path (widen path around pole)

Issues for noting:

- Parsons Avenue – poor lighting



### 15.4.1 Safe Routes to Schools

As part of the proposed neighbourhood enhancement plans, to be developed as a separate exercise for the four areas of Parmelia, safe routes to the four schools are to be provided as follows:

- **Gilmore College** – catchment of 1km (central neighbourhood).
- **North Parmelia Primary School** – 1km catchment (north-east neighbourhood).
- **St Vincent's Primary School** – 1km catchment (east and north-east neighbourhood).
- **Peter Carnley Anglican School** (Wellard campus) – 1km catchment (south neighbourhood).

The policy for the neighbourhoods is to construct a footpath on both sides of roads and is the long-term outcome for Parmelia. The two schools that exist in Parmelia are in the north-east neighbourhood and, therefore, the routes are proposed for this neighbourhood only.

### 15.4.2 Connections to Secondary Routes

The focus of subsequent neighbourhood cycling and walking planning for Parmelia should be to connect the local network into the secondary route developed from Kwinana Train Station to Kwinana City Centre (Section 0).

## 15.5 Parmelia Implementation Plan

**Table 15.1: Parmelia implementation plan**

Priority	Project	Destinations
P1	Meares Avenue / Sulphur Road intersection (extend shared path 30m to connect to cycle lanes on Meares Avenue)	Darius Wells Library Kwinana Marketplace Gilmore College
P2	Secondary route design (Kwinana Station to Kwinana City Centre)	Darius Wells Library Kwinana Marketplace Kwinana Train Station
P3	Parmelia Avenue – 220m shared path (2.5m wide) from Tunncliffe Street to northern entrance to St Vincent's school (east side)	St Vincent's Catholic College
P4	Parmelia Avenue – 300m shared path (2.5m wide) from The Ramble to Tuart Ridge (east side)	St Vincent's Catholic College
P5	Sickelmore Road – 850m shared path upgrade (2.5m wide)	Kwinana Loop Trail
P6	Skottowe Park – 30m footpath to connect to Skottowe Parkway	Skottowe Park Frank Konecny Centre
P7	Parmelia Avenue – 1.2km shared path (2.5m wide) from Challenger Avenue to Sulphur Road (east side)	St Vincent's Catholic College
P8	Tunncliffe Street – widen footpath around power pole	St Vincent's Catholic College

## 16. Wellard

### 16.1 Background

Wellard is one of the newer suburbs of Kwinana, along with Bertram, which has continued to expand for the last decade. Due to the suburb being significantly large and diverse, it has been broken up into three neighbourhoods for this study:

- The Village
- Homestead Ridge
- Providence

The focus has been on Homestead Ridge due to the consultation indicating people desire to have footpaths. The estate has been built as a rural setting in an urban region and is a lifestyle location, however, safety is important, and without footpaths people are required to walk on roads. For mothers with prams or people in wheel chairs wanting to meet at community meeting points this is particularly unsafe. Further consultation is required to ascertain perspectives of various members of the community before expenditure.

### 16.2 Secondary Destinations

One of the key secondary destinations in the City of Kwinana is Wellard Neighbourhood Centre. It is the central meeting point for the Village Wellard, but also desired destination for Homestead Ridge (just over 1 km from its central location).

Providence estate is isolated from the Wellard and Kwinana Centres with the Wellard Road missing gap proposed as a key project (project K5 in Table 1.5).

### 16.3 Local Destinations

Local neighbourhood connectors were determined for each of the three neighbourhoods as follows:

- **Wellard Park** – a community meeting point for Homestead Ridge near the corner of Bertram Road and Wellard Road, footpaths to this location are particularly poor and are the focus of Wellard neighbourhood plan.
- **Abingdon Park** – a community meeting point for The Village estate and to be a focus in the neighbourhood plan prepared for The Village in the next Bike and Walk plan.
- **Bulrush Park** – a community meeting point for Providence estate and to be a focus in the neighbourhood plan prepared for Providence in the long-term consideration.

Local neighbourhood connectors were also determined for Emerald Park and Sunrise estates, which form the Providence neighbourhood: the central parks on Gemstone Parade and Serenity Street respectively. Connections to these destinations should be sort in neighbourhood plans prepared for this area within the long-term consideration.

## 16.4 Wellard Neighbourhood Plans

Table 16.1 and Table 16.2 indicate the implementation plan for the Wellard neighbourhoods focused on Homestead Ridge connections to Wellard Park.

**Table 16.1: Homestead Ridge implementation plan**

Priority	Project	Destinations
H1	Wellard Road, Wellard (shared path western side) from Bertram Road to Providence Estate	Wellard Park Providence Estate (isolated from Wellard & Kwinana Town Centre)
H2	Silversmith Street – 550m of footpath from Wellard Road to Homestead Drive (liaise with residents to confirm demand and determine the side)	Wellard Park
H3	Stonemason Rise – 230m of footpath from Silvermith Street to pedestrian accessway to Mason Mews (liaise with residents to confirm demand and determine the side)	Wellard Park
H4	Connection from footpath network behind Mason Mews to path network in Wellard Park (liaise with residents to confirm demand)	Wellard Park

**Table 16.2: Wellard “The Village” and “Providence” implementation plan**

Priority	Project	Destinations
W1	Bicycle parking on The Strand – install 2 U-rails in front of Woolworths, one U-rail in front of Bliss & Momos Café, one U-rail at Wellard Square entrance (liaise with shop owners regarding location)	Wellard Neighbourhood Centre
W2	Bicycle parking in Abingdon Park – one U-rail at playground equipment	Abingdon Park
W3	Mortimer Road, Wellard (shared path south side) from Johnson Road to Kwinana Freeway	Kwinana Freeway
W4	Study of cycling and walking access to new Wellard Primary school	Wellard Primary School



## 17. Orelia

### 17.1 Background

To allow for the other strategic projects and demonstration neighbourhoods to receive the focus of funding, Orelia has limited focus in the implementation plan.

It is proposed to focus on Wellard and Orelia more significantly in the 2023 cycling and walking plan as the consultation revealed the community did not have significant complaints with the pedestrian and cycling network in Orelia.

The City of Kwinana project to resurface Orelia Drive in 2018/19 provided the opportunity to upgrade the infrastructure to red asphalt cycle lanes and widen where possible.

### 17.2 Secondary Destinations

The key secondary destinations close to Orelia are Darius Wells Library and Kwinana Adventure Park. The western part of Orelia is within 1-2km of these premier destinations and walking distance or cycling distance for people.

Gilmore College is officially in Orelia, but due to its importance and central location, many sources, including this plan, identify it in the City Centre. Its catchment is the entire City of Kwinana, however, many residents in Orelia can easily walk or cycle there due to its proximity. Future neighbourhood planning for Orelia should focus on cycling and walking to Gilmore College along with the primary schools in the area.

### 17.3 Local Destinations

Local neighbourhood connectors were determined for each of the three neighbourhoods as follows:

- **Orelia Shopping Centre** – a community meeting point for Orelia, requiring upgrade and expected in the near future (bicycle parking is poor and recommended to be added this implementation phase).
- **Orelia Park** – a community meeting point for Orelia and to be a focus in the neighbourhood plan prepared in the next Bike and Walk Plan.
- **Hennessey Park** – a community meeting point for Orelia and to be a focus in the neighbourhood plan prepared in the next Bike and Walk Plan.

### 17.4 Orelia Neighbourhood Plan

**Table 17.1: Orelia implementation plan**

Priority	Project	Destinations
O1	Orelia Avenue bicycle lanes (resurface cycle lanes from Thomas Road to Christmas Avenue)	Loop Trail Orelia Park
O2	Orelia Shopping Centre bicycle parking	Orelia Shopping Centre
O3	Langridge Crescent (Butt Place to Littlemore Road)	Littlemore Park

## Orelia Avenue

The existing shoulders that serve as pseudo bicycle lanes should be retained as part of upgrade works to Orelia Avenue, however, they should be resurfaced in red oxide to provide additional delineation and need protection as minimum. Where practical, the width of the shoulders should be increased at the expense of the traffic lane, with liaison required with the Public Transport Authority due to this being a bus route. The lighting in the central median, along with the trees on the western side and steep embankment, mean widening for a 2-way separated lane is impractical for the benefit required. Alternative north-south routes need to be sought in future neighbourhood planning for Orelia.

## Connections to Secondary Routes

The focus of subsequent neighbourhood cycling and walking planning for Orelia should be to connect the local network into the secondary route from Kwinana Train Station to Kwinana City Centre on Sulphur Road, Parmelia Avenue, Warner Road etc. Roads like Orelia Avenue, Crawford Road, Hennessey Avenue and Colchester Avenue are expected to become important local connections into the secondary route.

RECOMMENDATION 7: Implement all neighbourhood plans.

## 18. New Development East of Kwinana Freeway

18

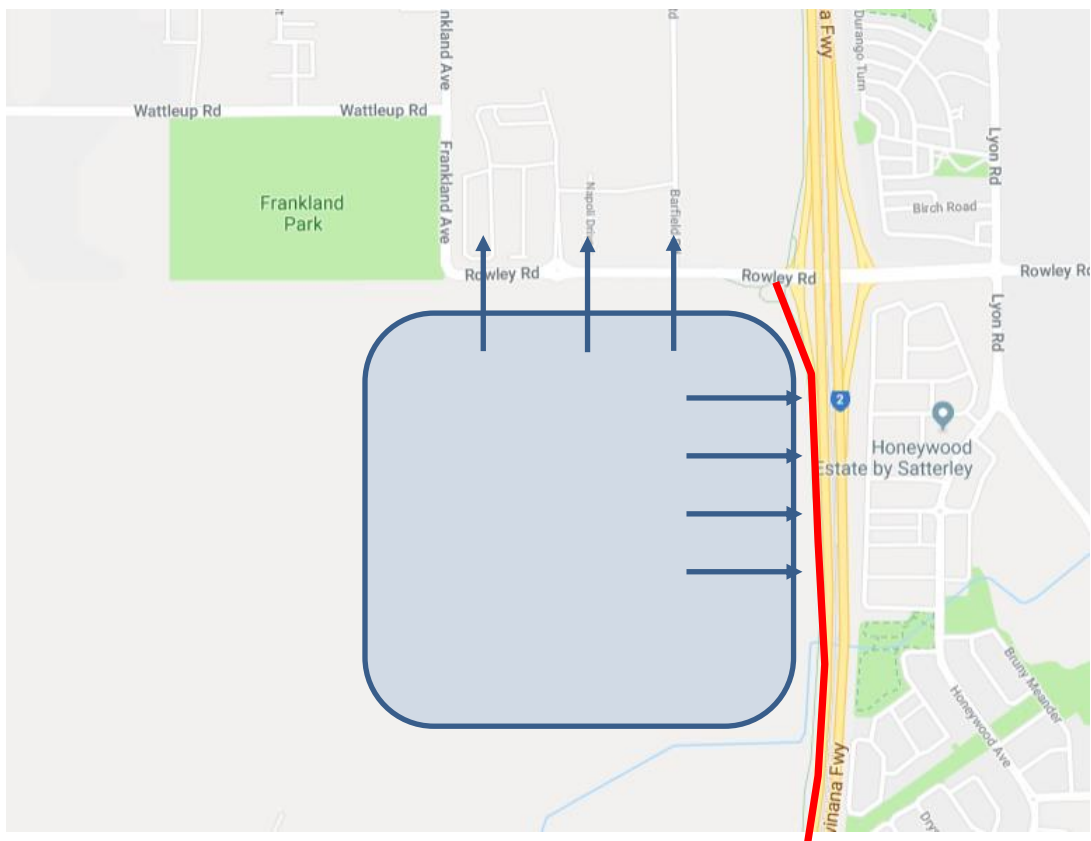
### 18.1 Background

Wandi, Casuarina, Mandogalup and Wellard East are earmarked for development from semi-rural land into residential housing estates at a rapid pace, for the next 20 years and will provide much of the additional 40,000 people forecast for the City of Kwinana. Therefore, it is paramount that infrastructure be developed that will sustain a bicycle and pedestrian network for the long term. Some developers take initiative to design strong cycling and walking infrastructure into subdivisional developments, while others search for ways to provide the minimum to reduce expenditure. Either way, it is well appreciated that active travel is a selling point on advertising material for new estates.

### 18.2 Mandogalup Estate

Starting from the north of Kwinana and to the west of the freeway, is the new development proposed by Qube in Mandogalup. Two important aspects of this development are the connections to Hammond Park in the City of Cockburn, and to the Kwinana Freeway PSP. Often developments provide large noise walls with limited access points, reducing the potential for people to cycle to secondary destinations along the primary routes. Every 4-500m there should be connections to the primary route.

**Figure 18.1: Mandogalup connectivity to PSP and City of Cockburn**



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Another aspect of the subdivisional development is the standard of the infrastructure. Qube developments have indicated its intent to not provide minimum, but desirable standards, including separated facilities with priorities through intersections. This should be supported by the City of Kwinana. Refer to the tool box for design guidance provided in section 20 of this plan.

### 18.3 Honeywood Estate – Wandí

Wandí is developing from a semi-rural to a residential estate with Honeywood estate being rolled out adjacent to the freeway in a prime location to the north of the City. Honeywood has its own local neighbourhood connectors, separate to the semi-rural of Wandí, and both should be connected in the long term.

Wandí had a number of roads suggested for cycling facilities in the *Crowdspot* survey indicating an active community, and that these roads are used for longer cycling trips. It is proposed to construct shared paths or bi-directional cycling facilities on Da Haer Road and Wandí Road as part of developments, and contributions should be appropriately sort from the developer at the time of construction. Further information on these roads is provided in Section 9.4.5.

Honeywood Avenue has become the north-south route and should be used on the secondary route from Wellard to Cockburn Central (Section 9.4.6). Other local routes should feed into this route and to Rowley Road. As the estate continues to the south, the secondary route should be developed and should consider boulevard treatments and speeds of 30km/hr if practical.

### 18.4 Wellard East – Casuarina

Sunrise estate is one of the first to be developed east of the freeway in Wellard East. It has been considered as part of Providence and Emerald Park neighbourhood area (Section 16).

Further development is occurring and will continue to occur in the Wellard East and Casuarina semi-rural areas. Opportunities to link the north-south route should be explored at all times. Developers must ensure they understand the importance of this route and feed into it and not compromise it for any reason.

**RECOMMENDATION 8:** Ensure all new developments are built to incorporate the local and secondary networks and connect to City of Cockburn's cycling and walking network.

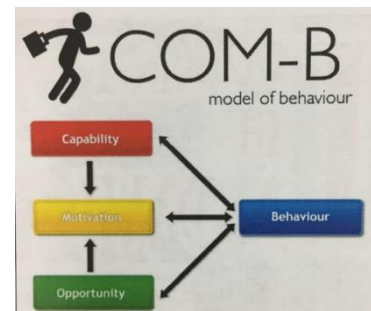
## 19. Implementing the Bike and Walk Plan

### 19.1 Supporting the Infrastructure

When developing an active travel community, it is important to provide measures that are non-infrastructure based, but still work toward the goal of changing people's travel behaviours helping them understand there are other viable modal choices. Although people are aware of the benefits of cycling, few people actively cycle or walk as an everyday transport option. Investment in cycling and walking infrastructure needs to be supported through the active promotion of these modes.

Research also suggested that, there are two main issues with changing people's travel behaviour, these being "Habits" and "Infrastructure". It is hard to break a habit if there is no alternative mode opportunity, or there is free parking available, or the existing infrastructure is not conducive to travel behaviour change.

Further, telling people what to do does not always provide the desired outcome as each person's situation and reason for using the car is different. A COM-B behaviour change principle can be considered, understanding a person's Capability, Oppportunity and Motivation (COM) and working with this can lead to Behaviour (B) change. While the following identifies some generic proposals for promotion and encouragement, it also provides opportunity for engagement with groups within the community, to understand their capabilities, opportunities for change and motivations.



#### 19.1.1 State Government Policy

The State Government discusses behaviour change within the Perth Transport Plan through "travel behaviour change programs" using education, information, incentives and other marketing-based approaches to persuade and assist people to decrease their need to travel, reduce dependence on private cars and increase physical activity by making voluntary changes in their travel habits and patterns. Such changes include reducing car use and increasing the share of trips by alternatives such as cycling, walking, public transport or car-pooling. Travel behaviour change programs achieve these shifts in demand by changing perceptions or attitudes to alternative travel options. Travel behaviour change programs typically target households, workplaces and schools.

In this regard, the integrated travel behaviour change program *Your Move*, which had its pilot project in neighbouring Cockburn, improves transport system efficiency in the local area by reducing travel demand and shifting travel times, thereby helping better manage local congestion. This program also improves public transport patronage and leverage cycling initiatives to improve infrastructure connections to destinations.

It is also noted, that the recent (August 2016) finalisation of the Western Australian Planning Commission Guidelines for Transport Impact Assessments has a greater requirement for active travel assessment and consideration of amenity.

The City have also indicated that where feasible, they will seek to align promotion activities with the Heart Foundation of Australia. To complement this, it is recommended that the City work with Department of Transport's *Your Move* Program where practicable.

**RECOMMENDATION 9: Develop an active transport behaviour change policy and strategy. And work with DoT to implement a 'Your Move Kwinana' program**

### 19.1.2 Encouragement/Promotion

The encouragement and promotion of cycling should seek to appeal to all members of the community with non-cyclists encouraged to consider cycling for leisure/recreational trips as well as every day trips; whilst existing leisure/recreational cyclists should be encouraged to cycle more often for everyday trips – such as commuting and accessing local facilities.

Programs aimed at encouraging cycling and walking need to promote the benefits and enjoyment and provide a positive image of cycling and walking. A range of suggested actions may include:

- Marketing the benefits of cycling and walking.
- Working with local schools to:
  - promote Safer Routes to School;
  - Bike and ride or "bike bus" (where riders group together) programs encouraging parents to ride to school with their children;
  - Ride to school programs and cycle proficiency training for school children; and
  - Assistance for schools wanting to participate in training and maintenance courses.
- Ensuring this Neighbourhood Bicycle and Walking Plan remains an active document endorsed and implemented by the City.
- Supporting development that encourages and/or caters for cycling and walking within its plan and design.
- Developing cycle parking standards/end of trip facility requirements that need to be adhered to for planning approval.
- Coordinate local community events aimed at promoting cycling and walking – based around new Active Travel Infrastructure and community facilities.
- Host Launch day events for new facilities – a launch day ride might include an organised ride that includes new infrastructure and linked sections of the existing network.
- Joint programs with local businesses to encourage use of cycling for short trips through incentive schemes.
- Open Street programs, such as Town of Victoria Park closure of certain roads to general traffic on a Sunday – such as Chisham Avenue within the City.
- "Welcome Wagon" concept – this is where the City would provide a welcome pack to all new residents and to new council staff that includes information and maps of all existing alternative travel modes.



## Cycle Tourism

The idea of cycle tourism and "Guide Rides" is something that was discussed during the community consultation workshops. It was noted that cycle tourism was becoming increasingly popular with overseas travellers and tourists. In this regard, several Cycle Tour suggestions were provided, as follows:

- A Link to Fremantle and the Cruise Ship terminal.
- Look to surface some of the Kwinana Loop Trail to make it accessible for both walking and cycling.
- Possible themed cycle and walking tours, such as:
  - A Wetlands Tour - utilising the proposed Recreational Routes;
  - A Bushlands Tour – utilising the large amount of Bushland surrounding Kwinana;
  - Tramways Trail which is identified in section 9.5;
  - A Kwinana Indigenous Tour; and
  - A longer "loop" trail, such as linking Kwinana, Rockingham Coast and Kwinana Freeway.

The City, possibly partnering with neighbouring authorities such as Cockburn, could produce maps and guides which would:

- enable self-guided tours;
- connect local routes to regional routes;
- allow adequate rest stops and to provide branded bikes in partnerships with local companies; and
- engage with local tour guide companies to lead groups on tours using their own bikes.

**RECOMMENDATION 10: Investigate the feasibility and routing options for potential cycle or walking tours**

### 19.1.3 Cycle Skills Training

It is well understood that people who have enjoyed the experience of cycling as a child are more likely to pick it back up as part of their transport behaviour as adults.

Education of users in respect to traffic rules and responsibilities is necessary in order to provide safer and courteous behaviour. In addition, education relating to cycle maintenance, safety precautions and practical skills in relation to other traffic is also needed.

Accordingly, the City should seek to work with Department of Transport and the Department of Education to try and identify suitable children's riding skills courses and potential funding mechanisms to deliver the training. In addition, the City should also seek to work with the Department of Transport, the Australian Bicycle Council and the Department of Environment, Water, Heritage and the Arts with respect to adult cycle proficiency training. As part of this, the Amy Gillet Foundation, the Bicycle Federation of Australia and Cycling Australia came together to create *AustCycle*, in 2008, to provide train-the-trainer and accreditation systems for both children and adult cycle training, through a commercially viable cycling training sector. *AustCycle* was superseded in 2016 by the *Lets Ride* and *She Rides* programs.

Education should also be aimed at both motorists and pedestrians with respect to the needs and likely behaviour of cyclists. Pedestrians and cyclists also need guidance on safe path sharing – this is particularly true given the amount of existing and proposed shared paths throughout the City, which is likely to result in an increased number of pedestrian/cycle interactions.

#### 19.1.4 Enforcement

The Police Service enforces the Road Traffic Act and Codes that relate to cycling. The Police also help educate cyclists and motorists about the rights and responsibilities of all road users.

Whilst enforcement by police patrols may enhance user security – for instance on shared paths – such measures are often expensive to undertake unless dedicated bike mounted patrols exist. The City can address this through education and encouragement of desired behaviours, addressing conflicts between cyclists and pedestrians within shared environments.

Path way behaviour management can assist in this regard – Figure 19.1 illustrates suggested signage.

Figure 19.1: Suggested enforcement signage



G9-259-1  
(a) *Keep Left* sign encourages all path users to travel on the left



G9-259-2  
(b) *Warn When Approaching* sign encourages path users to call out or use their bells



G9-259-3  
(c) *Stop Off Path* sign encourages path users to keep the path clear



G9-259-4  
(d) *Control Your Dog* sign reminds dog owners of their responsibilities

## 19.2 Monitoring and Evaluating

It is important to undertake sufficient monitoring and evaluation throughout the implementation of this plan. This can be undertaken by the following means:

- Documenting the implementation of actions recommended in this and the previous bike plan;
- Annual bike counts at key locations;
- Annual review of crash statistics specifically reported bicycle and pedestrian crashes (via Main Roads Western Australia Data Base or the Road Safety Commission Reporting); and
- Holding and supporting various events.

In addition, consideration could be given to installing permanent counters in the longer term as part of construction of regionally focussed paths or key local centre routes. Counters may need to be designed to collect data for both pedestrians and cyclists, noting that pedestrian volumes often outweigh bike volumes (e.g. Kwinana Loop Trail). To promote bicycle use, consideration could be given to visual displays integrated with the counters.

These activities provide the necessary data to continually evaluate the success of the *Bike and Walk Plan* to inform the priorities of future investment.

**Figure 19.2: Bicycle barometer on Barrack Street, City of Perth**



**Figure 19.3: Bicycle barometer in Moreland, VIC**



**RECOMMENDATION 11:** Undertake annual crash investigation study for key hotspot cycle pedestrian crash areas to understand causality making cycling/pedestrian safer

**RECOMMENDATION 12:** Develop a counting and monitoring strategy for cyclist and pedestrians



## 19.3 Innovation – Utilising Technology

The use of technology can assist in monitoring the use of new infrastructure as well as improve the connectivity and safety of infrastructure, such as *active lighting*. Active lighting refers to light that is only delivered when it is needed. Motion detectors "sense" when the spaces are active and automatically provide higher levels of light as required (Figure 19.4). As a person approaches the area, the lights along the path ahead will increase to full capacity and automatically dims to save energy once the person has left that area.

**Figure 19.4: Active lighting in Spindlers Park, NSW**



Other future opportunities may include solar pavements which are used in The Netherlands and United States (Figure 19.6 and Figure 19.7).

These types of treatment serve more than an aesthetic function; they improve visibility and could be a means to reduce crime and position the City in the best practice space for Western Australia for innovative means to make cycling and walking safer and more attractive.

**Figure 19.5: Solar pavement, Krommenie, The Netherlands**



Source: [http://motherboard.vice.com/nl/read/in-noord-holland-komt-het-allereerste-fietspad-met-zonnepanelen-?utm\\_source=motherboardfb](http://motherboard.vice.com/nl/read/in-noord-holland-komt-het-allereerste-fietspad-met-zonnepanelen-?utm_source=motherboardfb)

**Figure 19.6: Solar driveway, USA**



Source: <https://www.youtube.com/watch?v=qITA3rnpqzU>

Figure 19.7: In-Ground LED artwork, Eindhoven, The Netherlands



### 19.3.1 Provision for electric bikes

As the use of Electric Bikes (E-Bikes) becomes more popular, allowing riders to travel longer distances and along steeper gradients in comfort, it will be increasingly important to provide charging stations to ensure riders can complete longer journeys. As such, the City will need to consider the use of E-Bikes within the south-west metropolitan area, and work with neighbouring authorities and the South West Group to install an E-Bike cycle route, in much the same vein as the RAC implemented the Electric Highway through the south-west of WA.

RECOMMENDATION 13: Work with the South West Group to investigate an E-Bike Route.

## 19.4 Wayfinding signage

As part of the CrowdSpot survey a number of people mentioned the need to improve the wayfinding signage particularly around the Kwinana Loop Trail. As part of the promotion of the plan, a Wayfinding Strategy is recommended.

Signage is a critical part of an accessible, safe and connected cycling and walking network. Signage improves the efficiency of the network and thus enhances the utility of cycling and walking as a transport option. Without clear and legible signage, those who are unfamiliar with the network may feel unsafe or uncertain, and less likely to cycle or walk as a transport option.

To guide the installation of a bicycle network, a focal point map has been developed to achieve consistency in the use of secondary locations. The destinations and trip attractors were identified through feedback gained during consultation. The key principles when undertaking a wayfinding strategy include the following:

- **Focal points** – significant locations where regional routes start, finish, join or cross.
  - **Destination points** – city centres and localities which are located at the ends of regional bicycle routes but are not at a junction with other regional routes.
  - **Key decision points** – network junctions which are intersections-only (not focal points).
  - **Sub-destinations** – important local centres along a route.
  - **City and town centres** – business centres of cities/ towns.
  - **Local destinations** – local trip generators located at the termination of local routes.
- Focal points, destination points, sub-destinations, local destinations and town centres shown on the focal points map are the destinations which will be used to guide the installation of signage across the suggested bicycle and pedestrian network.

The principal forms of signage for any Wayfinding Strategy should include:

- **Intersection Fingerboards** –the primary means of indicating the route direction at key decision points. The focal point destination and one other destination are generally shown on each fingerboard, along with distances.
- **Advanced Direction Boards** –placed before an intersection to indicate the route being followed and the route choices available at the following intersection. Destinations and sub destinations are used on advanced direction boards, although distances are never used (however, time-based information may be applicable).
- **Reassurance Boards** –used between key decision points and on longer straight sections to reassure cyclists they are travelling towards their intended destination.

It is recommended that the City consider the following approach to the installation of new signage:

- i Signage to be installed in association with all priority routes, with intersection fingerboards installed at all key decision points.
- ii Intersection fingerboards to be mounted on existing sign posts, where possible, to reduce street clutter.
- iii Redundant bicycle signage to be removed/replaced.
- iv The City will liaise with Main Roads Western Australia to ensure consistency between signage.
- v The City will liaise with the Cities of Rockingham and Cockburn, where possible, to ensure routes are signed consistently and in particular the destinations used and distances are consistent.
- vi New signage will be installed, if required, as part of any major bicycle infrastructure project conducted in the City.
- vii The City will need to continually review the wayfinding signage (in accordance to an overall strategy) as more routes and links are implemented.

**RECOMMENDATION 14: Implement Behaviour Change Initiatives and Way Finding Signage Strategy including around Kwinana and Wellard Train Stations**

A demonstration project on Sulphur Road is proposed (see section 0) to apply pavement marking treatments to the existing environment and signage to indicate the destinations of Kwinana City Centre and Train Station, and to distinguish between on-road shoulder and the access road and path used.



## 19.5 Non-Active-Travel Behaviour Change Mechanisms

While this plan provides cycle and walking infrastructure proposals, as well as non-infrastructure based active travel promotion, there are also mechanisms the City can utilise to further encourage the use of active and public transport travel. These may include:

- Car Exclusion Zones around schools (nominally a 200m buffer but can be more) – this could be incorporated with a Safer Routes to School program as well as utilising any nearby public car parks for parents to park and walk. An example of a school exclusion zone can be found in New South Wales, on Brabyn Street, Denistone East.
- Town Centre Car Parking Strategy to incorporate managed and paid parking (providing a financial incentive for active travel over car use) to be delivered in conjunction with the implementation of the town centre masterplan.
- Area wide Developer Contribution Strategy, collecting funding from multiple developments toward cycling and walking infrastructure.
- More street trees to provide a consistent canopy of shade and to cool the streets down. Trees planted within the road side verge is preferred. However, trees planted within the road carriageway will also cool the streets down and provide shade.

## 20. Implementing the Neighbourhood Bike and Walking Plan – A Tool Box of Measures

### 20.1 Introduction

Infrastructure must be tailored to the demand and type of users. This has been detailed in Chapter 8. Pedestrians are generally less diverse in behaviour and requirement compared to people cycling. However, there still needs to be consideration of whether prams and gophers are expected. Where this is so, the width is to be wider; this plan proposes 2m for such paths (above the 1.8m min standard).

For cycling, the treatments vary from on-road treatments to bi-directional cycling facilities to paths shared with pedestrians. Even though people can cycle on footpaths legally, with recent legislative changes, this plan proposes to separate cycling from walking networks by the definition of shared path which is 2.5m wide, as a minimum.

This tool-box provides information for designers in the City, to the standards and requirements for each of the treatments proposed in the plan.

### 20.2 Bi-Directional Separated Bicycle Path

Bi-directional (or two-way) separated bicycle paths are located within the road reserve but are exclusive to bicycles. They are separate from parked cars, vehicle traffic and pedestrians. These facilities provide bi-directional travel along one side of the road and are highly desirable and safer than other on-road options.

These facilities often require substantial engineering works to implement, which needs to be balanced relative to competing demands for space within the road reserve. This type of facility is the preferred infrastructure type for major routes. It is chosen over a shared path when the number of people cycling is expected to be considerable and shared path interaction with pedestrians could become problematic. Where the road is less than 3,000 vehicles per day, a Safe Active Street treatment should be considered.

Design Requirement: 3.0m width (2 x 1.5m lanes) or 2.5m absolute minimum for local path access.

*Chisham Avenue is proposed for a bi-directional facility on the north side and will require substantial road re-configuration.*

Banksia Terrace, Kensington is an early example of this type of facility



## 20.3 Safe Active Street

The Safe Active Streets program is an innovative program designed to make cycling safer and easier in Western Australia, largely consisting of a new cycle infrastructure treatment known as Bicycle Boulevards. Bicycle Boulevards need to be located on local streets with low traffic volumes (less than 3,000vpd) and speeds (30km/hr or less), providing bike riders with safe and comfortable bike routes with priority over cars, and an easy, on-street link to local destinations or major bike routes. The lower speed road creates a safer environment for pedestrians, cyclists and motorists.

Examples of safe active streets in Perth include:

- Shakespeare Street, Mount Hawthorn
- Leake Street, Bayswater

A number of other new streets in various local governments around Perth are undergoing transformation into safe active streets through funding assistance with the Department of Transport. The City of Kwinana is set to undergo this same transformation with streets proposed as follows, noting Medina is proposed to be a demonstration suburb.

**Table 20.1: Safe Active Streets proposed, City of Kwinana**

Medina	Parmelia	Leda
Atkinson Road	Hunt Place	Sloan Drive (north of Harman)
Wheelock Road	Cowling Way	Porter Gardens
Harley Way	Preston Road	Bilya Gardens
Bingfield Road West	Adamson Road (east of Preston)	McNairn Cross
Tucker Street (north of Hubbard)	Sicklemore Road (north of Adamson)	Yeovil Way
Hubbard Street	Dawson Way	
Westcott Road	Champion Drive, Bertram (Mangart Road to Hero Crescent)	
Pace Road (west of Harley)		
Kirkus Road		



## 20.4 Bicycle Lanes

Bicycle lanes are the treatment historically used for roads with significant vehicle volumes to delineate space on the road. It is now a treatment less preferred to Safe Active Streets, bi-directional separated paths, and protected bicycle lanes.

Traditional bicycle lanes should be used sparingly, such as on Orelia Drive, where space restrictions prohibit improved treatments as mentioned above. The Department of Transport does not support unprotected bicycle lanes and will not provide grant funding unless lanes have some form of physical protection.

For new on-road cycle routes, it is recommended that all routes are designed to a standard of 1.5m in width, widening to 1.8m where possible, particularly on uphill sections where gradient is likely to be >5%. While it is acknowledged that Austroads Guide to Road Design Part 6A states that a bicycle lane can be 1.2m wide (with an absolute minimum of 1.0m for very short sections) – the City should consider using 1.5m as standard, reducing to 1.2m as a minimum.

Design Requirement: 1.5m lanes, 1.2m lanes as minimum, 1.8m lanes where possible.

Green treatments through intersections should be adopted on local distributor or roads of higher volumes, to ensure car drivers are more aware of people cycling across intersections.

**RECOMMENDATION 15:** Coloured surfacing for on-road cycling. Providing Green at conflict points as a minimum. Use the cycle symbol pavement marking on all on-road routes.

## 20.5 Footpaths and Shared Paths

With the recent change in legislation to allow cycling on footpaths, there is a little blur in the requirements of local government to build shared paths with designated pavement marking to denote shared path status.

For the City of Kwinana, the provision of shared paths should be constructed to 2.5m width when there are perceived to be 300 or more cyclists per day riding. Where there is expected to be considerable pedestrians, such as around café strips or aged care facilities, footpaths should be adopted as the treatment and the local authority should take care to protect pedestrians from people cycling and create safer road environments adjacent to the footpaths. The Department of Transport is recommending 3m shared paths for areas of activity to future proof the network and are not likely to fund path widths below this effective width (including clearances).

Main Roads cycling level of service guidelines, provide further assistance, recognising they have not been updated for 10 years and do not reflect latest best practice treatments.

[https://www.mainroads.wa.gov.au/Documents/los\\_guidelines\\_cycling.RCN-D06%5E2347971.PDF](https://www.mainroads.wa.gov.au/Documents/los_guidelines_cycling.RCN-D06%5E2347971.PDF)

## 21. Conclusion

The City of Kwinana has opted to produce a plan to enhance neighbourhood's walkability and cyclability networks for small 1-2km trips. The focus for the implementation plan has been on:

- A pedestrian plan for Bertram – to address its significant deficiencies identified in the *CrowdSpot* consultation.
- Medina neighbourhood plan – focusing on an east-west local route across the suburb.
- Leda neighbourhood plan – focusing on footpaths to parks to improve community connectivity and establishing meeting points.
- Secondary route from Kwinana Train Station to Kwinana City Centre.
- Design of secondary routes from Kwinana Train Station to Wellard Road (on route to Rockingham Station), and from Kwinana City Centre to Wells Park (on route to Rockingham Foreshore).
- Design guidance for development of the eastern semi-rural part of the local government to ensure bicycle networks connect.
- Implementation plans across the local government.

The top 5 projects across the entire local government have been prioritised for implementation before the neighbourhood plans, but closely align to a number of the neighbourhood plans. They should be delivered as a priority due to the safety importance and level of demand in the local community. These projects are:

- Tranby Way footpath (both sides of road), Bertram – connection to Bertram Primary School.
- Walgreen Crescent footpath (south side), Calista – connection to Kwinana Adventure Park.
- Rowley Road shared path (south side), Wandi – connection to Freeway PSP from Honeywood community.
- Thomas Road shared path (south side), Casuarina – connection to Kwinana from Marri Park community.
- Wellard Road shared path (west side), Wellard – connection to Kwinana from Providence and Homestead Ridge estates.

Table 21.1 on the following page provides a summary of all recommendations made in this plan.

**Table 21.1: Recommendations for the Kwinana Bike and Walk Plan**

Recommendations	
1	Liaise with Department of Transport about long-term priority to construct shared path on east side of freeway at local standard (3m wide)
2	Liaise with Department of Transport about provision of a Principal Shared Path (PSP) on the freight route for the long-term regional cycling network
3	Implement Kwinana Train Station to Kwinana City Centre secondary route in the implementation plan
4	Implement Kwinana Train Station to Rockingham Train Station secondary route in the implementation plan subject to Department of Transport funding (City of Kwinana section)
5	Prepare a separate Footpath and Cycling Plan for the industrial areas of Kwinana
6	Implement all neighbourhood plans
7	Ensure all new developments are built to incorporate the local and secondary networks, and connect to Cockburn's network
8	Develop an active transport behaviour change policy and strategy. And work with DoT to implement a 'Your Move Kwinana' program
9	Investigate the feasibility and routing options for potential cycle or walking tours
10	Undertake annual crash investigation study for key hotspot cycle pedestrian crash areas to understand causality, making cycling/pedestrian safer
11	Develop a counting and monitoring strategy for cyclist and pedestrians
12	Work with the South West Group to investigate an E-Bike Route
13	Implement Behaviour Change Initiatives and Way Finding Signage Strategy including around Railway Stations
14	Coloured surfacing for on-road cycling. Providing Green at conflict points as a minimum. Use the cycle symbol pavement marking on all on-road routes.



# Appendix A

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## Strategic Guidance

## A.1 Strategic Guidance

### City of Kwinana Strategic Documents

#### 2010 City of Kwinana Bike Plan

The City of Kwinana Bike Plan 2010 prepared a plan for the implementation of two interconnected systems of pathways, consisting of off-road shared paths for 'casual cyclists' (as termed by the consultant) and primarily on-road cycle lanes for commuting cyclists. The 'casual' cycling network was proposed to consist of an interconnected system of 2-meter-wide shared paths linking schools, shops, recreation and residential. The 'commuter' network consisted mainly of on-road facilities through the suburban parts of Kwinana.

Several projects identified within the 2010 plan have been implemented, either by the City or Main Roads WA. This is further detailed within section 4 on in this plan.

#### City of Kwinana – Strategic Community Plan 2015 to 2025

The City's strategic community Plan is founded on four visionary priorities which represents the community's aspirations for the future and defines what it will be like to live in Kwinana by the year 2030. These priorities are as follows;

- Rich in spirit.
- Alive with opportunities.
- Nature, preserve and enhance.
- It's all here, services, facilities, diverse lifestyles.

The plan imposes a proactive and strategic approach to planning for significant infrastructure needed for the future, such as major road networks, waste disposal/recycling facilities and ensure that project timeframes are matched to population growth. This in essence is meant to provide a safe and efficient integrated network of roads, footpaths and cycle routes supported by a good public transport system. The plan also advocates constructing and maintaining a safe and legible network of footpaths and cycle routes to enable residents to get where they need to go safely and easily.

#### City of Kwinana - Public-Health-Plan-2015-2018

The Public Health Plan has been developed to complement rather than duplicate Council's existing planning frameworks and strategies. As such, it has been designed collectively with community input and was driven by the City's Strategic Community Plan. It aligns the following four themes with the four priorities of the Community Strategic Plan:

- Healthy People
- Healthy Places
- Healthy Marketing and Promotion
- Healthy Partnerships

It has also been led by the current community health profile prepared by South Metropolitan Health Unit in 2013. Some of the most concerning health statistics occurring in Kwinana are the highest rate of Type II diabetes, the highest rate of cholesterol and the highest rate of mental and behavioural problems, in Australia, as well as the highest percentage of women who smoke during pregnancy, referencing Data from the Curtin University Geospatial Report 2014.

The Plan aims to address the physical, social, cultural and economic factors impacting on people's health and wellbeing, especially for those in the community at risk. It capitalises on the Strategic Community Plan aims and priorities by promoting a safe and efficient integrated

network of roads, footpaths and cycle routes, supported by a good public transport system. According to the plan, this would be achieved by:

- Creating Policies and reviewing the current Bike Plan to ensure bike and pedestrian routes are prioritized as modes of transport.
- Setting a standard for road layout that puts cyclists and pedestrians ahead of the car, by ensuring planning in early stages to ensure networks are efficient and safe for every user.
- Inspiring the provision of efficient cycleways and footpaths in newly developed areas, and upgrades to existing transport networks that enable active transport.

#### *City of Kwinana Draft Town Centre Master Plan 2017 / Local Planning Policy*

The focus of this Policy is on the City Centre Zone, which is bound by Sulphur Road in the north, Gilmore Avenue to the west, Meares Avenue to the east and Challenger Avenue to the south. The City's Town Centre Local Planning Policy details design provisions to complement the land use and development requirements prescribed in Local Planning Scheme No. 3 for the Kwinana City Centre. This policy has been prepared to assist in achieving the vision and four objectives set out in the Strategic Community Plan. Objectives of the movement network framework are set as follows;

- **Establish an appropriate balance between vehicle and pedestrian movement, providing safety for pedestrians and accessibility for vehicles;**
- Ensure appropriate building height to street width ratio, creating a sense of enclosure and definition to street, reinforcing street types by capacity and character;
- Ensure vehicle movement is convenient and efficient, with safe access and parking;
- Ensure on-site vehicle parking and access is appropriately located, minimising the adverse visual impact on the streetscape;
- **Reinforce connections to the public transport network; and**
- **Improve walking and cycling conditions to link destinations serviced by alternative parking facilities.**

Other objectives and design principles highlighted in the policy and directly related to walking and cycling are as follows:

- Establish Chisham Avenue Main Street as the focal point and prime public space of the city centre;
- Reinforcing the significance of Gilmore Avenue as the major approach and gateway to the city centre, linking through to the Chisham Avenue Main Street;
- Reinforcing the central pedestrian north-south spine and establish east-west pedestrian priority routes;
- Improve pedestrian permeability through to the southern precinct and proposed new residential development;
- North-south pedestrian movement linking the civic precinct in the north and Hub precinct in the south;
- Regular tree planting along the footpath paving with good canopy coverage providing a continuous line of site down Monument Parade;
- Continuous high-quality Main Street environment, with generous uncluttered footpaths providing sufficient space for alfresco seating and pedestrian movement; and
- Providing convenient, safe and attractive pedestrian and cycle links that connect to the city centre and its public transport node, and to nearby parks, waterfront public open space, education, recreation and community facilities.

**Table A.1: Town Centre Masterplan Movement Network Framework**

Element	Development Controls	Design Guidance
<b>Chisham Avenue</b>	<ul style="list-style-type: none"> <li>○ New development on the lower levels shall be designed to reinforce the significance of Chisham Avenue Main Street frontages.</li> <li>○ No vehicle access, blank walls and/or service areas shall be located on Chisham Avenue frontages.</li> <li>○ Vehicle entrance points and services areas are to be integrated into the overall building design and shall be designed to minimize their impact on the pedestrian environment and street vitality.</li> <li>○ Ground level facades shall provide variation and interest at a human scale along its length.</li> <li>○ Weather protection for pedestrians shall be provided along Chisham Avenue footpaths, either in the form of awnings, verandas or first floor balconies.</li> </ul>	<ul style="list-style-type: none"> <li>○ Traffic is slowed within the Chisham Precinct – through the provision of wide crossings to assist pedestrian movement and tree planting to create a sense of enclosure to the street</li> <li>○ Junctions and radii are also tightened within the Chisham Precinct in order to slow down vehicle movement.</li> </ul>
<b>Entry Boulevard - Gilmore Avenue</b>	<ul style="list-style-type: none"> <li>○ New development shall reinforce a built edge onto Gilmore Avenue – supporting a slow speed environment between Chisham Avenue and Sulphur Road.</li> <li>○ Prioritise pedestrian access across Gilmore Avenue at the key intersections of Sulphur Road, Chisham Avenue and Skerne Street.</li> </ul>	<ul style="list-style-type: none"> <li>○ Reduced speed environment reinforced by edged treatment- built form and trees.</li> <li>○ A pedestrian priority crossing will be implemented at Skerne Street through the instillation of traffic lights, zebra crossing, extended kerb lines and textured surface - allowing safe and direct access to the proposed skate park and Adventure Play Ground on Calista Oval.</li> </ul>



**Table A.2: Town Centre Masterplan Desired Character Areas**

Element	Guidelines
<b>Civic Precinct</b>	<ul style="list-style-type: none"> <li>Includes the northern portion of the town centre between Gilmore and Meares Avenues.</li> <li>This area exhibits a strong landscape character set within undulating topography creating a physical separation from the city centre.</li> <li>Accommodating the Council Administration, Arts Centre and Police Station, the area is connected by the central north-south pedestrian spine that links through to offices and business incubators at the crest of the hill.</li> <li>Careful location and design of activated frontages and back of house areas will optimize the streetscape quality of the precinct as the primary civic place for Kwinana.</li> <li>The civic administration will be located in a prominent and fitting place with associated public areas for ceremony and celebration.</li> <li>This precinct will also become more liveable and lively with addition of residential apartments offering housing choice for local residents.</li> <li>Streetscape and public realm treatment will also resolve level differences to provide an accessible and attractive place to live, work and play.</li> </ul>
<b>Chisham Precinct</b>	<ul style="list-style-type: none"> <li>It extends from Darius Road to the northern edge of The Hub shopping centre, and sits at the heart of the city centre.</li> <li>The Darius Library and Recreation Centre provide key attractions for the local community. However, there is a lack of attractive retail experience along the Chisham Avenue Main Street.</li> <li>The precinct will become a bustling retail and commercial area focused on Chisholm Avenue.</li> <li>The precinct includes the library and adjacent Requatic Centre as well as part of the retail site.</li> <li>It will have a high level of pedestrian activity, slow moving traffic, and a rich mix of uses fronting the street, with comfortable, wide, sheltered footpaths.</li> <li>The public realm will be characterised by significant tree planting to enhance the landscape qualities that are valued in Kwinana.</li> <li>New development fronting streets in this precinct will provide an engaging public space for locals, visitors and workers in the area.</li> <li>Improved connections to the shopping mall, shared spaces with pedestrian priority and on-street car parking, that will be time managed, will provide a more integrated and accessible core to the Kwinana town centre.</li> <li>Residential development will be encouraged, particularly at upper levels, to provide a liveable town centre.</li> </ul>

Element	Guidelines
<b>Kwinana Hub Precinct</b>	<ul style="list-style-type: none"> <li>○ Located to the south of Chisham Avenue, and approximately two thirds of this land is under the private ownership of Shopping Centres Australia, anchored by Woolworths, Big W and Dan Murphy.</li> <li>○ As the major retail tenant within the city centre, the focus has been on the internal activation of the development with large areas of car parking surrounding the shopping centre.</li> <li>○ The precinct will continue to be the primary retail focus for the town centre. The built edges of the shopping centre will be enlivened with active frontages connecting key destinations and entrances and reaching out beyond the site and precinct to improve walkability to and through the town centre.</li> <li>○ It is envisaged that this large landholding will become more intensely developed with deck car parking providing an opportunity to free up peripheral land for residential apartment development with mixed use at ground levels.</li> <li>○ The shopping centre as the key activity, will evolve to become an integrated and connected part of the town centre where people can move easily between the internal mall environment, the street and out to the precincts beyond.</li> <li>○ All retail and business development will address public spaces to create a safe, attractive well-landscaped place for people at all times of the day and night.</li> </ul>

The framework goes on to identify 'Primary Pedestrian Routes' and Primary Cycling Routes for the City centre.

**Table A.3: Town Centre Masterplan Primary Pedestrian and Cycle Routes**

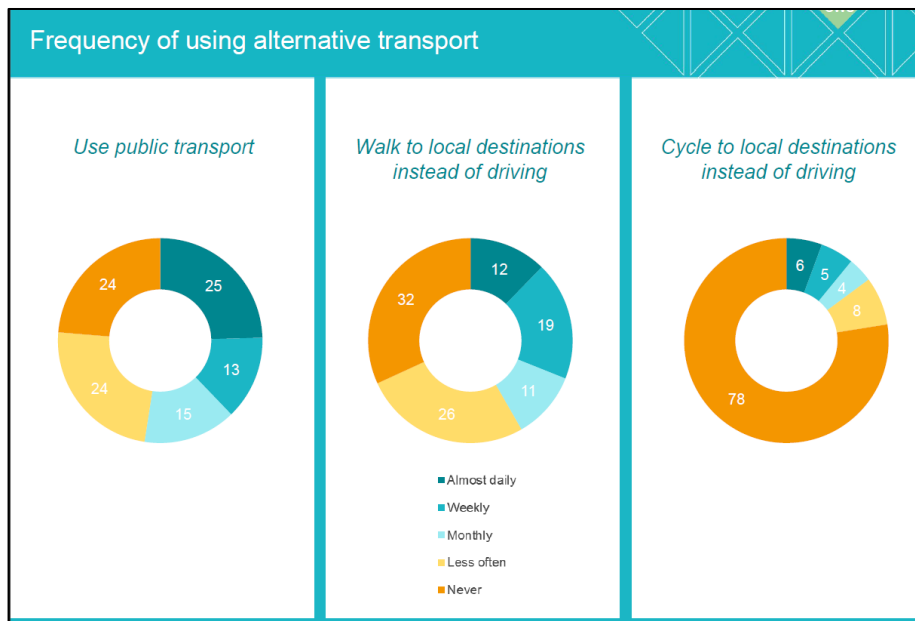
Primary Pedestrian Routes	Primary Cycle Routes	Guidelines
<ul style="list-style-type: none"> <li>○ Robbos Way</li> <li>○ Peel Right of Way</li> <li>○ Skerne Street</li> <li>○ Chisham Avenue</li> <li>○ Routes through the shopping centre parking lot</li> </ul>	<ul style="list-style-type: none"> <li>○ Gilmore Avenue</li> <li>○ Summerton Road</li> <li>○ Sulphur Road</li> <li>○ Walgreen Crescent</li> <li>○ Harlow Road</li> <li>○ Peel Right of Way</li> <li>○ Darius Drive</li> <li>○ Chisham Avenue</li> <li>○ Meares Avenue</li> <li>○ Barrick Road</li> <li>○ Chilcott Street</li> <li>○ Challenger Avenue</li> </ul>	<ul style="list-style-type: none"> <li>○ Ground level frontages on primary pedestrian links shall incorporate a mix of land uses and design measures to ensure passive surveillance contributing to a safe, active and diverse public realm.</li> <li>○ Areas of high pedestrian footfall within busy segments of primary pedestrian corridors shall ensure wide pavement fronting onto the public realm.</li> <li>○ Weather protection shall be integrated with the building design fronting primary pedestrian corridors, appropriately scaled and designed to reinforce the importance of street frontages enabling pedestrian connectivity.</li> </ul>

### *City of Kwinana Wellbeing Scorecard*

The Community Wellbeing Scorecard presents the community opinion of "Footpaths and Cycleways" in City of Kwinana and compares it to other areas across Perth. This data illustrates that 78% of respondents would never cycle to local destinations instead of driving. Only 11% cycled daily or weekly.

When asked about walking to local destinations instead of driving 32% said they would never walk with 26% less often. 31% of respondents walked to local destination almost daily or weekly.

Figure A.1: Catalyse Community Wellbeing Scorecard – Transportation response



#### LOCAL GOVERNMENT SUMMARY

The various local government reports have a common theme with each one noting the requirement for the City to provide a **connected** and **safe** network for cyclists and pedestrians. As well as planning for active travel and ensuring provision of cycling and walking infrastructure is allowed for in newly developed areas. The *Town Centre Masterplan* notes a number of corridors identified for cycling and walking priority.

#### Western Australia Strategic Documents

##### Western Australian Bicycle Network Plan

The Western Australian Bicycle Network Plan 2014-2031 (WABN Plan) has been developed to leave a legacy for all current and future cyclists. It includes new initiatives which cover a range of activities to efficiently provide a safe and sustainable cycling network which ties in with key activity and attraction areas.

The vision of the WABN Plan is to make WA a place where cycling is safe, connected, convenient and a widely-accepted form of transport.

The objectives of the WABN Plan take a whole-of government approach to cycling and are complementary to the National Cycling Strategy 2011-2016.

The objectives are to:

1. Build evidence and demonstrate the benefits of cycling for the community.
2. Encourage cycling to build active and healthy communities.
3. Provide a high-quality, interconnected bicycle network.
4. Improve the level of safety for people cycling.
5. Build and enhance relationships with advocacy groups and stakeholders.

The key infrastructure actions of the WABN Plan are:

- Expansion of the Principal Shared Path (PSP) Network
- Review of Local Bicycle Routes
- Perth Bicycle Network Grants Program
- Regional Bicycle Network (RBN) Grants Program
- Central Business District Cycling Projects
- Review of Traffic Management on Local Roads
- Connecting Schools
- Connecting Stations
- Planning for Cycling Facilities in the Regions
- Development of a Bicycle Counting and Monitoring Strategy
- Development of an Online Journey Planner
- End-of-Trip Facilities

#### Perth and Peel @3.5 Million Transport Plan

The State Government has prepared a long-term Transport Plan that sets the vision for a generational change to Perth's transport network. It provides a long-term plan for transport infrastructure and considers how we can use the transport network more efficiently as Perth's population approaches 3.5 million and beyond (nominally 2050). The plan looks at where people will live and work when as the population reaches 3.5 million and outlines a workable transport system so that people and freight can keep moving as the city grows.

The transport plan is needed to identify the transport infrastructure requirements of an additional 1.4 million people. It will also ensure that existing and growing centres of population in the Perth and Peel regions have appropriate transport options in the future.

The PTP has a vision for the future transport network; designed to keep the city moving as it grows and help Perth to continue to be one of the most liveable cities in the world.

The Western Australian Government recognises that an integrated approach to land use and transport planning is essential to ensure Western Australia's ongoing prosperity. Integrated land use and transport planning is one of the most cost-effective ways to optimise the performance of critical infrastructure, maximise use of latent capacity within existing land reserves, and facilitate the pipeline of investment needed to build new infrastructure to accommodate future growth.

The infrastructure proposed within the transport plan is presented in Table by mode type, with the following infrastructure proposed for the City of Kwinana:



Table A.4: PTP Proposals for City of Kwinana

Freight	Public Transport	Cycling	Road
<p><b>Rowley Road Extension (Strategic Freight Road)</b> - Container and general cargo port development in the Outer Harbour (Cockburn Sound) to be serviced by the Rowley Road Transport Corridor and integrated with <b>an intermodal logistics centre at Latitude 32 Industry Zone</b>.</p> <p>Rowley Road (west of the Kwinana Freeway) is proposed to be a strategic freight road.</p> <p>It will be extended and upgraded to provide an 8 kilometre four-lane dual carriageway to the coast.</p> <p>A portion of the road will go through the Latitude 32 Industry Zone.</p> <p>The new road reserve will be a Primary Regional Road reserve in the Metropolitan Region Scheme.</p> <p>It will have controlled access status and incorporate interchanges or grade separated junctions at major intersections.</p>	Thornlie Line Extension	<p><b>Proposed Local Routes:</b></p> <p>Rowley Rd</p> <p>Beeliar East - Fwy Connection</p> <p>Hammond Park – Wattelup</p> <p>Mandogalup Dr</p> <p>Mortimer Rd</p> <p>Kwinana Town Centre - Mitchell Fwy</p> <p>Kwinana</p> <p>Beeliar - Kwinana Beach</p> <p>Wellard Rd</p>	Fremantle Rockingham Controlled Access Highway (Stock Road)
<p><b>Stock Road</b> - will be upgraded to full freeway standard south of the Roe Highway. It will be aligned into the future Fremantle Rockingham Controlled Access Highway to provide a linkage to the Kwinana Freeway via Mundijong Road at the southern end and the Fremantle Inner Harbour at the northern end via the Fremantle Tunnel.</p>	Cockburn Coast to Rockingham Bus Priority	<p><b>Proposed Strategic Routes:</b></p> <p>Byford - Kwinana Fwy PSP</p> <p>Thomas Road</p> <p>Wellard Rd – Baldivis Rd</p>	Rowley Road Extension to link to Western Trade Coast
<p><b>Other new and upgraded links across Perth's south-west including:</b></p> <p>Widening of Kwinana Freeway to 6 lanes.</p> <p>the upgrade of Anketell Road (Strategic Freight Road) to four lane dual carriageway.</p> <p>the construction of the new Fremantle Tunnel and a new north-south link – the Fremantle Rockingham Controlled Access Highway.</p> <p>Widening and extension of Thomas Rd (Freight Road) to Rockingham Controlled Access Highway.</p> <p><b>New grade separations required between</b> Rowley Rd/Stock Rd, Anketel Rd/Stock Rd, and Thomas Rd extension/Stock Rd/ Rockingham Controlled Access Highway</p> <p><b>RAV Upgrades</b> – Rockingham Rd, Stock Rd, Rowley Rd, and Anketel Rd will be upgraded to RAV 7</p>	Bunbury Fast Train	<p><b>Proposed PSP:</b></p> <p>Kwinana Stn – Rockingham</p> <p>Mandurah PSP : Rowley Road - Anketell Road</p> <p>Mandurah PSP: Anketell Road - Thomas Road</p> <p>Mandurah PSP: Thomas Road - Mandjoogoordap Drive</p>	Cockburn Road Upgrade to 4 lanes
<p><b>Rail Access</b> - to the future container port facilities is planned to connect to the existing Cockburn to Kwinana freight mainline through the Latitude 32 Industry Zone. The rail alignment will follow the western section of the road alignment within the Rowley Road Transport Corridor.</p>	High Priority Transport Corridor on Thomas Rd	<p><b>Planned PSP:</b></p> <p>Rockingham - Point Walter (Stock Road)</p>	
<p><b>Infrastructure upgrades by 2.7m</b> - Additional infrastructure required to address capacity issues at the Kwinana Triangle to serve the Kwinana Industrial Area</p>	High Frequency Transport Corridor on Rockingham Rd/Patterson Rd	<p><b>Proposed RSP:</b></p> <p>Beeliar Wetlands West</p>	
<p><b>Infrastructure upgrades by 3.5m</b></p> <p>Track duplication between Cockburn Triangle and the Latitude 32 Industry Zone</p> <p>Track duplication between the Latitude 32 Industry Zone and the Kwinana Triangle within the Kwinana Industrial Area</p>			
<p><b>Expanding the Metropolitan Intermodal Terminal System</b></p> <p>Expand Perth's intermodal terminal network by facilitating development of a new open-access intermodal terminal facility at Kewdale Terminal Two (T2) to serve as a central hub for international container trade</p> <p>An integrated planning program to develop a major intermodal logistics centre at Latitude 32 to serve the future container port facilities and the State's freight and logistics industry</p>			

## South Metropolitan Sub-Regional Framework

The objective is to provide an efficient and effective regional movement network for people and freight that is integrated with land uses, links key employment opportunities and connects the sub-region to the greater Perth and Peel regions as well as the south-west of the State.

- A strategic link between areas north and south of the river is currently being investigated. This link connects industrial and logistics areas north and south with the existing Fremantle Port, the future Outer Harbour and Latitude 32.
- A new north-south route connecting Spearwood and Gilmore Avenues with opportunities for a lateral connection to the potential north-south route is proposed.
- Coastal Area within Cockburn Sound, between James Point and Naval Base, is the most suitable location for development of additional container port facilities.
- **Provision of a network of paths for cyclists and pedestrians offering commuters an alternative to private car trips as well as providing recreation opportunities and health benefits.**

## STATE GOVERNMENT SUMMARY

The common theme through the documents released by State Government is the importance of encouraging cycling and walking to build a more active and healthy community, specifically identifying **connections to schools** and **stations** and providing the right infrastructure for the right end user. The PTP has identified various road proposals as well as new cycle links that have been considered as part of the long-term network. The WABN notes specific infrastructure actions to which the Kwinana cycle and walking network plan (the plan) will respond to.

## National Strategic Documents

### National Cycling Strategy 2011 - 2016

The overarching vision for this strategy is to realise a step-change in attitudes to cycling and in the numbers of riders in this country. In the short term, the goal was to double the number of people cycling during the five-year period.

Priorities and objectives:

- Cycling promotion: promote cycling as both a viable and safe mode of transport and an enjoyable recreational activity.
- Infrastructure and facilities: **create a comprehensive network of safe and attractive routes to cycle, and end-of-trip facilities.**

All jurisdictions will continue to invest in developing local on-road and off-road cycling networks to key destinations in both urban and rural areas, that are consistent with national standards, and should commit to the identification of required funds in the relevant budget processes. Government will continue to develop end-of trip facilities that make it possible for people to cycle.

- Integrated planning: consider and address cycling needs in all relevant transport and land use planning activities.
- Safety: enable people to cycle safely.
- Monitoring and evaluation: improve monitoring and evaluation of cycling programs and develop a national decision-making process for investment in cycling.
- Guidance and best practice: develop nationally consistent technical guidance for stakeholders to use and share best practice across jurisdictions.

Our Cities, Our Future: A National Urban Policy for a productive, sustainable and liveable future (2011)

The Australian government recognise the importance of people of all ages and abilities to have physical access to employment, education, services and social, recreational and cultural opportunities and facilities. There has been a noticeable shift to cycling as a sustainable, economical and healthy, active transport option.

As such, the report recommends monitoring and reporting on progress toward achieving the national cycling target to double the number of cyclists by 2016. Promote healthy lifestyles through cycling and walking networks, recreation facilities and high-quality public spaces.

**Improve accessibility and reduce dependence on private motor vehicles.**

*Walking, Riding and Access to Public Transport: Supporting active travel in Australian communities, Ministerial Statement (2013)*

The primary objective of this statement is to articulate the Australian Government's interests in broadening the range of transport options in our communities: by increasing the share of people walking and riding for short trips; and improving their ability to access public transport.

**Plan:** Include walking and riding when planning for land use and transport

- Identify principal walking and riding routes in regional and local plans that are consistent with overall state planning and transport strategies.
- **Design networks of continuous, convenient connections.**
- Enable short walking and riding trips for transport purposes.
- Improve access to and within major activity, employment and education centres, focusing on 20-minute catchments (two kilometres walking, five kilometres cycling).
- Improve access to public transport stops particularly 5–10-minute walking catchments.

**Build:** Build appropriate infrastructure for walking and cycling needs

- Create safe environments for pedestrians and bicycle riders.
- Incorporate pedestrian and bicycle facilities when building infrastructure.
- protect routes for walking, riding and accessing public transport so that existing connections are not severed.

**Encourage:** Enable greater participation in walking, riding and public transport

**Govern:** Coordinate across agencies and levels of government

*Walking, Riding and Access to Public Transport – Australian Government Ministerial Statement*

The Australian Government Ministerial Statement on Walking, Riding and Access to Public Transport recognises the following benefits of these modes to private car travel:

- increased capacity in the broader transport network;
- reduced congestion;
- reduced environmental impacts;
- improved public health; and
- improved community wellbeing.






Moreover, the document reports on a study commissioned by the Queensland Government, which concluded that the net benefit to the community of cycling is approximately \$1.43 per kilometre cycled. Primarily these benefits are achieved through health benefits (\$1.12/km), which were partially offset by injury costs (\$-0.37/km).

Significant benefits also came from decongestion (\$0.21/km) and vehicle operating costs (\$0.35/km). Noise reduction, air quality, greenhouse gases, infrastructure provision and parking cost savings accounted for a total of (\$0.13/km).

Key principles in achieving an increase in the number of people walking and cycling for shorter trips and accessing public transport include, integrating planning of walking and cycling in land use planning and building appropriate infrastructure for these modes of transport.

Guidance on how to achieve an integrated road network is provided and reproduced in Figure A.1 which essentially indicates to consider the needs of private motor vehicles last.

**Figure A.1: Road Network Hierarchy Integration of Walking, Riding and Access to Public Transport**

					
Street or road type	Shared Zone with mixed traffic considered on a case by case basis	High pedestrian activity areas	Most urban roads	Urban arterial roads	Motorways and national highway network
Vehicle speed	< 20km/h	15–40km/h	40–60km/h	60–90km/h	90–110km/h
				Pedestrians + bicycles fully separated from vehicles	Pedestrians + bicycles fully separated from road environment
<div>Consider first</div> <div>↓</div> <div>Consider last</div>	Pedestrians	Pedestrians	Pedestrians on footpaths		
	Bicycles	Bicycle lane on road	Wide bicycle lane on road or shared path**		
	Public transport	Public transport	Public transport	Public transport	Freight vehicles
	Service vehicles	Service vehicles	Service vehicles	Freight and goods	Public transport
	Goods delivery	Goods delivery	Goods delivery	Service vehicles	Service vehicles
	Private vehicles	Private vehicles	Private vehicles	Private vehicles	Private vehicles

Source: Walking, Riding and Access to Public Transport, pg. 31

## NATIONAL GOVERNMENT SUMMARY

Federally released documents require state and local governments to improve accessibility within their jurisdiction in order to **reduce the dependence on private motor vehicles** and reduce social isolation. The **active transport networks should be continuous, convenient and connected** providing a **safe** environment for pedestrians and cyclists.



## Appendix B

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### Socio-Economic Report



A photograph of a tree-lined brick path with a building in the background. The path is made of red bricks with yellow brick crosswalks. Two black bollards are on the path. The background shows a building with a red roof and a stone wall, surrounded by trees.

# KWINANA CITY CYCLE AND WALKING NETWORK PLAN SOCIAL AND ECONOMIC REVIEW



# Kwinana City Cycle and Walking Network Plan – Social and Economic Review

July, 2017

NO.	DATE.	DETAILS	APPROVED BY
1.	28/04/2017	First Draft	SOS
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1.0

# INTRODUCTION

INTRODUCTION

# 1.0. Introduction

## 1.1. PROJECT METHODOLOGY

The assessment of current factors relating to emerging health and social issues and attitudes towards the liveability of Kwinana has involved a process of identifying key issues arising, challenges, opportunities and strategies to improve the quality of life and support a modal shift for delivery of an Active Transport Plan.

The short timeframe for the project dictated a mixed data collection approach. Quantitative research was undertaken in the form of a literature review and development of a Quality of Life (QoL) Index Framework to enable further review and validation of information and performance measures. This was followed by the qualitative review to confirm quantitative data analysis and assist in the identification of key impacts, future priorities, strategies and responsibilities to enable a full assessment of health and social issues and attitudes arising within the City of Kwinana, and how this can be improved upon in the future (Figure 1). Secondary data for addressing both qualitative and quantitative information was sourced from publically available reports and strategies, statistics from the Australian Bureau of Statistics and Australian Health Atlas as well as various academic publications.



**Figure 1.** Qualitative and Quantitative Research

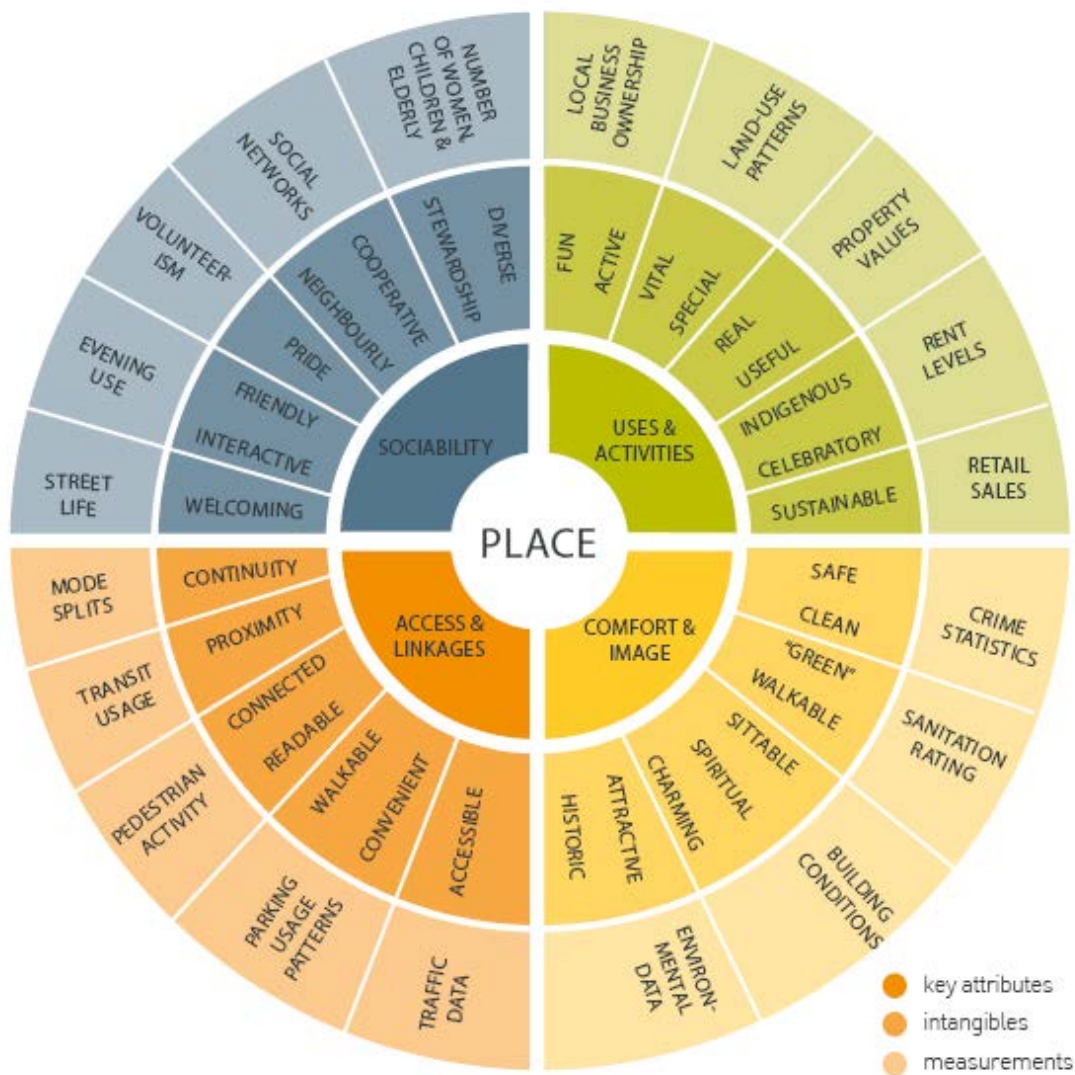
### Measuring liveability: The Place Lens

Measuring liveability can be very challenging as people look for and value different things when searching for 'a place to call home'. Liveability is closely linked to place. It is therefore valuable to reference a place lens that considers both the intangible qualities of place and the measurable quantitative aspects to enable a more comprehensive assessment of the success of a place as a liveable community (Figure 2).

Capturing data for both the quantitative and qualitative aspects of liveability and place provides the opportunity to measure the success of Kwinana as a place to live. This in turn will provide justification for future funding and service provision supporting the delivery of an Active Transportation Plan.



Figure 2. Place Lens



2.0

# QOL INDICATOR FRAMEWORK

QUALITY OF LIFE INDICATOR FRAMEWORK

## 2.0. Quality of Life (QoL) Indicators Framework

### 2.1 DOCUMENT REVIEW

There are a number of strategies and studies that are relevant to the Kwinana Social and Economic Review. Documents reviewed include strategic initiatives adopted at the state, regional and local level. Also included are academic research and current studies, all of which are identified to be relevant to the central themes contained within the QoL Framework. Undertaking this review ensures that qualitative data is captured from a variety of sources strengthening the information collated and further enables the alignment of strategic objectives across all tiers of government.

The document review has taken into account the following key documents. A summary of their relevance and key issues and opportunities arising are included in **Appendix C**. The review provided the basis to identify some of the key gaps in current strategies and related policies to inform key QoL theme areas for further review.

#### **City of Kwinana Planning Strategies:**

- City of Kwinana Healthy Lifestyle Plan (City of Kwinana, 2014)
- City of Kwinana Strategic Community Plan (City of Kwinana, 2013)
- City of Kwinana Health and Wellbeing Profile (SMPHU, 2013)
- Healthy Active By Design (Heart Foundation, 2017)
- Western Australian Health Promotion Strategy Framework 2012-2016 (DOH, 2012)
- Activating Architecture and Urban Planning (RA, 2009)

### 2.2 DETERMINING A QUALITY OF LIFE (QOL) INDICATORS FRAMEWORK

Quality of life (QOL) indicators are a basis for measuring a community's 'vital signs' (Carver County, 2006:i). Individually, indicators will explain and track progress in relation to a particular issue or feature while collectively, QOL indicators are a basis for viewing the larger picture and helping to continuously guide key institutions including policy makers in choosing appropriate responses.

QOL indicators have many different interpretations and will mean different things to different stakeholders. The challenge is to identify a meaningful set of indicators which can be measured and which provide useful information on variables which are directly related to the sphere of influence of key decision making bodies. The measurement of QOL indicators helps to guide processes of prioritising issues and allocating resources and also to engage broader constituencies including local communities. Ongoing measurement that is transparent and informative will help build trust and confidence among key stakeholders and is a foundation for partnerships in addressing even the most entrenched issues.

QOL indicators provide a structured way to collect, organize and analyses information about a particular place. Indicators are generally measured over time involving ongoing methods of data collection and reporting to key stakeholders such as local leaders, decision makers, residents and representatives from key institutions. The Australian Centre for Quality on Life based at Deakin University has developed the following definition:

*"Quality of life is both objective and subjective. Each of these two axes comprises several domains which, together, define the total construct. Objective domains are measured through culturally relevant indices of objective well-being. Subjective domains are measured through questions of satisfaction."*

(Australian Centre on Quality of Life, 2010)

There is a challenge in choosing appropriate indicators. The following framework by Hollander suggests criteria for making decisions about appropriate indicators and has been taken into consideration in the preparation of the QoLI indicator framework for Kwinana:

**Table 1.** Criteria for choosing indicators

Criteria	Description
<b>Validity</b>	Well-grounded in sound data and accurately depicts a real situation.
<b>Relevance</b>	Appropriate for and pertinent to the community's important issues.
<b>Consistency and reliability</b>	Data can be researched reliably over a period of time.
<b>Measurability</b>	Data can be obtained for the community.
<b>Clarity</b>	Indicators are not ambiguous and can be understood by a diverse group of people.
<b>Comprehensiveness</b>	Represents many parts of an issue and reduces the need for excessive number of indicators.
<b>Cost effectiveness</b>	Data collection is not overly expensive.
<b>Comparability</b>	Sufficiently general that communities can be compared to one another.
<b>Attractiveness</b>	Inspires interest by key stakeholders such as community groups, key institutions and the media.

Hollander 2002:3, in Phillips, 2003:18

This review considers the current projects being undertaken as part of the Kwinana Cycle and Walking Network Plan, which has assisted in determining targeted QOL indicators as they relate to liveability. From this review, a suggested list of indicators were proposed taking into account broadly:

- The scope of City of Kwinana (CK) role in the wider community;
- The capacity to meaningfully measure the indicators over time;
- The extent that these indicators are in direct relationship with some of the current key issues in the region and will therefore help to track progress of interventions intended to address these issues over time; and
- The need for broader partnerships and community capacity in addressing the issues raised by measuring indicators and therefore the need for strategic decisions that engage stakeholders in analysis and implementation.



The QOL indicators framework (Table 2) has been modelled on Community Indicators Victoria (CIV). CIV is comprehensive, driven from the level of the State Government and involves significant institutional partners enabling a comprehensive set of indicators and coverage of wide geographic areas (Victorian Community Indicators Project, 2006). It is a well-developed Australian example that encompasses both urban and rural areas. CIV has generated significant resources to assist with measuring indicators relevant to this project.

The following is the proposed QOL Indicators framework for measuring liveability in Kwinana

**Table 2.** Framework for Quality of Life Indicators for Kwinana

Theme	Domain	Indicators
Health Check	Early Childhood	Australian Early Development Index
	Mental health	Psychological distress
	Physical health	Quality of Life
		Obesity
		Prevalence of Type 2 Diabetes
		Adult Health Risk
		Adequate physical exercise
Sense of Place	Personal & Community Safety	Perceptions of Safety
		Incidence of Crime (person/property)
	Citizen Engagement	Opportunity to Have a Say on Important Issues
		Perceptions of Involvement in Local Issues & Community Activities
	Community Connectedness	Perceptions of Feeling Part of the Community
		Volunteering rates
Public Open Space	Quality of spaces	Youth Earning and Learning
		Appearance of public space playgrounds, parks and reserves
Movement Networks	Connectivity between destinations	Quality of Streetscapes
		Public transport patronage
		Dedicated walking and cycling trails
		Road safety
	Safety	Transport limitations
		Perceptions of traffic safety
Community Facilities & Key Destinations	Services Availability	Perceptions of Access to Services and Facilities
		Access to Services (shops, cafes, restaurants etc)
		Opportunities to Participate in Sporting and Recreation Activities
		Major Services Presence
	Access to key uses	Distance to Primary Education Services
		Distance to Secondary Education Services
		Journeys to Work
		Employment rate
Housing Diversity	Housing choice	Housing affordability
		Dwelling structure
		Household structure

The indicator framework has been devised as a tool for measuring progress towards a common goal (in this case aimed at achieving a liveable city and active community) and to provide sound information or evidence upon which to base decisions and actions. It was also envisaged that the indicators would include a mix of objective and subjective measures, given the importance of identifying differences between perception and reality, and the need for the framework to include priority values and goals of the Kwinana community, irrespective of their ease of measurement. In the case of Kwinana, the indicators are shaped in response to the identified needs.

The challenge with wellbeing indicator suites is that all possible measures cannot be included because the suite becomes too large and unwieldy, hard to decipher and potentially unnavigable to the community in general (ibid). As part of the filtering process for this review, in an effort to reduce the number of potential indicators, it was far easier to add indicators than to subtract them. At the same time, essential health and wellbeing indicators for which no immediate concerns were expressed by the wider community were deleted. It is important to note, rather than being an end in themselves, the indicators can only act as a spotlight and as a means to inform and focus whole community action.

## 2.3 LIMITATIONS AND CONSIDERATIONS

### **Indicator Data Sets**

Having identified the suite of indicators, the next task was to identify available data by which to undertake ongoing indicator measurements. One of the important limitations identified is the relative lack of local area data and that data sets are more readily available at the state or sometimes at the regional level.

A clear priority, if the indicators are to be useful for local government planning, is that some data will need to be collected via surveys or accessed from data collected administratively, usually by government departments. As discussed in Section 6, the implementation of a Kwinana Social and Economic Review is an early priority.

## 2.4 CONCLUSION

This section has outlined the themes, domains and indicators that make up the Kwinana QoL Indicators Framework. Within Section 4.0 further discussion is provided on each of the indicators data sources, the current status of progress measures (indicators) and historical trends, as well as an outlining “what the community has said” in response to these measures in order to identify key impacts and priorities.

3.0  
**CITY OF  
KWINANA  
SNAPSHOT**  
CITY OF KWINANA SNAPSHOT

## 3.0. City of Kwinana Snapshot

The following section provides an overview of the City of Kwinana's demographic profile identifying key statistics and trends that will have an impact on current and future social and economic needs of the community. The demographic analysis uses both 2011 and 2016 Australian Bureau of Statistics (ABS) census data, sourced from the City's demographers .id community.

### 3.1. LOCATIONAL CONTEXT

The City of Kwinana is located in Perth's outer southern suburbs, between 25 and 37 kilometres south of the Perth and covers an area of 120 square kilometres as shown in Figure 3. The area is made up of residential, industrial, rural and rural residential areas as well as a major retail and commercial city centre. A total of nine sub-catchment (small) areas is identified within the City of Kwinana LGA.

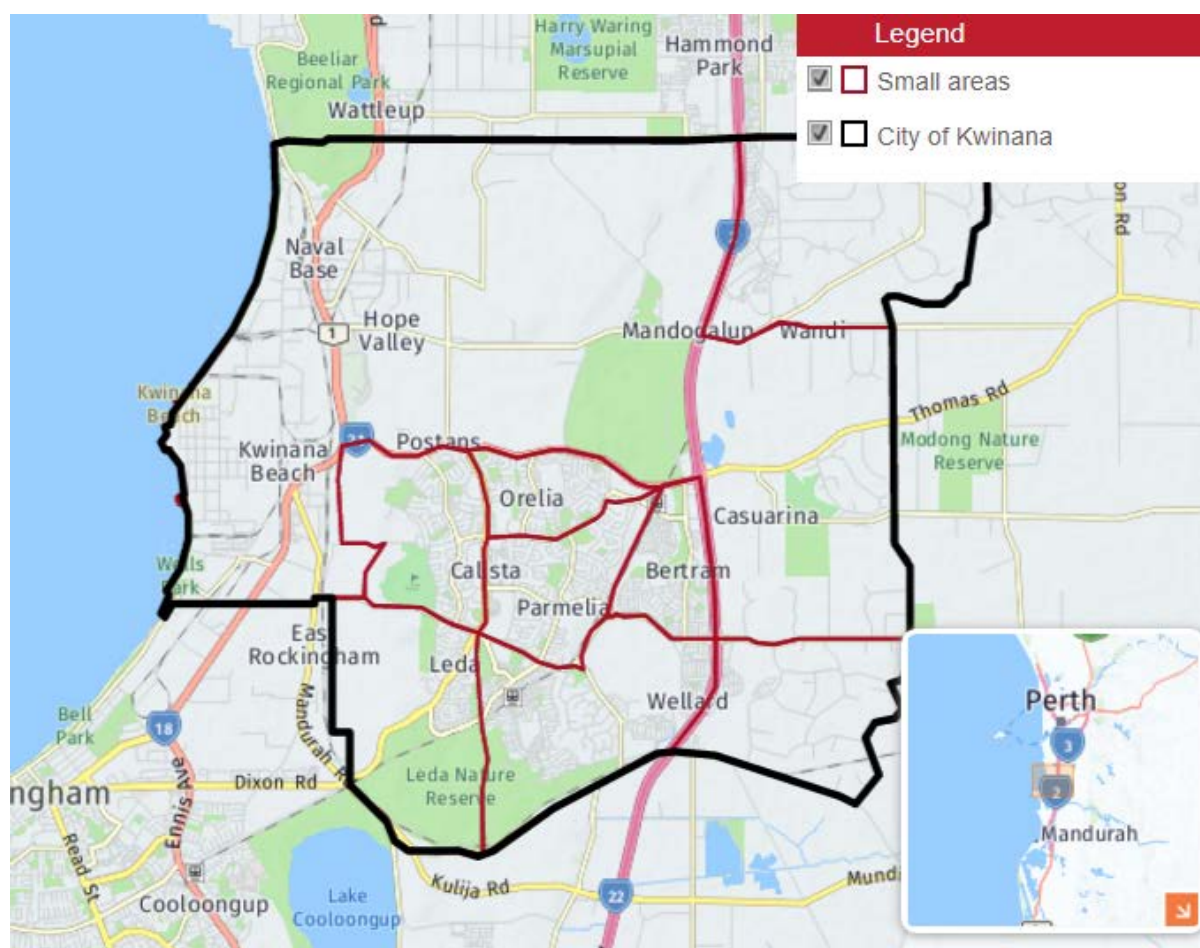


Figure 3. City of Kwinana context map

Source: Population and household forecasts, 2011 to 2036, prepared by .id, the population experts, May 2015.



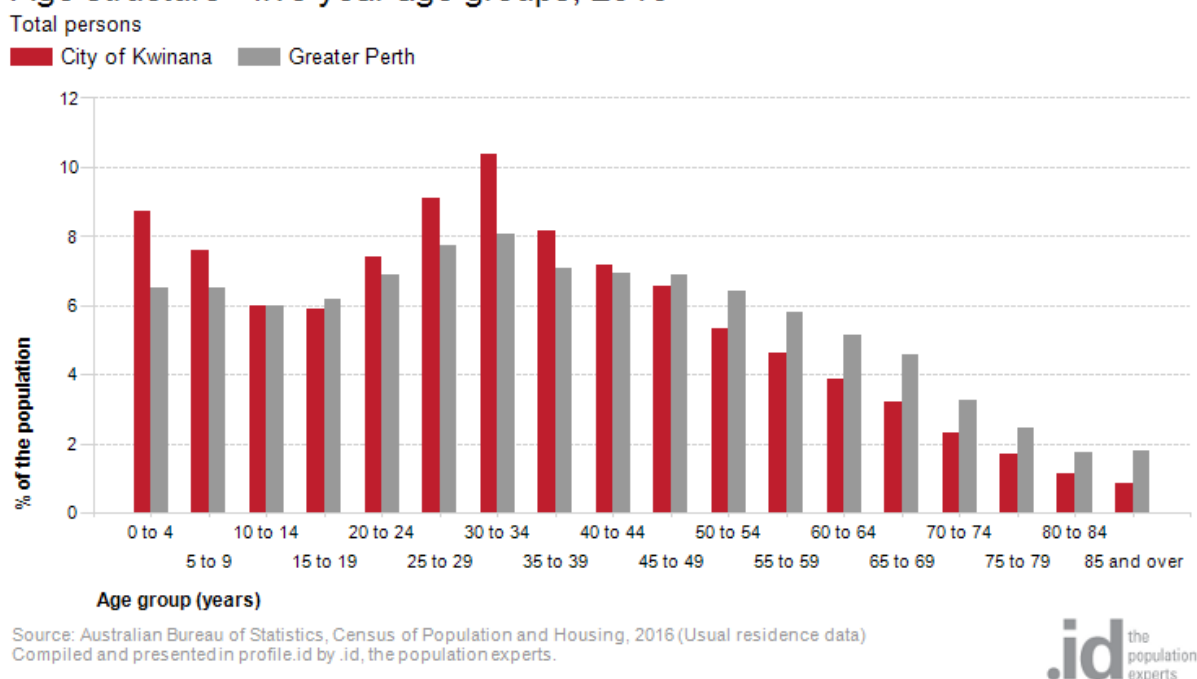
## 3.2. POPULATION TRENDS

The following population and household forecasts for City of Kwinana present what is driving population change in the community and how the population, age structure and household types will change each year between 2016 and 2036.

### Current Population

At 2016 Census the City of Kwinana had a resident population of 38,918 people, comprised of 51.3% male and 48.7% female residents (ABS Census, 2016). Between 2011 – 2016 the City experienced a 24% population growth, with the majority of this growth occurring in the urban areas of Bertram and Wellard (west). The predominant age ranges for people living within the city are between 30 to 34 years of age and between 25 to 29 years old. Population and resident age profiles have been shown in Figure 4.

#### Age structure - five year age groups, 2016



**Figure 4.** Estimated Resident Population and % Change, 2016

Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented by .id the population experts

### Future Population

Figure 5 summarises the population for the City of Kwinana and each of its small areas. This highlights how population change is affecting different parts of the Kwinana LGA in different ways. As seen from 2016 census data, the population within the area of Bertram, bound by the Kwinana Freeway (east) and Kwinana Railway Station (west), has exceeded growth projections, while the older, more established areas of Orelia and Parmelia - Kwinana Town Centre have remained relatively constant.

City of Kwinana	Forecast year						Change between 2011 and 2036	
Area	2011	2016	2021	2026	2031	2036	Total change	Avg. annual % change
City of Kwinana	30,697	39,941	51,563	62,695	73,679	84,207	+53,510	+4.12
Anketell - Casuarina	1,780	1,779	2,571	5,346	9,812	13,963	+12,183	+8.59
Bertram	5,352	6,089	6,771	6,851	6,742	6,672	+1,320	+0.89
Calista - Medina - Employment Area	4,347	4,680	4,882	5,043	5,139	5,207	+860	+0.72
Leda	3,509	3,450	3,479	3,400	3,356	3,336	-173	-0.20
Orelia	4,901	5,099	5,934	6,455	6,672	6,644	+1,743	+1.22
Parmelia - Kwinana Town Centre	6,468	6,851	8,685	10,746	12,310	12,330	+5,862	+2.61
Wandi - Mandogalup	924	2,882	4,722	7,196	9,564	15,528	+14,604	+11.95
Wellard (East)	714	2,978	4,593	6,011	7,366	7,524	+6,809	+9.88
Wellard (West)	2,701	6,133	9,927	11,647	12,719	13,003	+10,302	+6.49

**Figure 5.** Population forecast for Kwinana LGA local areas, 2011 to 2036

Source: Population and household forecasts, 2011 to 2036, prepared by [id.](#), the population experts, May 2015.

## Key Findings

- In 2016, the total population of the City of Kwinana was 38,918 people.
- It is expected to increase by over 31,900 people to 62,695 by 2026, at an average annual growth rate of 4.88%.
- This is based on an increase of over 10,900 households during the period, with the average number of persons per household rising from 2.69 to 2.79 by 2026.

## 3.3. POPULATION AGE TRENDS

The Age Structure of the City of Kwinana provides key insights into the level of demand for age based services and facilities such as child care. It is also an indicator of the City of Kwinana's residential role and function and how it is likely to change in the future. Five year age groups present a classic age profile of the population.

Between 2006 and 2016 the median age of Kwinana LGA remained relatively stable at 32 years of age (ABS Census, 2016). The median age of Kwinana LGA in 2016 is much lower when compared to Western Australia which had a median age of 36. Figure 7 below shows the change in age groups for the Kwinana LGA between 2006 and 2011. Notable historic trends over the two census periods showed most significant growth (as a proportion of overall population) was in the age group '25 to 34 years', which increased by 9.2%, this was followed by '0 to 4 years' and '30 to 34 years', which experienced an 8.9% and 8.5% increase respectively.

City of Kwinana - Total persons (Usual residence)	2011			2006			Change
Five year age groups (years)	Number	Greater Perth		Number	Greater Perth		2006 to 2011
		%	%		%	%	
0 to 4	2,593	8.9	6.6	1,754	7.6	6.1	+839
5 to 9	2,171	7.4	6.2	1,801	7.8	6.4	+370
10 to 14	1,940	6.6	6.4	1,828	7.9	6.9	+112
15 to 19	1,978	6.8	6.8	1,470	6.3	7.3	+508
20 to 24	2,142	7.3	7.5	1,724	7.4	7.3	+418
25 to 29	2,699	9.2	7.7	1,763	7.6	6.5	+936
30 to 34	2,470	8.5	7.0	1,881	8.1	7.0	+589
35 to 39	2,205	7.5	7.2	1,911	8.2	7.5	+294
40 to 44	2,214	7.6	7.4	1,660	7.2	7.5	+554
45 to 49	1,854	6.3	7.1	1,486	6.4	7.4	+368
50 to 54	1,601	5.5	6.5	1,335	5.8	6.8	+266
55 to 59	1,398	4.8	5.8	1,211	5.2	6.3	+187
60 to 64	1,223	4.2	5.3	1,012	4.4	4.6	+211
65 to 69	914	3.1	3.8	784	3.4	3.6	+130
70 to 74	729	2.5	3.0	646	2.8	2.9	+83
75 to 79	518	1.8	2.3	454	2.0	2.5	+64
80 to 84	318	1.1	1.8	272	1.2	1.8	+46
85 and over	260	0.9	1.6	203	0.9	1.5	+57
Total population	29,227	100.0	100.0	23,195	100.0	100.0	+6,032

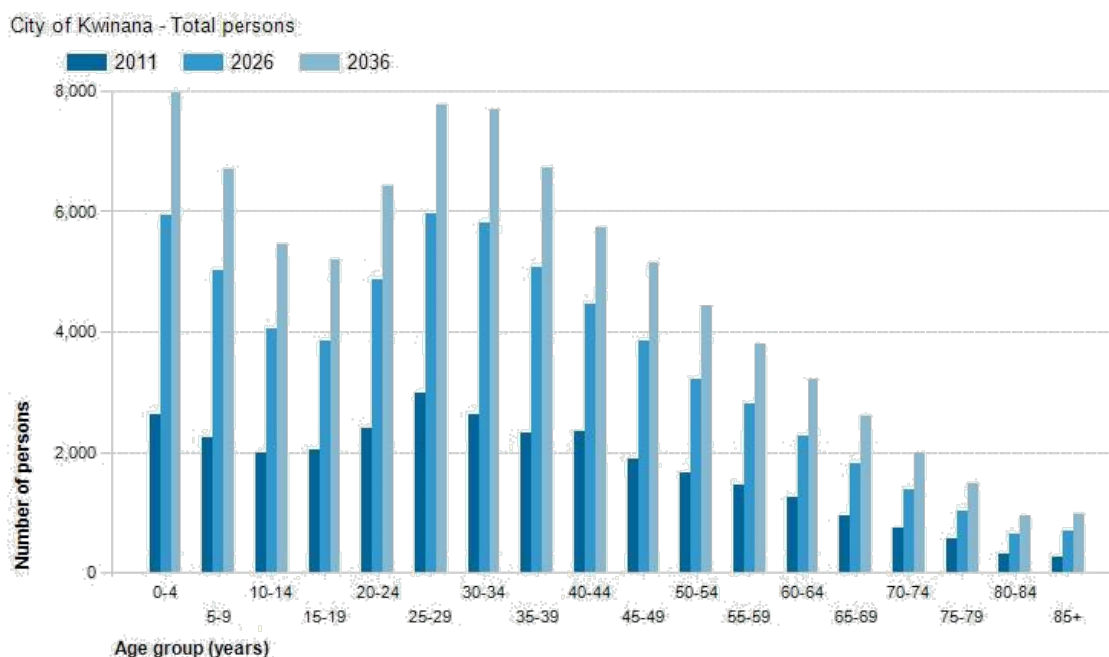
**Figure 6.** Age Change Kwinana LGA local areas, 2006 to 2011

Source: Population and household forecasts, 2011 to 2036, prepared by [id.](#), the population experts, May 2015.

Profiling how the age structure of the population is changing will be essential for planning appropriate age-based facilities and services, such as child care, recreation and aged care. The forecast age groups of the City of Kwinana is a function of the current age of the population as well as the age of people migrating into and out of the area. This in turn is driven by location (fringe, city centre, regional or rural) the existing housing stock (separate dwellings, medium or high density), the amount and type of new residential development (same as existing stock, or diversifying) and where the area is in a cycle of change.

Figure 7 shows the projected change in age groups for the Kwinan LGA between 2011 and 2036. Notable trends include:

- Expected twofold increase in the older age groups of '40 to 74 year olds';
- Expected increase in the ages groups '0 to 4 year olds', '20 to 24 year olds', '25 to 29 year olds' and '30 to 39 year olds';
- In 2016, the largest age group across the city was '30 to 34 year olds'. This trend is not expected to continue with '0 to 4 year olds' becoming the biggest age group by 2036.



**Figure 7.** Forecast Change in Age Groups Kwinana LGA (5 year age group), 2011 and 2036

Source: Population and household forecasts, 2011 to 2036, prepared by .id the population experts, May 2015.

### Key Findings

- In 2016, the dominant age structure for persons in the City of Kwinana was ages 30 to 24.
- The City of Kwinana has a larger percentage of 'Young Workforce' (19.5% compared to 15.8%)
- The largest increase in persons between 2011 and 2026 is forecast to be in ages 0 to 4, which is expected to increase by 3,304 and account for 9.5% of the total persons.
- The largest 5 year age group in 2026 is projected to be 25 to 29 years, with a total of 5,950 persons.

## 3.4. FAMILY STRUCTURE

Figure 8, summary of the household/family types in the City of Kwinana in 2016 compared to Greater Perth shows that there was a similar proportion of couple families with child(ren) and slightly lower proportion of one-parent families. Overall, 33.5% of total families were couple families with child(ren), and 12.8% were one-parent families, compared with 32.3% and 9.8% respectively for Greater Perth.

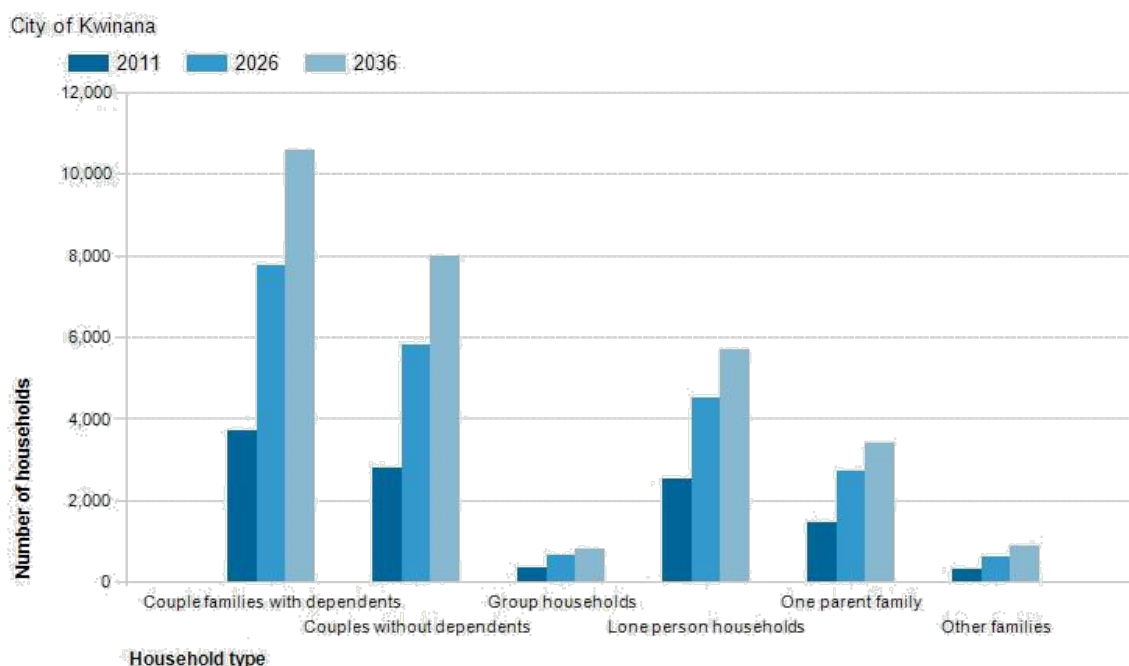
City of Kwinana - Total households (Enumerated)		NEW 2016			2011			Change
Households by type	⚡	Number ⚡	% ⚡	Greater Perth % ⚡	Number ⚡	% ⚡	Greater Perth % ⚡	2011 to 2016 ⚡
<b>a</b> Couples with children		4,622	33.5	32.3	3,370	31.7	31.6	+1,252
<b>a</b> Couples without children		3,195	23.1	25.4	2,527	23.7	25.7	+668
<b>a</b> One parent families		1,775	12.8	9.8	1,411	13.3	9.9	+364
Other families		176	1.3	1.3	129	1.2	1.4	+47
<b>a</b> Group household		416	3.0	3.8	340	3.2	4.0	+76
<b>a</b> Lone person		2,703	19.6	21.7	2,207	20.7	22.4	+496
Other not classifiable household		847	6.1	4.8	601	5.6	3.9	+246
Visitor only households		81	0.6	1.0	61	0.6	1.1	+20
<b>Total households</b>		<b>13,815</b>	<b>100.0</b>	<b>100.0</b>	<b>10,646</b>	<b>100.0</b>	<b>100.0</b>	<b>+3,169</b>

**Figure 8.** Household type, 2011 to 2016



Source: Australian Bureau of Statistics, Census of Population and Housing, 2016 (Usual residence data) Compiled and presented in profile.id by .id, the population experts.

Analysing the future household structure in City of Kwinana, especially in conjunction with age structure, provides insight to the role the area plays in the housing market. Usually areas such as Bertram with separate housing stock are dominated by families. Others, with more dense housing in inner city locations such as Parmelia have significant numbers of lone person households and couples without dependents.



**Figure 9.** Forecast Household Types Kwinana LGA, 2011 and 2036

Source: Population and household forecasts, 2011 to 2036, prepared by .id the population experts, May 2015.

### Key Findings

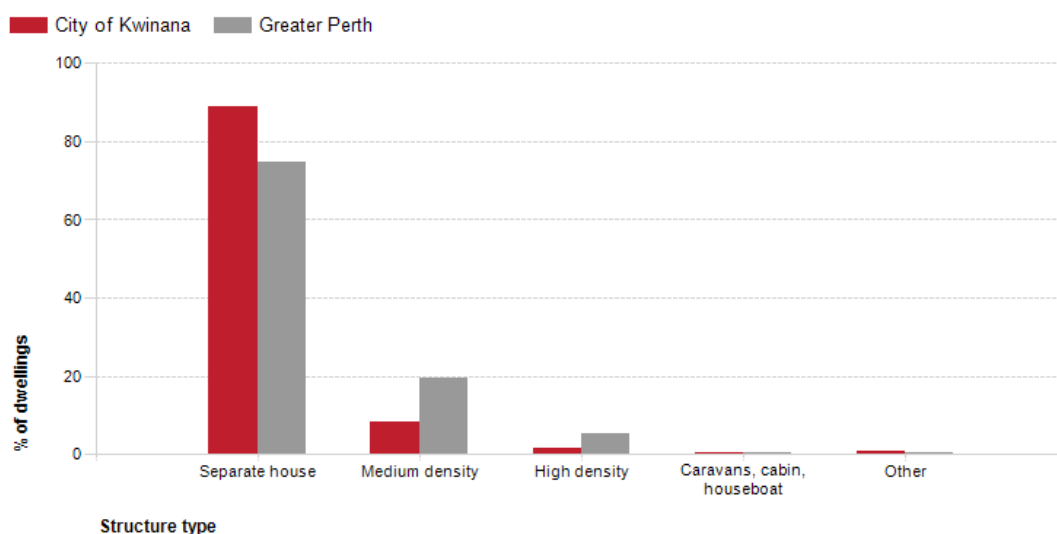
- In 2016, the dominant household type in the City of Kwinana was Couple families with dependents, which accounted for 32% of all households.
- The largest increase between 2011 and 2026 is forecast to be in Couple families with dependents, which will increase by 4,061 households and account for 35.1% of all households (Figure 9).
- In contrast Group households is forecast to increase by 321 households, to comprise 3.0% of all households in 2026, compared to 3.1% in 2011.

## 3.5. DWELLING AND DEVELOPMENT TRENDS

### Current Dwelling Types

Dwelling Type is an important determinant of the City of Kwinana's residential role and function. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households, often renting. Larger, detached or separate dwellings are more likely to attract families and prospective families. The residential built form often reflects market opportunities or planning policy, such as building denser forms of housing around public transport nodes or employment centres.

## Dwelling structure, 2016



**Figure 10.** Dwelling Structure, 2016

Source: Australian Bureau of Statistics, Census of Population and Housing, 2016 (Enumerated data) Compiled and presented in profile.id by .id, the population experts

Analysis of the types of dwellings in the City of Kwinana in 2016 shows that 88.9% of all dwellings were separate houses (Figure 10), 8.4% were medium density dwellings, and 1.5% were in high density dwellings, compared with 74.6%, 19.6%, and 5.1% in the Greater Perth respectively (ABS Census, 2016).

## Housing Role and Function

The primary housing market role that the City of Kwinana has played during the past 50 years was to provide housing opportunities for employees of local industry. In the last 10 to 15 years, the City has experienced a decline in the numbers of local jobs, combined with a significant increase in population. This has resulted from increased demand for housing in metropolitan Perth as well as improvements in transport infrastructure such as the Kwinana Freeway.

The variety of periods of settlement in the City mean that various suburbs are at quite different periods in the suburb lifecycle. In the older areas such as Medina and Calista, the original settlers have passed on, resulting in a diversity of age groups. Orelia has experienced new residential development in the last ten years resulting in a regeneration of the area. Significant levels of new residential development are expected over the forecast period in areas along the railway to Mandurah. This includes Bertram, Wellard, Leda, Casuarina and Wandi.

As described above, different areas within the City of Kwinana have slightly different functions based on both era of development and amount of new housing opportunities. Calista-Medina is expected to attract some younger families, while losing some young adults leaving home. Leda and Orelia are expected to continue to attract families in their development phase. New development areas such as Wellard and Wandi are expected to attract large number of young families with children. Parmelia-Kwinana Town Centre by contrast is expected to attract young adults in their teens and twenties in similar fashion to an inner city area. The variety of function and role of the small areas in the City of Kwinana means that population outcomes differ significantly across the LGA.

## 3.6. EMPLOYMENT PROFILE

### Employment Status

The City of Kwinana's employment statistics are an important indicator of socio-economic status. The levels of full or part-time employment, unemployment and labour force participation indicate the strength of the local economy and social characteristics of the population. Employment status is linked to a number of factors including [Age Structure](#), which influences the number of people in the workforce; the economic base and employment opportunities available in the area and; the education and skill base of the population ([Occupations](#), [Industries](#), [Qualifications](#)).

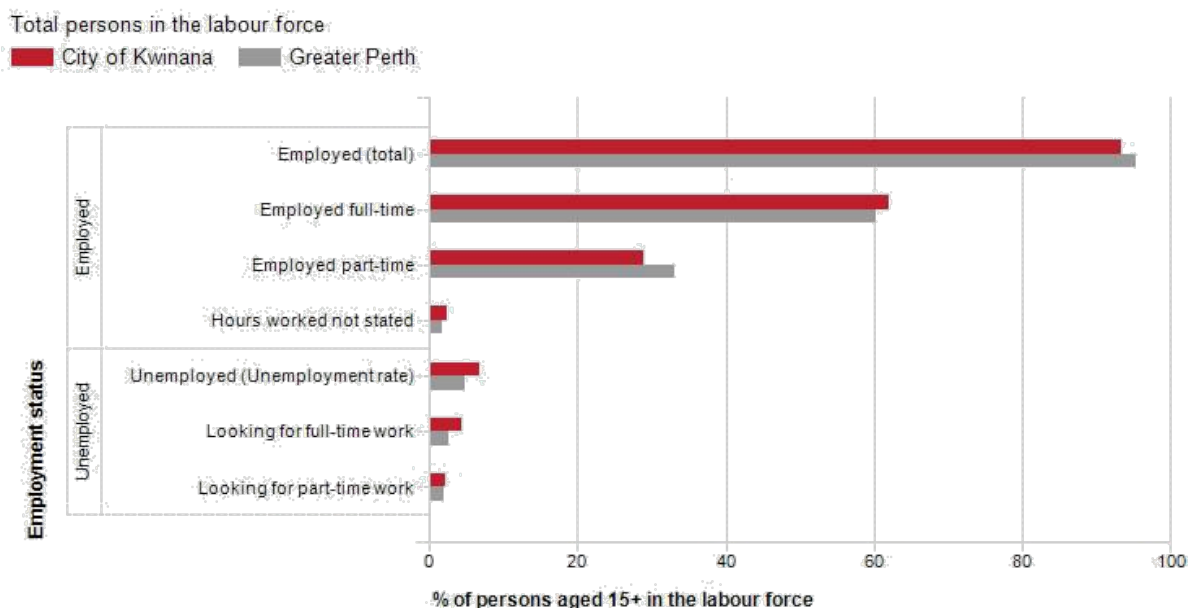


Figure 11. Employment Status, 2011

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Usual residence data) Compiled and presented in profile.id by .id, the population experts.

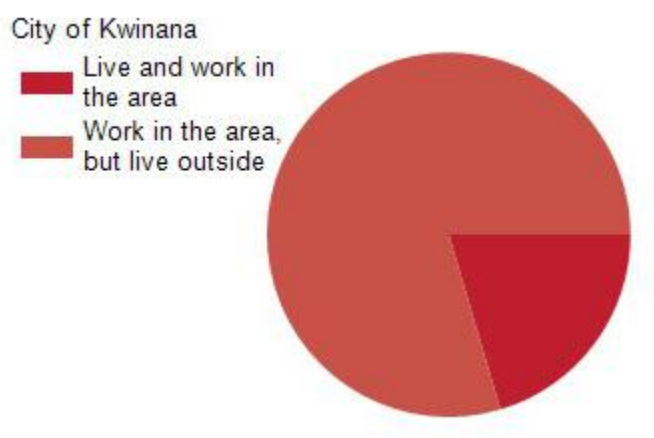
The size of the City of Kwinana's labour force in 2011 was 13,652, of which 3,962 were employed part-time and 8,450 were full time workers (ABS Census, 2011). Analysis of the employment status (as a percentage of the labour force) in the City of Kwinana in 2011 compared to Greater Perth shows that there was a lower proportion in employment (Figure 11), and a higher proportion unemployed. Overall, 93.3% of the labour force was employed (56.5% of the population aged 15+), and 6.7% unemployed (4.1% of the population aged 15+), compared with 95.2% and 4.8% respectively for Greater Perth.

The labour force participation rate refers to the proportion of the population aged 15 years and over that was employed or actively looking for work. *"The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being."* ([Australian Social Trends 1995](#)).

### Workers' Place of Residents

Journey to Work data sheds light on how many workers live locally, how many commute from other areas and which areas they commute from. Some areas attract a large external workforce because they have major employment centres or because local residents have a different set of skills or aspirations than the local jobs require. Understanding where workers reside assists in planning and advocacy for roads and public transport provision. It also helps to clarify economic and employment

drivers across areas and assists in understanding the degree to which the City of Kwinana provides local employment. As illustrated in Figure 12, approximately three quarters of people work in the area but live outside the City of Kwinana.

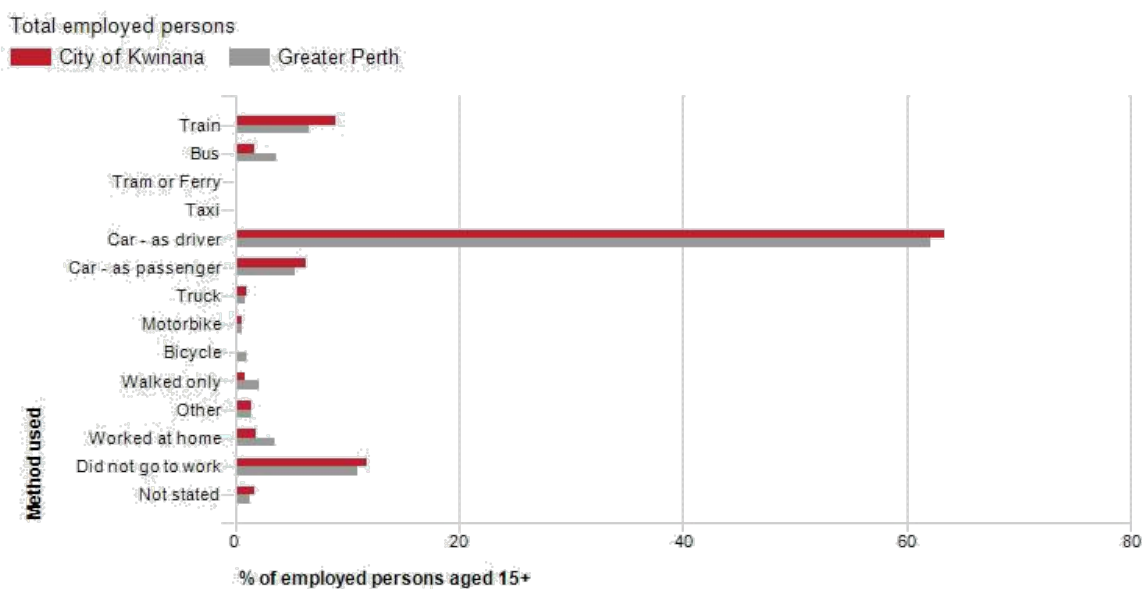


**Figure 12.** Residential location of Residential Workers, 2011

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Usual residence data) Compiled and presented in profile.id by .id, the population experts.

### 3.7. METHOD OF TRAVEL TO WORK

The City of Kwinana's commuting statistics reveal the main modes of transport by which residents get to work. There are a number of reasons why people use different modes of transport to get to work including the availability of affordable and effective public transport options, the number of motor vehicles available within a household, and the distance travelled to work.



**Figure 13.** Method of Travel to Work, Kwinana LGA, 2011

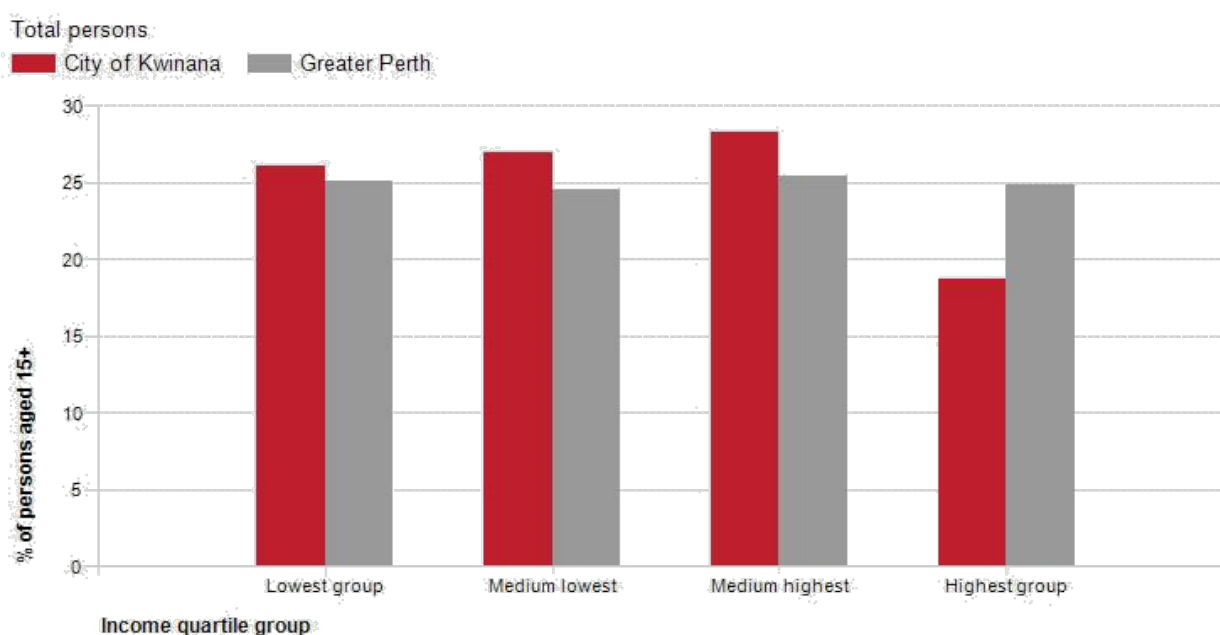
Source Australian Bureau of Statistics, Census of Population and Housing, 2011 (Enumerated data) Compiled and presented in profile.id by .id, the population experts.



Figure 13 analysis of the method of travel to work for residents living in the City of Kwinana in 2011, compared to Greater Perth, shows that 10.7% used public transport, while 71.4% used a private vehicle, compared with 10.4% and 68.9% respectively in Greater Perth (ABS Census, 2011).

### 3.8. INDIVIDUAL INCOME

The City of Kwinana's income statistics are an indicator of socio-economic status. With other data sources, such as Household Income, Qualifications and Occupation, they help tell the story of the area's economic opportunities and socio-economic status. Individual income levels are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile for the City of Kwinana in Figure 14 illustrates a greater portion in the medium highest quarterly (Profile.id 2011).



**Figure 14.** Individual Income Quarterlies, 2011

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Usual residence data) Compiled and presented in profile.id by .id, the population experts

### 3.9. IMPLICATIONS FOR LIVEABILITY & SOCIAL SERVICES

The socio-economic review for Kwinana LGA has highlighted a number of implications for this study:

#### **Population is expected to be younger over time**

The population of Kwinana is getting younger and it is expected that this trend will continue to 2036. The young population presents opportunities and challenges in relation to liveability and social services including:

- Stress on current community facilities, youth services, and other related social services. The increased level of service and provision of a holistic range of facilities required by a younger population.
- Programs and services will be needed for older people, especially those that address social isolation.
- Older people are becoming increasingly healthier, active, and productive. Retirement presents opportunities to engage in recreational and leisure pursuits and volunteering. This has implications for planning of community, cultural, and sport and recreation facilities as demand and usage of these facilities.
- As noted in the City of Kwinana Strategic Community Plan, there has been an increased requirement for aged care services and facilities in recent times.

#### **High proportion of families with young children**

Consistent with historic trends, families with children are the predominant household type in Kwinana representing 48.5% of all family types. Consequently, there will be requirements for appropriate children's and family services in the region. Venues such as community or neighbourhood centres create a valuable resource offering a range of activities including parenting classes, playgroups and childcare.

#### **High proportion of separate households**

Separate housing makes up 90% of dwelling types in Kwinana. This reflects the need for increased housing diversity and urban consolidation, as required by Directions 2031 and Beyond.

#### **High rate of private vehicle use**

Journey's to work highlighted 71.4% of people in the City of Kwinana drive solo, while only 10.7% catch public transport. This reflects opportunities to densify housing development (population densities) around key centres in order to create viable public transport services.

#### **Local Economy**

Planning needs to be proactive and holistic, understanding supply chains, to enable economic development to occur. Eliminate unnecessary red tape from the planning process.

- Continue to strengthen the existing strong relationships with industry and foster new relationships with local businesses.
- Provide increased diversity of employment such as retail and mixed business to cater for a wider employment market.

4.0

# QUALITY OF LIFE INDICATORS

QUALITY OF LIFE INDICATORS

## 4.0. Review of Quality of Life Indicators

Within the focus of the Kwinana Local Government Area, the following review of Quality of Life Indicators aims to assess the measures of progress for achieving a liveable city and greater community wellbeing. This section outlines the current status and historic trend validated by what the community have said in order to identify potential impacts, challenges and opportunities to inform future strategies and areas of priority.

The indicators act as a spotlight to inform future strategies for ensuring the city is a place that offers an appropriate level of diversity of activities and experiences, a place that provides for people of all ages and backgrounds, and reinforces the unique qualities of the place to be embraced and celebrated.

### STRATEGIES:

Strategies are seen as critical first steps to be undertaken in order for additional steps to be addressed. Where these have been indicated in **bold**, these are identified as high priority areas to be addressed.

Priorities should be informed through consideration of criteria such as:

- Level of impact - for achieving the Cycle and Walking Network Plan objectives and aspirations
- Change making - actions resulting in major transformation or innovation
- Strategic rationale - linking the City Vision or other major strategies including the Healthy Lifestyle Kwinana Plan
- Affordability - resources capacity, ongoing funding and maintenance considerations, leveraging off private investment and the ability to stage actions
- Project readiness - degree to which projects can be readily commenced
- Complexity - degree to which actions involve multiple players, require longer lead times or major changes in legislation etc
- Sustainability - creation of resilient and adaptable physical environments, and
- Understanding critical paths and actions that have to happen first to support others



**Table 3.** Framework for Quality of Life Indicators for Kwinana

Theme	Domain	Indicators
Health Check	Early Childhood	Australian Early Development Index
	Mental health	Psychological distress
	Physical health	Quality of Life
		Obesity
		Prevalence of Type 2 Diabetes
		Adult Health Risk
		Adequate physical exercise
Sense of Place	Personal & Community Safety	Perceptions of Safety
		Incidence of Crime (person/property)
	Citizen Engagement	Opportunity to Have a Say on Important Issues
		Perceptions of Involvement in Local Issues & Community Activities
	Community Connectedness	Perceptions of Feeling Part of the Community
		Volunteering rates
		Youth Earning and Learning
Public Open Space	Quality of spaces	Quality / appearance of public space playgrounds, parks and reserves
		Quality of Streetscapes
Movement Networks	Connectivity between destinations	Public transport patronage
		Dedicated walking and cycling trails
		Road safety
		Transport limitations
	Safety	Perceptions of traffic safety
Community Facilities & Key Destinations	Services Availability	Perceptions of Access to Services and Facilities
		Access to Services (shops, cafes, restaurants etc)
		Opportunities to Participate in Sporting and Recreation Activities
		Major Services Presence
	Destinations	Distance to Primary Education Services
		Distance to Secondary Education Services
		Journeys to Work
		Employment rate
Housing Diversity	Housing choice	Housing affordability
		Dwelling structure
		Household structure

# 4.1 Health Check

Theme	Domain	Indicators
Health Check	Early Childhood	Australian Early Development Index
	Mental Health	Psychological Distress
		Quality of Life
	Physical Health	Obesity
		Type 2 Diabetes
		Adult Health Risk
		Adequate physical exercise

## DOMAIN INDICATORS

### Australian Early Development Index

The Australian Early Development Census (previously known as the Australian Early Development Index or AEDI) is a population measure of young children's developmental progress as they enter school. The AEDI is a population measure of young children's development based on a teacher-completed checklist and measures five developmental domains:

- Physical health and well being
- Social competence
- Emotional maturity
- Language and cognitive skills
- Communication skills and general knowledge
- Social competence

According to the Australian Early Development Census (AEDC), 22 per cent of children starting school are developmentally vulnerable in one or more AEDC domains (physical health and wellbeing; social competence; emotional maturity; language and cognitive skills; communication skills and general knowledge). On these figures, Australia has 60 000 developmentally vulnerable children in their first year of formal, full-time school (Commonwealth of Australia, 2016). These children are less likely to make successful transitions to school and are at risk of poorer long-term educational outcomes.

### Psychological Distress

The remarkable progress in physical and material wellbeing for most Australians over the twentieth century has not necessarily been matched by gains in mental and subjective wellbeing. Good mental health is fundamental to the wellbeing of individuals, their families and the population as a whole. Although largely 'invisible', mental health problems and mental illness are a major cause of poor health in Victoria. It is estimated that they will affect more than one in five adults in their lifetime. Mental health problems and mental illness include a range of cognitive, emotional and behavioural disorders that interfere with the lives and productivity of individuals ([communityindicators.net.au](http://communityindicators.net.au)).

### **Quality of Life**

Quality of life measures the fit between a person's hopes and expectations and their present experience. Objective quality of life is about fulfilling the societal and cultural demands for material wealth, social status and physical well being, whereas subjective quality of life is about feeling good and being satisfied with things in general. The overall quality of life reflects the difference, that is, the gap between the hopes and expectations of a person and their present experience.

### **Obesity**

The World Health Organisation has declared that obesity is a disease of pandemic significance, which threatens the developing world, as well as developed countries (Binns, 2006). The increase in the population who are considered obese (adults with a Body Mass Index greater than 30) has been increasing rapidly over the past twenty five years. In 1980, one in 14 Australians were obese. Based on current trends, by 2025, a third of the population could be obese (Binns, 2006). The health problems and consequences of obesity include muscular-skeletal problems, cardiovascular disease, some cancers, sleep apnoea, type 2 diabetes and hypertension (Department of Health and Aaina, 2006).

### **Type 2 Diabetes**

Type 2 diabetes is sometimes described as a 'lifestyle disease' because it is more common in people who do insufficient physical activity and are overweight or obese. It is strongly associated with high blood pressure, high cholesterol and an 'apple' body shape, where excess weight is carried around the waist.

Often, Type 2 diabetes has no symptoms, although common symptoms include: being more thirsty than usual; passing more urine; feeling tired and lethargic; slow-healing wounds; itching and skin infections; blurred vision; and mood swings. Long term effects include reduced lifespan, damage to vessels and arteries which can lead to cardiovascular disease, stroke, and heart attack. Other long term effects include eye problems, foot problems, erectile dysfunction, fungal infections, kidney disease and nerve damage.

### **Adult Health Risk**

Research has shown that socio-economic and educational disadvantage is strongly linked to smoking. Addiction and substance misuse are social determinants of health. Alcohol dependence and misuse, illicit drug use and tobacco smoking are the biggest contributors to early mortality and morbidity (Keleher and Murphy, 2001). Smoking is a significant cause of many diseases, including coronary heart disease, stroke and numerous cancers, and it is one of the leading causes of death in Victoria. Among all lifestyle-related risk factors, smoking is responsible for the greatest burden of premature death and disability in the state. Tobacco smoking accounts for almost 8.2 per cent of disability-adjusted life years for Victoria.

### **Adequate Physical Exercise**

Nationally, there is a strong interest in the health related benefits of exercise. Individuals who participate in physical activities are healthier in mind and body and have a reduced risk of cardiovascular and related diseases. Adequate levels of physical activity to derive health benefits may also be indicative of striking a balance between work and life and has links with mental health. Participation in sporting activities is also related to interactions with the wider community. Participation builds social cohesion and connectedness, thereby reducing isolation, a recognised social determinant to health.

Australian Early Development Index	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Proportion of children "developmentally vulnerable" (0-10th percentile) on two or more AEDI domains</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i>
Key Findings	
<p><b><u>Current State:</u></b></p> <ul style="list-style-type: none"> <li>11.8% of children in 2015 were identified as developmentally vulnerable in two or more domains (as compared to 10.5 for Greater WA).</li> </ul> <p><b><u>Historical Trend</u></b></p> <ul style="list-style-type: none"> <li>Historically this has declined from 18.3% in 2009 and 17.7% in 2012.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Children experiencing high rates of vulnerable and at risk across any of the domains are less likely to make successful transitions to school and are at risk of poorer long-term educational outcomes. This highlights the need to provide greater services for families with young children to enable early diagnosis of health concerns.</li> <li><b>Good access to parks and natural areas of open space with facilities that encourage early childhood physical activity and nature-based play as well as engagement with other children within the community is important beyond the physical activity benefits but for creating a sense of place and community.</b></li> </ul>	

Psychological Distress	
Measure	Data Sources
<ul style="list-style-type: none"> <li>ASR per 100 people aged 18 years and over with high or very high psychological distress, based on the Kessler 10 Scale (K10) (2014-15)</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i>
Key Findings	
<p><b><u>Current State:</u></b></p> <ul style="list-style-type: none"> <li>14.4 people aged 18 years and over were estimated to have high or very high psychological distress (as compared to 9.9 for Greater Perth)</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Parks and other areas of public open space provide local destinations for people to walk and cycle to and be active in; provide exposure to nature which can be restorative and positive mental health benefits; and places for social interaction which is critical for creating and maintaining community cohesion and building social capital.</li> <li><b>The provision of public open spaces is thus a key factor in promoting active living and providing important physical, psychological and social health benefits for individuals and the community</b> (Heart Foundation, 2017).</li> </ul>	
Evidence	



- Department of Health and Aged Care & Australian Institute of Health and Welfare (DHAC & AIHW) 1999c.
- National Health Priority Areas report: mental health 1998. Canberra: DHFS and AIHW.

Quality of Life	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Community perceptions on their quality of life</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>60% of respondents classify the quality of life in Kwinana as 'thriving' – having positive views of their present life situation and have positive views of the next five years.</li> <li>37% of respondents had a moderate view of their present situation OR moderate OR negative view of their future.</li> </ul> <b><u>Current Response:</u></b>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>A good sense of place can foster a positive emotional attachment to a neighbourhood and community, levels of interaction between members of the community and formal participation or involvement in neighbourhood and community organisations.</li> <li><b>More walkable and mixed-use environments with connected street networks promote neighbourly interactions, social capital and sense of community.</b></li> <li><b>The provision of sports and recreation facilities are important places for regular social interaction and the development of a sense of community</b> (Heart Foundation, 2017).</li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li>Cummins, R. A., Eckersley, R., Pallant, J., Van Vugt, J., Misajon, R. (2003). Developing a National Index of Subjective Wellbeing: The Australian Unity Wellbeing Index. <i>Social Indicators Research</i>, 64, 159 – 190.</li> </ul>	

Obesity	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Percentage of people who are obese according to a Body Mass Index (BMI) of 30 or greater</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i>  Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b><u>Current State:</u></b> <ul style="list-style-type: none"> <li>30.7 of people aged 18 years and over who were estimated to be obese (as compared to 23.4 for Greater Perth)</li> <li>18.7 of children aged 12-17 years who were estimated to be obese (as compared to 19.2 for Greater Perth)</li> </ul> <b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>45% of respondents reported to consume 1+ fast food meal a week</li> </ul>	

Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>• <b>Evidence indicates that the presence of footpaths is important to encourage general and recreational walking across the age groups.</b></li> <li>• <b>Proximity to bus stops and rail stations has also been positively associated with active transportation and walking for adults and older adults.</b></li> <li>• The design of the public transport stops should also provide both shade and shelter and accommodate seating or places to lean – making public transport more accessible for users who have difficulty standing for extended periods, such as the elderly.</li> <li>• Improve infrastructure and promotion of the health benefits of increase levels of physical activity (Heart Foundation, 2017).</li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li>• <a href="#">Department of Health and Ageing, Australian Government, <i>About Overweight and Obesity</i>, 2006</a></li> <li>• Flood V, Webb K, Lazarus R &amp; Panf G 1999, 'Use of self-report to monitor overweight and obesity in populations: some issues for consideration', Australian and New Zealand Journal of Public Health, vol. 24, pp. 96–9.</li> <li>• Australian Institute of Health and Welfare &amp; Australian Department of Health and Family Services 1997, First report on national health priority areas 1996, Canberra.</li> <li>• World Health Organisation 1997, Obesity: preventing and managing the global epidemic, Geneva.</li> <li>• Australian Bureau of Statistics 2001, National Health Survey 2001, cat. no. 4364.0, Canberra.</li> </ul>	

Type Two Diabetes	
Measure	Data Sources
<ul style="list-style-type: none"> <li>• ASR (Age Standard Rate) per 100 estimated number of people aged 18 years and over with diabetes mellitus</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i>
Key Findings	
<b>Current State:</b> <ul style="list-style-type: none"> <li>• 6.3% of people aged 18 years and over are estimated to have diabetes mellitus within Kwinana (as compared to 5.5 for Greater Perth).</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>• Type 2 diabetes is sometimes described as a 'lifestyle disease' because it is more common in people who do insufficient physical activity and are overweight or obese. It is strongly associated with high blood pressure, high cholesterol and an 'apple' body shape, where excess weight is carried around the waist.</li> <li>• <b>Evidence indicates that connected street networks facilitate active walking for transport for all age groups.</b></li> <li>• <b>Street trees provide a multitude of environmental, economic, social, and health and wellbeing benefits and are an important consideration in the planning and design processes of our urban (and suburban) areas for enhancing walkability</b> (Heart Foundation, 2017).</li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li>• Austin, T., Shoemark, S., Stokes, S., Stone, S., and Terril, A. (2001). Part 1-Developing A Draft Set of Sustainability Indicators for the Shire of Cardinia. Graduate School of Environmental Science, Monash University, November 2001.</li> </ul>	

Adult Health Risk	
Measure	Data Sources
<ul style="list-style-type: none"> <li>ASR per 100 people aged 18 years and over with a waist measurement estimated to indicate an increased/substantially increased risk of developing chronic disease</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i>
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>61.1 people aged 18 years and over who were estimated to be at risk of developing chronic disease (as compared to 56.5 for Greater Perth).</li> </ul> <p><b>What the Community Said:</b></p> <ul style="list-style-type: none"> <li>45% of respondents reported to have excellent or very good health.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Integrated community facilities play a vital role in creating healthy communities, enhancing wellbeing, and building social networks.</li> <li><b>Shared use of sport and recreation facilities helps to increase community access to these services, as well as providing open spaces of a sufficient size to accommodate sporting spaces and infrastructure.</b> These are important places for regular physical activity, social interaction and the development of a sense of community (Heart Foundation, 2017).</li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li><a href="#">Department of Health and Ageing, Australian Government, Fact Sheet, How Smoking Can Harm You, 2007.</a></li> <li>Department of Human Services Victoria, 2005, The Victorian burden of disease study: morbidity and mortality in 2001, Melbourne.</li> </ul>	

Adequate Exercise	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Portion of the community who exercise daily</li> </ul>	(Catalyse, 2016)
Key Findings	
<p><b>What the Community Said:</b></p> <ul style="list-style-type: none"> <li>41% of respondents identified their level of activity as active or very active</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Good access to recreational facilities is associated with physical activity among children, adolescents, adults and older adults.</li> <li><b>The creation of compact mixed-use neighbourhoods with a diverse mix of co-located destinations (including employment, education, retail and recreation land uses) integrated with public transport and within close proximity of a variety of residential dwelling types allows residents to undertake and fulfil a variety of daily activities and needs (i.e., live, work, play) in their neighbourhood and encourages active and sustainable modes of transport</b> (Heart Foundation, 2017).</li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li><a href="#">Cardiovascular Disease (Clinical) DSS - Exported from METeOR (AIHW's Meta Data OnLine registry)</a></li> <li>Egger, G., Donovan, R., Giles-Corti, B., Bull, F. &amp; Swinburn, B. (2001). Developing National Physical Activity Guidelines for Australians. <i>Australian and New Zealand Journal of Public Health</i>, Vol 25(6), 561-563.</li> </ul>	

## 4.2 SENSE OF PLACE

Theme	Domain	Indicators
<b>Engaged &amp; Connected Communities</b>	Personal & Community Safety	Perceptions of Safety
		Incidence of Crime
	Citizen Engagement	Opportunities to Have a Say on Important Issues
		Perceptions of Involvement in Community Activities
	Community Connectedness Citizen Engagement	Feeling Part of the Community
		Volunteering
		Youth Earning and Learning

### DOMAIN INDICATORS

#### Perceptions of Safety

Neighbourhoods which are perceived as safe, foster community participation, encourage physical activity, community connectedness and add to the health and well-being of local residents and visitors. Neighbourhood safety can only be achieved through the development and support of partnerships, within local communities, with business, residents, community groups, police, agencies and councils, which identify local solutions to local issues. The built environment and the way neighbourhoods are designed and maintained, impact greatly on perceptions of safety and are critical factors in any strategy for improving safety in neighbourhoods.

#### Crime (persons/property)

Crime impacts negatively on the community in terms of personal security, the attractiveness of an area for recreation, and on general amenity. The incidence of crime is both a cause and symptom of low quality of life, and is associated with poverty, exclusion and the need for support services.

#### Opportunity to Have a Say on Important Issues

Community wellbeing depends on people having a say on important issues and a sense of choice or control over their lives. In a democratic community, people participate in decision making via the local government. People have confidence that government will make good decisions so that individuals feel that their voice is being heard in the wider community leading to greater community wellbeing.



### **Perceptions of Community Involvement in Local Issues & Activities**

An active community is involved in local issues and activities moving beyond those managed by local government. Community involvement in local issues and activities transfers knowledge amongst community members leading to greater collective knowledge, community strength and social connectedness as individuals assemble and mobilize on issues and activities significant to their community. A strong community is empowered, supportive and resilient leading to increased community wellbeing.

### **Feeling Part of the Community**

Community strength is found in the human relations that people draw upon for identity, interaction and support. A strong community is one where people understand and work towards sustainability and is inclusive of their most disadvantaged groups. To do this people need to be involved, feel capable of working through issues and feel supported by their fellow citizens.

### **Volunteering**

The number of volunteers in the community is a measure of community engagement and social connectedness. The volunteer rate is influenced by age, gender and the current social climate. Although difficult to measure, there is a strong interest among economic analysts in the value of unpaid work because of its significance and because of linkages between unpaid work and the market sector of the economy (ABS 2002).

### **Youth Earning & Learning**

In 2012 a quarter of Australians aged 18-24 were not studying, learning new skills or working, according to the COAG Reform Council. In the same year, our teenagers were three times more likely to be unemployed than adults. Youth living in areas of high disadvantage are particularly at risk of disengaging from work or study. If a young man or woman comes from a home where neither parent works, they are less likely to have the family contacts to land that all-important first job. And, without the financial means to access further training they face a double barrier (Mission Australia. 2012).

Perceptions of Safety	
Measure	Data Sources
<ul style="list-style-type: none"> <li>ASR per 100 - Estimated number of people aged 18 years and over who felt very safe/safe walking along in local areas after dark.</li> </ul>	<p>PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i></p> <p>Catalyse (2016) Community Services and Wellbeing Scorecard</p>
Key Findings	
<p><b><u>Current State:</u></b></p> <ul style="list-style-type: none"> <li>2014 estimates show 33% of people aged 18 years and over who felt very safe/safe walking along in local areas after dark (as compared to 48.5% for Greater Perth)</li> </ul> <p><b><u>What the Community Said:</u></b></p> <ul style="list-style-type: none"> <li>Safety and security is seen as a key area to address in the City of Kwinana (Catalyse, 2016)</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Residents who feel unsafe in their local neighbourhood may constrain their physical and social activities, especially in public places and spaces, negatively impacting on their levels of physical activity and sense of community or social capital, which in turn deters people from walking in their neighborhood.</li> <li><b>Sport and recreation centres / facilities should be located within walkable distances and/or supported by public transport routes with good pedestrian and cycle way access, well-lit entrances and boundaries in accordance with Crime Prevention Through Environmental Design (CPTED) principles.</b> This includes the provision of well-lit car parks, footpaths and secure cycle storage areas for safe access after dark. Pedestrian routes should also be planned away from areas of potential concealment (Heart Foundation, 2017).</li> </ul>	

Incidence of Crime (Person/Property)	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Rate of offences against the person (excluding domestic violence incidents) per 100,000 people. Rate of offences against property per 100,000 people.</li> </ul>	(Western Australian Police, 2016)
Key Findings	
<p><b><u>Current State:</u></b></p> <ul style="list-style-type: none"> <li>Over the last five years, the dominate crime statistics have been recorded for assault (117) and burglary (89).</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>In recent years, much consideration has been given to the concept that the design of the built environment can lead to a reduction in the fear and incidence of crime and an improved quality of life.</li> <li>Crime prevention through environmental design is based on the principles that peoples' behaviour within the urban environment, in terms of the possibility of offending as well as an individual's perceptions about their safety, is influenced by the design of that environment.</li> </ul>	

- **Attributes of the built environment and street design that promote visibility and natural surveillance or reflect social control and place attachment, have well documented associations with feeling safe.**
- **A mix of uses, different building designs and the creation of vibrant and inviting town centres are also effective tools in designing out crime. Neighbourhood and town centres should have a range of uses and activities that generate activity at different times of the day and night. Night-time activation of places can also be accomplished through the provision of adequate street lighting and illumination across footpaths, entrances to buildings and at bus stops and train stations.**
- Permeable fencing, landscaping and surveillance of the area from buildings and land uses also help to create opportunities for passive surveillance (healthyactivebydesign.com.au).

### Opportunity to Have a Say on Important Issues

Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ People who feel they can have a say on important issues: expressed as a % of the adult population.</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>• The local community feel the City clearly explains the reasons for its decisions and how residents views have been taken into account.</li> <li>• The City has a strong social media presence enabling the community to have their say on important issues</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>• <b>Community engagement allows for people to gain better connections into and within the community, it ensures that services are designed to meet specific needs of the people using them.</b></li> <li>• It is recommended that online surveys be regularly utilised by the City to enable the community to have a say and capture ideas and levels of satisfaction with regard to local planning, facilities, events and spaces e.g. Social Pinpoint (socialpinpoint, 2016) which provides a simple online tool to engage with communities and stakeholders, reaching a broader audience and increasing participation rates.</li> </ul>	

### Perceptions of Involvement in Community Activities

Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ People who feel it is an active community where people get involved in local issues and activities, expressed as a percentage of the adult population.</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
<b>Key Findings</b>	
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>• 65% of respondents belong to 1 or more groups or associations.</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>• Community involvement keeps local society functioning through connecting people and it creates a sense of ownership in the local area. Greater levels of community involvement will bring greater levels of community</li> </ul>	

investment both socially and fiscally promoting the sense of community and creating an environment the community can be proud of.

- A socially sustainable community is one with many connections and a high level of volunteering.
- **Having a mix of places within walking and cycling distances where they can meet and interact with other people (both deliberately and through chance encounters) encourages social interaction and promotes lively and activated neighbourhoods that make people feel connected – both to each other and their neighbourhood** (Heart Foundation, 2017).

### Perceptions of Feeling Part of the Community

Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ Satisfaction with feeling part of the community.</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
<b>Key Findings</b>	
<b><u>What the Community Said:</u></b>	
<ul style="list-style-type: none"> <li>• 51% of respondents felt like they belonged in the local community. This is significantly lower than industry comparison scores.</li> </ul>	
<b>Future Impacts and Opportunities:</b>	
<ul style="list-style-type: none"> <li>• A growing body of evidence suggests that the way we design and build our neighbourhoods and communities affects residents' social connections and interactions, their sense of community and social capital which in turn may influence their levels of physical activity and mental health.</li> <li>• A sense of community creates a shared faith that everyone is committed to creating a better Kwinana. It creates a sense of belonging and trust while fulfilling the needs of the community in terms of a support network, conversation and inspiration. It creates positive experiences with others to promote residents to feel involved and live in the town longer.</li> <li>• <b>Investment in social infrastructure can help build the social capital and fabric of a community by enabling active living, learning opportunities, social interactions and supporting programs that help people innovate, express themselves and adapt to major life events. It is social capital that makes a community liveable, inclusive, competitive and diverse</b> (Heart Foundation, 2017).</li> </ul>	

### Volunteering

Measure	Data Sources
<ul style="list-style-type: none"> <li>• People who do voluntary work for organisations or groups, as a percentage of the population.</li> </ul>	PHIDU (2017). <i>Social Health Atlas of Australia, Western Australia</i> RAI, (2016) Insight Australia's Regional Competitiveness Index
<b>Key Findings</b>	
<b><u>Current State:</u></b>	
<ul style="list-style-type: none"> <li>• 11.30% of people aged 15 years and over participated in voluntary work (as compared to 15.6% for Greater Perth).</li> </ul>	



- Analysis of the voluntary work performed by the population in the City of Kwinana in 2011 compared to Greater Perth shows that there was a lower proportion of people who volunteered for an organisation or group.
- Overall, 11.3% of the population reported performing voluntary work, compared with 15.6% for Greater Perth.
- (National ranking, 531 out of 563 LGAs)

#### Future Impacts and Opportunities:

- Volunteers contribute economic value to businesses and organisations that could otherwise not afford to pay employees. **Given the high participation of volunteering within the sport and recreation sector, initiatives should be explored to promote volunteering within other sectors which may benefit from this support.**
- Volunteering provides mentoring and role modelling for the young and disadvantaged within the community. It is recognised as a stepping stone for people to gain new skills, leading to future employment and career opportunities.
- Volunteering opportunities should correlate with recognised industry growth sectors. The benefit of this is multi-faceted in that it provides local youth with exposure to emerging industry sectors, provides local resources to new/growing businesses and provides initiatives to help retain residents.

### Learning and Earning

#### Measure

- % of people learning or earning at ages 15-19 years old.

#### Data Sources

PHIDU (2017). *Social Health Atlas of Australia, Western Australia*  
RAI, (2016) Insight Australia's Regional Competitiveness Index

#### Key Findings

##### Current State:

- 65.7% of people between the ages of 15 – 19 are learning or earning (as compared to 79.9% for Greater Perth)
- National ranking 479 out of 563 LGAs

#### Future Impacts and Opportunities:

- Traditional neighbourhoods tend to contain a diverse mix of destinations integrated within close proximity of a variety of residential dwelling types. This allows residents to undertake and fulfil a variety of daily activities and needs (i.e., live, work, play) in their neighbourhood.
- **A key intent of creating walkable neighbourhood environments should be to provide for the diverse daily needs of a community through the provision of a mix of destinations that attract people for a variety of activities.**
- Living within close proximity to a mix of destinations is associated with higher levels of active transport across all age groups (Heart Foundation, 2017).

## 4.3 PUBLIC OPEN SPACE

Theme	Domain	Indicators
Public Open Space	Quality of spaces	Quality and appearance of public space playgrounds, parks and reserves
		Appearance of Streetscapes

### DOMAIN INDICATORS

#### Appearance of Public Open Space

Satisfaction with the built environment contributes to overall feelings of well-being. The amount and type of open space is a key element of urban design and impacts on people's perceptions of 'neighbourliness' and safety. The type of open space also determines the range of recreation and leisure opportunities. Open space is often centred around areas of specific importance such as historic buildings, cultural centres, icons, parks and gardens. Open space acts to cement relationships within our communities and with the natural world. The amenity value of open space can be seen in the high price real estate commands in areas with views, ocean outlooks or surrounding parks and gardens.

#### Appearance of Streetscapes

Neighbourhood aesthetics determine the general appeal and presentation of the neighbourhood and whether it provides a pleasant pedestrian-orientated environment. The characteristics of neighbourhood streets can help create convivial environments for walking for all age groups. The street should also be thought of as a social space, rather than just a channel for movement - providing characteristics make the street a desirable place for stationary and lingering social activities and provide opportunities for short-term interactions between people (healthyactivebydesign.com.au).

Appearance of Public Open Space	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Perceptions of public open space</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<p><b><u>What the Community Said:</u></b></p> <ul style="list-style-type: none"> <li>Overall, the local community have indicated the local playgrounds, parks and reserves perform quite well.</li> <li>Participants desire better quality parks with new or upgraded playgrounds, shading facilities, and dog-exercise areas</li> </ul> <p><b><u>Current Response:</u></b></p> <ul style="list-style-type: none"> <li>Recent development of the Adventure Park in Calista Oval creating new destination to the city centre.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Perceived park aesthetics, condition and safety have also been associated with increased park visitation and physical activity levels within parks. Attractive park aesthetics appear to promote recreational walking, whereas physical incivilities appear to deter recreational walking for adults and older adults (Heart Foundation, 2017).</li> <li><b>Enhance local parks, playgrounds and reserves – to cater for a variety of users.</b></li> <li><b>Enhance pedestrian and cycle linkages to the newly developed Adventure Playground in Calista Park</b></li> </ul>	
Evidence	
<ul style="list-style-type: none"> <li>Queensland Health. (2005). Health impact assessment: issue guidelines for natural and built environment determinants of health, February.</li> <li>World Health Organisation. (2003). Social determinants of health: the solid facts. 2nd edition, edited by Richard Wilkinson and Michael Marmot.</li> <li>Essential Services Commission (2010). <i>Reducing the Reporting Burden on Local Government</i>, Scoping Paper, August.</li> </ul>	

Quality of Streetscape	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Perceptions of the quality of local streetscapes</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<p><b><u>What the Community Said:</u></b></p> <ul style="list-style-type: none"> <li>Respondents want tidier streetscapes, more trees and better verge maintenance.</li> <li>The images of the City of Kwinana as the City of Trees and Parks was highly valued by respondents.</li> <li>Lack of maintenance was seen as a key issue creating unattractive areas.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Local streets and footpaths are the most frequently used facilities among adults for physical activity. <b>Research suggests there is a relationship between environmental quality and people's willingness to walk; they are more likely to walk where they feel comfortable and where the environment is pedestrian-friendly</b> (Heart Foundation, 2017).</li> </ul>	

## 4.4 Movement Network

Theme	Domain	Indicators
Movement Network		Public Transport Patronage
		Use of Walking and Cycle Trails
		Transport Limitations
		Perceptions of Traffic Safety

### DOMAIN INDICATORS

#### Public Transport Patronage

Public transport is seen as a key sustainability indicator as it has wide-ranging impacts on the environment, employment options and access to services. Adequate public transport is particularly important for the young, elderly or disadvantaged who are often without a car and have difficulty accessing services, facilities and social networks. For a transport network to be a viable alternative to the car, pedestrian and cycle paths need to be integrated with public transport systems (The Australia Institute and Newcastle City Council, 2000).

Transport networks have the additional benefit of increasing physical activity. Increasing physical activity improves physical and mental well-being, encourages social interaction and lowers the risk of heart, cardiovascular and respiratory diseases. Escalating petrol prices are encouraging more people to use public transport and leave the car at home. However, not all communities have adequate infrastructure or public transport services. People's perceptions of practical non-car transport opportunities are important in determining whether the transport network is effective. Increased public transport has significant potential to reduce road accidents, traffic congestion, and air pollution (Austin et al., 2001).

#### Dedicated Public Walking and Cycle Trails

For a transport network to be a viable alternative to the car, pedestrian and cycle paths need to be integrated with public transport systems (The Australia Institute and Newcastle City Council, 2000). Transport networks have the additional benefit of increasing physical activity. Increasing physical activity improves physical and mental well-being, encourages social interaction and lowers the risk of heart, cardiovascular and respiratory diseases.



**Transport Limitations**

Access to both public or private transportation is essential for citizens to contribute to their community and reach their potential. Safe, reliable affordable transport is a key determinant of people's opportunities to access health services and programs, education and secure employment. It is especially important for the elderly to have access to public transportation. Limitation in regards to transport is related to social isolation and also has a relationship with sedentary lifestyles.

**Perceptions of Traffic Safety**

It is important that our roads are safe for all users, as a sustainable community is one that has many integrated transport options so that residents are not forced to rely on the car. It is important however that increased levels of walking activity do not lead to higher numbers of pedestrian and cycling casualties. Despite increased motor vehicle use, Australia has made considerable gains in reducing deaths and injuries from motor vehicle accidents by introducing legislation for compulsory seat belt requirements, the installation of red light and speed cameras, upgrading roads improvements to vehicle designs (Australian Bureau of Statistics, 2004) and enforcing drink driving laws. The number of road fatalities per 100,000 residents is used as an indicator in many national and international indicator suites, including in the State of the Environment Report (Human Settlements) and the Australian Bureau of Statistics, Measures of Australia's Progress.

Public Transport Patronage	
Measure	Data Sources
<ul style="list-style-type: none"> <li>% of local residents who caught public transport to work</li> </ul>	ABS (2011) Community Profile  Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>In 2011, there were 1,322 people who caught public transport to work (train, bus, tram or ferry) in City of Kwinana, compared with 8,837 who drove in private vehicles (car – as driver, car – as passenger, motorbike, or truck).</li> <li>Analysis of the method of travel to work of the residents in the City of Kwinana in 2011, compared to Greater Perth, shows that 10.7% used public transport, while 71.4% used a private vehicle, compared with 10.4% and 68.9% respectively in Greater Perth.</li> </ul> <p><b>Historical Trend:</b></p> <ul style="list-style-type: none"> <li>Historically, a larger percentage of people have chosen to travel by train (0.9% compared to 6.7% for Greater Perth).</li> </ul> <p><b>What the Community Said:</b></p> <ul style="list-style-type: none"> <li>Residents desire greater public transport services. Hotspots included Casuarina and Wellard.</li> <li>Limited transportation links to services are seen as key areas for concern given the growing population.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li><b>Increase residential densities around key centres to increase PT patron numbers required for regular service routes.</b></li> <li>The City of Kwinana's commuting statistics reveal the main modes of transport is by private vehicle to get to work. There are a number of reasons why people use different modes of transport to get to work including the availability of affordable and effective public transport options, the number of motor vehicles available within a household, and the distance travelled to work.</li> <li>Research has indicated that public transport stops located in areas with well-connected gridded streets are more heavily used than those in areas with less well connected streets.</li> <li><b>Proximity to bus stops and rail stations has also been positively associated with active transportation and walking for adults and older adults. When parents perceive public transport services to be limited, their children are less likely to walk or cycle.</b></li> </ul>	

Dedicated Public Walking and Cycle Trails	
Measure	Data Sources
<ul style="list-style-type: none"> <li>% of local residents who rode or walked to work</li> </ul>	ABS (2011) Community Profile  Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>In the City of Kwinana 135 people rode their bike or walked to work in 2011.</li> </ul>	

#### **Historical Trend:**

- A smaller percentage of people have chosen to commute by bus or walk to work (1.7% compared to 3.7% and 0.9% compared to 2.2%) as compared to Greater Perth.

#### **What the Community Said:**

- 78% of respondents never cycle to destinations instead of driving.
- Only 12% walk to local destinations instead of driving.

#### **Future Impacts and Opportunities:**

- Numerous studies indicate that heavy traffic volumes negatively influence children and adolescent physical activity, particularly active transport. There is consistent evidence that greater traffic safety and/or presence of suitable road crossings is positively associated with children and adolescent active transport and physical activity.
- **An important consideration for recreational and transport walking and cycling is the presence and continuity of pedestrian/cycle infrastructures. Pedestrian infrastructure includes the built and planted features that provide amenities or affect mobility, safety and comfort – these include the basic street pattern and road classification, as well as the provision of footpaths, pedestrian crossings, street trees, aesthetics and furniture.**
- Connected road networks have been shown to be associated with more walking in older adults and children, but only when traffic-related issues are managed and the local streets are perceived to be safe (Heart Foundation, 2017).

### **Transport Limitations**

#### **Measure**

#### **Data Sources**

- % of households having access to two or more motor vehicles.

ABS (2011) Community Profile

#### **Key Findings**

#### **Current State:**

- Analysis of the car ownership of the households in the City of Kwinana in 2011 compared to Greater Perth shows that 85.2% of the households owned at least one car, while 5.9% did not, compared with 87.5% and 6.0% respectively in Greater Perth.
- Of those that owned at least one vehicle, there was a similar proportion who owned just one car; a smaller proportion who owned two cars; and a similar proportion who owned three cars or more.
- Overall, 32.0% of the households owned one car; 34.9% owned two cars; and 18.4% owned three cars or more, compared with 32.0%; 37.1% and 18.4% respectively for Greater Perth.

#### **Future Impacts and Opportunities:**

- **The ability of the population to access services and employment is strongly influenced by access to multiple modes of transport.** The number of motor vehicles per household in the City of Kwinana quantifies access to private transport and will be influenced by [Age Structure](#) and [Household Type](#), which determine the number of adults present; access to [Public Transport](#); distance to shops, services, employment and education; and [Household Income](#).
- Depending on these factors, car ownership can be seen as a measure of advantage or disadvantage, or a neutral socio-economic measure, which impacts on the environment and quality of life.

Perceptions of Traffic Safety	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Perceptions of traffic safety issues</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>Dangerous driving (honing) registers the highest level of concern from the community, specifically in Bertram and Leda areas.</li> <li>This is followed by home burglaries or break-ins and alcohol and drug use.</li> <li>Concerns with traffic management are closely related to safety and security, in particular speeding. Residents want greater control over hoon behaviour and the use of off-road trail and motor bikes.</li> </ul>	
Future Impacts and Opportunities:	
<ul style="list-style-type: none"> <li>Measures suggested by the community include: reducing opportunity for dangerous driving within local streets; greater police presence and use of CCTV – creating safe environments for children; more lighting around trouble areas.</li> <li>Numerous studies indicate that heavy traffic volumes negatively influence children and adolescent physical activity, particularly active transport. <b>There is consistent evidence that greater traffic safety and/or presence of suitable road crossings is positively associated with children and adolescent active transport and physical activity.</b></li> <li>The connection between traffic speed and risk of injury to pedestrians and cyclists is undisputed. Evidence indicates that lowering traffic speeds can have positive effects on both injury reduction and increased walking and cycling rates.</li> <li>Research suggests that there is a relationship between environmental quality and people's willingness to walk or cycle; they are more likely to walk where they feel comfortable and where the environment is pedestrian/cycle-friendly. Street design should also be thought of as a social space, rather than just a channel for movement - providing characteristics make the street a desirable place for stationary and lingering social activities and that provide opportunities for short-term interactions between people.</li> <li><b>Buildings that are designed with more diverse street frontages or facades, especially at the first and second-floor levels, contributes to a varied streetscape and provides visual interest and prompts people to linger, creating livelier streets</b> (Heart Foundation, 2017).</li> </ul>	



## 4.5 Community Facilities & Key Destinations

Theme	Indicators	
Community Facilities	Services Available	Perceptions of Access to Services and Facilities
		Opportunity to participate in Sports and Recreation
		Access to Services (Cafes, shops, restaurants)
		Major service presence
	Destinations	Distance to Primary Education Services
		Distance to Secondary Education Services
		Journeys to work
		Employment Rate

### DOMAIN INDICATORS

#### Perceptions of Access to Services & Facilities

Access to services is a measure of community connectivity in terms of transport infrastructure, physical distance and urban planning. It is believed that when community members have access to the services they need, when they need them, they are more likely to have feelings of civic engagement and well-being. Not having access to such services can place vulnerable groups at greater disadvantage and signal pockets of social isolation (Bastian, 2000).

#### Access to Services

A community's ability to attract and retain population can be largely attributed to the presence and quality of major services (social infrastructure). Social infrastructure can act as an 'attractor' which encourages people to live in, or visit a particular area. Given that a key component of a sustainable community is diversity, providing a range of quality social infrastructure can help attract/retain a diverse population. The NHS London Healthy Urban Development Unit (2008) suggest that "People want to live in areas that are served by good schools, good health services, high quality open spaces and recreational activities, all in accessible and convenient locations".

### **Opportunities to Participate in Sporting & Recreation Activities**

This indicator is a measure of participation in the wider community. Participation builds social cohesion and connectedness, thereby reducing isolation. By building a collective identity, event and cultural facilities also build community strength. Community and cultural events provide a range of socially inclusive activities that contribute to overall community well-being. Both culture and leisure activities assist in developing national identity and forming community networks and bonds crucial to social cohesion. Industries associated with culture and leisure are growth industries and are thus important to Australia's economic wellbeing. The culture and leisure sector also contribute to economic development through facilitating creativity, innovation, and self-reflection (ABS, 2001).

### **Major Services Presence**

These indicators includes the availability of services as a function of distance and accessibility for groups most likely to have a high need for services. Included services are: health, childcare, respite care, complementary medicines, mental health and outreach services. When measuring accessibility, limited transport options for community members such as parents of young children, young people, older people and people with a disability are also sometimes included.

### **Access to Primary Education Services**

Though the provision of education may be widespread and diverse throughout Australia, equitable access to this education is constrained and limited by factors associated with distance and with population density. These make access to education provisions both more difficult and more expensive.

### **Access to Secondary Education Services**

Though the provision of education may be widespread and diverse throughout Australia, equitable access to this education is constrained and limited by factors associated with distance and with population density. These make access to education provisions both more difficult and more expensive.

### **Journeys to Work**

Living within close proximity to employment and a mix of destinations is associated with higher levels of active transport across all age groups. Living within close proximity to destinations, such as shops and parks, are positively associated with transportation walking in adults and older adults.

### **Employment Rate**

Employment for all is an important social goal. People out of a job may have a sense of less than full membership of the community. Improving employment options for young people, people with disabilities, indigenous people and older residents is important for a community that values people. Local employment options for residents will make the municipality a desirable place to live and reduce economic leakage and greenhouse gas emissions due to reduced travel demands. One of the key outcomes of local industry is local employment provision.

Adequate employment levels are an important social goal (Freebairn, 2005). Employment gives people the opportunity to make lifestyle choices and is associated with levels of personal satisfaction (Freebairn, 2005). Insufficient employment opportunities may lead to a decline in health and skill levels of unemployed people, family breakdowns and increasing crime rates (Austin et al., 2001).

Perceptions of Access to Services & Facilities	
Measure	Data Sources
<ul style="list-style-type: none"> <li>People who feel the area has good or very good facilities and services like shops, childcare, schools and libraries.</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>The community highly value the local library's and Recquatic Centre located at the heart of the City.</li> <li>47% of respondents had accessed the Darius Wells Library and Recourse Centre in the last 12 months.</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>Neighbourhoods with a mix of co-located destinations (for example at a neighbourhood or town centre) when supported and surrounded by a network of connected streets, paths and cycle ways, provide opportunities for active transport. Good public transport access creates environments that are also more conducive for walking and cycling as they provide local focal points for people to meaningfully and conveniently commute to within their neighbourhood.</li> <li><b>Ensuring neighbourhoods have access to a mix of shops, services and transport connections has positive implications beyond physical activity.</b> The provision of a mix of destinations and community facilities within the neighbourhood helps to attract a range of people of all ages and provides opportunities for casual and chance interactions with other members of the community as well as providing places and spaces for people of all ages to gather, meet friends and family and engage in social activities (Heart Foundation, 2017).</li> </ul>	

Access to Services	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Community perceptions of access to services</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b><u>What the Community Said:</u></b> <ul style="list-style-type: none"> <li>Economic development is seen as lacking within the City.</li> <li>Respondents want greater access to shops, cafes, restaurants, and telecommunication services in their local areas.</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>The location of different land uses relative to one another has a strong impact on how people travel between, to and from them.</li> <li><b>The provision of mixed-use neighbourhood and town centres within walking distance from homes also makes alternative forms of transport such as walking, cycling or public transport use more viable and provides people with the option not to use the car</b> (Heart Foundation, 2017).</li> </ul>	

Major Service Presence	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Presence of major infrastructure such as university, TAFE, hospitals and other major facilities.</li> </ul>	(RAI, 2016)
Key Findings	
<b>Current State:</b> <ul style="list-style-type: none"> <li>Currently the City has one major service provider being the local TAFE.</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li><b>The location of key destinations such as employment, education, retail and recreation land uses close to homes is a key design feature of 'walkable' and sustainable neighbourhood design to encourage active transport.</b></li> <li>People living in walkable, mixed-use neighbourhoods have been shown to have higher social capital than those in car-oriented neighbourhoods (Heart Foundation, 2017).</li> </ul>	

Perceived Opportunities to Participate in Sporting & Recreation Activities	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Percentage of people who feel they have opportunities to participate in local sporting and recreational activities: expressed as a % of the adult population that are satisfied with parks, reserves and sporting grounds</li> </ul>	Catalyse (2016) Community Services and Wellbeing Scorecard
Key Findings	
<b>What the Community Said:</b> <ul style="list-style-type: none"> <li>39% of respondents had accessed the Recquatic Centre in the last 12 months.</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>Integrated community facilities play a vital role in creating healthy communities, enhancing wellbeing, and building social networks.</li> <li><b>Shared use of sport and recreation facilities helps to increase community access to these services, as well as providing open spaces of a sufficient size to accommodate sporting spaces and infrastructure.</b> These are important places for regular physical activity, social interaction and the development of a sense of community (Heart Foundation, 2017).</li> </ul>	

Distance to Primary Education Services	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Average distance for residents to a primary school</li> </ul>	(Regional Australia Institute, 2012) (Australian Curriculum Assessment & Reporting Authority, 2015)
Key Findings	
<b>Current State:</b>	



- The average distance for residents to travel to primary schools in Kwinana is 0.6km.
- (National ranking = 69 out of 563 LGAs)

#### Future Impacts and Opportunities:

- Access to primary, secondary, technical and further education and tertiary education services indicates the accessibility of essential education services. Children within close proximity to their school are more likely to walk or cycle, increasing their levels of daily activity and promoting a healthy lifestyle.
- Schools are an important daily destination to which children and adolescents may walk. Active commuting to school can contribute to children achieving recommended physical activity levels
- **Promoting active modes of travel to and from school can assist in developing a perception of safety in the area. If more children have the desire to walk/cycle to school greater initiatives can be implemented to promote walkability in the area with safe crossing and sidewalks** (Heart Foundation, 2017).

### Distance to Secondary Education Services

Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ Average distance for residents to a secondary school</li> </ul>	(Regional Australia Institute, 2012) (Australian Curriculum Assessment & Reporting Authority, 2015)
<b>Key Findings</b>	
<b>Current State:</b>	
<ul style="list-style-type: none"> <li>• The average distance for residents to travel to secondary schools in Kwinana is 2km.</li> </ul>	
<b>Future Impacts and Opportunities:</b>	
<ul style="list-style-type: none"> <li>• Children in close proximity to their school and much more likely to walk or cycle increasing their levels of independent mobility and promoting a healthy lifestyle, this is likely to occur in Kwinana.</li> <li>• <b>An increase in infrastructure quality can offset competitive disadvantage and should be a focus for policy. However, bridging the basic access gap requires engagement in innovative use of technology and other resources that alleviate the tyranny of distance.</b></li> </ul>	

### Journeys to Work

Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ % of local residents living and working in the area</li> </ul>	ABS (2011) Community Profile
<b>Key Findings</b>	
<b>Current State:</b>	
<ul style="list-style-type: none"> <li>• 20.4% of local residents live and work in the area.</li> <li>• (79.6% work in the area, but live outside)</li> </ul>	
<b>Future Impacts and Opportunities:</b>	
<ul style="list-style-type: none"> <li>• Evidence from Austria confirms the importance of connected cycle lanes to commuter cyclists, whereas traffic safety and lack of bike storage and end-of-trip shower facilities appear to be barriers to cycling to work</li> </ul>	

- A number of infrastructure, programs and policies have been shown to increase cycling, these include the use on-street markings and/or the painting bike lanes onto the road surface or signage to visually reinforce the separation of areas for bicyclists and motorists.
- **Where conditions warrant, for example of busier roads, separate bikeways and vehicular traffic lanes with physical demarcations or adding a buffer between bicyclists and cars increases riders' confidence for cycling.**
- **When designing sites that include parking, consider how the provision, location and design of parking may affect the use of more active modes of travel such as walking, bicycling, and public transport.**  
Abundant car parking discourages active and transit mode use. Research from California indicates that increased supply of parking may result in reduced active transportation and public transit use, suggesting that when (cheap) parking is available, people use it. Designing car parking so as to reduce unnecessary car travel, particularly when walking, bicycling, and public transit are convenient alternatives are therefore important (Heart Foundation, 2017).

Employment Rate	
Measure	Data Sources
<ul style="list-style-type: none"> <li>▪ % of labour force unemployed.</li> </ul>	ABS (2011) Community Profile  RAI, (2016) Insight Australia's Regional Competitiveness Index
Key Findings	
<b>Current State:</b> <ul style="list-style-type: none"> <li>• 11.5% rate of unemployment in 2016 (as compared to 6% for Greater Perth)</li> <li>• (National ranking 501 out of 563 LGAs)</li> </ul>	
<b>Future Impacts and Opportunities:</b> <ul style="list-style-type: none"> <li>• Sense of community is defined as "a feeling that members have of belonging and being important to each other and a shared faith that members' needs will be met by the commitment to be together". Social capital is defined as "the social networks and interactions that inspire trust and reciprocity among citizens."</li> <li>• <b>Ensuring neighbourhoods have access to employment, shops, services and transport connections have implications beyond physical activity alone. Neighbourhoods that promote interaction between people tend to have higher stocks of social capital and sense of community.</b> For example, people living in walkable, mixed-use neighbourhoods have been shown to have higher social capital than those in car-oriented neighbourhoods. (Heart Foundation, 2017).</li> </ul>	
<b>Evidence</b> <ul style="list-style-type: none"> <li>• Freebairn, J. (2005). Opinion. Melbourne Institute News. September 2005. Melbourne Institute of Applied Economic and Social Research. Issue 9.</li> <li>• Austin, T., Shoemark, S., Stokes, S., Stone, S., and Terril, A. (2001). Part 1-Developing A Draft Set of Sustainability Indicators for the Shire of Cardinia. Graduate School of Environmental Science, Monash University November 2001.</li> </ul>	

## 4.6 Housing Diversity

Theme	Domain	Indicators
<b>Housing Diversity</b>	Housing Choice	Housing affordability
		Dwelling structure
		Household structure

### DOMAIN INDICATORS

#### Housing Affordability

Housing satisfies the essential needs of people for shelter, security and privacy. Shelter is recognised throughout the world as a basic human right. The adequacy or otherwise of housing is an important component of individual wellbeing. Housing also has great significance in the national economy, with its influence on investment levels, interest rates, building activity and employment. Affordability of housing will affect choice of location, access to employment, education, essential services and proximity to social and family networks (Onkaparinga, 2000).

The cost of housing is particularly significant to people on lower incomes. When costs are high, people have less residual income to spend on other essential household items. There is no accepted definition of housing affordability. It is a relative term that is about the capacity to enter the housing market; that is, cost and availability. The cost of housing relates to the prosperity of the community, the functioning of the economy, location choices relating to employment opportunities, and transportation issues.

#### Dwelling Structure

Dwelling Type is an important determinant of the City of Kwinana's residential role and function. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households, often renting. Larger, detached or separate dwellings are more likely to attract families and prospective families. The residential built form often reflects market opportunities or planning policy, such as building denser forms of housing around public transport nodes or employment centres.

#### Household Structure

The City of Kwinana's household and family structure is one of the most important demographic indicators. It reveals the area's residential role and function, era of settlement and provides key insights into the level of demand for services and facilities as most are related to age and household types.

Housing Affordability	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Median house valuation.</li> </ul>	ABS (2011) Community Profile
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>At June 2016, the City of Kwinana had a median house valuation of \$381,180, \$119,045 lower than the median house valuation for Western Australia.</li> </ul>	
<p><b>Future Impacts and Opportunities:</b></p> <ul style="list-style-type: none"> <li>Housing affordability remains a concern for new entrants to the market and those with lower disposable incomes. Housing diversity can make provision for housing that is more affordable to rent and buy.</li> <li><b>Affordable housing should also be located close to amenities such as public transport, employment, shops, schools and services. This be particularly relevant to those who do not own a car.</b></li> <li><b>A diversity of housing types and tenures in new and established areas can help to meet these important equity needs</b> (Heart Foundation, 2017).</li> </ul>	

Dwelling Structure	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Dominant dwelling structure</li> </ul>	ABS (2011) Community Profile
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>90.4% of household types are separate houses</li> <li>(7.2% medium density and 2.2% high density)</li> </ul>	
<p><b>Future Impacts and Opportunities:</b></p> <ul style="list-style-type: none"> <li>Housing diversity is delivered through the provision of a range of dwelling products and sizes and is usually achieved by providing a wider range of lots sizes and promoting a variety of building forms.</li> <li><b>The provision of a diverse range of dwelling styles and densities also provides housing choice and ensures the housing needs of residents at different stages in life and increasingly diverse household types (e.g. young families, professionals, retirees, those with disabilities) are provided and catered for.</b></li> <li>By providing a greater housing and lifestyle choice, a more diverse range of people are also attracted to a location.</li> <li><b>Population and residential densities are critical in creating mixed-use neighbourhoods - providing the customers required to support local businesses. Higher densities also generally result in the creation of more compact uses of land decreasing the distances to between homes/residential land uses and destinations.</b> There is consistent evidence that the combination of higher residential densities and mixed land uses are positively associated with adults and older adults walking. The viability of public transport services also increases with increased population densities.</li> <li>Studies have repeatedly shown that urban sprawl, as characterised by the low densities, long, winding street networks and separated land uses, decreases local walking and increases vehicle miles travelled. The evidence highlights a strong and consistent connection between higher residential density and mixed-use planning and walking, across all life stages (Heart Foundation, 2017).</li> </ul>	



Household Structure	
Measure	Data Sources
<ul style="list-style-type: none"> <li>Dominant family structure</li> </ul>	ABS (2011) Community Profile
Key Findings	
<p><b>Current State:</b></p> <ul style="list-style-type: none"> <li>In the City of Kwinana, 32% of households were made up of couples with children in 2011, compared with 32% in Greater Perth.</li> <li>Analysis of the household/family types in the City of Kwinana in 2011 compared to Greater Perth shows that there was a similar proportion of couple families with child(ren) as well as a higher proportion of one-parent families. Overall, 31.7% of total families were couple families with child(ren), and 13.3% were one-parent families, compared with 31.6% and 9.9% respectively for Greater Perth.</li> <li>There were a lower proportion of lone person households and a lower proportion of couples without children. Overall, the proportion of lone person households was 20.7% compared to 22.4% in Greater Perth while the proportion of couples without children was 23.7% compared to 25.7% in Greater Perth.</li> </ul>	
<p><b>Future Impacts and Opportunities:</b></p> <ul style="list-style-type: none"> <li><b>A diversity of housing types helps respond to the needs of communities at different stages of the life course and provides opportunities for communities where people can move home without leaving a neighbourhood.</b> For example, as people age, their first preference is often to stay living in their existing neighbourhoods (i.e. ageing in place), where friends and support networks are already well established.</li> <li><b>For older adults, designing and locating safe, affordable, well-connected housing and higher density housing with the aim of facilitating active lifestyles, social interaction, and creating a safe living environment with amenities for daily living is critical. Smaller, diverse housing types within the development/community will offer this flexibility.</b> Additionally, older adults, particularly women, are more fearful and more vulnerable to crime thus the design and location of housing is important to avoid people constraining their behaviour.</li> <li>Living within close proximity to a mix of destinations is associated with higher levels of active transport across all age groups.</li> <li>Evidence also suggests that walkable (i.e., denser, mixed-use and more connected) environments enhance the sense of community and social capital by encouraging and facilitating social ties or community connections through opportunities for residents to meet, interact and engage in their neighbourhood (Heart Foundation, 2017).</li> </ul>	

5.0

# REVIEW SUMMARY

REVIEW SUMAMRY

## 5.0. Review Summary

### 5.1 SOCIAL INFRASTRUCTURE REVIEW PROCESS

Following the review of a community's social infrastructure, it is important to understand this has both 'hard' and 'soft' elements. 'Hard' elements include health facilities and centres, education facilities, art and cultural facilities, recreational grounds and connections between. Ensuring good quality design outcomes within these elements is important for maximising their potential benefits to the community and value for money outcomes. As found within the review of major infrastructure, Kwinana has a good supply of facilities accommodating a range of activities and services. However, there is a gap in understanding of how well connected these facilities as well as their used in terms of the 'soft' programming and the quality of design to suit their purpose.

'Soft' elements may include programs, resources and services, as well as public art and cultural events that complement 'hard' elements and contribute to the formation of community. 'Hard' elements do not work successfully unless 'soft' elements accompany them. Public and private investment in social infrastructure is essential to build the social capital and fabric of the community. This enables active living, learning opportunities, social interactions and supporting programs that help people innovate, express themselves and adapt to major life events. It is social capital that makes the community liveable, inclusive, competitive and diverse (WAPC, State Planning Strategy 2050, 2014). In this regard, a detailed Social Services Review for Kwinana is a priority to understand the alignment of 'hard' and 'soft' elements, and where the future needs and provisions will be to provide for its social infrastructure.

No two places are the same and therefore there is no single blueprint for creating liveable, inclusive, competitive and diverse communities; it arises from an understanding of context and place. Often this is best delivered by outcome-based policy rather than by traditional planning models that focus on hard rather than soft infrastructure outcomes. An outcomes-based approach requires those designing and assessing strategies and proposals to have a holistic understanding of community wellbeing and place-making. Spaces and places are public areas which reflect the community needs, purpose and identity. Collaboration with the Kwinana community and the application of an appropriate response and design outcomes will be essential to the future prosperity of the City.

**Figure 15.** Social Infrastructure as both hard and soft elements



## 5.2 SOCIAL AND ECONOMIC INITIATIVES

This review is an overview or spotlight on health and liveability issues in Kwinana. As such, it has been framed around liveability themes and initiatives that respond broadly to the overarching place based lens.

### Measuring liveability: The Place Lens

Measuring liveability can be very challenging as people look for and value different things when searching for 'a place to call home'. Liveability is closely linked to place. It is therefore valuable to reference a place lens that considers both the intangible qualities of place and the measurable quantitative aspects to enable a more comprehensive assessment of the success of a place as a liveable community.

Capturing data for both the quantitative and qualitative aspects of liveability and place will enable the success of Kwinana as a place to live to be more clearly measured. This in turn will provide justification for future funding and service provision.

**Figure 16.** Place Lens



Source: Projects for Public Spaces, [www.pps.org](http://www.pps.org), 2016



There are many initiatives and programmes already in place across government agencies and other responsible parties that are aimed at improving liveability in Kwinana. The initiatives emerging from this review are those which came into sharper focus through both the liveability indicators and a review of recent community consultation. The 'spotlight' nature of the project and short timeframe has constrained the ability to refine, deepen and articulate implications of findings. As such, further work is recommended to confirm the initiatives proposed.

In proposing the initiatives there has been a focus on:

- **Diversity** – Linking local destinations to positively influences neighbourhood walkability and encourages residents to enjoy physical activity and social connections.
- **Access** – Ensuring a selection of destinations within walkable distance from households facilitates active transport, such as walking, cycling or use of public transport as more viable and makes it easier to reduce car use.
- **Design** - The design of the public realm is important in determining how people reach the destination, how they move and interact with it, as well as how it can enable a strong connection to the community and the environment.
- **Connectivity** - Movement can be enhanced through the provision of safe, connected, convenient, continuous, easily navigated and attractive links.
- **Infrastructure** - The inclusion of safe, functional and highly visible infrastructure encourages a range of travel options.
- **Streetscape Design** - Streets that have been designed to accommodate all transport users encourage more movement.
- **Function** - Open spaces assist in meeting the physical, recreational and social needs of a community.
- **Consultation** - Encouraging both current and future communities to participate in design and development decisions contributes to a sense of place and builds ownership and respect.
- **Composition** - The layout or position of community facilities that enable multiple uses can provide health and socio-economic and economic benefits.
- **Flexibility** - Facilities that can accommodate multiple functions may better serve the community and encourage greater use.
- **Context** - Well-designed buildings can improve health outcomes by engaging with their surrounds.
- **Local Participation** - Combination of hard and soft initiatives with a priority for low capital expenditure and optimum community participation.
- **Choice of Housing** – Ensuring a mix of dwelling types to increase density and attract a broad demographic, creating a resilient neighbourhood that caters for a diverse range of household structures, ages and tenures.

## 5.3 PRIORITY ACTIONS

### HEALTHY CHECK

#### Connectivity

The way we design and build our neighbourhoods and communities' affects resident's social connections, sense of community and social capital and thus their levels of physical activity and mental health.

- Ensure parks and other areas of public open space provide attractive local destinations for people of all ages to walk and cycle to and be active in.
- Ensure continuity of access within and through adjacent neighbourhoods, and to the wider networks – particularly in less connected, older neighbourhoods of Calista-Medina, Orelia and Parmelia.
- Promote greater physical activity and community interactions by establishing good access along a defined active transport networks of footpaths and cycle ways - connecting the range of uses and destinations such as the Kwinana Recquatic Centre, train station, local schools and surrounding public open spaces.
- Review opportunities to densify neighbourhoods, particularly Wellard, Leda and Wandi, and offer a diverse mix of co-located destinations (including employment, education, retail and recreational uses) to encourage and sustain active modes of transport.

#### Access

A selection of destinations that are a walkable distance from home makes active transport, such as walking, cycling or use of public transport more viable.

- Ensure community and recreational facilities are well serviced by linked pedestrian and cycle routes, designated crossings, and suitable ramps to encourage regular physical activity and social interaction.
- Within developing neighbourhood areas such as Wellard and Bertram ensure a range of uses that promote physical activity and community interactions.
- Ensure all community members have access to at least one open space within a 400m - 800m walk – enhancing opportunity for walking and cycling as well as mental health benefits and greater social interaction.

### SENSE OF PLACE

#### Personal and Community Safety

The design of the public realm and network of connections are important in determining perceptions of safety, how people reach the destination, as well as how they move and engage within spaces and places.

- Ensure open spaces and supporting infrastructure are well managed and maintained – creating attractive environments and a positive sense of place.
  - How well do nearby buildings and streets overlook the space?
  - Do public spaces provide adequate lighting and safe access after dark?
- Review key destination to ensure public spaces encourage activity and interaction across the community.
  - Does the design encourage people to linger?
  - Do destinations offer shade, seating, secure cycle storage, planting, artwork and the use of high quality materials?
- Ensure the design of spaces and connections put the pedestrian first, and are of a comfortable scale – particularly within the city centre and new local centres.

- Identify opportunities to attract night-time activation, particularly within the city centre – creating vibrant and inviting centres.
- Ensure adequate street lighting and illumination across footpaths, at key entrances to buildings and at bus stops and train stations.

### **Local Participation**

A good sense of place can foster a positive emotional attachment to a neighbourhood and community, levels of interaction between members of the community and formal participation or involvement in neighbourhood and community organisations.

- Ensure community consultation has been employed to determine infrastructure needs, gaps and desires into the future.
- Identify opportunities for the community to be engaged and involved in the design of the public realm, civic spaces and public art.
- Ensure design choices have been informed by the cultural identity of the city and local areas - based on the social, economic, environmental and indigenous histories.
- Identify strategies to encourage a diverse mix of destinations integrated in close proximity to residential dwellings – providing greater opportunity to fulfill daily activities and needs (live, work, play) within existing and newer neighbourhoods.

## **PUBLIC OPEN SPACE**

### **Function**

For children and young families, public spaces and parks provide places to meet and to participate in physical and social play. The provision of public open spaces is thus a key factor in promoting active living and providing important physical, psychological and social health benefits for individuals and the community.

- Consider the roles and functions within public open spaces holistically to resolve needs to cater for a variety of users across the open space network.
- Enhance pedestrian and cycle linkages to public open spaces – particularly new attractions such as the Adventure Playground in Calista Park.

### **Quality of spaces**

Open space designs that respond to their surrounds can enable a strong connection to the community and the environment.

- Ensure public open spaces and linkages offer attractive environments and quality design outcomes – increasing visitation and physical activity levels.
- Ensure pedestrian and cycle connections most frequently used provide protected and comfortable environments.
- Ensure public spaces respond to existing environmental conditions such as drainage, slopes and retaining trees where appropriate.
- Ensure new development is designed to contribute to street activation and allow natural surveillance of the surrounding community and public spaces.

## MOVEMENT NETWORKS

### Integration

- Ensure pedestrian and cycle networks optimise access and routes to community spaces and key destinations, such as the city and local centres, railway stations and schools.
- Provide continuity and cohesion of walking, cycling and public transport movement networks across adjacent neighbourhoods – particularly for integrating older neighbourhoods of Calista, Orelia and Medina linkages to the city centre and railway station.
- Encourage greater density around key centres to increase PT number require for regular service routes.
- Ensure good access to regional cycle routes and networks – enabling greater choice of active transport.

### Streetscape Design

Streets that have been designed to accommodate all transport users encourage more movement. Movement is enhanced through the provision of safe, connected, convenient, continuous, easily navigated and attractive links.

- Ensure connections to key destinations are well lit, provide clear directions or signage to encourage greater use and accommodate shade and shelter at key stops and destinations.
- Link more than one route between destinations to provide variety in active transport options and experiences.
- Identify opportunities to narrow streets near schools with footpaths becoming wider with crosswalks and pedestrian crossing points connecting movement networks.
- Ensure streets are connected and designed in response to their surrounds – reducing speeds along primary pedestrian and cycle networks, increasing perceptions of safety and comfort.

### Infrastructure

The inclusion of safe, functional and highly visible infrastructure encourages a range of travel options.

- Ensure end of trip facilities such as bike racks, drinking fountains, change rooms and lockers, shade/ shelter, seating and lighting are provided within city, local centres and key destinations.
- Ensure facilities are designed for all users including the young, the elderly and those with disabilities.
- Ensure public transport stops are provided within suitable proximity to dwellings and destinations.
- Prioritise walking and cycling as the preferred means of travel within the city centre. Address wait times at traffic lights, the size of footpaths compared to roadway widths and prioritising pedestrian/cycle crossing points.
- Modes of transport will continue to evolved over time. Ensure future transport needs are accommodated in new street design.

## COMMUNITY FACILITIES AND KEY DESTINATIONS

### Flexibility

Mixed-use planning and the presence of a variety of destinations promotes greater walking and cycling which in turn increases the sense of community or social capital through the facilitation of interaction between residents.

- Within developing areas such as Wellard, ensure community facility are organised to allow for interim uses while the area is established.
- Review community and recreational facilities to ensure these provided offer a range of activities that meet the needs of the community.
- Identify the opportunity for facilities to accommodate multiple functions, better servicing the community and encouraging greater use.



### **Diversity of Uses**

Places for social interaction are critical for creating and maintaining community cohesion and building social capital. An interesting choice of local destinations positively influences neighbourhood walkability and encourages residents to enjoy physical activity and social connections.

- Promote active modes of travel to and from schools – increasing physical levels of activity and fostering perceptions of safety in the area, particularly in Wellard (west) development of a new school on Johnson Road.
- Ensure destinations offer a mix of uses that will encourage consistent attendance and use – within walking distance to homes.
- Identify opportunities where usage can be enhanced through the provision of community and cultural facilities, open spaces or sporting activities.
- Address opportunities for creating ‘walkable’ and sustainable neighbourhoods by offering key destinations such as employment, education, retail and recreation land uses.
- Design car parking within the city and local centres to reduce unnecessary car travel – with a focus on linking safe, attractive and comfortable pedestrian and cycle pathways as convenient alternatives.

## **HOUSING DIVERSITY**

### **Choice of housing**

A mix of dwelling types can increase density and attract a broad demographic, creating a resilient neighbourhood that caters for a diverse range of household structures, ages and tenures.

- Review policy to ensure new neighbourhoods offer a range of dwelling choices that are suited to the needs and character of the area.
- Identify opportunities within existing neighbourhoods to provide for a diverse community and enable residents to remain within their community across each stage of life.
- Review the strategic locations of affordable housing in close proximity to local amenities such as public transport, employment, shops and schools.

### **Context**

The design of a dwelling can have a positive influence on its surroundings and inhabitants, and can lead to safer and more engaged communities and healthier lifestyles.

- Ensure new dwellings are designed to engage with the street and/or adjacent open space.
- Provide guidance for dwellings to provide passive surveillance by locating active spaces such as living areas and balconies overlooking streets and open spaces.
- Identify opportunities for new dwellings sited on the lot to allow for future intensification.

## 6.0. Bibliography

- ACARA. (2016, August 19). *My School*. Retrieved from My School: <http://www.myschool.edu.au/>
- Australian Bureau of Statistics, A. (2016). *Australian Bureau of Statistics Census Data*. Australian Government.
- Australian Centre on Quality of Life, A. (2010, October 4). *Australian Centre on Quality of Life*. Retrieved from Australian Centre on Quality of Life: <http://www.acqol.com.au>
- Australian Curriculum Assessment & Reporting Authority, A. (2015, August). *My School*. Retrieved from My School: [www.myschool.edu.au](http://www.myschool.edu.au)
- Australian Early Development Census, A. (2015). *AEDC Community Profile Kwinana*. Australian Government.
- Australian Early Development Census, A. (2015). *Data Explorer*. Australian Government.
- Catalyse. (2016). *Community Services and Wellbeing Scorecard*. City of Kwinana.
- FYA. (2016, August 10). *FYA*. Retrieved from FYA: <http://www.fya.org.au/wp-content/uploads/2016/05/FYA-Election-Platform-FINAL.pdf>
- Goldfields Land and Sea Council, G. (2016, August). Senior Consultant. (H. Sharley, Interviewer)
- Headly, E., & Birrell, B. (2006). *Housing and Community in the Compact City*. AHURI.
- Healthy Safe & Inclusive Communities, F. G. (2016, August 10). Review of Kalgoorlie Boulder Liveability & Social Services. (H. Sharley, Interviewer)
- Heart Foundation. (2017). *Healthy Active by Design*. Retrieved from Healthy Active by Design: [www.healthyactivebydesign.com.au](http://www.healthyactivebydesign.com.au)
- Multicultural, F. G. (2016, August 11). Cultural Diversity. (H. Sharley, Interviewer)
- PHIDU, P. H. (2016). *Social Health Atlas of Australia, Western Australia*. Torrens University Australia.
- Profile id, I. (2016). *Our Community Profile*. Profile.id.
- RAI, R. A. (2016, August 4). *Insight: Australia's Regional Competative Index*. Retrieved from Australia's Regional Competative Index: <http://www.regionalaustralia.org.au/home/tools-and-products/insight/>
- Regional Australia Institute, R. (2012). *Insight Australia's Regional Competitiveness Index*. Regional Australia Institute.
- Regional Development Australia Goldfields Esperance, R. (2015). *Goldfields-Esperance Arts and Culture Framework 2015-2020*. RDAGE.
- socialpinpoint. (2016, September 4). *socialpinpoint*. Retrieved from socialpinpoint: <https://www.socialpinpoint.com/>
- Victorian Community Indicators Project, V. (2006, August 2). *Community Indicators Victoria*. Melbourne: Institute of Community Engagement and Policy Alternatives (ICEPA), Victoria University. Retrieved from Community Indicators Victoria: <http://www.communityindicators.net.au/>
- WAPC. (2012). *Household Forecasts - Western Australia Tomorrow, Population Report No.8, 2006-2026*. Perth: WAPC.
- WAPC. (2014). *State Planning Strategy 2050*. Perth: WAPC.
- Western Australian Police, W. (2016). *Crime Statistics Portal*. Western Australian Police.



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## Appendix C

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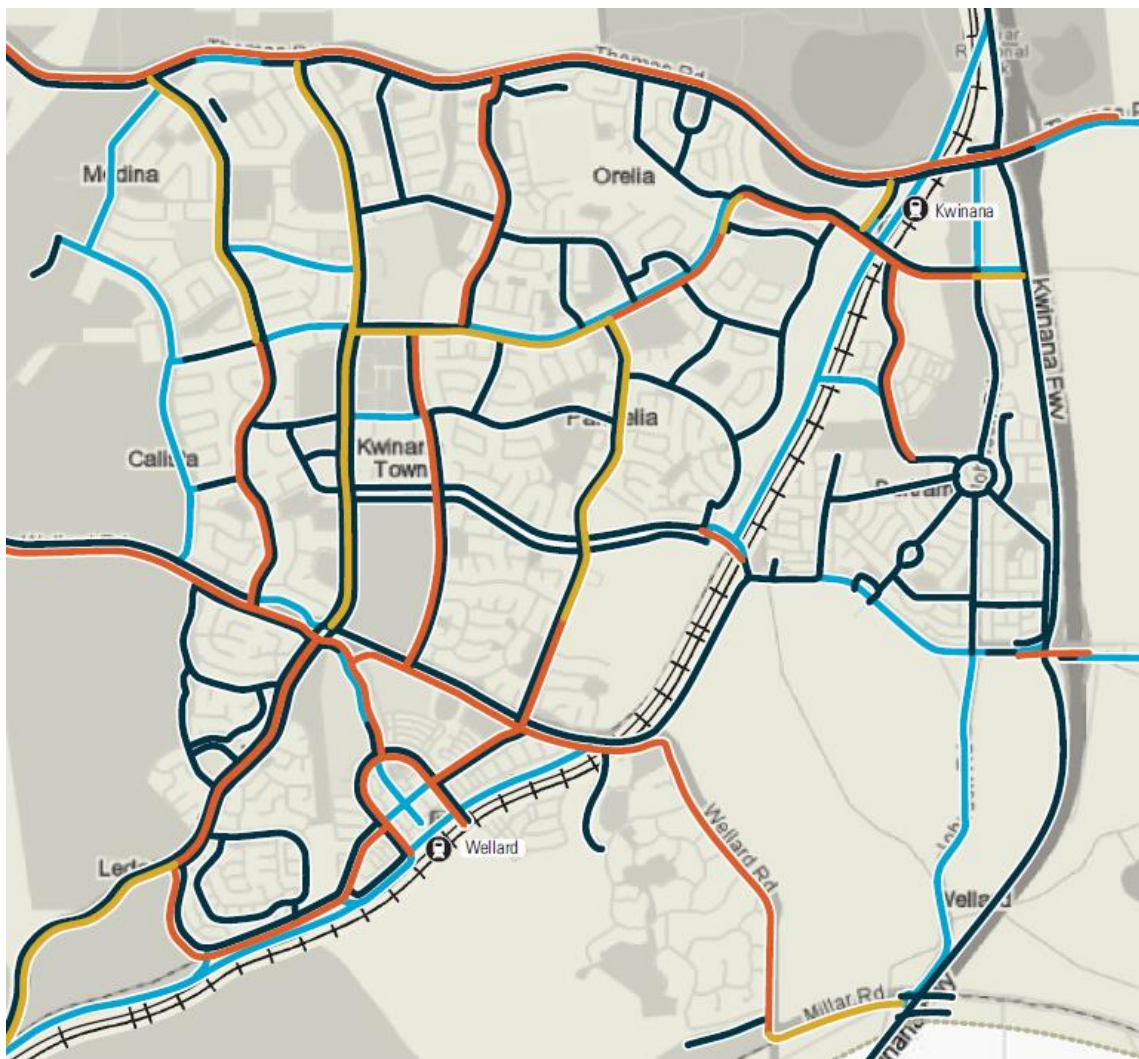
### Complete Schedule of 2010 Bike Plan Recommended Projects & Present Status



#	Project	Status	Comment
1	Hope Valley Rd Shared Path	Complete	-
2	Burlington St / McLaren Ave Shared Path	Complete	-
3	Beard St Shared Path	Outstanding	Industrial connections not priority of 2017 plan
4	Mason Dr Shared Path	Not Proceeding	Northern section part of Local Route network
5	Rockingham Rd / Thomas Rd intersection	Under Construction	Project identified in Crowd Spot (27 times)
6	Rockingham Rd Shared Path (Thomas Rd – Mandurah Rd)	Complete	To confirm / standard not to PSP requirement of PTP Plan
7	Patterson Rd / Mandurah Rd intersection	Programmed	Future PSP alignment (ensure standards met)
8	Mandurah Rd Cycle Lanes	Not Proceeding	PSP on freight line preferred option for network
9	Office Rd Cycle Lanes	Not Proceeding	Beach & Ocean recommended route options
10	Thomas Rd Shared Path (at Bingfield Rd E)	Not Proceeding	Consider bike boulevard on Bingfield East
11	Bingfield Rd W, Tucker St, Beacham Cr, Westbrook St Shared Path	Partially Complete	Local Route network
12	Medina Ave Cycle Lanes	Outstanding	Low priority (path or cycle lanes)
13	Calista Ave Path upgrade	Not Proceeding	Focus on secondary route Coleman-Bright
14	Gilmore Ave Cycle Lanes (Thomas Rd – Wellard Rd)	Outstanding	Alternative alignment considered
15	Gilmore Avenue Cycle Lanes (Runnymede Gt - Mandurah Rd)	Complete	-
16	PSP Design Wellard Rd - Rockingham Stn	Outstanding	Continue design and progress alternative route
17	Henley Blvd Shared Path	Complete	-
18	PSP Design Thomas Rd - Freeway PSP	Not Proceeding	Current connection Thomas Rd adequate
19	Thomas Rd / Johnson Rd intersection	Programmed	PSP connection
20	PSP Design Kwinana Stn - Wellard Rd	Outstanding	Developer to construct to PSP standard
21	Bertram Rd Shared Path	Complete	-
22	Johnson Rd Shared Path (Mortimer - Millar)	Complete	-
23	Mortimer Rd Shared Path (Freeway - Barker)	Programmed	Developer to construct (check standard)
24	Parkfield Blvd Shared Path	Complete	-
25	Price Pkwy Shared Path	Complete	-
26	Johnson Rd Shared Path (Sulphur - Thomas)	Programmed	Low priority – developer to construct
27	Holden CI Shared Path & Cycle Lanes	Not Proceeding	Bike Boulevard (quiet street)
28	Wellard Rd Shared Path (near Calista)	Complete	-
29	Sulphur Rd Cycle Lanes (Durant-Nottingham)	Outstanding	Proposed in 2017 (consider two-way cycle track)
30	Cycle Lane Design Sulphur Rd (Parmelia – Gilmore)	Outstanding	Reconsider project; signage of present treatment
31	Orelia Ave Cycle Lanes (Menli – Thomas)	Outstanding	Consider two-way cycle track
32	Parmelia Ave (Sulphur – Tunnicliffe)	Outstanding	Consider two-way cycle track
33	Wellard Rd Shared Path (Mears – Bertram)	Complete	-
34	Chisham Ave (Gilmore – Meares)	Complete	Crossing points in CrowdSpot

#	Project	Status	Comment
35	Pace Rd Path upgrade (Medina – Gilmore)	Outstanding	Consider bike boulevard
36	Millar Rd Cycle Lanes (Johnson – Wellard)	Complete	-
37	Rockingham Rd / Frederick St intersection	Programmed	Check status with Main Roads
38	Rockingham Rd Cycle Lanes (Cockburn – LG Boundary)	Partially complete	Check location / PSP
39	Rockingham Rd / Beard St intersection	Outstanding	Check status with Main Roads
40	Rockingham Rd / Cockburn Rd intersection	Programmed	Check status with Main Roads
41	Wellard Rd Shared Path (at railway crossing)	Not Proceeding	PSP to progress
42	Armstrong Rd Shared Path	Complete	-
43	Anketell Rd Shared Path	Outstanding	Secondary route (Naval Base to Armadale)

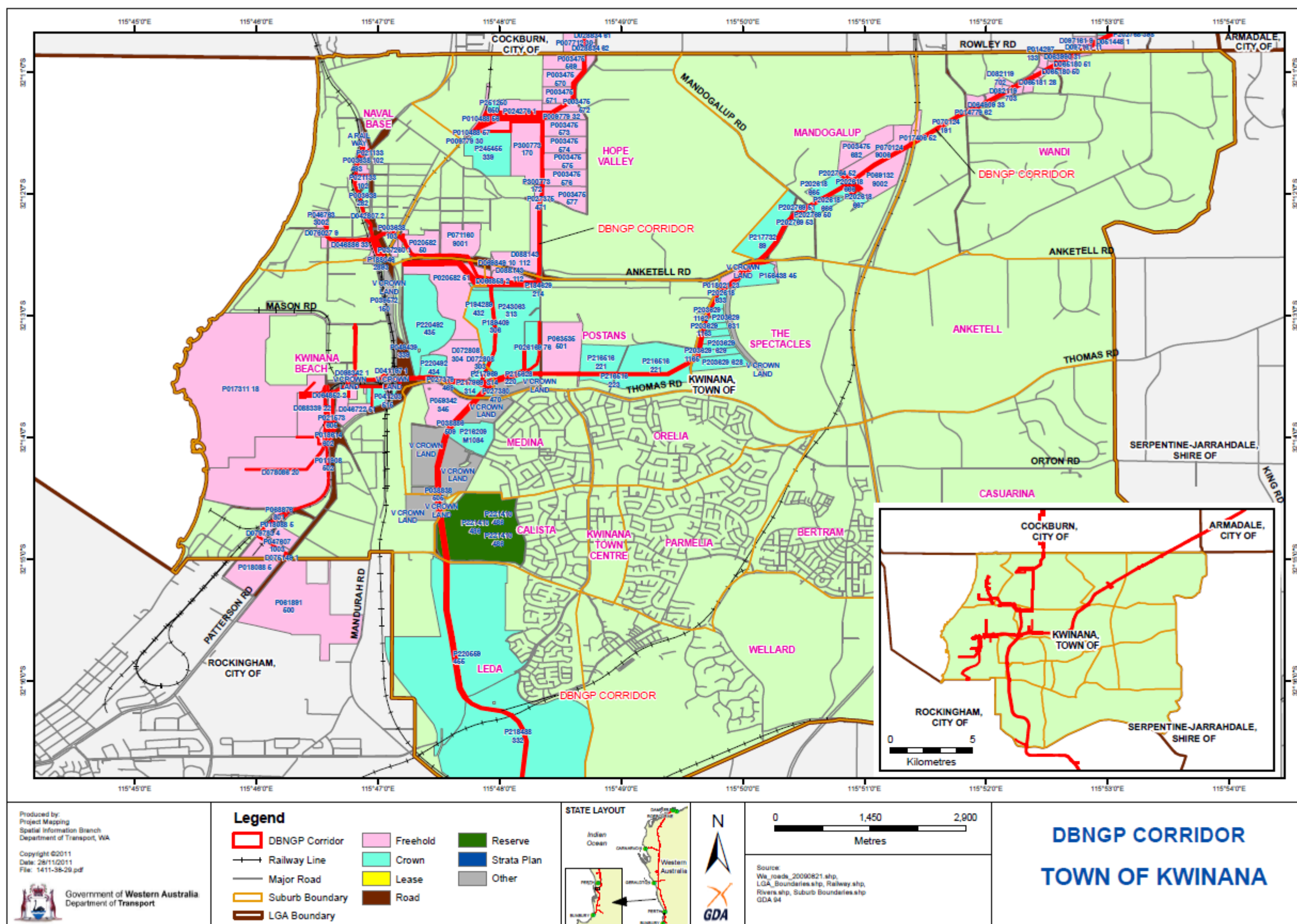
Map of routes proposed in 2010 Bike Plan



## Appendix D

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### Dampier to Bunbury Natural Gas Pipeline Map





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# **Bike and Walk Kwinana**

## **Project Report**

**City of Kwinana**

Created by CrowdSpot

July 2017



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July 2017

**Disclaimer**

This report is provided for information and it does not purport to be complete. While care has been taken to ensure the content in the report is accurate, we cannot guarantee it is without flaw of any kind. There may be errors and omissions or it may not be wholly appropriate for your particular purposes. In addition, the publication is a snapshot in time based on historic information which is liable to change. CrowdSpot accepts no responsibility and disclaims all liability for any error, loss or other consequence, which may arise from you relying on any information contained in this report.



# 1. Introduction

## Background

The City of Kwinana launched the Bike and Walk Kwinana project map on 15 May 2017. Developed by CrowdSpot, the digital map was open for 6 weeks until 30 June 2017 and allowed the broader Kwinana community to give input on how walking and biking can be made easier.

## Study Area

The study area included the entire City of Kwinana municipality. Key geographic features include the coast on the Eastern side, the centre of Kwinana, and the Kwinana Freeway corridor.

## Process

The data will be used to inform the development of the Kwinana Bike Plan. The prioritisation of walk and bike spots may also help us to determine which capital works need to be addressed in the short, medium and long term.

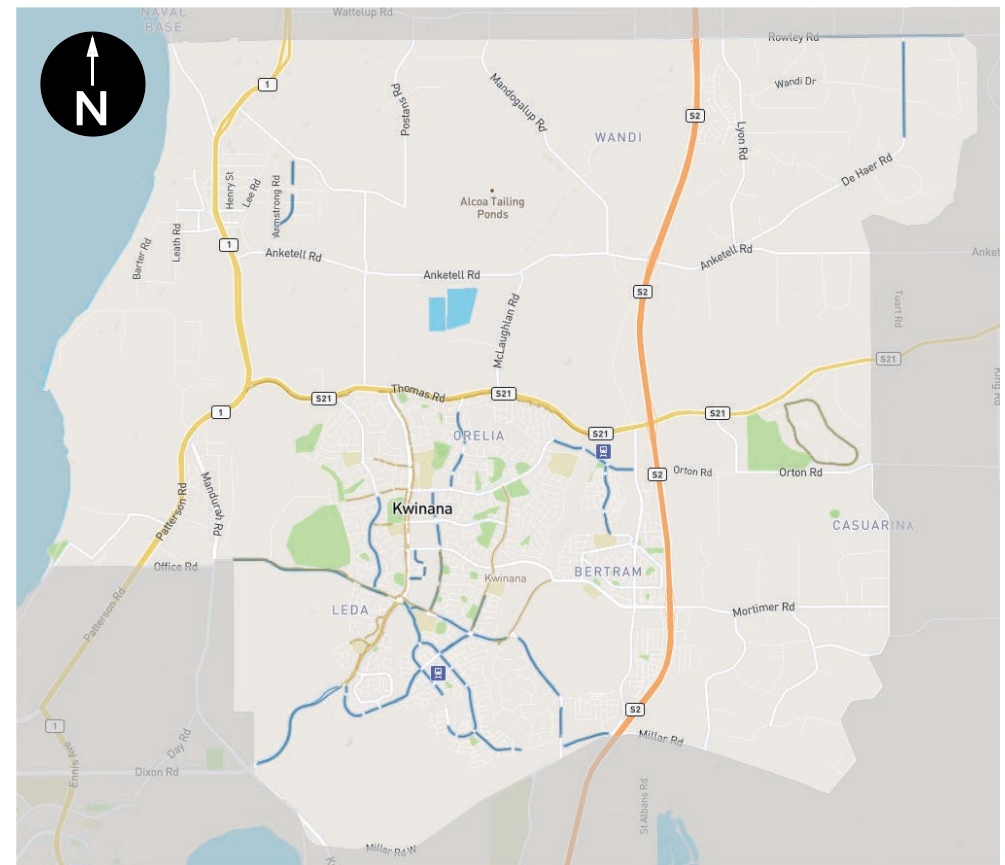
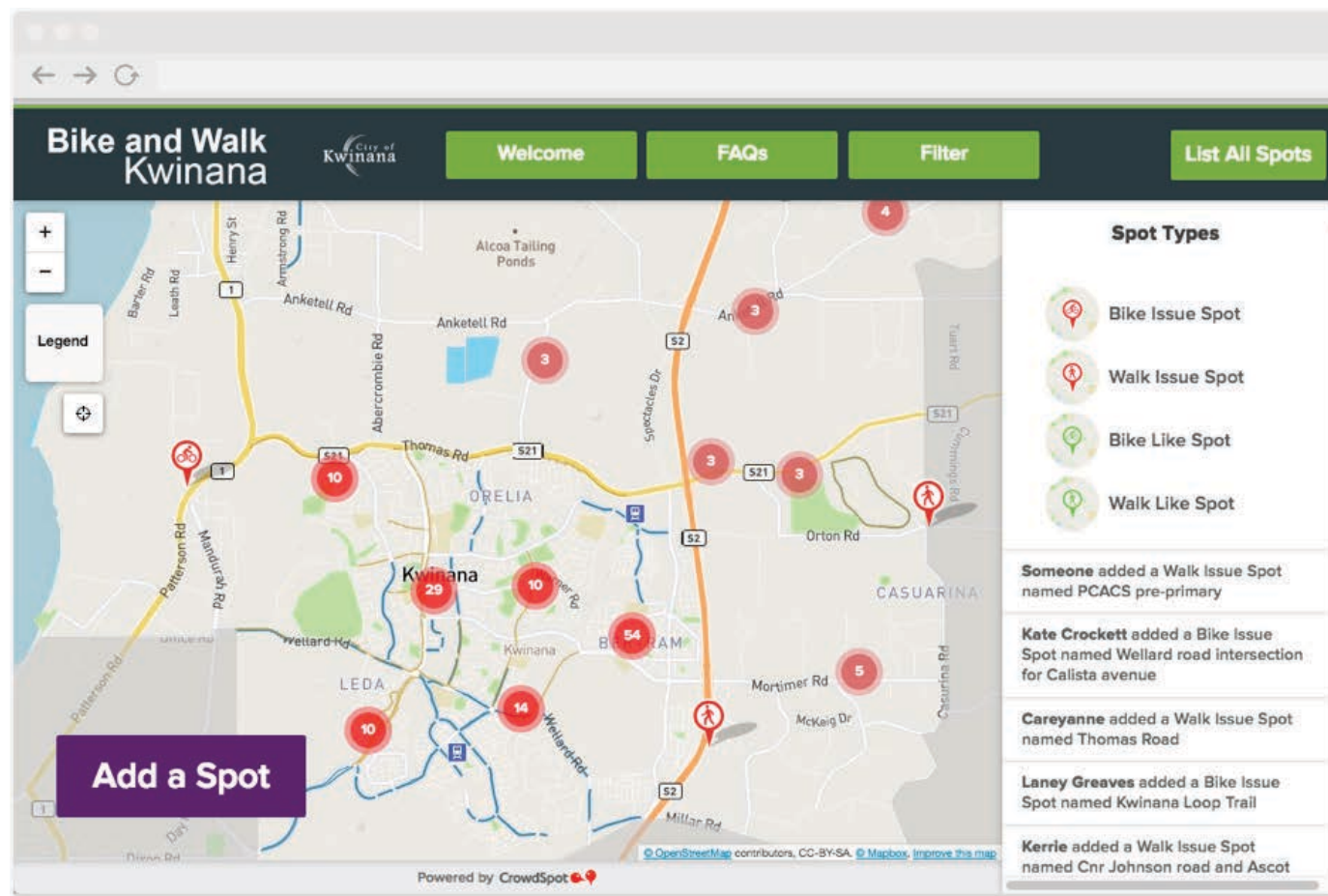


Figure 1 – Project Study Area

## 2. The Project Map

The online CrowdSpot map, was accessed via the City of Kwinana website or directly via the CrowdSpot map URL (<http://bikeandwalkkwinana.crowdspot.com.au/>). The map (Figure 2) allowed users to identify locations where they like walking and riding their bicycle (Like Spots) or where they encounter walking and bicycle issues (Issue Spots).

Figure 2 – Parramatta Bike Plan Project Map



## Contributing to the map

The survey form contained a combination of location specific questions (type of spot, etc.) in addition to demographic questions of the participant (Connection to the City of Kwinana, Age and Gender). There were three ways people were able to actively contribute their input to the map.

This includes:

1. 'Adding a Spot' to the map via the survey form (four Spot types)
2. Commenting on existing spots already on the map
3. Voting on existing spots already on the map by clicking the 'support' button

Figure 3 – The survey form

The screenshot shows the 'Bike and Walk Kwinana' survey form. The header includes the City of Kwinana logo and navigation buttons: 'Welcome', 'FAQs', 'Filter', and 'List All Spots'. The main form is titled 'Tell us about riding and walking in Kwinana..'. It contains the following fields:

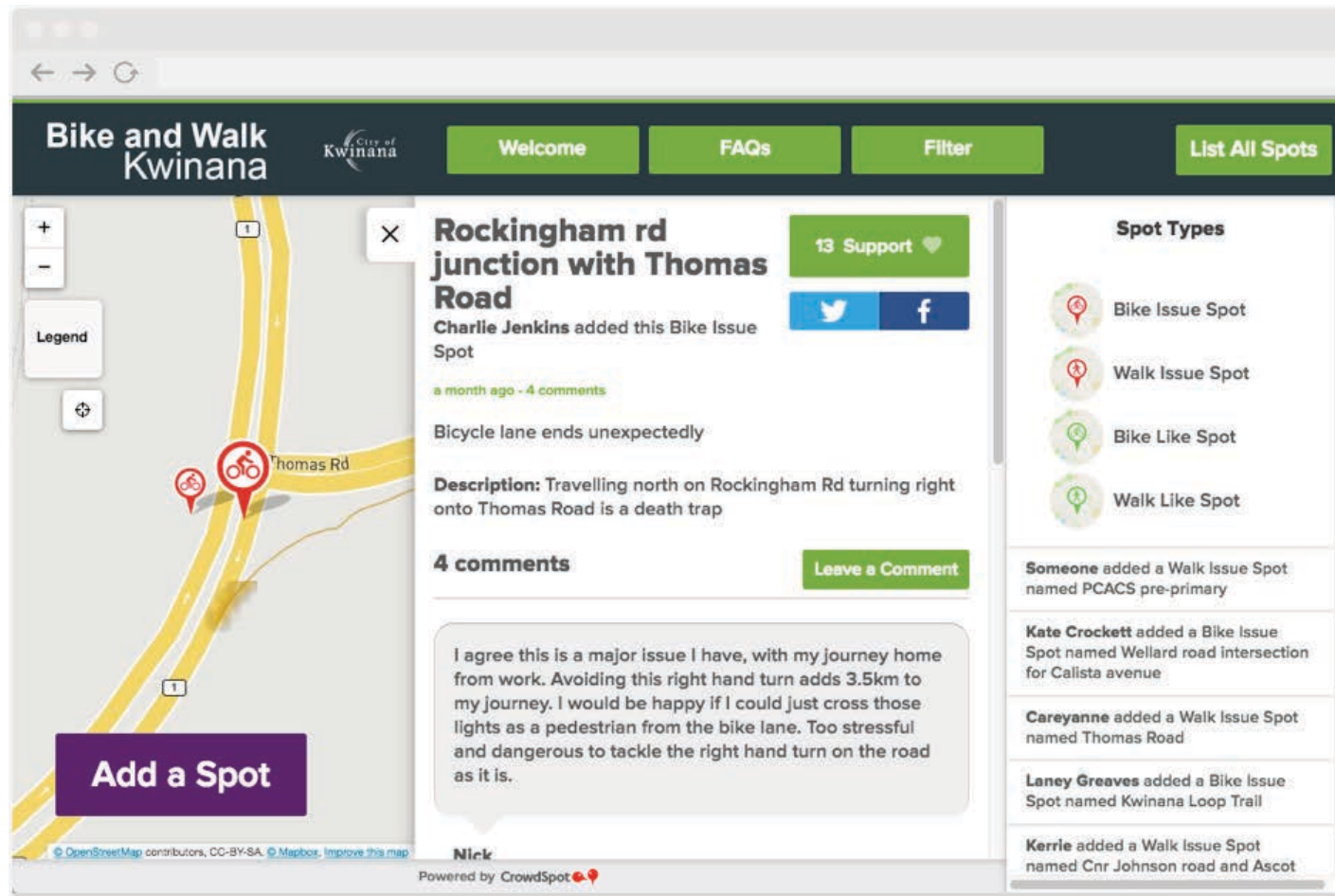
- 'What is the name of this spot?' with a text input field (placeholder: 'Street, Park, Landmark, etc.').
- 'What type of Spot is this?' with a dropdown menu showing 'Choose One', 'Bike Issue Spot' (selected), 'Walk Issue Spot', 'Bike Like Spot', and 'Walk Like Spot'.
- 'What is the bike issue at this spot?' with a dropdown menu showing 'Choose One'.
- 'Please tell us more about your experience at spot or if you have any ideas on how to improve at this spot or route..' with a text area (placeholder: 'Please describe...').
- 'What is your primary connection to the City of Kwinana?' with a dropdown menu showing 'Choose One'.
- 'Your gender' with a dropdown menu showing 'Choose One'.

The right sidebar, titled 'Spot Types', lists four categories: 'Bike Issue Spot', 'Walk Issue Spot', 'Bike Like Spot', and 'Walk Like Spot'. Below this, it shows recent submissions:

- Someone added a Walk Issue Spot named PCACS pre-primary
- Kate Crockett added a Bike Issue Spot named Wellard road intersection for Calista avenue
- Careyanne added a Walk Issue Spot named Thomas Road
- Laney Greaves added a Bike Issue Spot named Kwinana Loop Trail
- Kerrie added a Walk Issue Spot named Cnr Johnson road and Ascot

The map on the left shows the Kwinana area with various streets and landmarks. A blue plus icon indicates the current location. The footer mentions 'Powered by CrowdSpot'.

Figure 4 – Example Spot on the map





### 3. Participation Data

The data collected through the map includes a combination of both active and passive participation. Active participation refers to user interactions where people have submitted their input by either adding a spot, comment or 'support'. Passive participation refers to cases where users have explored the map, viewing and reading various contributions without actively making a submission.

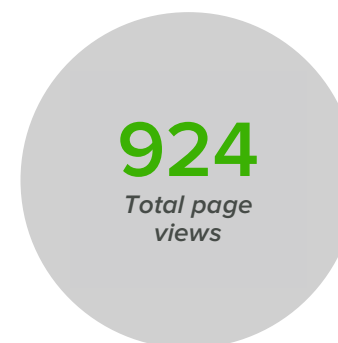
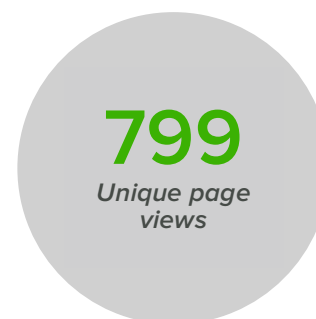
#### Active Participation



#### Passive Participation

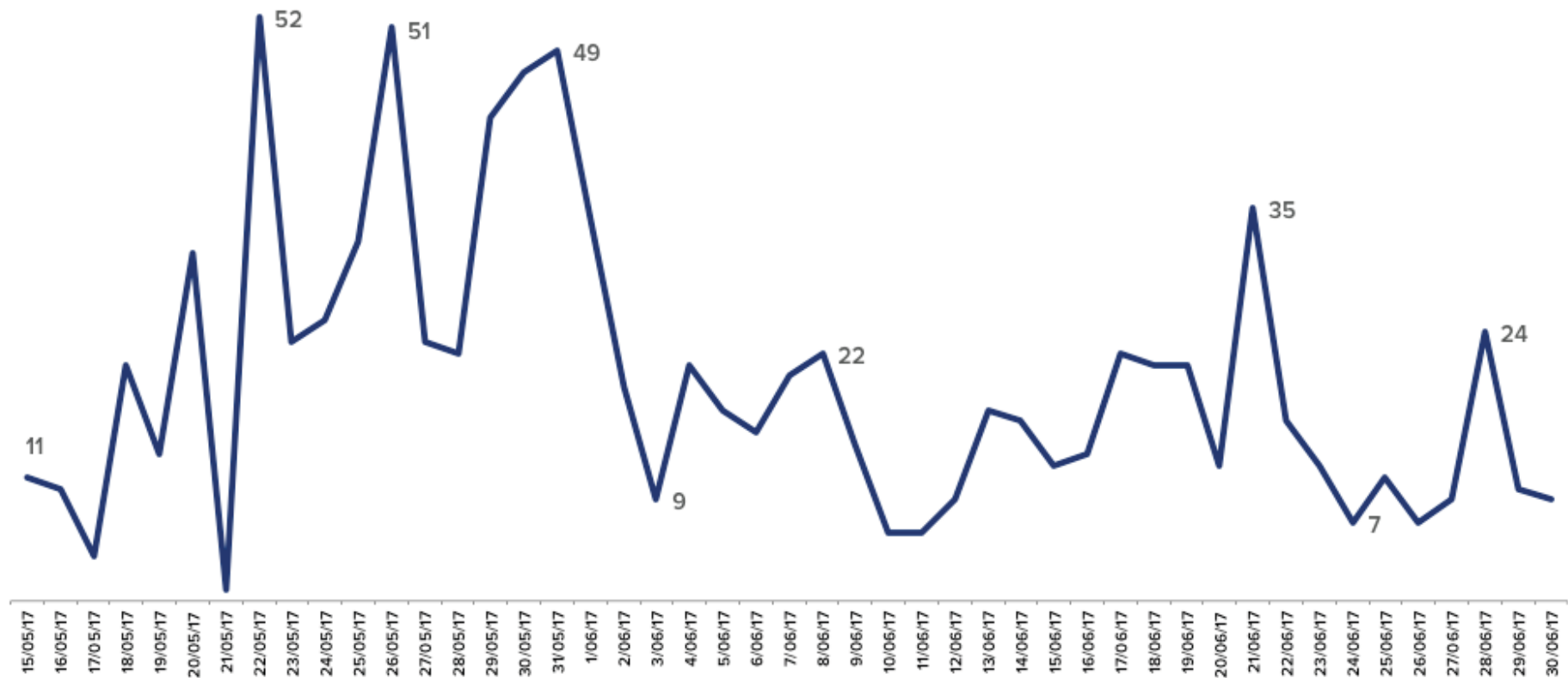


#### Page Views



In total, there were 137 active participants who submitted input on the map and Google Analytics reported 799 unique page views. As a result, we can determine that there were 662 passive participants, those who came to the website but did not make a submission. This large number could be due to large interest in the project from people who do not have a connection with biking or walking in the City of Kwinana. Figure 5 on the following page outlines the total number of views per day over the engagement period. The peak occurred a week after the project launch on 22 May with approximately 52 page views.

Figure 5 – Page views over time (source: Google Analytics)



## Gender

Overall, the majority of people who submitted a spot on the map were woman, who represented 53%.

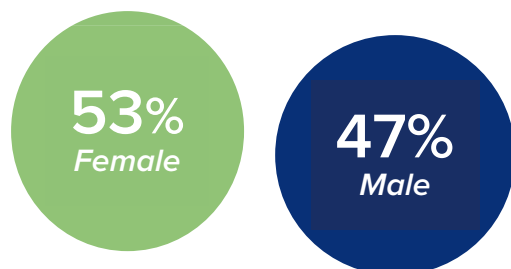


Figure 6 – Gender

## Age

In term of age, the majority of participants were in the 35-49 age range, representing 48% of participants. Together with the 25-34 age range, these two age groups made up 76% of all participants. Interestingly, there were relatively more women than men represented in the younger 25-34 age range and more men than women in the 50-59 age range. There was also very limited participation from people under 24.

Figure 8 – Age

## Connection to City of Kwinana

People who live within the City of Kwinana represented 88% of people who submitted a spot on the map. The remaining participants 'work' (7%) within or 'visit' (6%) the City of Kwinana.

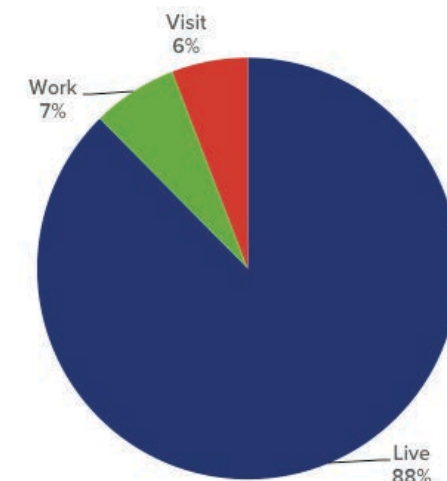
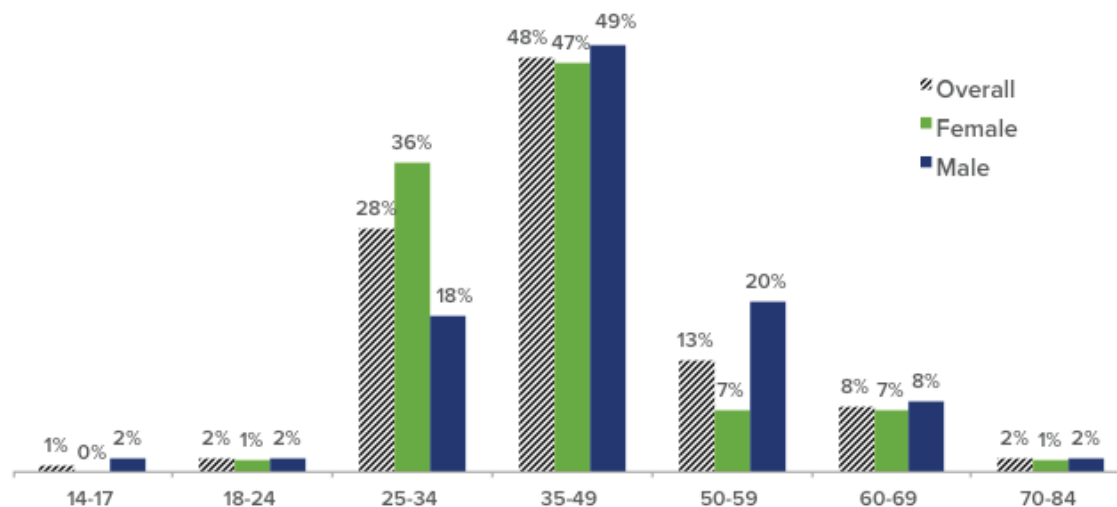
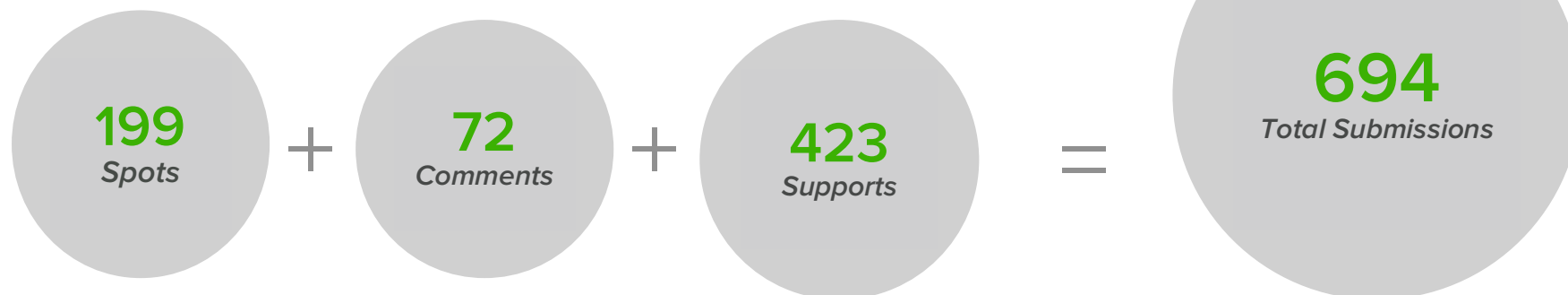


Figure 7 – Connection



## 4. Submissions

There were a total of 1,254 submissions made up of spots, comments and supports.



### Types of Spots

The majority of spots on the map were Walk Issue Spots (56%). Together with Bike Issue Spots they represented 91% of all spots (Figure 9). Interestingly, men added the majority of Bike Spots and women added the majority of Walk Spots (Figure 10).

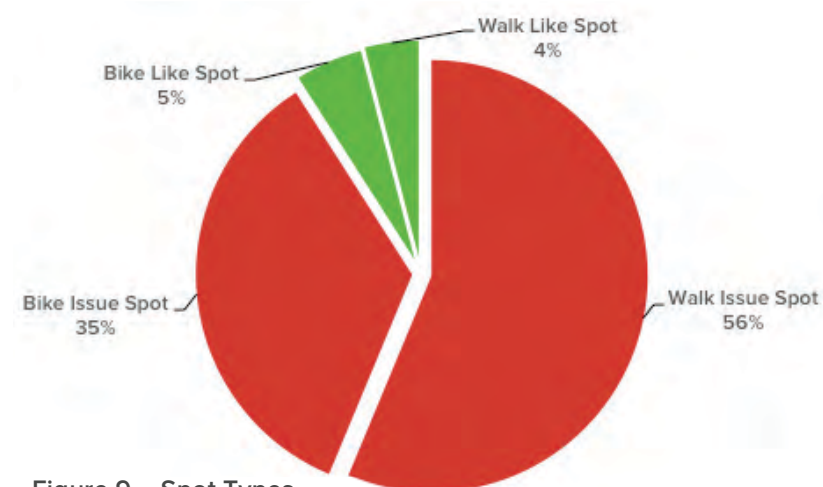
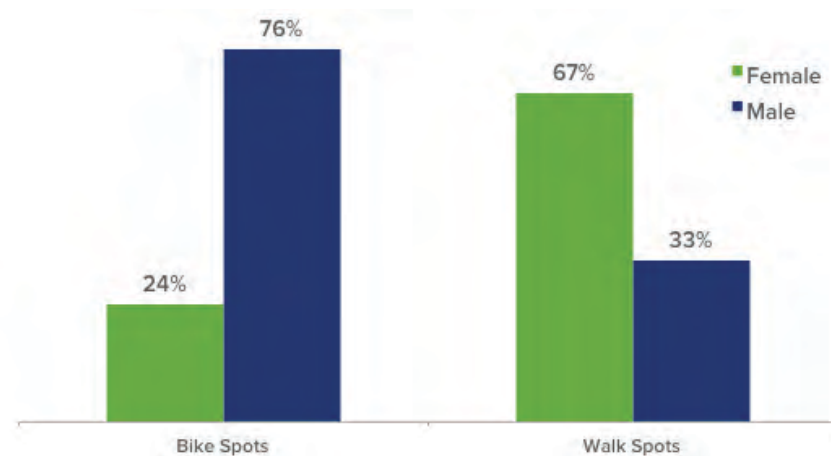


Figure 9 – Spot Types

Figure 10 – Spot Types by gender





## 5. Spatial distribution of Spots

The image to the right includes all spots added to the map. There are concentrations of spots south Thomas Rd and west of Kings Freeway in suburbs of Bertram and Kwinana.

The south-east and northern section of the study area did not receive many submissions. This is likely due to these areas not having many residents. This spatial distribution can also be seen with the heat map on the following page.

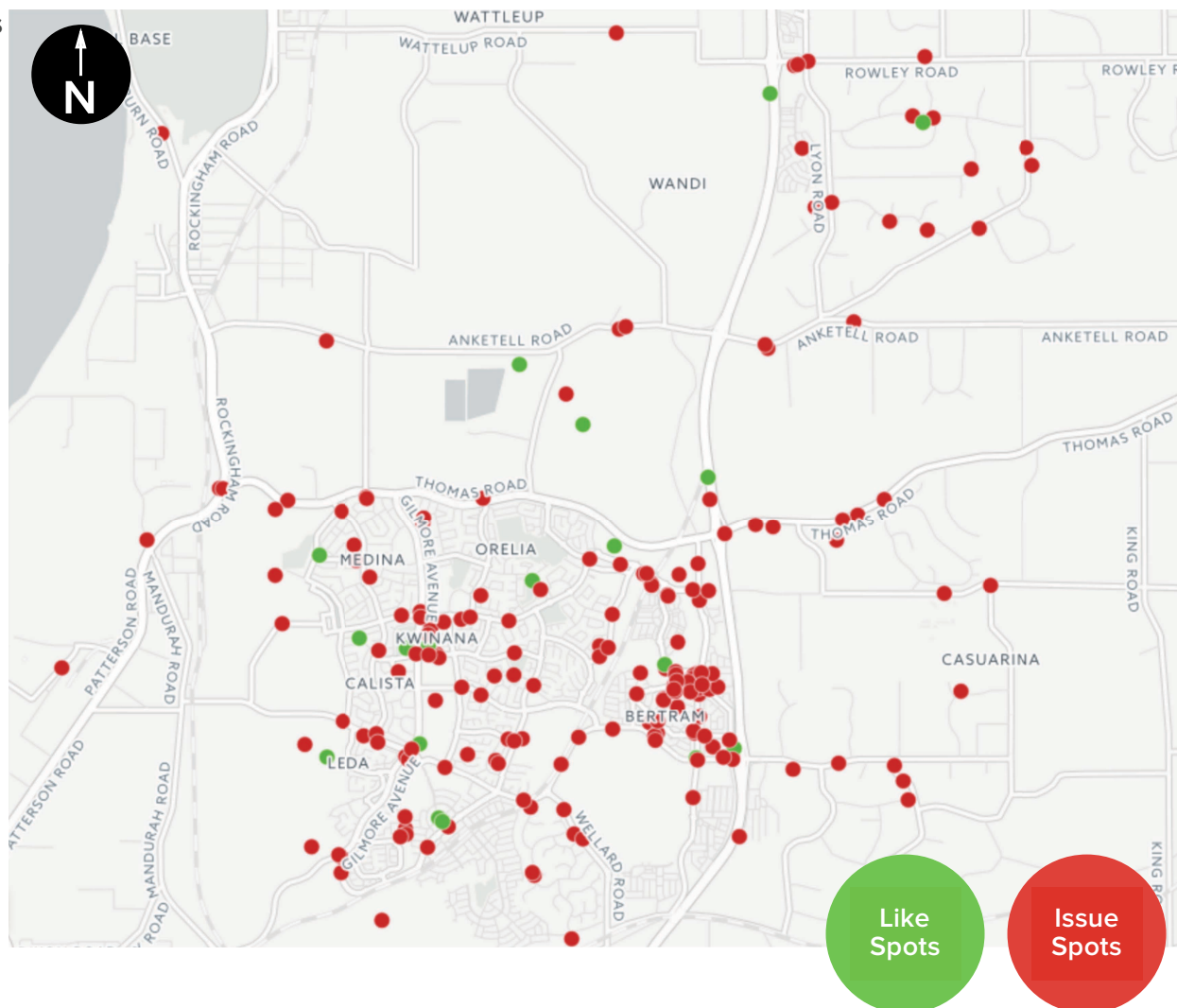
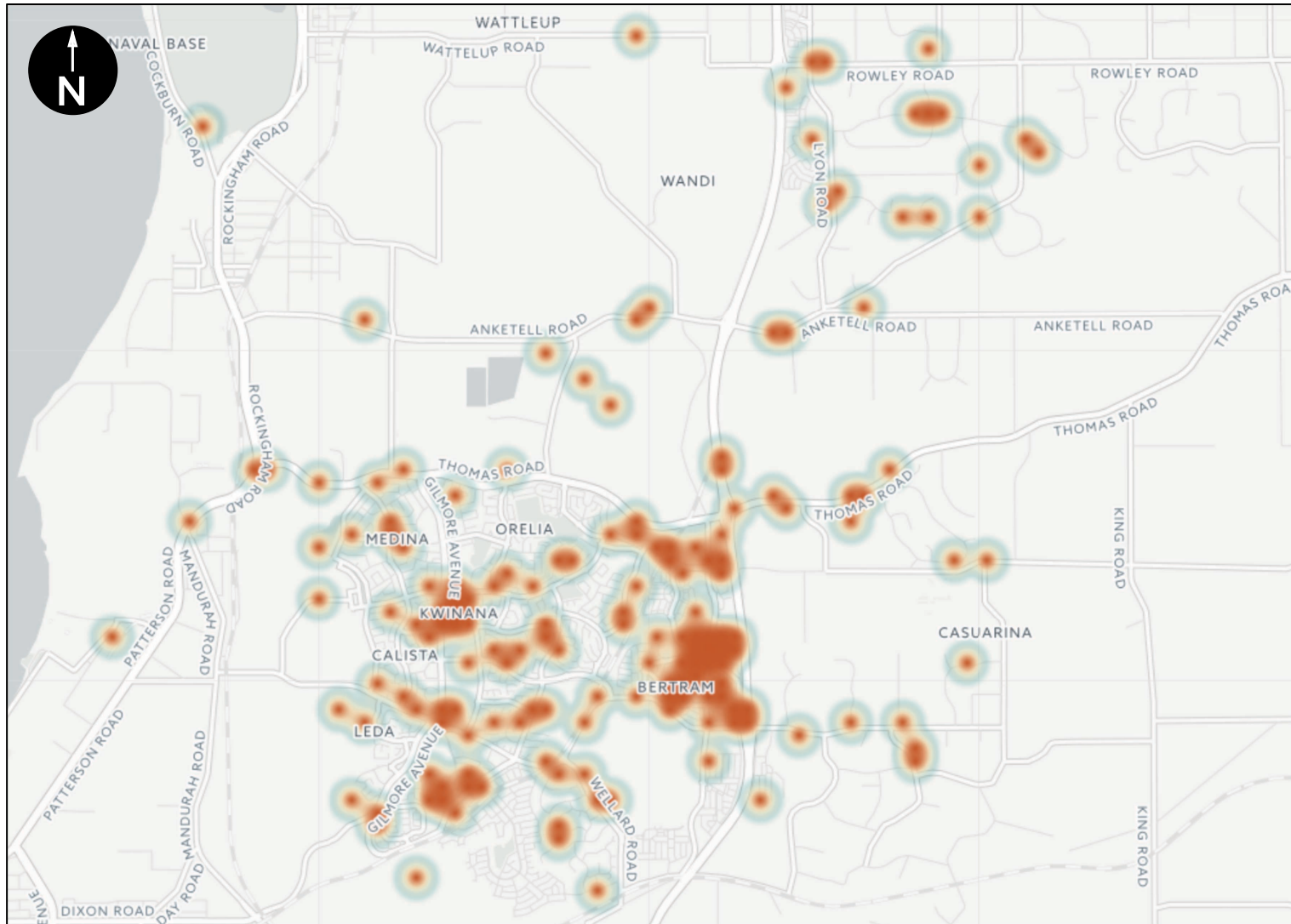


Figure 11 – Spatial distribution of Spots

Figure 11 – Heat map

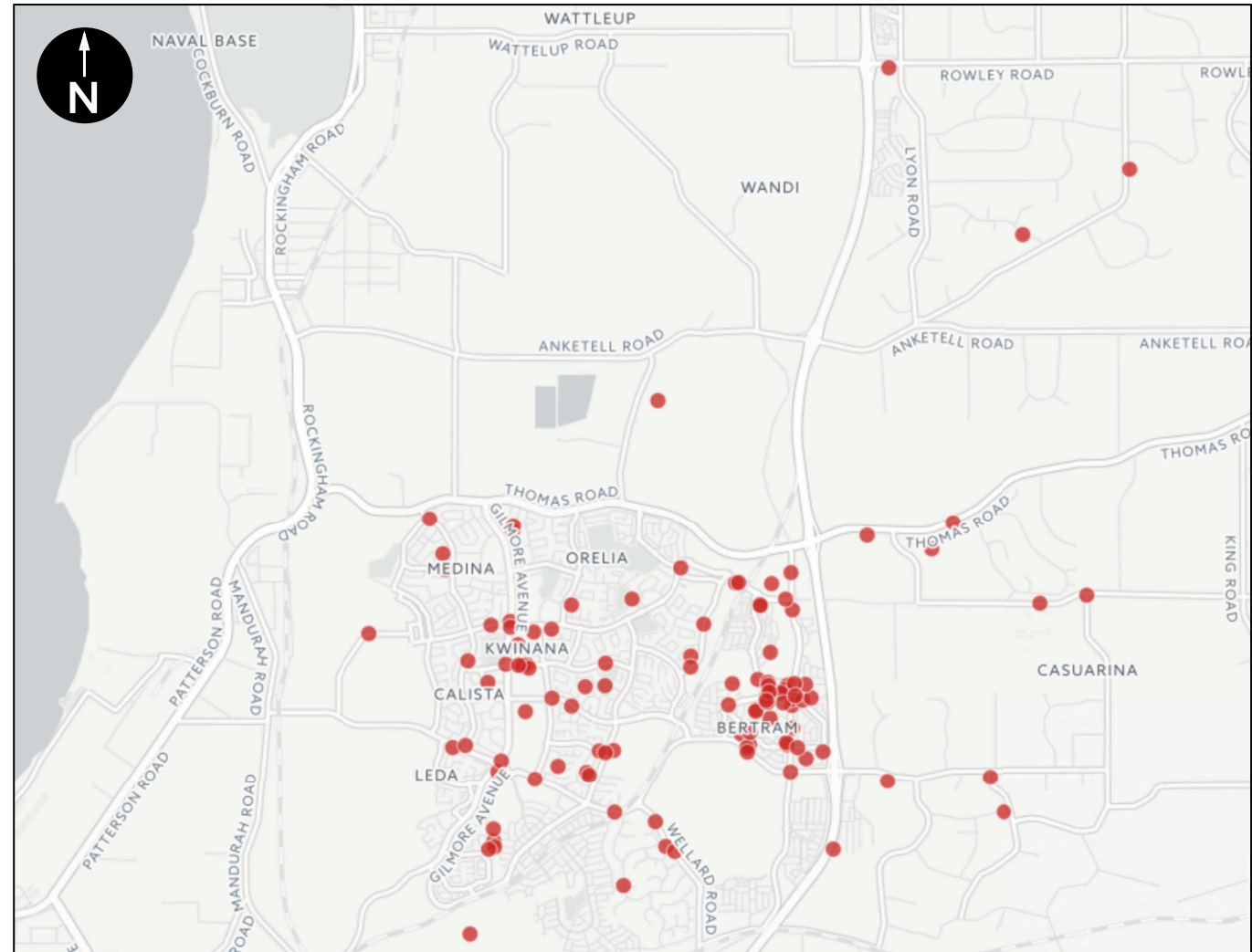


## 6. Walk Issue Spots

Walk Issue Spots were the most popular types of spots representing 56% or 112 spots submitted on the map.

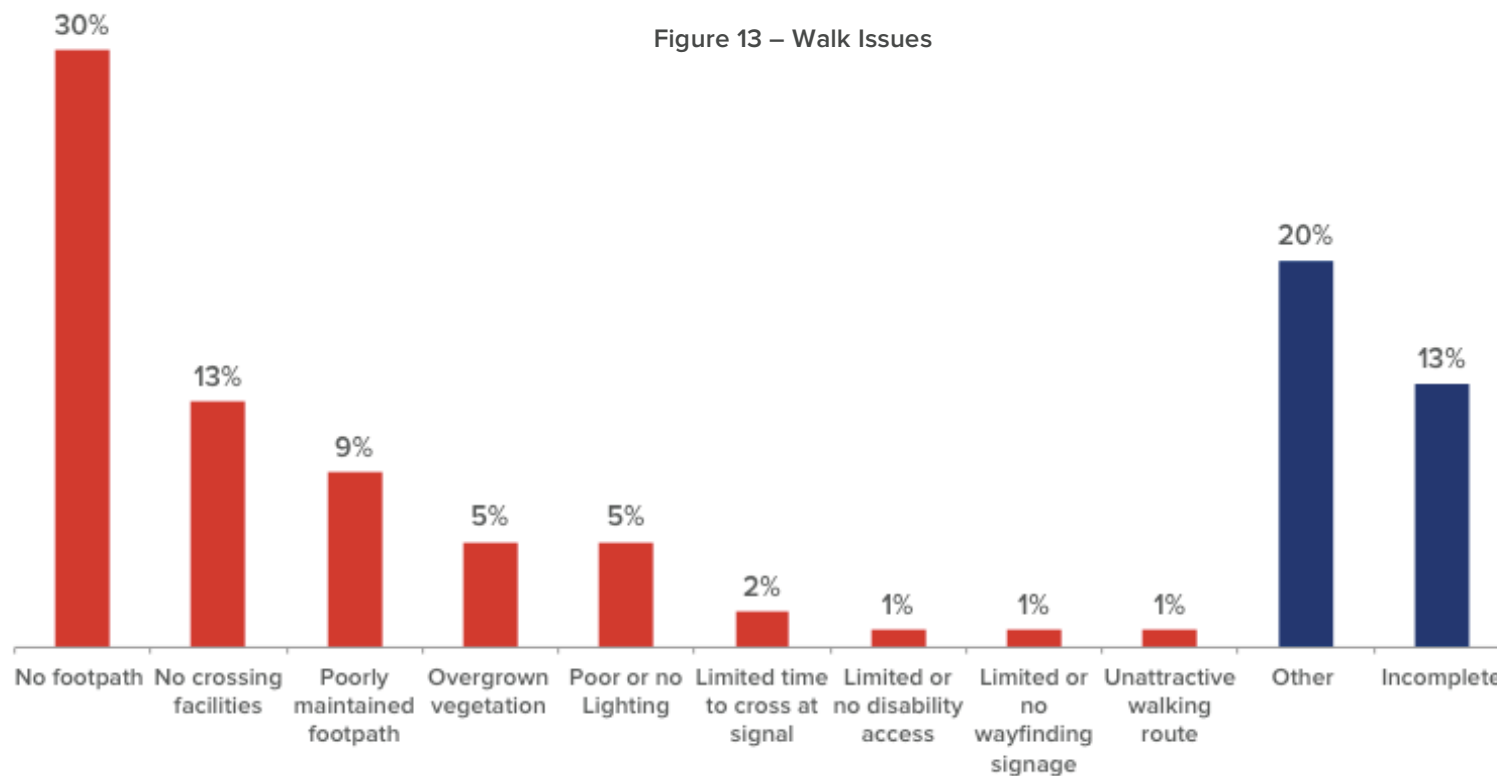
Figure 12 displays all Walk Issue Spots, where clusters of submissions are found in the suburbs of Kwinana and Bertram. Participants were asked to specify the type of walking issue (Figure 13) and we are also able to determine the priority Walk Issue Spot locations (Figure 17).

Figure 12 – Walk Issue Spots



## Walking Issues

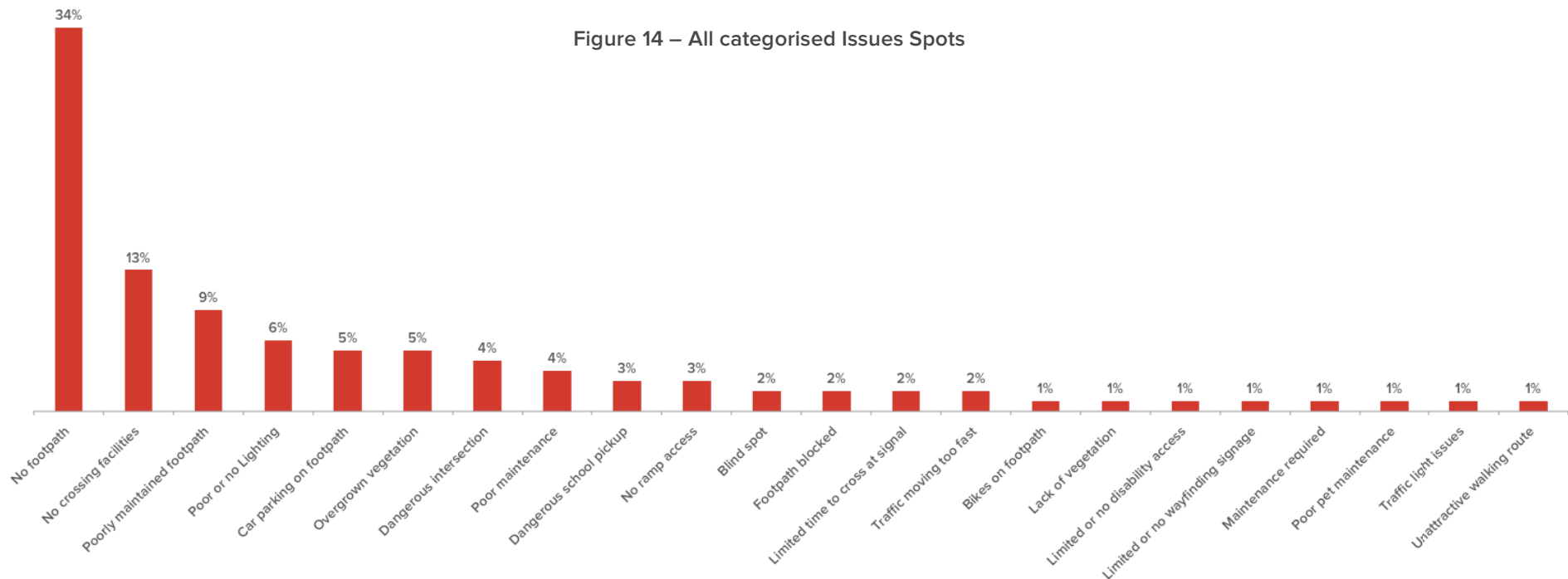
Participants were able to select from a dropdown list of walking related issues. As seen in Figure 13, the most popular option selected in the dropdown list was 'No footpath' (30%). The next most common response was 'Other' (20%). Combined with the 'Incomplete' responses (13%), 33% of Walk Issue Spots did not select a pre-determined issue from the dropdown list. These submissions have been categorised and combined into Figure 14 on the following page. Of the Walk Issue Spots where an option was selected, 'No crossing facilities' (13%) and 'Poorly maintained footpath' (9%) were the other top responses. These results suggest that there is a lack of existing walking infrastructure and room for improvement with existing footpaths.





## Walking Issues - categorised

The figure below represents all Walk Issue Spots after categorising 'Other' and Incomplete submissions. The top 3 types of issues remain the same as in Figure 13, but new categories of 'Poor or no lighting' (6%) and 'Car parking on footpath' (5%) now appear in the top 5 issues types. Visible in the chart below is an extensive range of different types of walking issues. This highlights the complexity of walking experiences for different people.



## Top 10 Walk Issue Spots

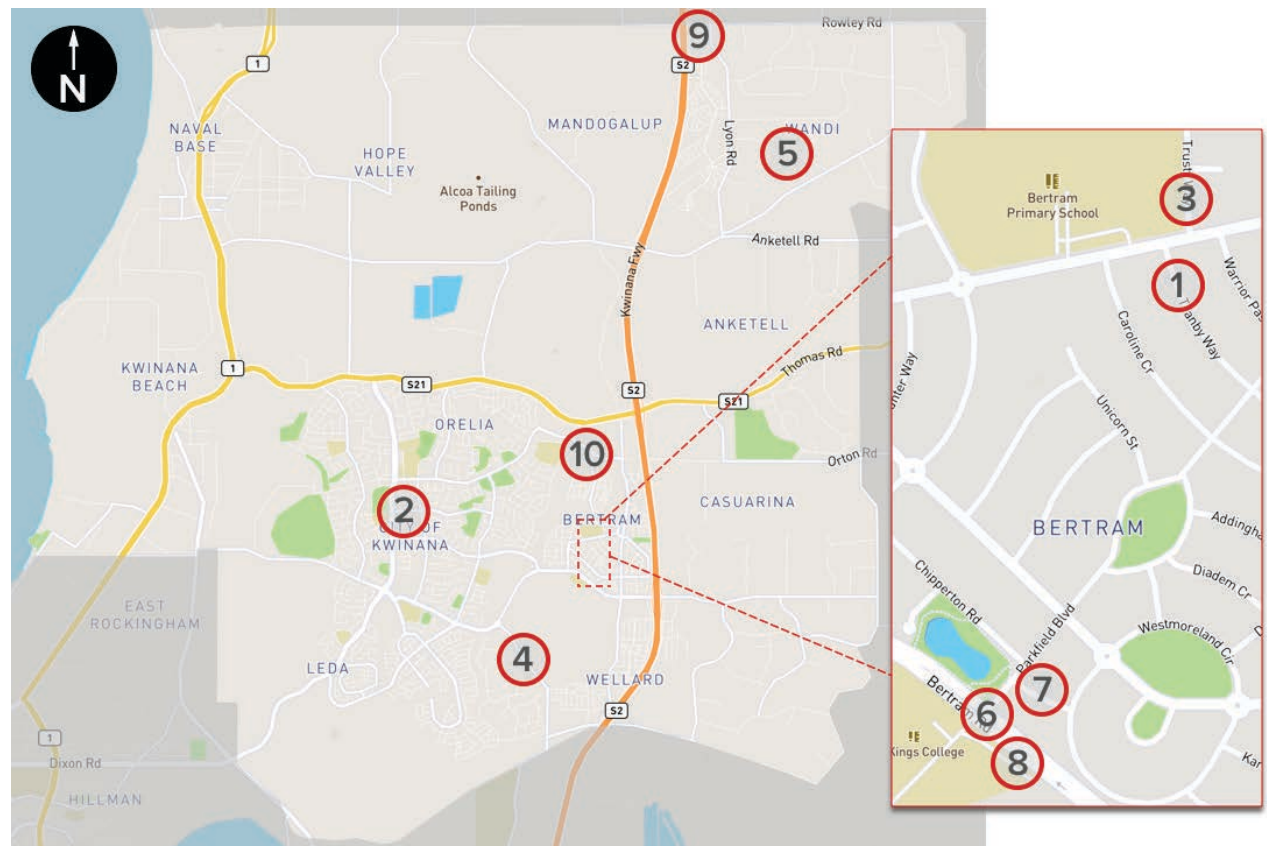
This map represents the top 10 Walk Issue spots added to the map. These locations were identified based on the amount of 'supports' and comments received. Spots at the same location with the same intent and have been aggregated.

Five of the top 10 Walk Issues are located within Bertram within close proximity of schools. The other top priority spots are located close to Bertram, Kwinana and Wandi. Interestingly, seven out of the top 10 walking issues all related to there being 'no footpath'.

### Locations

1. Tranby Way - No footpath
2. Chisham Ave - No crossing facilities
3. Trusty Way - No footpath
4. Wellard Rd - No footpath
5. Magenup Rd - No footpath
6. Parkfield Blvd & Bertram Rd - Overgrown vegetation
7. Orient Way - No footpath
8. Bertram Rd - No footpath
9. Rowley Rd - No footpath
10. Sulphur Rd - Footpath blocked

Figure 15 – Top 10 Walk Issue Spots

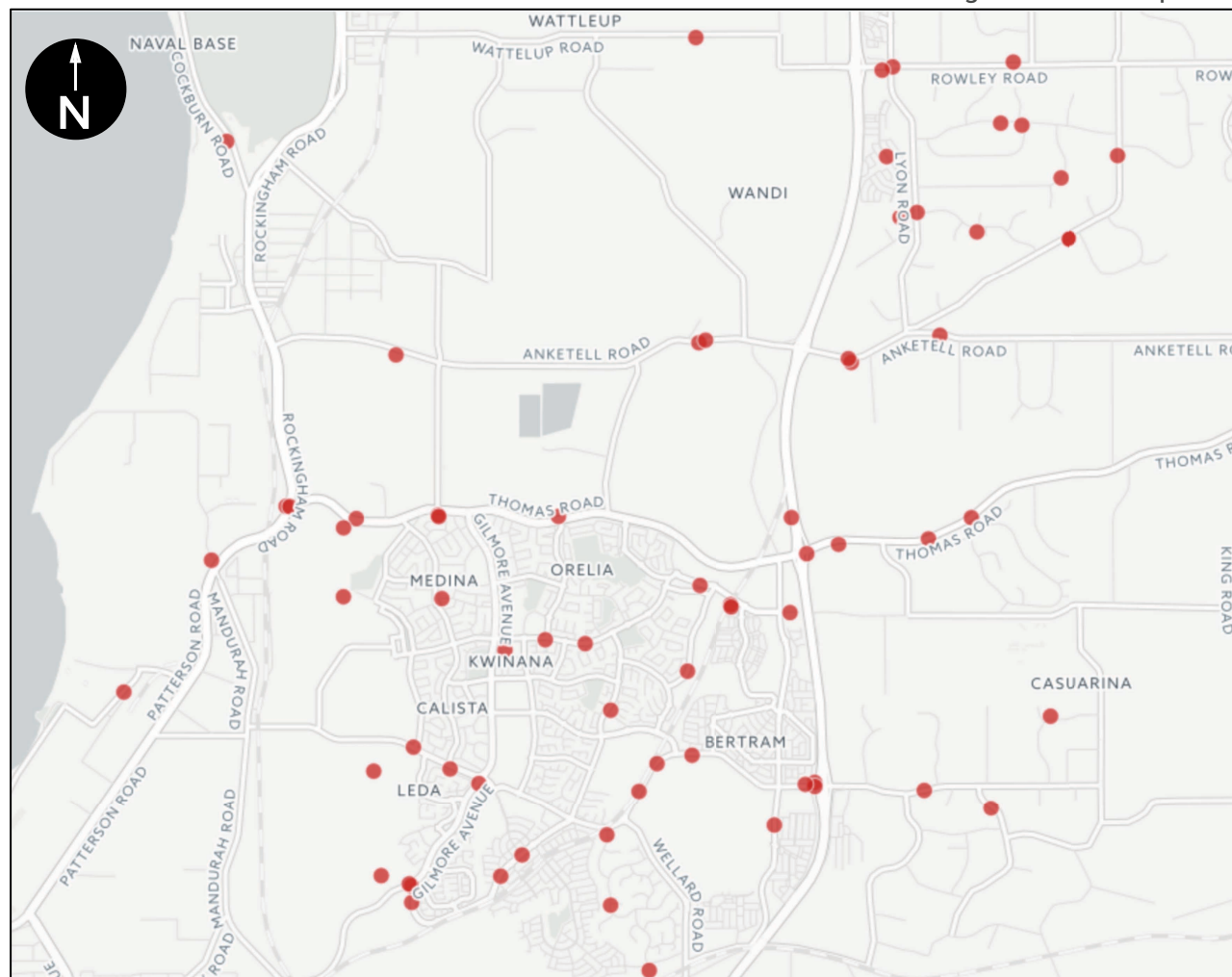


## 7. Bike Issue Spots

Bike Issue Spots were the second most popular types of spots representing 35% or 69 spots submitted on the map.

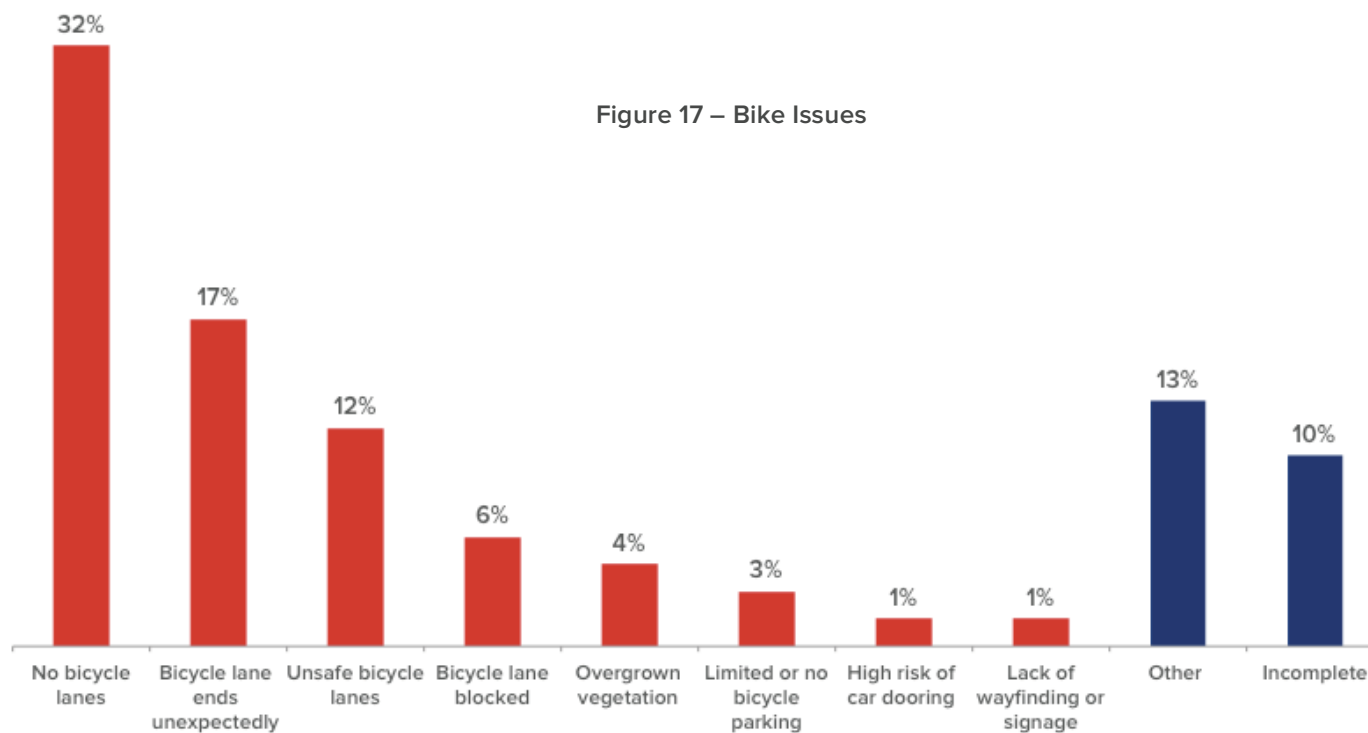
As opposed to the Walk Issue Spot discussed in Figure 12, there is much less clustering for Bike Issue Spots. Figure 16 shows that Bike Issue Spots are much more spread out across the municipality, providing an indication of the longer distances biker riders travel compared to pedestrians.

Figure 16 – Issue Spots



## Bike Issues

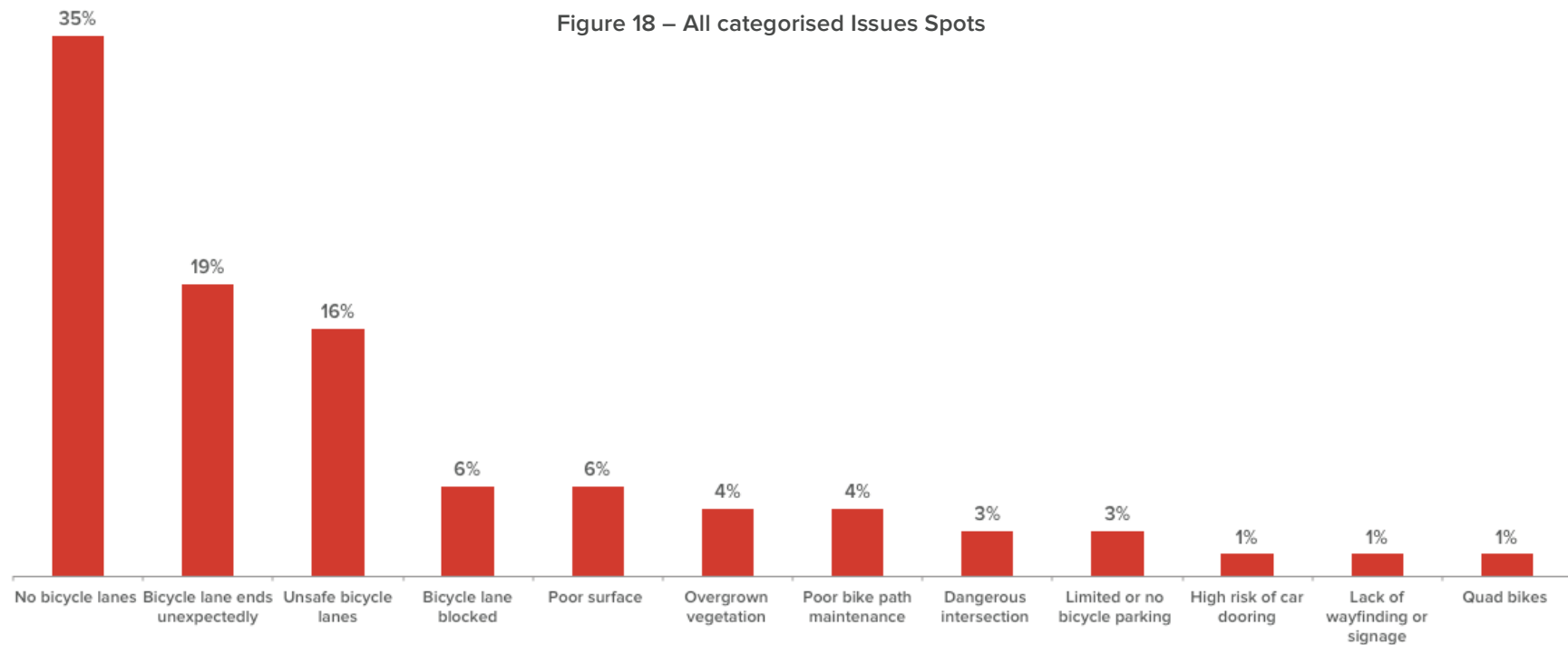
When adding a Bike Issue Spot participants were able to select from a dropdown list of bike issues. As seen in Figure 17, the most popular option selected in the dropdown list was 'No bicycle lane' (32%). The next two most common bike issues selected were 'Bicycle lane ends unexpectedly' (17%) and 'Unsafe bicycle lanes' (12%). These results suggest that there is a lack of existing bicycle infrastructure, gaps in the existing bicycle network and existing bicycle facilities perceived to be unsafe. 'Other' and incomplete submissions represented 23% of Bike Issue Spots and have been categorised with all other submission on the following page in Figure 18.





## Bike Issues - categorised

The figure below represents all Bike Issue Spots after categorising 'Other' and Incomplete submissions. The top 4 types of issues remain the same (Figure 17), but 'Poor surface' (6%) now appears as the fifth most common bicycle issue type.



## Top 10 Bike Issue Spots

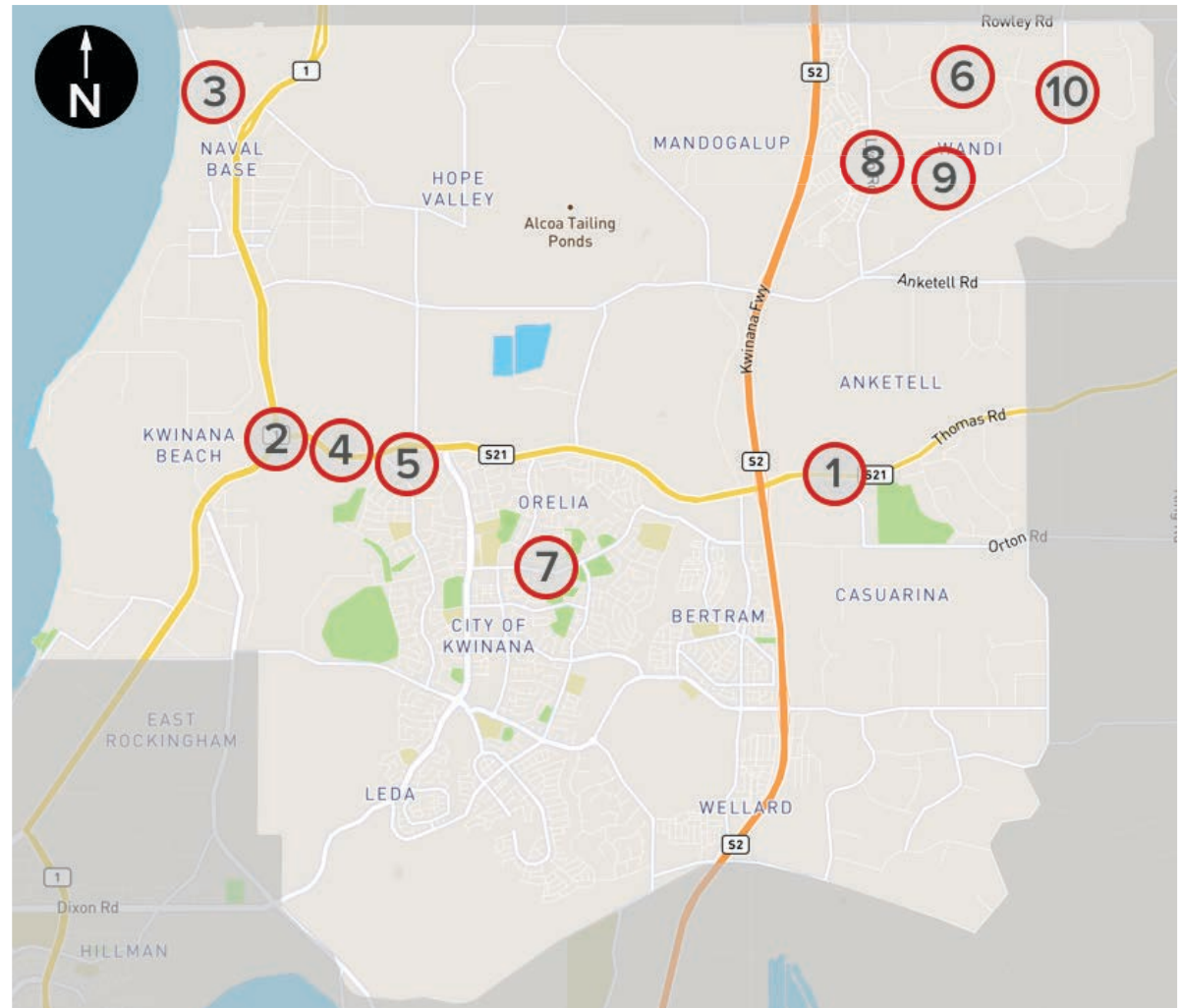
This map represents the top 10 bike issue spots added to the map. Once again, these locations were identified based on the amount of ‘supports’ and comments received. Spots at the same location with the same intent and have been aggregated.

Thomas Rd appears to be an important bicycle corridor to many in the community with four out of the top 5 Bike Issue Spots, including the top priority location. The suburb of Wandi also received 4 top spot locations.

### Locations

1. Thomas Rd - No bicycle lanes
2. Rockingham Rd & Thomas Rd - Bicycle lane ends
3. Cockburn Rd - Unsafe bicycle lanes
4. Thomas Rd - Bicycle lane blocked
5. Bingfield Rd - No direct bike link
6. Wandi Drive - No bicycle lanes
7. Sulphur Road - No bicycle lanes
8. Magenup Rd & Lyon Rd - No street signage
9. Magenup Rd - No bicycle lanes
10. DeHaer Rd - Unsafe bicycle lanes

Figure 19 – Top 10 Bike Issue Spots



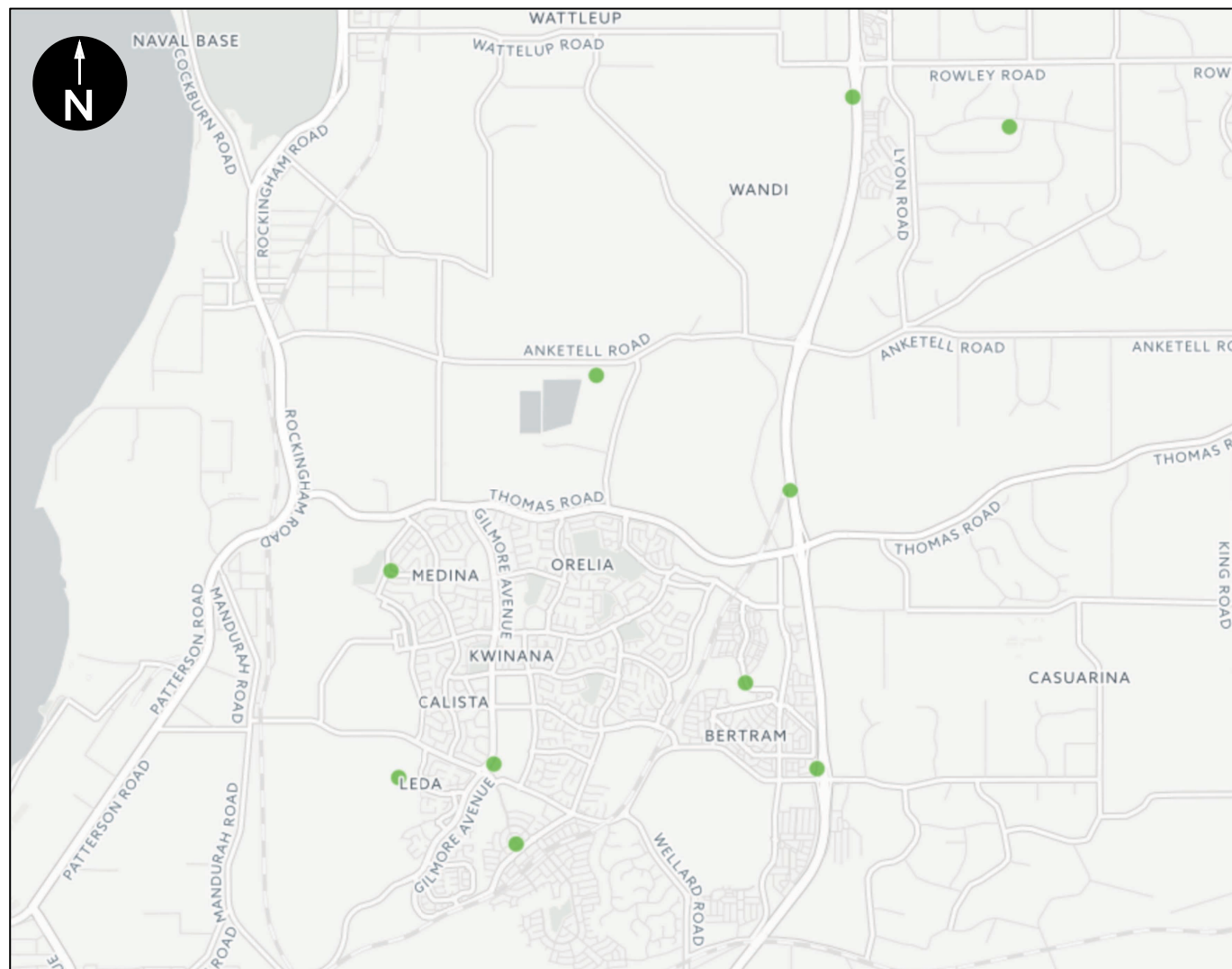
## 8. Like Spots

### Bike Like Spots

Bike Like Spots were the third most popular spot type but only received 5% of 10 spot overall. Unfortunately there weren't enough 'supports' or comments to determine a priority spot map. Despite this, the Freeway Shared Path received the most interest.

*'The freeway shared path is a brilliant place to ride for fun and exercise. I thought it deserved some recognition since it adds a lot to my enjoyment of this area.'*  
- Mark Kingston

Figure 20 – Bike Like Spots



## Walk Like Spots

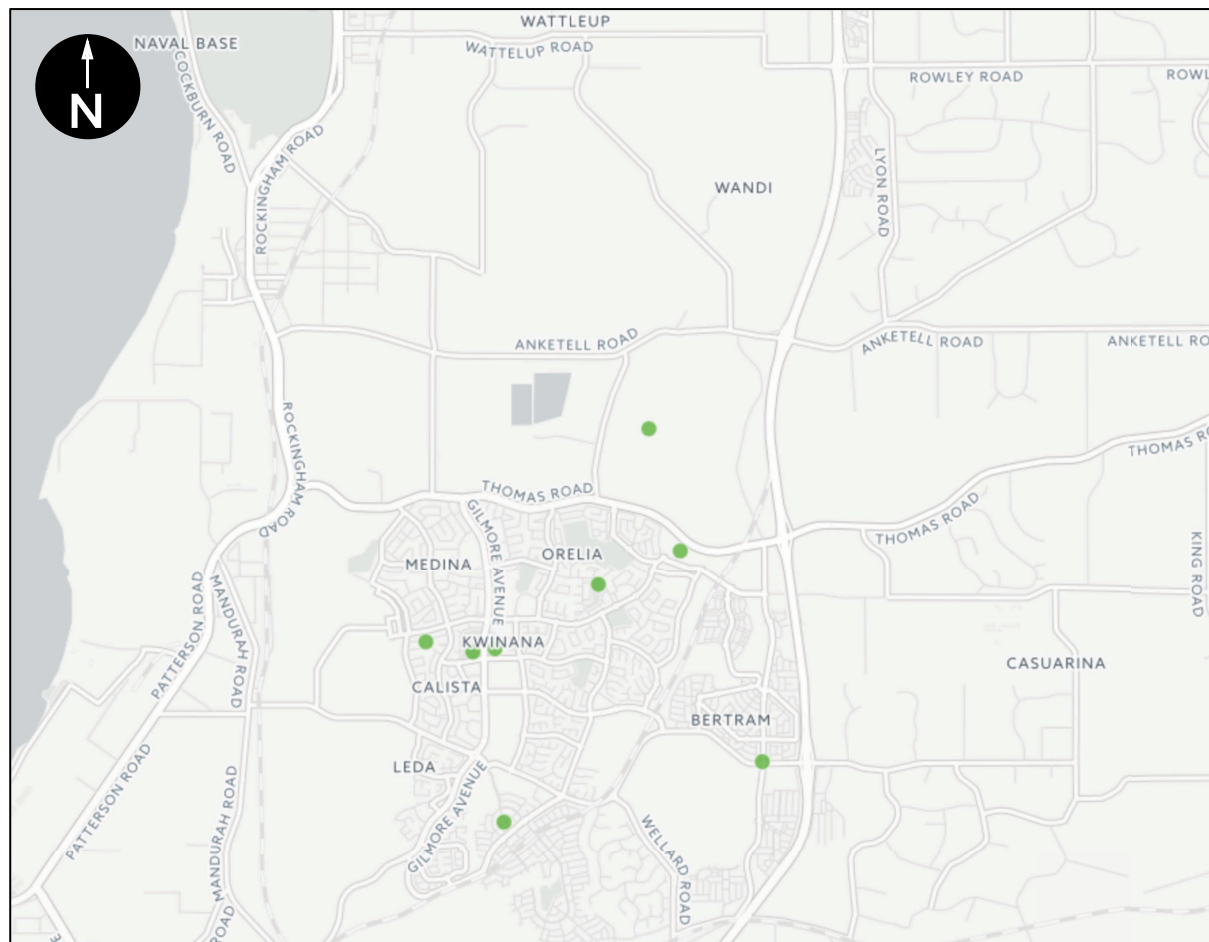
Walk Like Spots received just 4% of 8 spots on the map overall (Figure 21). Similar to the Bike Like Spots there weren't enough 'supports' or comments to determine a priority map.

Most of the positive comments were associated with a connection to the natural environment.

*'Fantastic walking spot - great for night walks with the Kwinana Cubs - torches and mozzie repellent a must - lots of wildlife and clearly marked track.'*  
- Adam Salathiel

*'Beautiful native trees and flowers. Especially in Spring when the wildflowers come out.'*  
- Kareena

Figure 21 – Walk Like Spots





## 9. Report Summary and Recommendations

The Bike and Walk Kwinana map was open for public submissions for a period 6 weeks from 15 May to 30 June, 2017. During this time, the map received 694 individual submissions made up of 199 individual spots and the comments (72) and 'supports' (423) within those spots. These submissions were made from 137 unique participants. There was a range of location specific feedback added within the different spot types. Based on all the information collected and their relative priorities, below is a set of broad recommendations:

### Key recommendations:

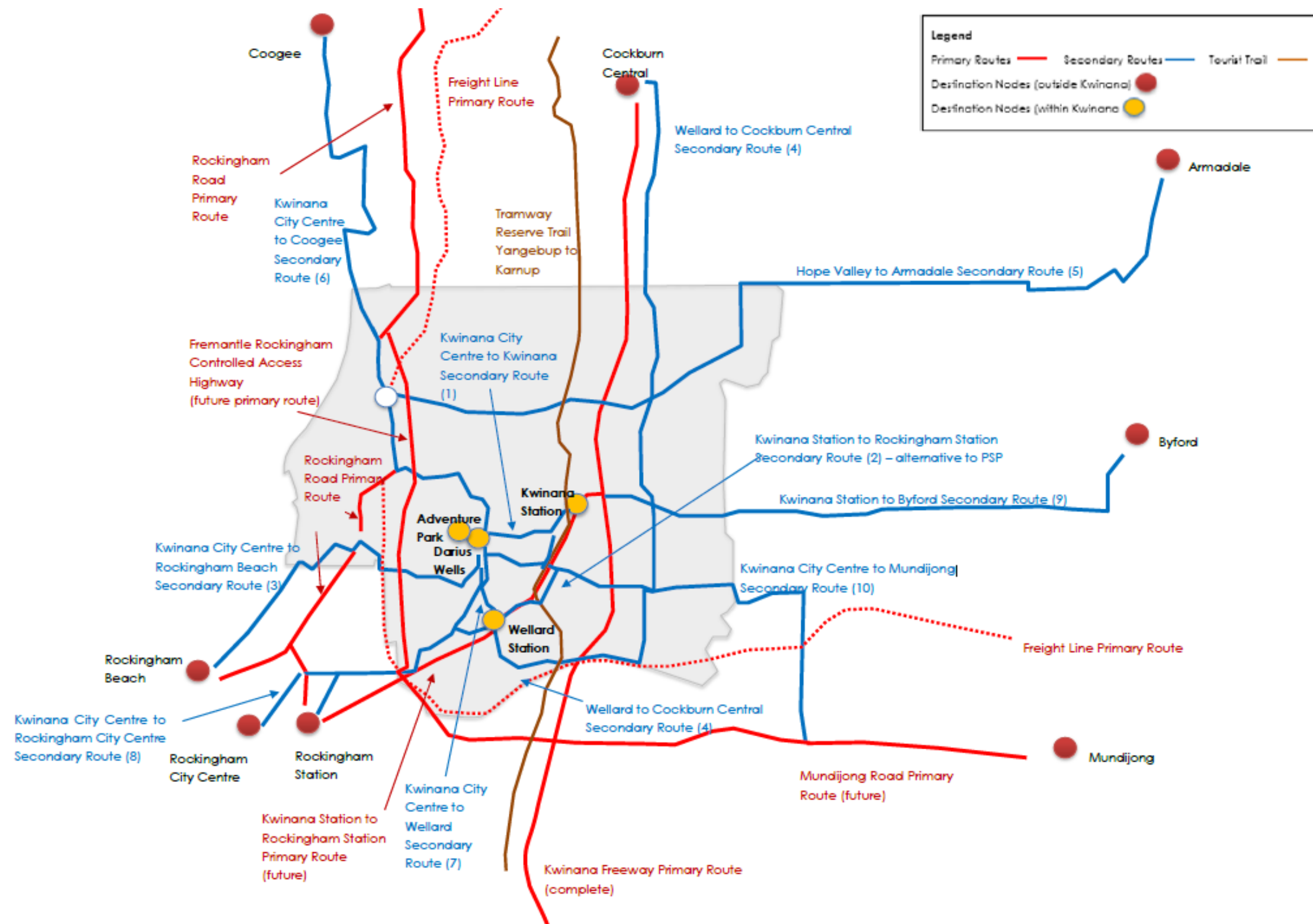
- **Walk**
  - Build footpaths in high-interest areas such as within close proximity to schools in Bertram.
  - Assess the need to install or advocate for signalised crossings at locations such as Chisham Ave.
  - Improve maintenance of existing network of footpaths. This encompasses uneven surfaces and removing hazards such as glass.
- **Bike**
  - Created new safe bicycle lanes in identified areas in areas along and connecting to Thomas Rd. This also includes connecting missing bicycle links between existing bicycle facilities.
  - Explore opportunities to widen existing narrow bicycle facilities.
  - Consider possibilities to pave current off-road bicycle connections.

For both biking and walking, consideration should also be given to enhancing natural environment areas in order to encourage increased recreational activities.

# City of Kwinana

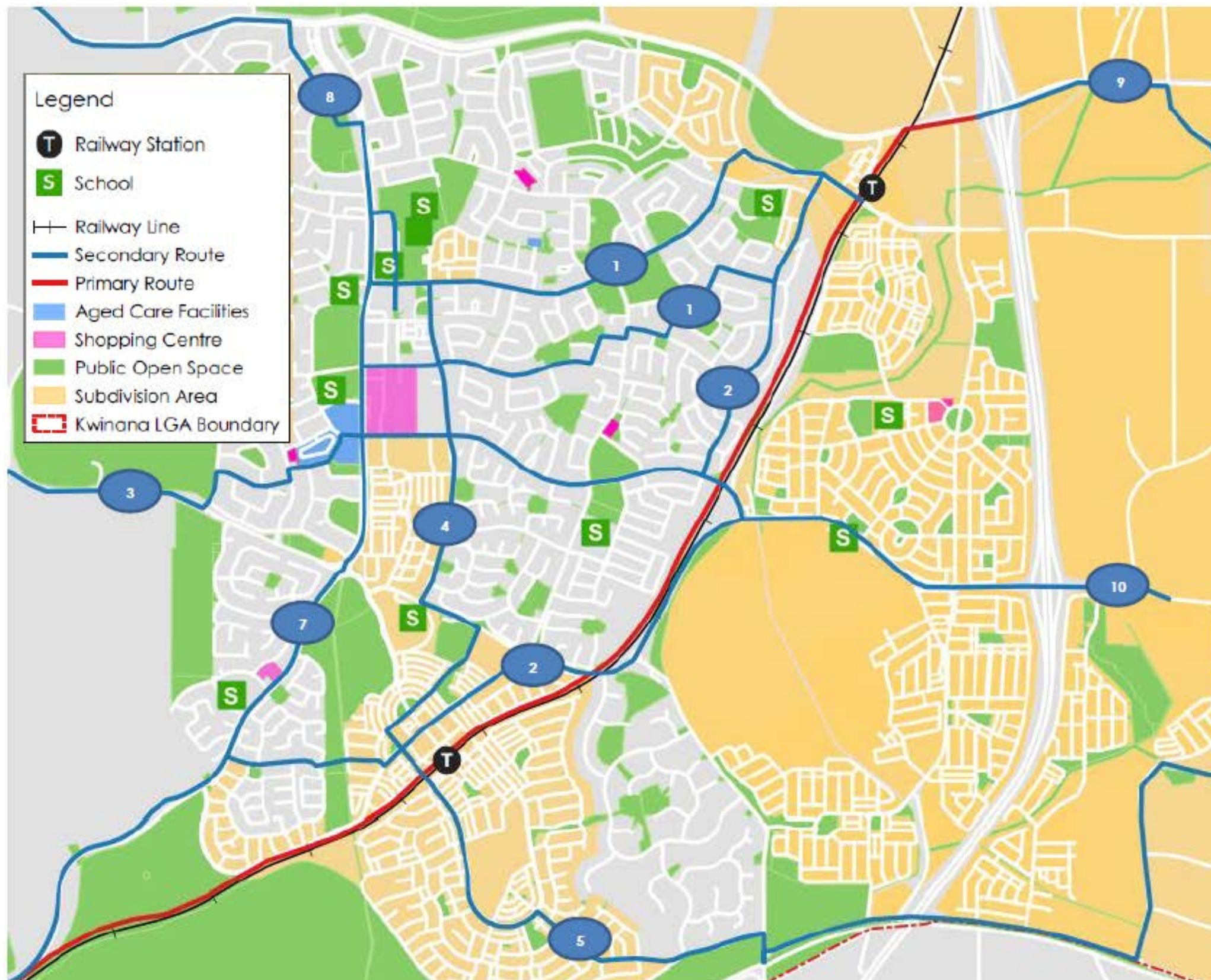
## Long Term Primary and Secondary Cycling and Walking Network

### Attachment D





**City of Kwinana**  
**Long Term**  
**Secondary Cycling and Walking Network**



Secondary Route priority for implementation:

- 1 – **Kwinana City Centre to Kwinana Train Station**  
 (Bicycle boulevard proposed through Parmelia) Note:  
 Sulphur Road is an alternative route between these  
 destinations
- 2 – **Kwinana Train Station to Rockingham Train Station**  
 (Secondary route alternative – Section 9.4.2)
- 3 – **Kwinana City Centre to Rockingham Beach**  
 (bicycle boulevard through Calista / Wellard Rd /  
 Beach St / Kwinana Beach Rd / Rockingham Beach  
 Rd)
- 4 – **Kwinana City Centre to Wellard Town Centre**  
 (Meares Ave / shared path through Abingdon Park /  
 Runnymede Gate)
- 5 – **Wellard to Cockburn Central**  
 (through new and future developments)
- 6 – **Hope Valley to Armadale**  
 (Anketell Rd / De Haer Rd / Rowley Rd – beyond  
 scope of this map)
- 7 – **Kwinana City Centre to Rockingham Town Centre**  
 (Gilmore Ave largely completed with shared path –  
 Rockingham section to be determined)
- 8 – **Kwinana City Centre to Coogee**  
 (Gilmore Ave / Thomas Rd / Rockingham Rd /  
 Cockburn Rd)
- 9 – **Kwinana Train Station to Byford**  
 (Thomas Road / Orton Road – to confirm with  
 Department of Transport and Shire of Serpentine  
 Jarrahdale)
- 10 – **Kwinana City Centre to Mundijong** (Challenger /  
 Bertram Rd)

The proposed principal route from Kwinana Station to Rockingham Station on the railway reserve is a long-term objective to be built in conjunction with the State Government priorities. In the meantime, an alternative route is proposed as a strategic route option between Sicklemore Rd and Gilmore Ave (shown dashed on the map).

Kwinana Freeway Principal route is completed. Rockingham Rd and the freight line principal routes are long term objectives of the State Government.



## **15.7 Adoption for Advertising of Local Planning Policy No.11: Site Requirements and Standards for Development within the Industrial Zones**

### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

### **SUMMARY:**

Council is requested to consider the adoption of a Draft Local Planning Policy No. 11 (Draft LPP) for Site Requirements and Standards for Development within the Industrial Zones within the City of Kwinana (refer Attachment A). The City of Kwinana's current Local Planning Policy titled Development within the Industrial Zones (Attachment B) is to be rescinded and replaced with the Draft LPP.

The Draft LPP aims to provide greater clarity and guidance to landowners, developers and the City of Kwinana (City) Officers on the assessment of applications on land zoned for industrial purposes under the City of Kwinana's Local Planning Scheme No.2 (LPS2). The Draft LPP will align with modern changes in construction standards and provide an updated set of design criteria to help ensure a high standard of built form is achieved throughout the City's industrial zones.

Key changes to the policy include:

- Title change;
- Introducing design criteria for development;
- Introducing criteria for landscaping variations;
- Introducing criteria for setback variations;
- Specifying maximum plot ratio/site cover variations;
- Inclusion of Public Art considerations; and
- Updated maps for verge parking.

It is recommended that Council adopt the Draft LPP for the purpose of public advertising and that City Officers then bring the Draft LPP back to Council for further consideration with a full assessment of submissions made.

### **OFFICER RECOMMENDATION:**

That Council:

1. Adopt draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones, as detailed in Attachment A, for the purpose of public advertising.
2. Publicly advertise draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones for a period of 21 days.
3. Request a report back to Council that details the submissions received during the advertising period and make a recommendation that draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones be either adopted with or without modification, or not to proceed.



### 15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES

#### **DISCUSSION:**

LPS2 came into effect in 1992 and the provisions of LPS2 regarding industrial development have largely not been updated and do not reflect changes in building methods or standards. Furthermore, the City's current Local Planning Policy Development within the Industrial Zones (Attachment B) has not been updated to reflect these changes. It is considered appropriate to rescind the current policy and replace it with a new policy to reflect these changes.

To encourage and accommodate current approaches to industrial development, the Draft LPP has been prepared to allow a more flexible and practical approach to development within these zones. However, there are sections of the current policy which remain essentially unchanged and have been carried over in the Draft LPP.

#### Essentially Unchanged Sections

The following sections of the current policy have been incorporated into the proposed Draft LPP and remain essentially unchanged:

- Sealing/Drainage;
- Groundwater Protection;
- Effluent and Wastewater Disposal;
- Transportable and Non-permanent Structures; and
- Verge Parking.

The above sections have been included in the Draft LPP, however, information such as Verge Parking maps for example, have been updated to provide greater clarity and to improve ease of use. Aspects of development that are considered and assessed against the requirements of other policies, standards or specifications, have been removed from the Draft LPP - eg. pavement requirements will be assessed against the City's Specification for Pavement and Drainage of Trafficable Areas – Industrial Area, and Specification for Pavement and Drainage of Non Trafficable Areas – Industrial Area. Standards and requirements addressed in other policies or specifications are referenced within the Draft LPP.

#### Title Change

The current Local Planning Policy is intended to be rescinded and the Draft LPP - Local Planning Policy No.11: Site Requirements and Standards for Development within the Industrial Zones is proposed for adoption for the purposes of advertising.

The Draft LPP title is reflective of the City's current titling of the Local Planning Policies and reflects the specific requirements to be considered as part of any industrial development proposal.

The primary focus of the Draft LPP is to establish and outline the City's position with respect to acceptable variations to LPS2. In this regard, the Draft LPP establishes the extent of variations to LPS2 that Council is prepared to consider, and specifies the corresponding development requirements which apply when seeking such variations. The following sections of this report outline the current outcomes being delivered in the industrial areas and discusses the Draft LPP response.

#### Setbacks

Boundary setbacks under LPS2 are considered restrictive and takes a "one size fits all" approach to industrial development.

### 15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES

The boundary setbacks under LPS2 are as follows:

Zone	Front	Side	Rear	Secondary Street frontage
General Industry	15 metres	6 metres	9 metres	6 metres
Light Industry	9 metres	3 metres	6 metres	4.5 metres

#### Issues

The current setback provisions for the industrial zones under LPS2 are considered restrictive and do not take into account modern building practices. The following are some of the issues with the current LPS2 provisions:

- LPS2 applies different setbacks for different industrial zoning i.e. General Industry and Light Industry. This links setbacks to the zoning rather than the utilisation of the property. Each operator may utilise the property in a different way and applying a one-size fits all approach to the development of industrial lots limits the effective utilisation of the property.
- The large side and rear setback areas become places for storage of materials and are generally unlikely to be maintained, potentially impacting on the amenity of the industrial areas. By reducing setbacks and permitting buildings to be constructed on side or rear boundaries allows for storage to occur within the development and represents a more effective use of industrial land.
- LPS2 does not account for modern building practices and materials. As mentioned earlier, LPS2 came into effect in 1992 and the industrial development requirements have generally not been updated. Current building standards, methods and materials have changed which no longer require boundary setbacks.
- LPS2 does not recognise the difference in lot sizes within the industrial zones. The same setbacks are applied whether the lot is 2000m<sup>2</sup> in area or a multi-hectare property. Excessive setbacks on smaller lots limits the capabilities of a site and potentially restricts growth of an established use or business on a property.

The Draft LPP addresses the aforementioned setback issues in the following manner.

The Draft LPP allows for reduced setbacks where:

- Upgrading of the site is proposed (e.g. upgrading of existing landscaping, provision of new landscaping areas, verge treatment, screening of external storage);
- Upgrading of an existing building is proposed. Upgrading works may include but not be limited to:
  - Rendering/ bagging and painting existing old brickwork for portions of an existing façade visible from the street;
  - Professionally re-coating or painting existing metal sheeting for portions of an existing façade visible from the street;

**15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES**

- Replacing or modifying older windows and doors;
- Construction of new entry statements such as porticos, new front doors, verandahs and awnings;
- Replacing/repairing and painting gutters and downpipes;
- (iii) Parapet walls are located having regard to visibility from the street and relationship to buildings on adjacent lots;
- (iv) Side parapet walls, which are visible from the street, shall incorporate appropriate architectural treatments to reduce the visual impact of blank walls (e.g. grooves/patterns combined with textures/colours);
- (v) The variation is necessary to facilitate redevelopment or extensions with high quality building elevations being provided;
- (vii) The variation will negate the need for external storage, result in an increased level of amenity, increase opportunities for onsite car parking, contribute positively to the existing streetscape or where the applicant can demonstrate some other planning benefit to the wider community;
- (viii) Maximum wall height is to be 9 metres.

In addition to the above criteria, the Draft LPP requires that any development proposing reduced boundary setbacks must include a minimum of three to five (3-5) of the General Design Principles outlined under Clause 6. A minimum of three (3) design principles are required to be incorporated into the designs of development proposing side and rear boundary setback variations, and a minimum of five (5) design principles are to be incorporated into proposals seeking primary street setback variations. The General Design Principles outlined under Clause 6 of the Draft LPP have been prepared to deliver good quality built form outcomes. It is important to note however, that reduced setbacks will only be considered where the provisions of the Draft LPP have been complied with and all assessments will be based on the merits of an application.

**Landscaping**

Achieving quality landscaping in industrial areas is a challenge. In addition to this, the current policy and LPS2 does not take into account lot sizes (many industrial properties have extensive frontages) and water restrictions causing maintenance issues for large landscaping areas.

Clause 6.8.7 of LPS2 requires a minimum of 5% of the site to be developed and maintained as landscape area. The requirement can be reduced to 2.5% where the applicant agrees to landscape the verge. However, there are a significant number of multi-hectare lots within the industrial zones which (under LPS2) require thousands of square metres of landscaped areas that over time become difficult for property owners to maintain appropriately.

The Draft LPP aims to achieve quality smaller landscaping areas that can be appropriately maintained to a high standard. The focus is on establishing landscaping areas within the verge that will positively contribute to the streetscape. The Draft LPP sets minimum landscaping areas appropriate for varying lot sizes and provides some flexibility for multi-hectare lots. Landscaping strips are encouraged under the Draft LPP to act as a visual buffer adjacent to all street frontages.

### 15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES

The landscaping variations that are proposed under the Draft LPP are as follows:

Lot size	Minimum landscaping
Up to 10,000 <sup>2</sup>	A 3 metre wide landscape strip being provided adjacent to the primary street boundary for the width of the property, which may be reduced by up to half if landscaping/tree planting is provided within the verge.
Secondary Street Frontages	A minimum 1.5m metre landscaping area shall be applied to all secondary street frontages.
Large / Multi Hectare Lots	In exceptional circumstances where a lot has extensive and / or multiple street frontages, the City may allow; <ul style="list-style-type: none"> <li>(i) A 3 metre landscaping area located adjacent to the primary street boundary;</li> <li>(ii) Landscaping for secondary streets to be provided in the verge where the applicant demonstrates landscaping will be of a high quality;</li> <li>(iii) The use of trees to break up any large expanses of car parking areas visible from the street.</li> </ul>

The Draft LPP sets out graduating requirements for different lot sizes and in most cases the landscaping requirement is likely to result in less than the 5% landscaping required under LPS2. However, the objective is to achieve higher quality landscaping areas that can be readily maintained. This is a performance-based approach and therefore applicants will be required to satisfy the provisions of the Draft LPP if they seek a variation to the landscaping requirements of LPS2 as part of a development proposal. Any landscaping which is proposed to be located within the adjacent road verge will be required to be installed and maintained in accordance with the City's Street Trees and Verge Treatments Policy.

#### Plot Ratio / Site Cover

LPS2 specifies a maximum plot ratio of 1.0 and site coverage of 70% for the Light Industry Zone and a plot ratio of 0.8 and site coverage of 65% for the General Industrial Zone.

The Draft LPP aims to allow increased flexibility for industrial development by allowing the maximum plot ratio/site coverage requirements of LPS2 to be varied, as long as adequate onsite car parking, landscaping, accessways, loading/unloading and storage areas are provided.

The Draft LPP allows variations to plot ratio and site coverage requirements for all development where;

- i) There is adequate onsite parking to service the existing and proposed development; and
- ii) The application complies with the setback requirements of LPS2 or the acceptable setbacks outlined in the Draft LPP; and
- iii) The application complies with the landscaping requirements of LPS2 or the acceptable landscaping areas outlined in the Draft LPP; and
- iv) The proposal will result in an upgrade of the aesthetics of the site (landscaping, resurfacing / repairing car parking/ verge treatment).



**15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES**

By allowing this level of flexibility, development of lots within the industrial zones can be better utilised. Furthermore, it allows businesses to expand and still remain in the same location and avoid potential relocations out of the Kwinana Industrial Area.

**Fencing**

LPS2 requires that any security fence be subject to a minimum 1.5 metre setback from the front boundary of a lot. The Draft LPP encourages minimal fencing within the front setback area, however where fencing cannot be located behind the front building line, a higher quality fencing combined with good quality landscaping will be encouraged.

Fencing will be permitted with a nil setback to the front property boundary where;

- i. The fencing is necessary for security purposes; and
- ii. Quality fencing is proposed; and
- iii. Landscaping on the site is substantially upgraded or new landscaping is proposed along the frontage that meets the requirements of LPS2 or the acceptable areas outlined in the Draft LPP.

**Public Art**

The Draft LPP aims to seek opportunities to introduce art on both public and private land, which will add to the visual interest and character of the City of Kwinana's Industrial Areas. Opportunities to introduce art within both public and private land, as part of development, are encouraged as per the City of Kwinana's Local Planning Policy No.5: Development Contribution towards Public Art.

**Elected Members Forum**

The Draft LPP was presented at an Elected Members Forum held on 30 April 2018. City Officers have included additional references relating to Crime Prevention Through Environmental Design (CPTED) principles following feedback relating to the impact of landscaping on the safety/security of the site (eg. a potential hiding place for criminals targeting industrial areas).

The Draft LPP directs landowners and applicants to incorporate the requirements of the City of Kwinana's Local Planning Policy No. 8: Designing Out Crime. This policy is to be considered for all future development within the City of Kwinana.

**LEGAL/POLICY IMPLICATIONS:**

The following strategic and policy based documents were considered in the formulation of this Draft LPP;

**Schemes**

City of Kwinana Local Planning Scheme No.2

**Local Planning Policies**

Development within the Industrial Zones Policy;  
Council Policy - Street Trees and Verge Treatments Policy;  
Council Policy – Pavement and Drainage for Residential, Commercial and Industrial Areas;

**15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES**

Local Planning Policy No.5 – Development Contributions towards Public Art;  
Local Planning Policy No.8 – Designing Out Crime.

Regulations

*Planning and Development (Local Planning Schemes) Regulations 2015*

City of Kwinana Local Planning Scheme No.2

Schedule 2, Clause 3 of the Deemed Provisions within the Planning and Development (Local Planning Scheme) Regulations 2015 outlines the procedure for Council to *'prepare a Planning Policy in respect of any matter related to the planning and development of the Scheme Area ...'*

A Planning Policy is required to be advertised for public comment for no less than 21 days prior to the final adoption by Council, as per Schedule 2, Clause 4(1) of the Deemed Provisions.

**FINANCIAL/BUDGET IMPLICATIONS:**

The preparation and advertising of the Draft LPP will be undertaken within the City's existing budget. There are no other direct financial implications associated with the Draft LPP.

**ASSET MANAGEMENT IMPLICATIONS:**

No direct asset management implications are associated with the Draft LPP.

**ENVIRONMENTAL IMPLICATIONS:**

No direct environmental implications are associated with the Draft LPP.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	A well planned City.	4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high levels of amenity.

**15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES**

**COMMUNITY ENGAGEMENT:**

Should Council resolve to adopt the Draft LPP for the purpose of public advertising, these documents will be advertised in accordance with the requirements of the *Planning and Development Act 2005* in conjunction with the City's Community Engagement Policy. The advertising of this Draft LPP will involve:

- Advertising the document for 21 days;
- Notices in the local newspapers; and
- Written letters to key stakeholders such as the Kwinana Industries Council, and landowners within the Kwinana Industrial Areas advising of the opportunity to provide a submission on the Draft LPP.

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	Lack of policy may result in underutilised and poorly developed industrial sites within the City
Risk Theme	Failure to control the development of industrial areas throughout the City.
Risk Effect/Impact	Reputation Compliance
Risk Assessment Context	Strategic
Consequence	Moderate
Likelihood	Possible
Rating (before treatment)	Moderate
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	Adoption of the Draft LPP provides greater clarity and guidance to developers and the City on the development of industrial areas within the City, thereby mitigating the risk.
Rating (after treatment)	Low

**15.7 ADOPTION FOR ADVERTISING OF LOCAL PLANNING POLICY NO.11: SITE REQUIREMENTS AND STANDARDS FOR DEVELOPMENT WITHIN THE INDUSTRIAL ZONES**

**COUNCIL DECISION**

**299**

**MOVED CR S LEE**

**SECONDED CR W COOPER**

**That Council:**

- 1. Adopt draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones, as detailed in Attachment A, for the purpose of public advertising.**
- 2. Publicly advertise draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones for a period of 21 days.**
- 3. Request a report back to Council that details the submissions received during the advertising period and make a recommendation that draft Local Planning Policy 11: Site Requirements and Standards for Development within the Industrial Zones be either adopted with or without modification, or not to proceed.**

**CARRIED  
8/0**



# Local Planning Policy No.11

## Site Requirements and Standards for Development within the Industrial Zones





<b>Local Planning Policy No.11</b>  <b>Site Requirements and Standards for Development within Industrial Zones</b>	D18/18258
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## 1. Title

Local Planning Policy No.11 - Site Requirements and Standards for Development within Industrial Zones

## 2. Purpose

Local Planning Policy No.11 is intended to complement the City of Kwinana Local Planning Scheme No.2 (LPS2) and provide more flexibility for development through the identification of circumstances where a variation to site requirements and development standards may apply.

This Policy will:

- a) Explain the existing LPS2 requirements; and
- b) Outline variations to the LPS2 requirements through alternative development standards and site requirements that may be applied to development within the industrial zones.

## 3. Objectives

- a) To provide guidelines for City Officers, developers, landowners and other key stakeholders on the planning requirements and considerations for all development within the General Industry and Light Industry zones.
- b) To clearly identify the circumstances where Council will consider variations to the site requirements and development standards outlined in LPS2 for industrial zoned lots.
- c) To encourage a high standard of development with flexible development controls, which recognise the realistic commercial needs of businesses, while helping to ensure industrial development has minimal impact on the Cockburn Sound Catchment.
- d) To ensure the appropriate provision and siting of landscaping, security fencing, and verge parking ensuring that the City of Kwinana (the City) is not exposed to risk of public liability.

#### 4. Definitions

Verge -	means land within the gazetted road reserve, between the carriageway/pavement and the common boundary of the road reserve and lots fronting the road reserve.
Verge Parking -	means parking of vehicles within the verge.
Extended Parking -	means a parking area constructed within the verge but is physically linked and integrated with parking areas on private land within the setback area and all access/egress to the parking area is via an approved crossover.
Kerb Access Parking -	means a parking area constructed within the verge not physically linked or integrated with parking areas on private land and where the means of access/egress to the parking area is via a mountable kerb and parking bays are aligned at 90 <sup>0</sup> or 45 <sup>0</sup> or parallel to the road carriageway/pavement.
Parking Embayment -	means a parking area within the verge where parking bays are aligned parallel to and at the same vertical level of the road carriageway and the parking bays or bordered by continuation of the kerb.
Security Fencing -	means a barrier, railing, or other upright structure, which encloses a property to prevent and/or control access and incorporates deterrents such as barbwire, razor wire, spiked fencing, electric fencing or other types of deterrents in the design.

#### 5. Intent of the Industrial Zones

The City of Kwinana's Industrial Zones are intended to cater for a wide range of light, service, general and heavy industries.

#### 6. General Design Principles for Industrial Zones

The City's intent for the Industrial Zones is to facilitate good quality design outcomes for both industrial operators and the wider community. When preparing proposals for new development or extensions / re-development, landowners and applicants are encouraged to consider and include the following design elements.

## 6.1 Legibility

- a) The building should be designed to address the street, providing a legible entrance for pedestrians and a positive contribution to the streetscape through a predominant use of glazing;
- b) All customer service areas and employee amenities shall be consolidated within the front of the building area, and the operational areas should be located to the rear of the site;
- c) Offices and administrative components should be designed as focal points, and include a building element such as a veranda, canopy or colonnade facing the public street and parking areas;
- d) Canopies, awnings and solar shading devices should be thoughtfully integrated into the façade as required on elevations visible to the street;
- e) On corner lots, buildings should address the secondary street through the use of windows, articulated elevations and major openings; and
- f) Blank walls facing streets will not be permitted.

## 6.2 Form and Layout

- a) The street facade of the building should provide a visual richness and variety. This can be achieved in the use of form, colour, texture and materials and by the following design features;
  - i. Changes in wall planes and height;
  - ii. Varied façade alignment;
  - iii. Projections and/or recessions;
  - iv. The use of different building materials and colours;
  - v. Incorporating horizontal or vertical elements such as recessed walls or banding;
  - vi. Defining the window openings, fenestration, building entrances and doors;
  - vii. Integrated signage;
  - viii. The use of vertical, horizontal and/or angled grids.
  - ix. Emphasis of structural and functional elements such as sun shading devices, noise barriers, louvre vents and exposed braces; and
  - x. Feature roof forms, parapets and overhanging elements.
- b) The scale and selection of building forms, material and elements should relate to the perceived use i.e. the office components should be expressed differently to the warehouse or factory component of the development;



- c) Roof forms should be designed to provide a 'clean' appearance, minimising visual clutter;
- d) Building forms should be designed for adaptability through the provision of flexible spaces and regular building form designed to accommodate a multitude of uses and may be converted or divided in the future;
- e) Glazing should bring daylight to customer service areas and provide surveillance to the street; and
- f) Materials used for the construction of walls on or near boundaries should be rendered or painted and fully integrated into the building design.

### **6.3 Ancillary Structures and Equipment**

- a) Ancillary structures (such as security kiosks, maintenance buildings and outdoor equipment enclosures) or additions to the original development should integrate similar design attributes originally utilised on the main structure including colour, form and materials;
- b) External fixtures and equipment such as roof ventilation, exhaust towers and plumbing pipes should be effectively screened from view using roof structures and architectural elements. All roof top equipment should be screened from public view by materials of the same nature as the building's basic materials;
- c) Temporary structures (e.g. portable modular units, sea containers etc.) should not be located where they will be directly visible from the public street, or are to be appropriately screened;
- d) Storage yards are to be placed behind the primary street building setback line; and
- e) Aboveground water storage tanks are to be positioned within the side setback areas (including secondary streets) or to the rear of the building mass.

### **6.4 Crime Prevention through Environmental Design (CPTED)**

Developments are to minimise the opportunity for crime and maximise people's perception of safety. Developments should be designed to incorporate CPTED principles in accordance with the City's Local Planning Policy No.8: Designing Out Crime.

## **7. City of Kwinana Local Planning Scheme No.2 Requirements**

LPS2 is a statutory document which controls development within the City and prescribes standards and requirements for setbacks, plot ratio/site coverage, minimum landscaping

areas, fencing setbacks, building materials and appearance, car parking and crossovers, loading and unloading areas, and waste water and effluent disposal.

Notwithstanding the above, if a proposed development does not comply with a requirement or standard prescribed by LPS2, the Council has discretion to consider each application on its individual merit, and may vary a standard or requirement in accordance with Clause 6.2 of LPS2.

The following elements have been prepared by Council for consideration when assessing development proposals with variations to the requirements of LPS2. The following sections of this Policy outline the development standards and site requirements, to be considered and implemented, when variations to the provisions of LPS2 are sought as part of a development proposal.

## **8. Setbacks**

### **8.1 Setback Objectives**

To provide flexibility for maximum development and use of the land in a manner that does not negatively affect streetscape and encourages upgrading of the aesthetics of industrial sites.

### **8.2 Setbacks under LPS2**

The minimum setback from boundaries requirements of LPS2 are as follows:

**TABLE 1: EXTRACT OF CITY OF KWININA LOCAL PLANNING SCHEME NO. 2**

<b>Zone</b>	<b>Front</b>	<b>Side</b>	<b>Rear</b>	<b>Secondary Street Setback</b>
General Industry	15 metres	6 metres	9 metres	6 metres
Light Industry	9 metres	3 metres	6 metres	4.5 metres

### **8.3 Acceptable Setback Variations**

In considering variations to boundary setbacks, Council shall have regard to the provisions of Clause 6.3.2 and 6.8.5 of LPS2, except as varied by the following section.

To provide more certainty for landowners and developers this Policy outlines the City's position in regards to variations to the boundary setbacks of both Light and General Industrial uses, in accordance with Table 2 below (subject to the provisions of Part 8.3.1 and 8.3.2).

**TABLE 2: ACCEPTABLE SETBACK VARIATIONS SUBJECT TO CONDITIONS**

<b>Lot Size</b>	<b>Primary Street Setback</b>	<b>Side</b>	<b>Rear</b>	<b>Secondary Street Setback</b>
Lots less than 5000m <sup>2</sup>	9 metres – May be varied subject to conditions	Nil – conditions apply	Nil – conditions apply	Determined by Building Code and Landscaping.
Lots of 5000m <sup>2</sup> and greater	15 metres – May be varied subject to conditions	Nil – conditions apply	Nil – conditions apply	Determined by Building Code and Landscaping.

It is accepted that the generic setback requirements may not be appropriate or desirable in all cases and the City has the discretion to consider variations on their individual merit. The City will favourably consider setback variations for development proposals that incorporate elements of the General Design Principles outlined in this Policy.

### **8.3.1 Requirements for Acceptable Primary Street Setback Variations**

The City is prepared to consider a reduced Primary Street setback where:

- (i) New developments, or extensions to existing buildings, incorporate a minimum of five (5) design elements outlined in Part 6.1 and 6.2 of this policy;
- (ii) Upgrading of the site is proposed. (e.g. upgrading of existing landscaping, provision of new landscaping areas, verge treatment, screening of external storage);
- (iii) Upgrading of an existing building is proposed. Upgrading works may include but not be limited to;
  - Rendering/ bagging and painting existing old brickwork for portions of an existing façade visible from the street;
  - Professionally re-coating or painting existing metal sheeting for portions of an existing façade visible from the street;
  - Replacing or modifying older windows and doors;

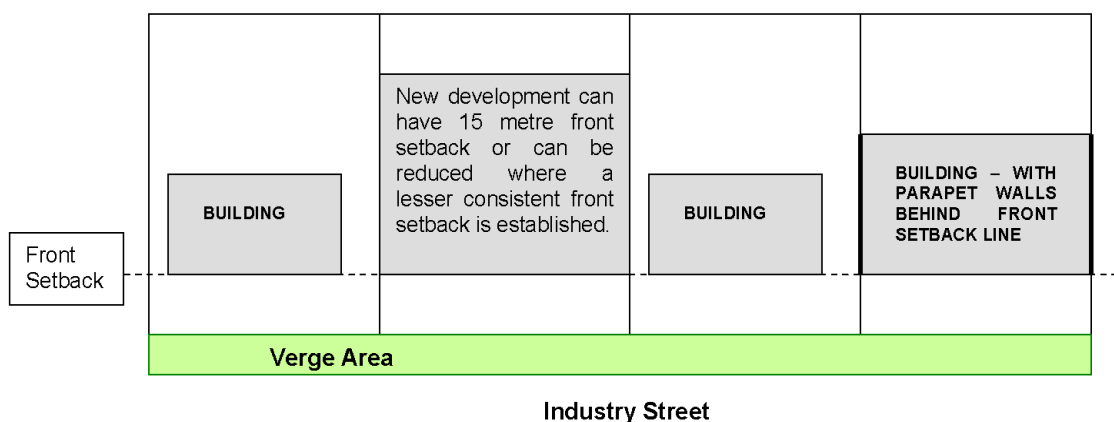
- Construction of new entry statements such as porticos, new front doors, verandahs and awnings; and
  - Replacing/repairing and painting gutters and downpipes.
- (iii) The variation is necessary to facilitate redevelopment or extensions with good quality elevations; and
- (iv) The variation will negate the need for external storage, result in an increased level of amenity, increase opportunities for onsite car parking, contribute positively to the existing streetscape or where the applicant can demonstrate some other planning benefit to the wider community.

### **8.3.2 Requirements for Acceptable Side, Rear and Secondary Street Setback Variations**

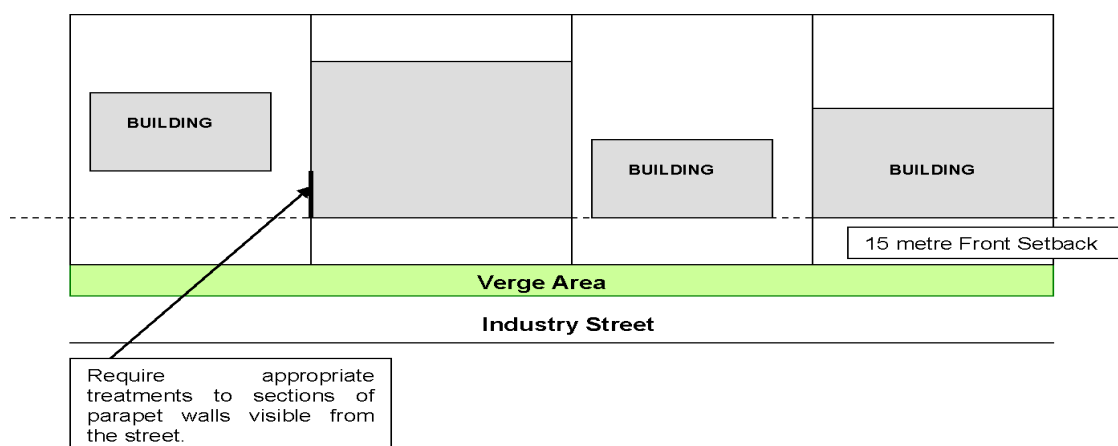
The City is prepared to consider reduced Side, Rear and Secondary Street setbacks where:

- (i) The development incorporates a minimum of three (3) design elements outlined in Part 6.1 and 6.2 of this policy;
- (ii) Parapet walls are located having regard to visibility from the street and relationship to buildings on adjacent lots - refer Figure 1;
- (iii) Side and/or Rear parapet walls, which are visible from the street, shall incorporate appropriate architectural treatments to reduce the visual impact of blank walls (e.g. grooves/patterns combined with textures/colours) – Refer Figure 2;
- (iv) The variation is necessary to facilitate development or building extensions with good quality elevations;
- (v) The variation will negate the need for external storage, result in an increased level of amenity, increase opportunities for onsite car parking, contribute positively to the existing streetscape or where the applicant can demonstrate some other planning benefit to the wider community; and
- (vi) Maximum wall height on the boundary does not exceed 9 metres.





**FIGURE 1: PARAPET WALLS BEHIND THE FRONT SETBACK LINE**



**FIGURE 2: PARAPET WALLS VISIBLE WITH SUITABLE TREATMENT**

## 9. Landscaping

Clause 6.8.7 of LPS2 requires a minimum of 5% of the site to be developed and maintained as landscape area. The requirement can be reduced to 2.5% where the applicant agrees to landscape the verge.

### 9.1 Landscaping Objectives

This Policy aims to achieve:

- Quality smaller landscaping areas that can be realistically maintained to a high standard;
- Upgrading of landscaping throughout the whole Kwinana Industrial Area;
- The use of native and water wise species;

- d) Landscaping of the street verge that will contribute to the streetscape;
- e) Minimum areas appropriate for varying lot sizes and some flexibility for multi-hectare lots;
- f) Landscaping strips to act as a visual buffer adjacent to all street frontages.

## 9.2 Acceptable Landscaping Variations

Variations to LPS2 landscaping requirements will be supported where they comply with the following:

**TABLE 3: ACCEPTABLE LANDSCAPING VARIATIONS SUBJECT TO CONDITIONS.**

<b>Lot size</b>	<b>Minimum landscaping*</b>
Up to 10,000 <sup>2</sup>	A 3 metre wide landscape strip being provided adjacent to the primary street boundary for the width of the property, which may be reduced by up to half if landscaping/tree planting is provided within the verge.
Secondary Street Frontages	A minimum 1.5m metre landscaping area shall be applied to all secondary street frontages.
Large / Multi Hectare Lots	In exceptional circumstances where a lot has extensive and / or multiple street frontages, the City may allow; <ul style="list-style-type: none"> <li>(i) A 3 metre landscaping area located adjacent to the primary street boundary;</li> <li>(ii) Landscaping for secondary streets to be provided in the verge where the applicant demonstrates landscaping will be of a high quality;</li> <li>(iii) The use of trees to break up any large expanses of car parking areas visible from the street.</li> </ul>

Any landscaping which is located within the verge shall be installed and thereafter maintained, to a high standard, in accordance with the City's Policy – Street Trees and Verge Treatments.

**\*Note: Landscaping areas may be required to increase over the areas listed above dependent on any land area requirement for effluent disposal.**

## 10. Plot Ratio and Site Coverage

### 10.1 Existing LPS2 Requirements

Clause 6.8.4 of LPS2 applies the following as maximum plot ratio and site coverage requirements:

**TABLE 4: EXTRACT OF THE CITY OF KWINANA LOCAL PLANNING SCHEME NO. 2**

<b>Zone</b>	<b>Plot Ratio</b>	<b>Site Coverage</b>
Light Industry	1.0	70%
General Industry	0.8	65%

## **10.2 Plot Ratio and Site Coverage Objective**

To allow increased flexibility of the maximum building floor area as long as adequate on site car parking, landscaping, accessways, loading/unloading and storage areas are provided.

## **10.3 Acceptable Variations to Plot Ratio and Site Coverage**

It is recognised that the area that can be developed for buildings on any lot is typically constrained by the need to provide adequate on site car parking, landscaping, accessways, loading/unloading and storage areas.

The City is therefore prepared to support variations to plot ratio and site coverage requirements for all development where;

- i) There is adequate onsite parking to service the existing and proposed development; and
- ii) The application complies with the setback requirements of LPS2 or the acceptable setbacks outlined in Part 8 of this Policy; and
- iii) The application complies with the landscaping requirements of LPS2 or the acceptable landscaping areas outlined in Part 9 of this Policy; and
- iv) The proposal will result in an upgrade of the aesthetics of the site (landscaping, resurfacing / repairing car parking/ verge treatment).

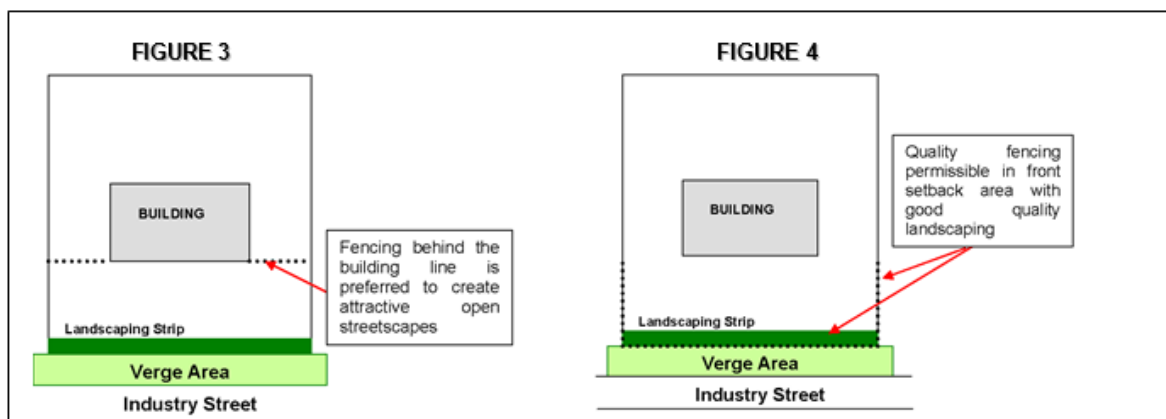
# **11. Fencing**

## **11.1 Existing LPS2 Requirements**

Clause 6.8.12 of LPS2 requires that any security fence be subject to a minimum 1.5 metre setback from the front boundary of a lot. Minimum fencing standards within the Industrial areas is black PVC coated chain or link mesh.

## 11.2 Objectives for Fencing

To encourage minimal fencing within the front setback area. Where fencing cannot be located behind the front building line, a higher quality fencing combined with good quality landscaping will be encouraged.



## 11.3 Acceptable variations to fencing setback

Fencing will be permitted with a nil setback to the front property boundary where;

- i) The fencing is necessary for security purposes; and
- ii) Quality fencing (Garrison or Masonry Pillars with open style infill panels) is proposed; and
- iii) Landscaping on the site is substantially upgraded or new landscaping is proposed along the frontage that meets the minimum landscaping requirements of LPS2 or the acceptable landscaping areas outlined in Part 9 of this Policy.

## 12. Transportable/Non-permanent Structures

### 12.1 LPS2 Requirements

Clause 6.8.6 of LPS2 requires that all buildings and ancillary structures shall be located, designed and constructed so that the external appearance arising from height, expanse, method of construction, materials used, colour and texture of external finish serve to blend the development into the natural landscape and surrounding built environment and minimise the visual impact of the development.



## **12.2 Objectives for Transportable / Non-permanent Structures**

The City's objective with regard to transportable/non-permanent structures is to minimise the typically adverse visual impact of such structures (offices, amenities etc.) on streetscapes and to encourage the general upgrade of the aesthetics of industrial sites.

## **12.3 Transportable / Non-permanent Structures requirement for Approval**

With the exception of transportable buildings / non-permanent structures used as part of construction works for approved buildings and development, all transportable or non-permanent type structures require planning approval.

## **12.4 Development Standards for Transportable / Non-permanent Structures**

Transportable or non-permanent structures sited behind the building line, which are not visible from the street or public thoroughfares, may be approved on a permanent basis subject to the following criteria:

- a. The transportable structure is ancillary to the main office or administration function on the property; and
- b. The finish, materials and colours used in construction of the transportable or non-permanent structure is to be visually sympathetic to that of the main building. More specifically a minimum of three of the following architectural features are incorporated into the transportable or non-permanent structure design:
  - i. Incorporate a facade comprising of two different building materials or two different colours;
  - ii. Incorporate defined window openings, fenestration, building entrances and doors;
  - iii. Incorporate the use of vertical, horizontal and/or angled grids;
  - iv. Incorporate articulated building frontages and/or features;
  - v. Incorporate structural and functional elements such as sun shading devices, noise barriers and louvre vents.

## **13. Verge Parking**

### **13.1 Existing LPS2 Requirements**

Clause 6.8.8 of LPS2 requires that car parking spaces shall be provided, designed, constructed and maintained in accordance with the provisions of Part

VII of LPS2 and approved plan relating thereto.

### **13.2 Objectives for Verge Parking**

That as far as practicable all vehicle parking associated with land use and development applications shall be accommodated onsite.

That verge parking will only be considered:

- i. in circumstances where expansion of existing industrial premises is only possible if verge parking is permitted; and
- ii. in defined areas where such parking does not prejudice traffic safety, traffic circulation, access, amenity or pose a threat to infrastructure located in the road verge.

### **13.3 Acceptable Variations to Verge Parking**

Verge parking will only be considered where the landowner seeks a reduction in car parking based on staff numbers and operational requirements and where physically car parking cannot fit on site.

### **13.4 Verge Parking Locations**

Verge parking will only be considered for installation in the extended parking, embayment parking, or kerb access parking locations identified in Appendix B of this Policy.

### **13.5 Verge Parking Layouts**

The City's acceptable verge parking layouts are depicted in Appendix A of this Policy.

### **13.6 Implementation**

#### **13.6.1 Verge Parking of any form is inappropriate where:**

- a) The road is reserved under the Metropolitan Region Scheme, has known road widening requirements or is subject to Main Roads WA Control of Access notice.
- b) Such parking obstructs traffic sight lines because of its location near an intersection or road curvature or vertical elevation.

- c) Such parking compromises the functioning and maintenance of essential services (electricity, gas, water, sewer, telephone) and is opposed by the relevant public utility agency.
- d) Such parking inhibits manoeuvring of industrial traffic.
- e) Such parking renders the use of the public road network unsafe.

**13.6.2** Kerb Access Parking and Extended Access Parking (refer to Appendix A) is inappropriate where;

- a) Traffic speeds and volumes on the road are unacceptably high.
- b) The functional role of the road is a local, district or regional distributor.
- c) The road represents a through route.
- d) The gradients on the adjacent roads prevent effective emergency stopping.
- e) The topography of the locality prevents adequate sight distance.
- f) Where medians or islands have been installed in the vicinity.
- g) Verge width is less than 7.5 metres.
- h) Distance from intersection is less than specified under Main Roads WA Traffic regulations and therefore impacts on safe traffic movement at the intersection.

**13.6.3** Embayment Parking (refer to Appendix A) is inappropriate where;

- a) Road reserve and carriageway/pavement widths are inadequate.
- b) Road gradients in the vicinity prevent emergency stopping.
- c) Topography in the vicinity obstructs safe traffic sight lines.
- d) Verge width is less than 3.5 metres.

**13.7 Consideration of Verge Parking**

- a) The City may decline support for verge parking if in its opinion such parking poses a threat to traffic and pedestrian safety and the smooth flow of traffic.
- b) The City in considering individual applications involving verge parking shall have regard to the criteria for verge parking listed in Part 13.6.1 of this policy.
- c) Verge Parking will only be considered in relation to development proposals for expansion of long standing existing industrial developments where such

expansion could not comply with LPS2 requirements in respect of onsite parking, as a result of insufficient available land area.

- d) Verge parking will not be considered where new development is proposed on vacant lots, where parking could be accommodated onsite with redesign of proposed development or where a change of use and/or ownership (respectively) is proposed or is in process.
- e) Verge parking will only be considered where the proponent provides the City with written agreement from all public utility agencies to the extent that the installation of verge parking will not prejudice the function or maintenance of electricity, gas, water, sewer, telephone or other communication infrastructure.

### **13.8 Conditions of Verge Parking**

- a) Where the City and Public Utilities approve verge parking, the owner/proponent shall indemnify the City and Public Utilities against public liability claims to a value of \$10,000,000 against damage to or injury arising from the use and works, undertaken in the course of establishing and operation of verge parking. The indemnity should also include damage to services in the verge arising from works undertaken in the verge in order to establish verge parking. Where public utilities require access to the verge for upgrade and maintenance purposes, the landowner/proponent shall reinstate the verge and parking area immediately thereafter at no cost to the City or the Public Utility. The proponent shall also meet all costs associated with relocation of services.
- b) The requirement to indemnify the City, referred to in (a) above shall be secured by legally binding agreement between the landowner/developer and the City and shall be secured by a bond and the cost associated with the drafting, preparation and registration of the agreement will be met by the landowner/proponent.
- c) The approval and agreement should also require the acknowledgement by the owner that if the permanent use of the verge for parking cannot be granted and that at some time in the future, the City or other public agencies may require the parking area be removed and the verge area be reinstated at no cost to the City.



- d) Verge parking areas shall be sealed and drained at the proponent's cost to the City's specifications and all stormwater drainage from the paved areas is to be directed towards and disposed of on the proponent's landholding.
- e) Verge parking areas shall be landscaped to the satisfaction of the City, equivalent to 5% of the area within the verge used for parking and shall include the installation of reticulation and thereafter be maintained to a high standard to the satisfaction of the City.
- f) The layout of Extended Parking areas shall ensure that all vehicles are able to manoeuvre and leave the subject property in a forward gear and via an approved crossover.
- g) Verge parking areas shall not be used for the loading, unloading or storage of goods.
- h) For Embayment Parking entry and exit, curves should be to the City's specifications.

#### **14. Effluent and Wastewater Disposal**

**14.1** All proposed or upgrades to on-site effluent disposal systems are to be nutrient retentive. Conventional septic systems are not permitted within the Industrial area. Expansions of an existing development's effluent disposal system shall be in accordance with City's Policy - Nutrient Retentive Effluent Disposal Systems.

**14.2** Development shall not discharge wastewater to the environment or be used as a 'wet industry' without the prior approval of the City and Department of Water and Environmental Regulation.

For further advice on this matter, please refer to the following documents:

- a) *Health (Treatment of sewage and disposal of effluent and liquid waste) Regulations 1974;*
- b) City of Kwinana Policy - Nutrient Retentive Effluent Disposal Systems;
- c) Code of Practice for the design, manufacture and installation and operation of aerobic treatment units;
- d) *Environmental Protection (Unauthorised Discharges) Regulations 2004.*
- e) All proposed development is required to comply with the current Western Australian Government Sewerage Policy.

## 15. Groundwater Protection

**15.1** Where applications are processed by the City, or where members of the community are using chemicals, fuel storage and other organic matters likely to impact on the groundwater in the long term, the following documents will need to be considered, to minimise risk and liability:

- a) Water quality protection note, land use compatibility in public drinking water sources;
- b) *Health Act (Underground Water Supply) Regulations 1959*;
- c) Environmental Management Plan for Cockburn Sound and its Catchment.

**15.2** Where applications are processed by the City or members of the community are using chemicals, fuel storage and other organic matter, likely to impact on groundwater in the long term, the following conditions shall be imposed to minimise risk and liability:

- a) All storage containers, facilities or tank farms where chemicals, fuel and organic matter are used, stored or handled, shall be bunded equal to 110% capacity of the product used, stored or handled, to prevent pollution of groundwater, including drinking water.
- b) Where large capacities in excess of 5000 litres are capable of being stored, or are present in tanks, containers or other facilities, it shall be necessary to install impervious membrane protection under the tank, containers or other facility. The membrane shall direct any spilt liquid or spillage of chemicals, including fuels and organic matter, to a protected area surrounding each tank, container or other facility, which shall discharge to a waste treatment and recovery process.
- c) When a development is proposed to be developed, modified or changed, the proponent shall be advised that the City requires that the environment and the health of the community to be protected from any potential environmental and health impacts from the development including the processes and practices.
- d) The proponent shall be required to provide the appropriate groundwater protection and bore monitoring systems and all monitoring bores installed shall be based on professional hydro-geological advice. The advice shall

be provided to the City's Environmental Health Services prior to the installation commencing.

- e) The proponent shall be advised to seek professional hydro-geological advice pertaining to any existing contamination, the processes and practices proposed or utilised and the potential for groundwater contamination from chemicals spilt and/or leaks and contaminated stormwater run-off from the development.

## **16. Sealing/Drainage**

All proposed paving and drainage is to be installed as per the specifications for Pavement and Drainage of Trafficable Areas and Parking Areas, and Non-Trafficable and Lay-down areas to the satisfaction of the City of Kwinana.

## **17. Public Art**

The objective of this section is to seek opportunities to introduce art on both public and private land, which will add to the visual interest and character of the City's Industrial Areas. Art may be incorporated into built form, along streetscapes, within lot frontages and so on. Art may be painted, constructed, sculptured or an interesting architectural feature or such like. It may be linked with the marketing of the company or industrial type. The aim is to create visual interest, a point of difference and to encourage the general upgrade of the aesthetics of the City's industrial areas.

Opportunities to introduce art within both public and private land, as part of development, are encouraged in accordance with the City's Local Planning Policy No.5: Development Contribution Towards Public Art.

## **18. Kwinana Beach and Naval Base - Development of Regional Significance**

### **18.1 Background**

- The State Government of Western Australia has identified the Kwinana Industrial Area under the State Planning framework as a Strategic Industrial Area of significant economic and strategic importance to the State economy.
- The central core of the Kwinana Industrial Area is intended to accommodate existing (and planned) heavy industries, which generate offsite impacts including, risks and hazards, reduced air quality, odours, noise and vibration which are subject to licensing by various state government regulatory agencies

which in part requires separation from uses attracting members of the public non employees of industry.

- The establishment of uses attracting members of the public into areas subject to industrial impacts is inappropriate from a public health and safety and environmental perspective.
- The establishment of uses attracting members of the public into areas in close proximity to these industries will in many cases, result in minimum separation distances referred to in licences or used as the basis for issuing licences issued by State Government agencies, not being met.
- Depending on the particular issue, the City's objectives for business services and facilities with the Kwinana Industrial Area may from time to time not necessarily be consistent with State Government objectives.
- At present LPS2 permits (with varying levels of Council use of discretionary powers) certain uses within the General Industrial Zone (which includes the central core of the Kwinana Industrial Area), which may attract member of the public into areas subject to unacceptable levels of industrial impacts.
- The Western Australian Planning Commission (WAPC) whose role it is to protect State Government Interest in the planning process is not always aware of proposals, which may impact on State Interest within the Kwinana Industrial Area.
- Local Government is able to refer proposals for development which it believes are of State or Regional significance to the Western Australian Planning Commission for determination.

## **18.2 Implementation**

- a) Where the City receives development applications for the establishment of a new retail, commercial, service commercial, light industrial or service industrial, or uses of a similar nature (or expansion thereof). Which, in the opinion of the City, are likely to attract members of the public into an area exposed to industrial impacts, within Policy Area 15 Kwinana Industrial Strip, and Policy Area No 14 Naval Base in Part 4 of LPS2, and the City intends to grant approval of the use or development. The City shall deem that the proposed use or development is of State or Regional Significance and refer the application to the WAPC for determination under the Metropolitan Region Scheme.
- b) Such referral should occur irrespective of the value of development proposed.



- c) Maintenance and refurbishment of existing approved development where no expansion or change of use is proposed shall not be deemed to be of State or Regional Significance in the context of this Policy and do not necessitate referral to the WAPC.

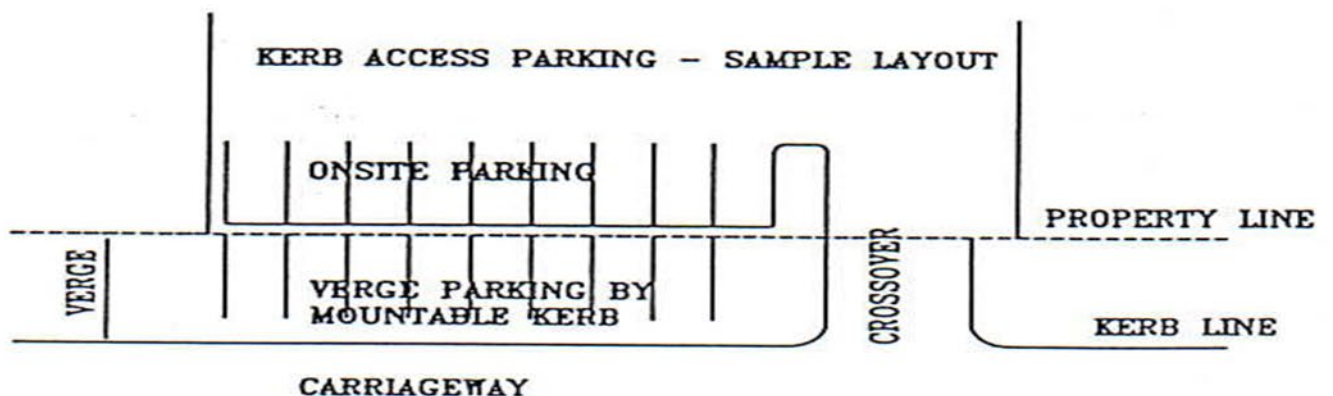
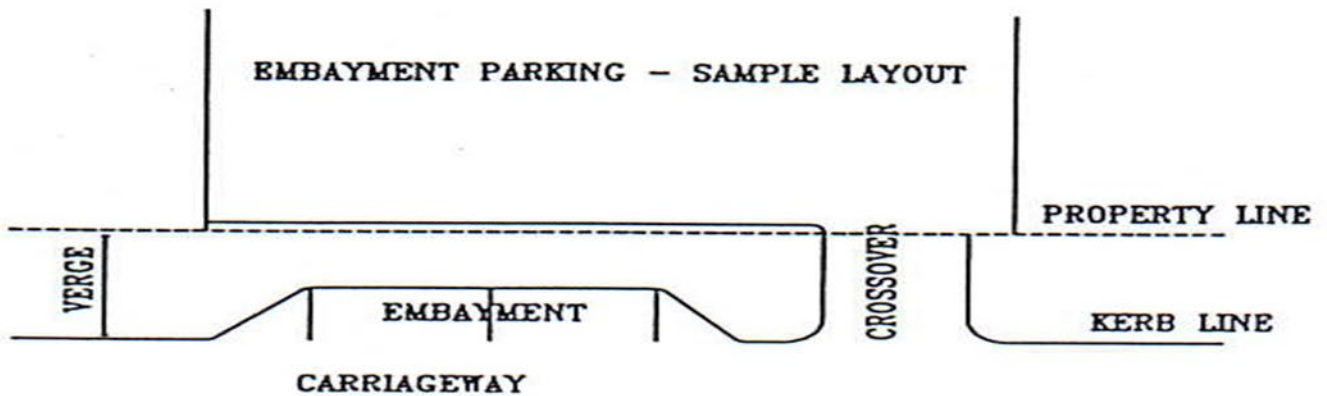
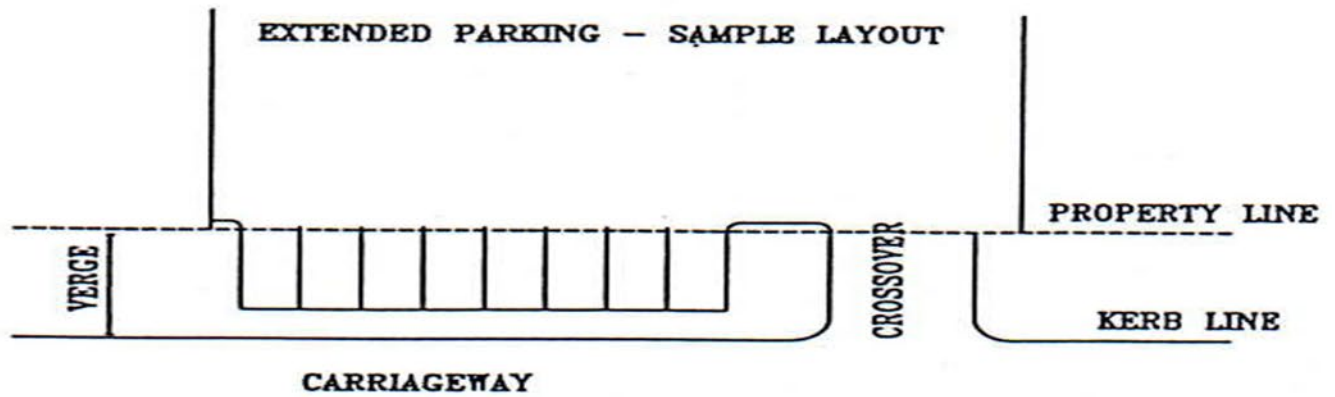
## **19. Medina Light (Golf Course) Industrial Estate**

### **19.1 Gentle Road Amalgamation of Lots**

That as a condition of Development Approval, Council impose a requirement to amalgamate front and rear portions of Lots 149-159 with Lots 184-191 Gentle Road, Medina if under the same ownership.

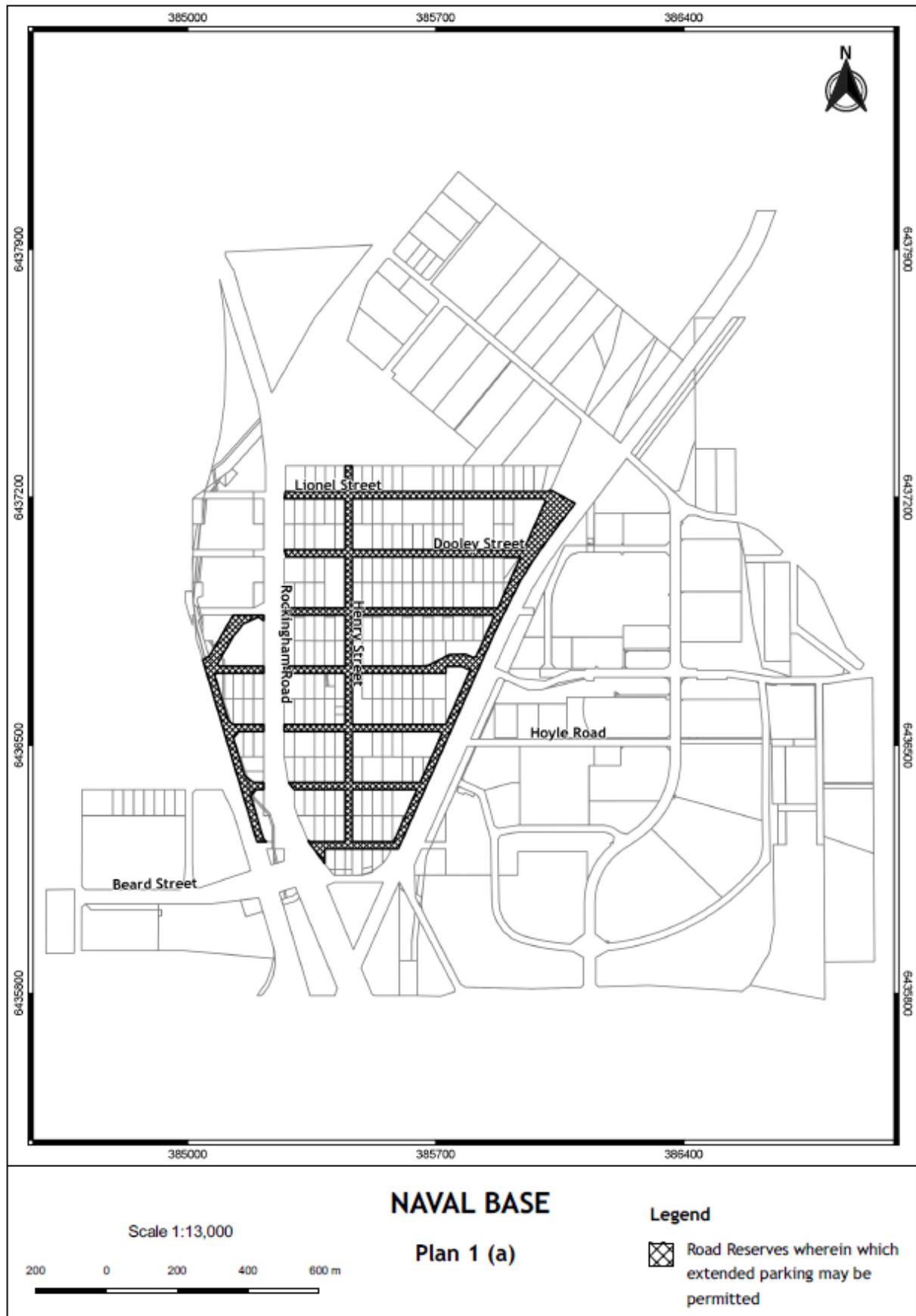
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## APENDIX A: VERGE PARKING LAYOUTS



## APPENDIX B: VERGE PARKING LOCATIONS

The City of Kwinana will only consider Extended Parking in industrial zoned areas delineated on Plan 1 (a - c).

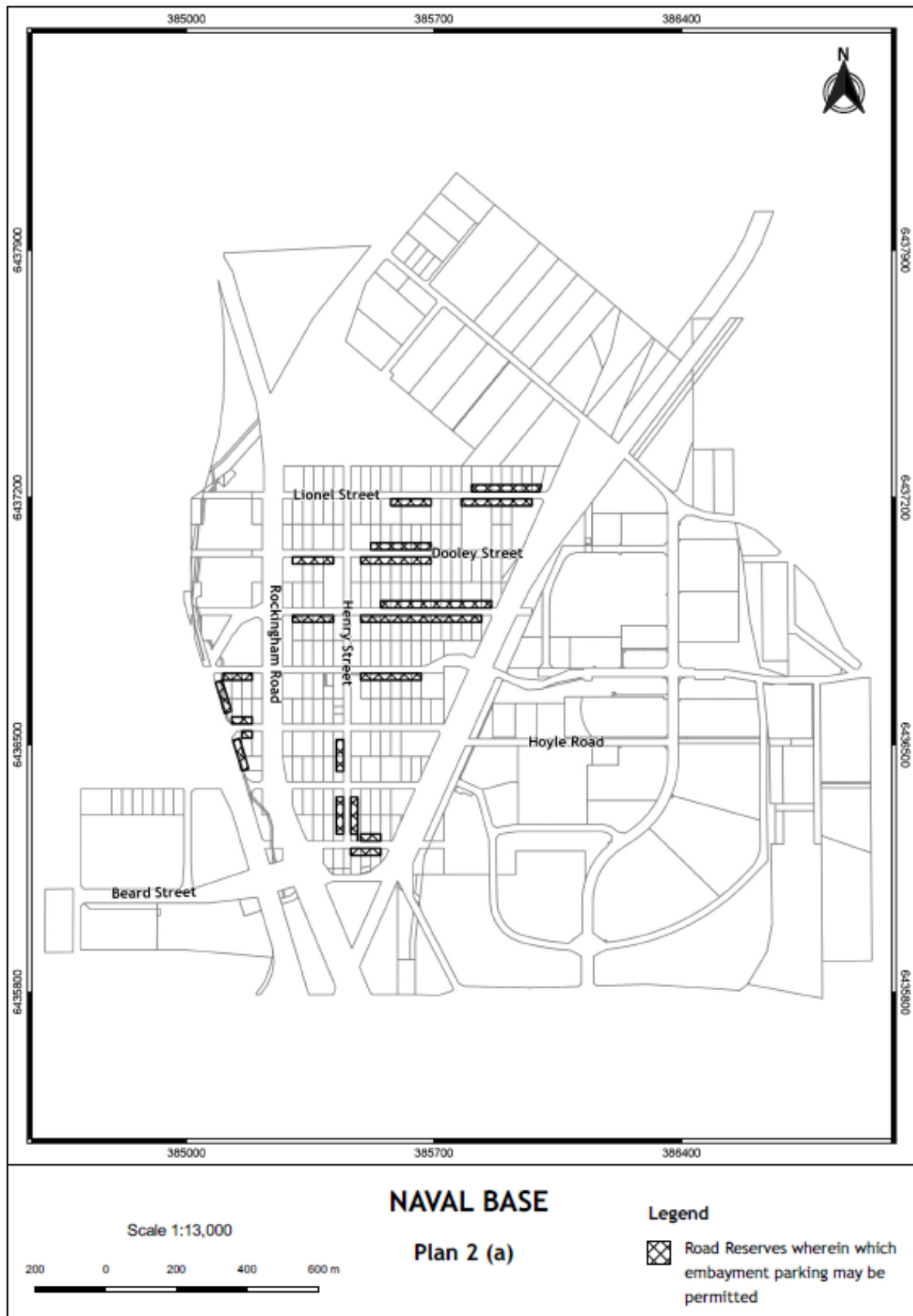








The City of Kwinana will only consider Embayment Parking in areas delineated on Plan 2 (a-c).

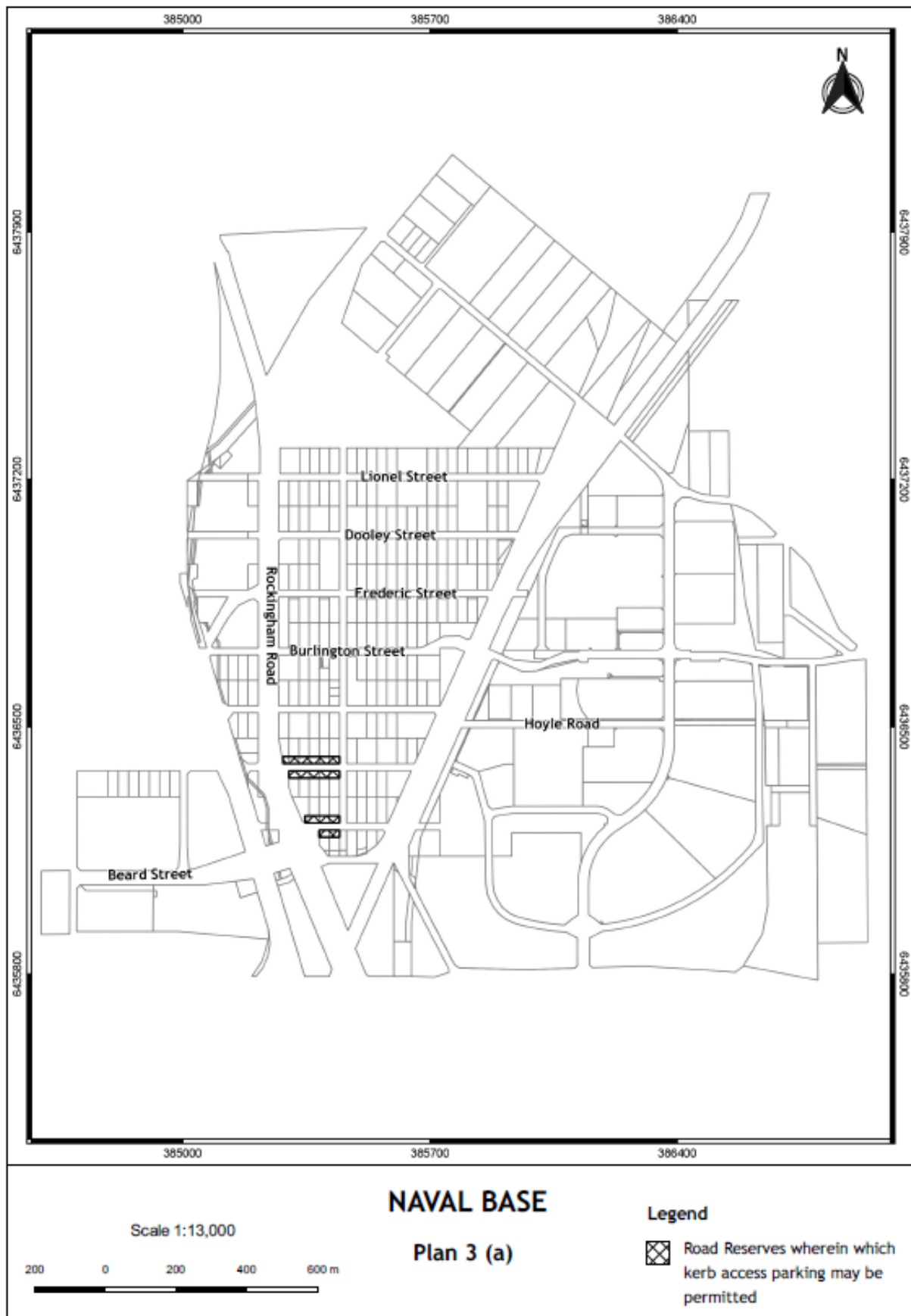








The City of Kwinana will only consider Kerb Access parking in areas delineated on Plan 3 (a-c).







Name of Policy	Local Planning Policy No.11: Site Requirements and Standards for Development within the Industrial Zones
Date of Adoption and resolution No	<i>Insert the date on which the Policy was first adopted by Council and the resolution No</i>
Review dates and resolution No #	<i>List the dates on which the Policy was reviewed by Council and the resolution Nos</i>
Next review due date	<i>Insert the date on which the next review should be completed by</i>
Legal Authority	Planning and Development (Local Planning Schemes) Regulations 2015 – Schedule 2 Deemed Provisions (Division 2)
Directorate	City Regulation
Department	Statutory Planning
Related documents	This Policy shall be read in conjunction with the City of Kwinana's Local Planning Policy No.8: Designing Out Crime and Local Planning Policy No.5: Development Contribution Towards Public Art.

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## **16 Reports – Civic Leadership**

### **16.1 Monthly Financial Report August 2018**

#### **DECLARATION OF INTEREST:**

There were no declarations of interest declared.

#### **SUMMARY:**

The Monthly Financial Report, which includes the Monthly Statement of Financial Activity and explanation of material variances, for the period ended 31 August 2018 has been prepared for Council acceptance.

#### **OFFICER RECOMMENDATION:**

That Council:

1. Accepts the Monthly Statements of Financial Activity for the period ended 31 August 2018, contained within Attachment A; and
2. Accepts the explanations for material variances for the period ended 31 August 2018, contained within Attachment A.

#### **DISCUSSION:**

The purpose of this report is to provide a monthly financial report, which includes rating, investment, reserve, debtor, and general financial information to Elected Members in accordance with Section 6.4 of the *Local Government Act 1995*.

The period of review is August 2018. The municipal surplus for this period is \$40,262,734 compared to a budget position of \$37,036,301. This is considered a satisfactory result for the City as the City is maintaining a healthy budget surplus position.

Income for the August 2018 period, year to date is \$46,666,773. This is made up of \$45,557,917 in operating revenues and \$1,108,856 in non-operating grants, contributions and subsidies received. The budget estimated \$45,892,434 would be received for the same period. The variance to budget is \$774,339. Details of all significant variances are provided in the notes to the Monthly Financial Report contained within Attachment A.

Expenditure for the August 2018 period year to date is \$8,254,468. This is made up of \$7,938,133 in operating expenditure, and \$316,335 in capital expenditure. The budget estimated \$13,037,671 would be spent for the same period. The variance to budget is \$4,783,203. Details of all significant variances are provided in the notes to the Monthly Financial Report contained within Attachment A.

#### **LEGAL/POLICY IMPLICATIONS:**

Section 6.4 of the *Local Government Act 1995* requires a local government to prepare an annual financial statement for the preceding year and other financial reports as are prescribed.

**16.1 MONTHLY FINANCIAL REPORT AUGUST 2018**

Regulation 34 (1) of the *Local Government (Financial Management) Regulations 1996* as amended requires the local government to prepare monthly financial statements and report on actual performance against what was set out in the annual budget.

**FINANCIAL/BUDGET IMPLICATIONS:**

There are no financial implications relating to the preparation of the report. Any material variances that have an impact on the outcome of the budgeted closing surplus position are detailed in the Monthly Financial Report contained within Attachment A.

**ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications associated with this report.

**ENVIRONMENTAL IMPLICATIONS:**

There are no environment implications associated with this report.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	Business Performance	5.4 Ensure the financial sustainability of the City of Kwinana into the future

**COMMUNITY ENGAGEMENT:**

There are no community engagement implications as a result of this report.

**PUBLIC HEALTH IMPLICATIONS**

There are no public health implications as a result of this report.

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	Inadequate management of the City's provisions, revenues and expenditures.
Risk Theme	Failure to fulfil statutory regulations or compliance Providing inaccurate advice/information

## 16.1 MONTHLY FINANCIAL REPORT AUGUST 2018

Risk Effect/Impact	Financial Reputation Compliance
Risk Assessment Context	Operational
Consequence	Minor
Likelihood	Unlikely
Rating (before treatment)	Low
Risk Treatment in place	Reduce (mitigate the risk)
Response to risk treatment required/in place	Annual adoption of variance tolerances for reporting purposes.
Rating (after treatment)	Low

**COUNCIL DECISION**

300

**MOVED CR P FEASEY****SECONDED CR S MILLS****That Council:**

- 1. Accepts the Monthly Statements of Financial Activity for the period ended 31 August 2018, contained within Attachment A; and**
- 2. Accepts the explanations for material variances for the period ended 31 August 2018, contained within Attachment A.**

**CARRIED**  
**8/0**



# Monthly Financial Report



# **CITY OF KWINANA**

## **MONTHLY FINANCIAL REPORT (Containing the Statement of Financial Activity) For the Period Ended 31 August 2018**

### **LOCAL GOVERNMENT ACT 1995 LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996**

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**CITY OF KWINANA**  
**STATEMENT OF FINANCIAL ACTIVITY**  
**(Statutory Reporting Program)**  
**For the Period Ended 31 August 2018**

	Note	Adopted Annual Budget	Current Annual Budget	YTD Budget (a)	YTD Actual (b)	Var. \$ (b)-(a)	Var. % (b)-(a)/(a)
		\$	\$	\$	\$	\$	%
<b>Opening Funding Surplus(Deficit)</b>	2	1,345,947	1,345,947	1,345,947	<b>1,259,915</b>	(86,032)	(6%)
<b>Revenue from operating activities</b>							
Governance		35,760	35,760	617	<b>40,164</b>	39,547	6410%
General Purpose Funding - Rates	8	38,101,480	38,101,480	37,660,083	<b>37,604,821</b>	(55,262)	(0%)
General Purpose Funding - Other		4,477,650	4,477,650	772,192	<b>521,285</b>	(250,907)	(32%)
Law, Order and Public Safety		330,500	330,500	54,120	<b>69,272</b>	15,152	28%
Health		153,066	153,066	5,217	<b>19,620</b>	14,403	276%
Education and Welfare		7,168,961	7,209,961	1,205,539	<b>1,322,645</b>	117,106	10%
Community Amenities		5,534,442	5,534,442	4,980,067	<b>5,077,105</b>	97,038	2%
Recreation and Culture		2,999,818	2,999,818	484,058	<b>581,314</b>	97,256	20%
Transport		179,611	179,611	104,611	<b>0</b>	(104,611)	(100%)
Economic Services		1,280,762	1,280,762	280,989	<b>263,332</b>	(17,657)	(6%)
Other Property and Services		1,364,646	1,364,646	215,486	<b>58,358</b>	(157,128)	(73%)
		<b>61,626,696</b>	<b>61,667,696</b>	<b>45,762,979</b>	<b>45,557,917</b>	(205,062)	(0%)
<b>Expenditure from operating activities</b>							
Governance		(2,596,800)	(2,596,800)	(407,348)	<b>(672,937)</b>	(265,589)	(65%)
General Purpose Funding		(790,130)	(790,130)	(140,952)	<b>(91,894)</b>	49,058	35%
Law, Order and Public Safety		(3,369,960)	(3,369,960)	(533,382)	<b>(489,081)</b>	44,301	8%
Health		(950,887)	(950,887)	(160,759)	<b>(135,010)</b>	25,749	16%
Education and Welfare		(11,379,613)	(11,678,113)	(1,988,999)	<b>(1,591,550)</b>	397,449	20%
Community Amenities		(10,248,550)	(10,248,550)	(1,342,143)	<b>(1,151,180)</b>	190,963	14%
Recreation and Culture		(22,098,138)	(22,098,138)	(3,395,930)	<b>(2,160,859)</b>	1,235,071	36%
Transport		(15,431,921)	(15,431,921)	(2,602,555)	<b>(917,100)</b>	1,685,455	65%
Economic Services		(1,861,358)	(1,861,358)	(304,818)	<b>(223,413)</b>	81,405	27%
Other Property and Services		(3,942,836)	(3,942,836)	(616,471)	<b>(505,108)</b>	111,363	18%
		<b>(72,670,193)</b>	<b>(72,968,693)</b>	<b>(11,493,357)</b>	<b>(7,938,133)</b>	3,555,224	31%
<b>Operating activities excluded from budget</b>							
Add back Depreciation		13,672,393	13,672,393	2,278,742	<b>0</b>	(2,278,742)	(100%)
Adjust (Profit)/Loss on Asset Disposal	7	189,040	189,040	0	<b>8,608</b>	8,608	
<b>Amount attributable to operating activities</b>		<b>2,817,936</b>	<b>2,560,436</b>	<b>36,548,364</b>	<b>37,628,392</b>	1,080,028	3%
<b>Investing Activities</b>							
Non-operating Grants, Subsidies and Contributions		4,285,605	4,285,605	129,455	<b>1,108,856</b>	979,401	(757%)
Proceeds from Disposal of Assets	7	423,500	423,500	38,500	<b>22,176</b>	(16,324)	42%
Land and Buildings	11	(4,937,050)	(5,057,323)	(580,485)	<b>(127,807)</b>	452,678	78%
Plant, Furniture and Equipment	11	(2,458,200)	(2,458,200)	(223,476)	<b>(156,029)</b>	67,447	30%
Infrastructure Assets - Roads	11	(3,000,084)	(3,000,084)	(272,735)	<b>(2,691)</b>	270,044	99%
Infrastructure Assets - Parks and Reserves	11	(1,869,669)	(1,892,396)	(192,697)	<b>(25,373)</b>	167,324	87%
Infrastructure Assets - Footpaths	11	(193,560)	(193,560)	(17,596)	<b>(710)</b>	16,886	96%
Infrastructure Assets - Drainage	11	(2,339,323)	(2,339,323)	(212,666)	<b>(1,953)</b>	210,713	99%
Infrastructure Assets - Street Lighting	11	(394,272)	(394,272)	(35,843)	<b>(1,733)</b>	34,110	95%
Infrastructure Assets - Bus Shelters	11	(20,000)	(20,000)	(1,817)	<b>0</b>	1,817	100%
Infrastructure Assets - Car Parks	11	0	(7,000)	(7,000)	<b>(39)</b>	6,961	99%
<b>Amount attributable to investing activities</b>		<b>(10,503,053)</b>	<b>(10,653,053)</b>	<b>(1,376,359)</b>	<b>814,696</b>	2,191,055	(159%)
<b>Financing Activities</b>							
Proceeds from New Debentures	9	2,268,000	2,268,000	0	<b>0</b>	0	0%
Self-Supporting Loan Principal		16,168	16,168	2,694	<b>4,009</b>	1,315	49%
Transfer from Reserves	6	9,499,275	9,649,275	828,155	<b>885,044</b>	56,889	7%
Repayment of Debentures	9	(777,133)	(777,133)	0	<b>0</b>	0	0%
Transfer to Reserves	6	(4,667,140)	(4,667,140)	(312,500)	<b>(329,322)</b>	(16,822)	(5%)
<b>Amount attributable to financing activities</b>		<b>6,339,170</b>	<b>6,489,170</b>	<b>518,349</b>	<b>559,731</b>	41,382	8%
<b>Closing Funding Surplus(Deficit)</b>	2	<b>0</b>	<b>(257,500)</b>	<b>37,036,301</b>	<b>40,262,734</b>	3,226,433	9%

This statement is to be read in conjunction with the accompanying Financial Statements and notes. All material variances are discussed in Note 1.

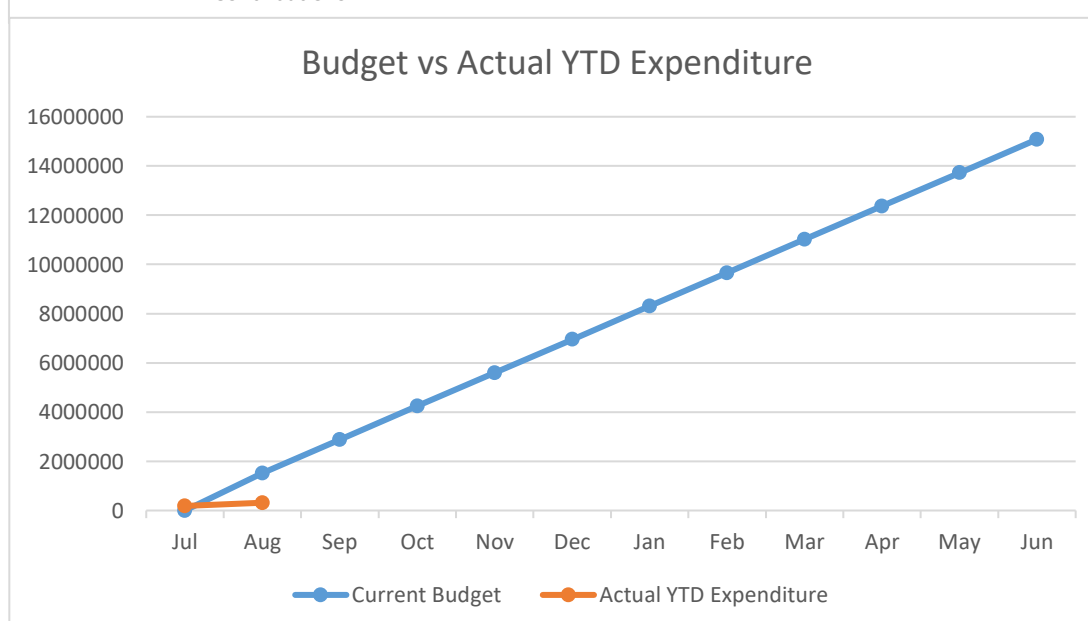
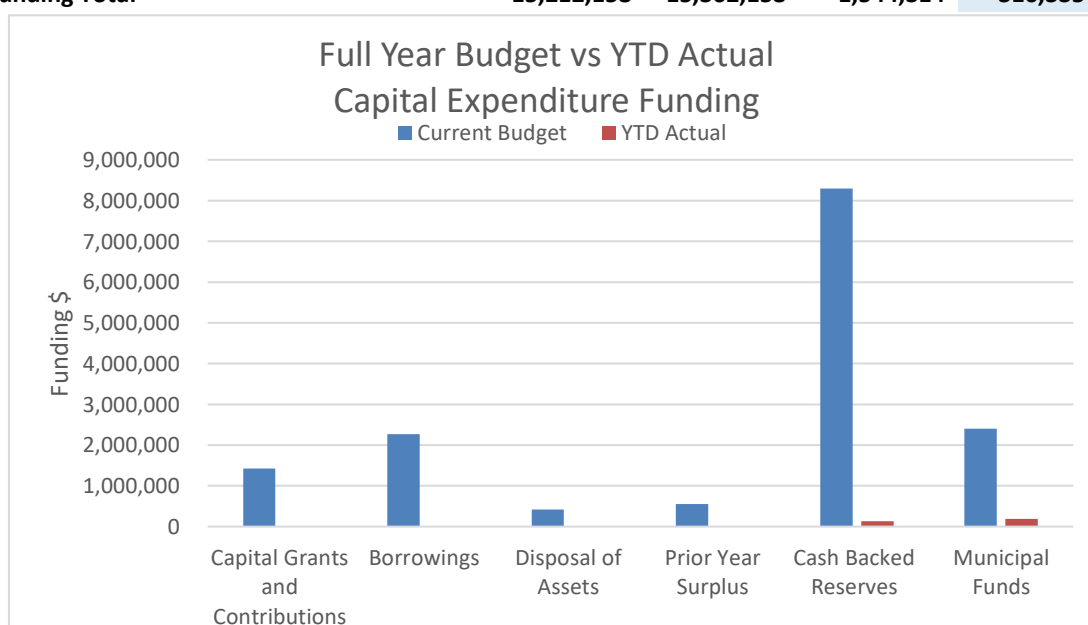
**CITY OF KWINANA**  
**STATEMENT OF FINANCIAL ACTIVITY**  
**(By Nature or Type)**  
**For the Period Ended 31 August 2018**

	Note	Adopted Annual Budget	Current Annual Budget	YTD Budget (a)	YTD Actual (b)	Var. \$ (b)-(a)	Var. % (b)-(a)/(a)
		\$	\$	\$	\$	\$	%
<b>Opening Funding Surplus (Deficit)</b>	2	1,345,947	1,345,947	1,345,947	<b>1,259,915</b>	(86,032)	(6%)
<b>Revenue from operating activities</b>							
Rates	8	38,101,480	38,101,480	37,660,083	<b>37,604,821</b>	(55,262)	(0%)
Operating Grants, Subsidies and Contributions		7,639,227	7,680,227	1,422,068	<b>1,321,600</b>	(100,468)	(7%)
Fees and Charges		11,694,484	11,694,484	6,090,205	<b>6,225,635</b>	135,430	2%
Interest Earnings		2,690,500	2,690,500	357,501	<b>252,055</b>	(105,446)	(29%)
Other Revenue		1,489,873	1,489,873	233,122	<b>153,805</b>	(79,317)	(34%)
Profit on Disposal of Assets	7	11,132	11,132	0	<b>0</b>	0	
		<b>61,626,696</b>	<b>61,667,696</b>	<b>45,762,979</b>	<b>45,557,917</b>	(205,062)	(0%)
<b>Expenditure from operating activities</b>							
Employee Costs		(28,625,503)	(28,386,503)	(4,431,044)	<b>(4,201,040)</b>	230,004	5%
Materials and Contracts		(26,006,185)	(26,303,685)	(4,013,102)	<b>(3,002,340)</b>	1,010,762	25%
Utility Charges		(2,361,417)	(2,361,417)	(326,995)	<b>(360,952)</b>	(33,957)	(10%)
Depreciation on Non-Current Assets		(13,672,393)	(13,672,393)	(2,278,742)	<b>0</b>	2,278,742	100%
Interest Expenses		(1,111,762)	(1,111,762)	0	<b>33,599</b>	33,599	100%
Insurance Expenses		(570,108)	(570,108)	(432,640)	<b>(403,707)</b>	28,933	7%
Other Expenditure		(122,653)	(122,653)	(10,834)	<b>4,915</b>	15,749	145%
Loss on Disposal of Assets	7	(200,172)	(200,172)	0	<b>(8,608)</b>	(8,608)	100%
		<b>(72,670,193)</b>	<b>(72,728,693)</b>	<b>(11,493,357)</b>	<b>(7,938,133)</b>	3,555,224	31%
<b>Operating activities excluded from budget</b>							
Add back Depreciation		13,672,393	13,672,393	2,278,742	<b>0</b>	(2,278,742)	(100%)
Adjust (Profit)/Loss on Asset Disposal	7	189,040	189,040	0	<b>8,608</b>	8,608	100%
<b>Amount attributable to operating activities</b>		<b>2,817,936</b>	<b>2,800,436</b>	<b>36,548,364</b>	<b>37,628,392</b>	1,080,028	3%
<b>Investing activities</b>							
Grants, Subsidies and Contributions		4,285,605	4,285,605	129,455	<b>1,108,856</b>	979,401	(757%)
Proceeds from Disposal of Assets	7	423,500	423,500	38,500	<b>22,176</b>	(16,324)	42%
Land and Buildings	11	(4,937,050)	(5,057,323)	(580,485)	<b>(127,807)</b>	452,678	78%
Plant, Furniture and Equipment	11	(2,458,200)	(2,458,200)	(223,476)	<b>(156,029)</b>	67,447	30%
Infrastructure Assets - Roads	11	(3,000,084)	(3,000,084)	(272,735)	<b>(2,691)</b>	270,044	99%
Infrastructure Assets - Parks and Reserves	11	(1,869,669)	(1,892,396)	(192,697)	<b>(25,373)</b>	167,324	87%
Infrastructure Assets - Footpaths	11	(193,560)	(193,560)	(17,596)	<b>(710)</b>	16,886	96%
Infrastructure Assets - Drainage	11	(2,339,323)	(2,339,323)	(212,666)	<b>(1,953)</b>	210,713	99%
Infrastructure Assets - Street Lighting	11	(394,272)	(394,272)	(35,843)	<b>(1,733)</b>	34,110	95%
Infrastructure Assets - Bus Shelters	11	(20,000)	(20,000)	(1,817)	<b>0</b>	1,817	100%
Infrastructure Assets - Car Parks	11	0	(7,000)	(7,000)	<b>(39)</b>	6,961	99%
<b>Amount attributable to investing activities</b>		<b>(10,503,053)</b>	<b>(10,653,053)</b>	<b>(1,376,359)</b>	<b>814,696</b>	2,191,055	(159%)
<b>Financing Activities</b>							
Proceeds from New Debentures	9	2,268,000	2,268,000	0	<b>0</b>	0	
Self-Supporting Loan Principal		16,168	16,168	2,694	<b>4,009</b>	1,315	49%
Transfer from Reserves	6	9,499,275	9,649,275	828,155	<b>885,044</b>	56,889	7%
Repayment of Debentures	9	(777,133)	(777,133)	0	<b>0</b>	0	
Transfer to Reserves	6	(4,667,140)	(4,667,140)	(312,500)	<b>(329,322)</b>	(16,822)	(5%)
<b>Amount attributable to financing activities</b>		<b>6,339,170</b>	<b>6,489,170</b>	<b>518,349</b>	<b>559,731</b>	41,382	8%
<b>Closing Funding Surplus (Deficit)</b>	2	<b>0</b>	<b>(17,500)</b>	<b>37,036,301</b>	<b>40,262,734</b>	3,226,433	9%

This statement is to be read in conjunction with the accompanying Financial Statements and notes. All material variances are discussed in Note 1.

**CITY OF KWINANA**  
**STATEMENT OF CAPITAL ACQUISITIONS AND CAPITAL FUNDING**  
**For the Period Ended 31 August 2018**

Capital Acquisitions	Note	Adopted Annual Budget	Current Annual Budget	YTD Budget (a)	YTD Actual Total (b)	Variance (a) - (b)
		\$	\$	\$	\$	\$
Land and Buildings	11	4,937,050	5,057,323	580,485	127,807	452,678
Plant, Furniture and Equipment	11	2,458,200	2,458,200	223,476	156,029	67,447
Infrastructure Assets - Roads	11	3,000,084	3,000,084	272,735	2,691	270,044
Infrastructure Assets - Parks and Reserves	11	1,869,669	1,892,396	192,697	25,373	167,324
Infrastructure Assets - Footpaths	11	193,560	193,560	17,596	710	16,886
Infrastructure Assets - Drainage	11	2,339,323	2,339,323	212,666	1,953	210,713
Infrastructure Assets - Street Lighting	11	394,272	394,272	35,843	1,733	34,110
Infrastructure Assets - Bus Shelters	11	20,000	20,000	1,817	0	1,817
Infrastructure Assets - Car Parks	11	0	7,000	7,000	39	6,961
<b>Capital Expenditure Totals</b>		<b>15,212,158</b>	<b>15,362,158</b>	<b>1,544,314</b>	<b>316,335</b>	<b>1,227,979</b>
<b>Capital acquisitions funded by:</b>						
Capital Grants and Contributions		<b>1,423,989</b>	<b>1,423,989</b>	<b>0</b>	<b>2,691</b>	<b>(2,691)</b>
Borrowings		<b>2,268,000</b>	<b>2,268,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
Disposal of Assets		<b>423,500</b>	<b>423,500</b>	<b>0</b>	<b>0</b>	<b>0</b>
Prior Year Surplus		<b>550,934</b>	<b>550,934</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cash Backed Reserves		<b>8,133,427</b>	<b>8,290,427</b>	<b>0</b>	<b>127,772</b>	<b>(127,772)</b>
Municipal Funds		<b>2,412,308</b>	<b>2,405,308</b>	<b>1,544,314</b>	<b>185,872</b>	<b>1,358,442</b>
<b>Capital Funding Total</b>		<b>15,212,158</b>	<b>15,362,158</b>	<b>1,544,314</b>	<b>316,335</b>	<b>1,227,979</b>





**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 1: Explanation of Operating Revenue and Expenditure Material Variances by Nature and Type**

The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date budget materially.

The material variance adopted by Council for the 2018/19 year is the greater of \$50,000 or 5%.

Nature and Type Category	Var. \$	Var. %	Var.	Timing/ Permanent	Explanation of Variance
<b>Operating Revenues</b>					
Rates	(55,262)	(0%)		No Material Variance	
Operating Grants, Subsidies and Contributions	(100,468)	(7%)	M	Permanent	First instalment of FESA grant (\$167k) was budgeted to be received in July, but was actually received in June 2018. Funds were quarantined in Restricted Grants and Contribution reserve and has been brought forward to 2018/19 as a transfer from reserve. This has been offset by more than expected income for CCB subsidies (FDC).
Fees and Charges	135,430	2%		No Material Variance	
Interest Earnings	(105,446)	(29%)	M	Timing	Timing variance as budget has been spread evenly over the 12 months. Investments matured in July and were additionally offset by the reversal of accrued interest (262k) recognised in 2017/18.
Other Revenue	(79,317)	(34%)	M	Timing	The Engineering project management fee has not yet been posted to the capital expenditure accounts.
Profit on Disposal of Assets	0			No Material Variance	
<b>Operating Expense</b>					
Employee Costs	230,004	5%	M	Permanent	Salary savings due to vacancies in budgeted positions.
Materials and Contracts	1,010,762	25%	M	Timing	Costs have been budgeted to be spent over 12 months. Each month, a number of invoices are not received until after period end processing has finished, resulting in the expenditure reported in these statements not reflecting the actual cost in the month the expense was incurred.City officers are looking at ways to improve reporting and ensure that these costs are captured in line with when the works are completed.
Utility Charges	(33,957)	(10%)		No Material Variance	
Depreciation on Non-Current Assets	2,278,742	100%	M	Timing	Timing variance as depreciation will be calculated after the annual financial report has been audited.
Interest Expenses	33,599	100%		No Material Variance	
Insurance Expenses	28,933	7%		No Material Variance	
Other Expenditure	15,749	145%		No Material Variance	
Loss on Disposal of Assets	(8,608)	100%		No Material Variance	

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 1: Explanation of Operating Revenue and Expenditure Material Variances by Nature and Type**

The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date budget materially.

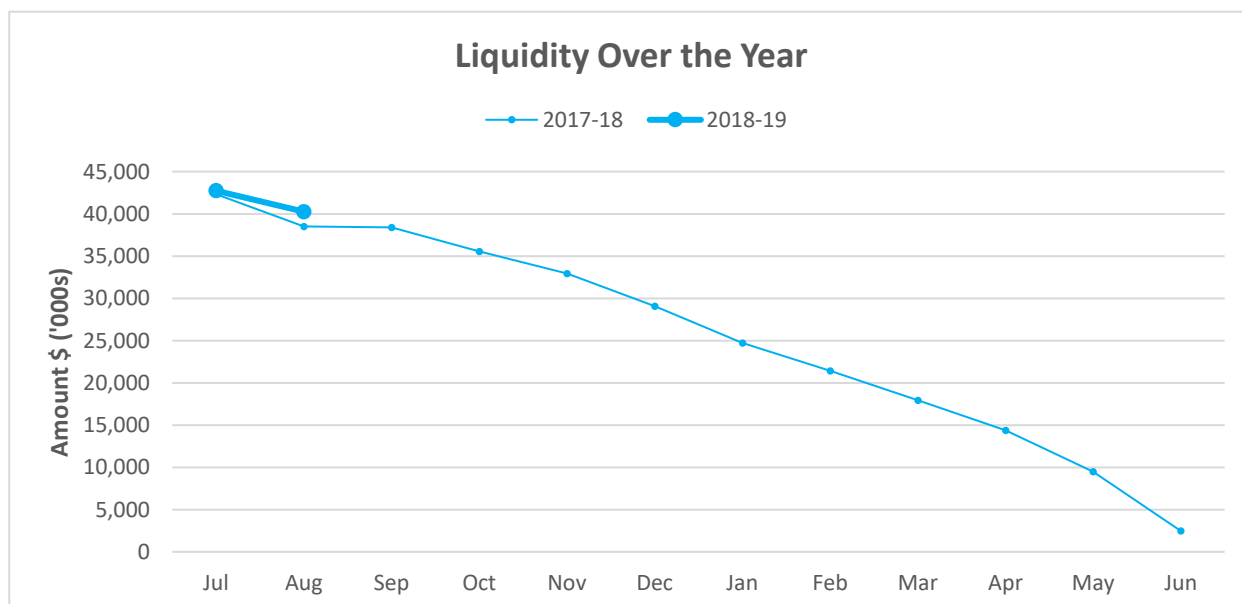
The material variance adopted by Council for the 2018/19 year is the greater of \$50,000 or 5%.

Nature and Type Category	Var. \$	Var. %	Var.	Timing/ Permanent	Explanation of Variance
<b>Capital Revenues</b>					
Grants, Subsidies and Contributions	979,401	(757%)	M	Timing	Developer Contributions were budgeted to be received later in the year, but the City received \$1.1m YTD. Timing of contributions is difficult to estimate due to the unknown timing of subdivisions.
Proceeds from Disposal of Assets	(16,324)	42%		No Material Variance	
<b>Capital Expenses</b>					
Land and Buildings	452,678	78%	M	Timing	Budgets have currently been spread equally over 11 months from August to June. Officers are working to estimate budgeted cashflows for reflection in September financial report.
Plant, Furniture & Equipment	67,447	30%	M	Timing	Budgets have currently been spread equally over 11 months from August to June. Officers are working to estimate budgeted cashflows for reflection in September financial report.
Infrastructure - Roads	270,044	99%	M	Timing	Budgets have currently been spread equally over 11 months from August to June. Officers are working to estimate budgeted cashflows for reflection in September financial report.
Infrastructure Assets - Parks and Reserves	167,324	87%	M	Timing	Budgets have currently been spread equally over 11 months from August to June. Officers are working to estimate budgeted cashflows for reflection in September financial report.
Infrastructure Assets - Footpaths	16,886	96%		No Material Variance	
Infrastructure Assets - Drainage	210,713	99%	M	Timing	Budgets have currently been spread equally over 11 months from August to June. Officers are working to estimate budgeted cashflows for reflection in September financial report.
Infrastructure Assets - Street Lighting	34,110	95%		No Material Variance	
Infrastructure Assets - Bus Shelters	1,817	100%		No Material Variance	
Infrastructure Assets - Car Parks	6,961	99%		No Material Variance	
<b>Financing</b>					
Proceeds from New Debentures	0	0%		No Material Variance	
Proceeds from Advances	0	0%		No Material Variance	
Self-Supporting Loan Principal	1,315	49%		No Material Variance	
Transfer from Reserves	56,889	7%	M	Timing	Actual funds expected to be transferred from the Restricted Grants and Contributions reserve varies to budget as final reconciliations have occurred with actual 2017/18 values being transferred as required.
Advances to Community Groups	0	0%		No Material Variance	
Repayment of Debentures	0	0%		No Material Variance	
Transfer to Reserves	(16,822)	(5%)		No Material Variance	

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 2: Net Current Funding Position**

		Last Years Closing	This Time Last Year	Current
	Note	30 June 2018	31 Aug 2017	31 Aug 2018
		\$	\$	\$
<b>Current Assets</b>				
Cash Unrestricted	3	21,137	18,482,594	8,219,163
Cash Restricted - Reserves	6	52,875,771	50,580,168	52,320,046
Receivables - Rates	5(a)	3,597,121	24,958,181	36,088,059
Receivables - Sundry Debtors	5(b)	720,633	572,353	665,883
Other Current Assets		412,123	0	105,687
Accrued Income		491,460	0	0
Inventories		34,180	34,923	33,321
		58,152,425	94,628,219	97,432,159
<b>Less: Current Liabilities</b>				
		(4,016,739)	(5,535,699)	(4,849,379)
Less: Cash Reserves	6	(52,875,771)	(50,580,168)	(52,320,046)
<b>Net Current Funding Position - Surplus/(Deficit)</b>				
		<b>1,259,915</b>	<b>38,512,352</b>	<b>40,262,734</b>



**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 3(a): Cash and Investments**

	<b>Total Amount</b>	<b>Interest Rate</b>	<b>Calculated Interest Earnings</b>	<b>Institution</b>	<b>S&amp;P Rating</b>	<b>Deposit Date</b>	<b>Maturity Date</b>	<b>Term Days</b>
	<b>\$</b>	<b>%</b>	<b>\$</b>					
CBA Municipal Bank Account	5,129,384	Variable	N/A	CBA	AA	N/A	N/A	N/A
CBA Reserves Bank Account	-	Variable	N/A	CBA	AA	N/A	N/A	N/A
CBA Trust Bank Account	2,222,893	Variable	N/A	CBA	AA	N/A	N/A	N/A
Cash On Hand - Petty Cash	4,650	N/A	N/A	PC	N/A	N/A	N/A	N/A
<b>Sub-total Cash Deposits</b>	<b>7,356,928</b>		-					
<b>(b) Term Deposits - Investments</b>								
BEN - TD2716903	2,000,000	2.75%	48,671	BEN	A	22/08/2018	11/07/2019	323
BWA - TD4749320	2,000,000	2.60%	12,822	BWA	AA	28/08/2018	26/11/2018	90
BWA - TD4749321	2,000,000	2.75%	40,534	BWA	AA	28/08/2018	24/05/2019	269
BWA - TD4749322	2,000,000	2.75%	48,822	BWA	AA	28/08/2018	18/07/2019	324
<b>Sub-total - Term Deposits - Investments</b>	<b>8,000,000</b>		<b>150,849</b>					
<b>Reserve Funds Investments (Cash Backed Reserves)</b>								
Aged Persons Units Reserve - TD36-866-8236	752,844	2.65%	5,029	NAB	AA	1/08/2018	1/11/2018	92
Asset Management Reserve - TD36-842-8945	505,471	2.65%	3,382	NAB	AA	1/08/2018	1/11/2018	92
Asset Replacement Reserve - TD42-972-1062	504,448	2.64%	3,284	NAB	AA	7/08/2018	5/11/2018	90
Banksia Park DMF Reserve - TD42-997-1790	131,640	2.64%	857	NAB	AA	7/08/2018	5/11/2018	90
Community Services & Emergency Relief Reserve - TD43-069-3230	84,567	2.64%	551	NAB	AA	7/08/2018	5/11/2018	90
CLAG Reserve - TD43-083-2341	267,587	2.64%	1,742	NAB	AA	7/08/2018	5/11/2018	90
Workers Compensation Reserve - TD69-136-9789	321,970	2.65%	2,099	NAB	AA	9/08/2018	7/11/2018	89
Settlement Agreement Reserve - TD68-951-1678	161,049	2.65%	1,052	NAB	AA	9/08/2018	7/11/2018	89
Infrastructure Reserve - TD68-832-2429	342,197	2.65%	2,236	NAB	AA	9/08/2018	7/11/2018	89
Golf Course Cottage Reserve - TD68-730-8350	28,217	2.65%	184	NAB	AA	9/08/2018	7/11/2018	89
Future Community Infrastructure Reserve - TD88-185-4822	1,392,416	2.65%	12,232	NAB	AA	15/08/2018	14/12/2018	121
Family Day Care Reserve - TD88-195-0531	1,496,264	2.65%	13,145	NAB	AA	15/08/2018	14/12/2018	121
Employee Leave Reserve - TD10560134	2,077,584	2.65%	45,402	NAB	AA	27/08/2018	24/06/2019	301
Employee Leave Reserve - TD10560408	2,090,308	2.65%	45,529	NAB	AA	28/08/2018	24/06/2019	300
Refuse Reserve - TD10555501	2,200,095	2.60%	13,164	NAB	AA	8/08/2018	31/10/2018	84
Refuse Reserve - TD4741512	2,683,478	2.65%	17,535	BWA	AA	2/08/2018	31/10/2018	90
Refuse Reserve - TD4747990	583,404	2.65%	3,812	BWA	AA	23/08/2018	21/11/2018	90
Information Technology Reserve - TD4747992	1,891,619	2.65%	12,360	BWA	AA	23/08/2018	21/11/2018	90
City Assist Initiative Reserve - TD4747993	100,584	2.65%	657	BWA	AA	23/08/2018	21/11/2018	90
Youth Engagement Strategy Reserve - TD4747996	145,069	2.65%	948	BWA	AA	23/08/2018	21/11/2018	90
<b>Sub-total - Term Deposits - (Cash Backed Reserves)</b>	<b>17,760,811</b>		<b>185,200</b>					
<b>Reserve Funds Investments (Developer Contributions)</b>	<b>-</b>							
DCA - 1 Hard Infrastructure - Bertram - TDB35732709.97	1,890,771	2.56%	11,935	CBA	AA	22/08/2018	20/11/2018	90
DCA - 2 Hard Infrastructure - Wellard - TD2718200	1,892,760	2.55%	11,901	BEN	A	23/08/2018	21/11/2018	90
DCA - 5 Hard Infrastructure - Wandl - TD10560135	1,302,629	2.63%	8,541	NAB	AA	27/08/2018	26/11/2018	91
DCA - 5 Hard Infrastructure - Wandl - TD10560409	9,029	2.63%	59	NAB	AA	28/08/2018	26/11/2018	90
DCA - 7 Hard Infrastructure - Mandogalup (West) - TD27-609-7675	11,713	2.65%	103	NAB	AA	15/08/2018	14/12/2018	121
DCA - 9 Soft Infrastructure - Wandl/Anketell - TD10561103	10,487,573	2.65%	137,057	NAB	AA	30/08/2018	26/02/2019	180
DCA - 10 Soft Infrastructure - Casuarina/Anketell - TD27-453-1941	227,912	2.65%	2,002	NAB	AA	15/08/2018	14/12/2018	121
DCA - 11 Soft Infrastructure - Wellard East - TDB35732709.99	5,952,985	2.56%	37,577	CBA	AA	22/08/2018	20/11/2018	90
DCA - 12 Soft Infrastructure - Wellard West - TD4740441	6,674,970	2.65%	43,616	BWA	AA	1/08/2018	30/10/2018	90
DCA - 13 Soft Infrastructure - Bertram - TD27-521-3013	282,230	2.65%	2,479	NAB	AA	15/08/2018	14/12/2018	121
DCA - 14 Soft Infrastructure - Wellard/Leda - TD27-496-1706	504,779	2.65%	4,434	NAB	AA	15/08/2018	14/12/2018	121
DCA - 15 Soft Infrastructure - Townsite - TD27-479-8398	158,315	2.65%	1,391	NAB	AA	15/08/2018	14/12/2018	121
<b>Sub-total - Reserve Funds Investments (Developer Contributions)</b>	<b>29,395,667</b>		<b>261,096</b>					
	-							
	-							
<b>Total</b>	<b>62,513,405</b>		<b>597,145</b>					
Less Trust Bank	(2,203,103)							
<b>Total Municipal Controlled Funds</b>	<b>60,310,302</b>		<b>597,145</b>					



**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
For the Period Ended 31 August 2018

**Note 3(b): Cash and Investments - Compliance with Investment Policy**

Portfolio Credit Risk	Funds Held	Actual at Period End	Limit per Policy	
AAA & Bendigo Bank Kwinana Community Branch	3,892,760	6%	100%	✓
AA	58,615,996	94%	100%	✓
A	-	0%	60%	✓
BBB	-	0%	20%	✓
Unrated	-	-	20%	✓

Counterparty Credit Risk	Funds Held	Actual at Period End	Limit per Policy	
BEN (AAA)	3,892,760	6%	45%	✓
BWA (AA)	18,079,124	29%	45%	✓
CBA (AA)	15,196,033	24%	45%	✓
NAB (AA)	25,340,838	41%	45%	✓

**Comments - Investment Policy Compliance**

The City's investments are invested in line with Council Policy - Investments. The above tables exclude the total of petty cash (\$4,650) held by the City.  
Interest received on the City's investments year to date is \$157,192.

**5.5.1 Portfolio Credit Framework**

To control the credit quality on the investment portfolio, the following credit framework limits the percentage of the portfolio exposed to any particular credit rating category.

S&P Long Term Rating	S&P Short Term Rating	Direct Investment Maximum for category %
AAA and Bendigo Bank Kwinana Community Branch	A-1+ and Bendigo Bank Kwinana Community Branch	100%
AA	A-1+	100%
A	A-1	60%
BBB	A-2	20%

If any of the investments within the portfolio are subject to a credit rating downgrade such that the portfolio credit percentages are no longer compliant with the Investment Policy, or there is a review of this policy, the investment will be divested as soon as practicable.

**5.5.2 Counterparty Credit Framework**

Exposure to an individual counterparty/institution will be restricted by its credit rating so that single entity exposure is limited, as detailed in the table below:

S&P Long Term Rating	S&P Short Term Rating	Direct Investment Maximum for category %
AAA and Bendigo Bank Kwinana Community Branch	A-1+ and Bendigo Bank Kwinana Community Branch	45%
AA	A-1+	45%
A	A-1	25%
BBB	A-2	10%

If any of the investments within the portfolio are subject to a credit rating downgrade such that the portfolio credit percentages are no longer compliant with the Investment Policy, or there is a review of this policy, the investment will be divested as soon as practicable.

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

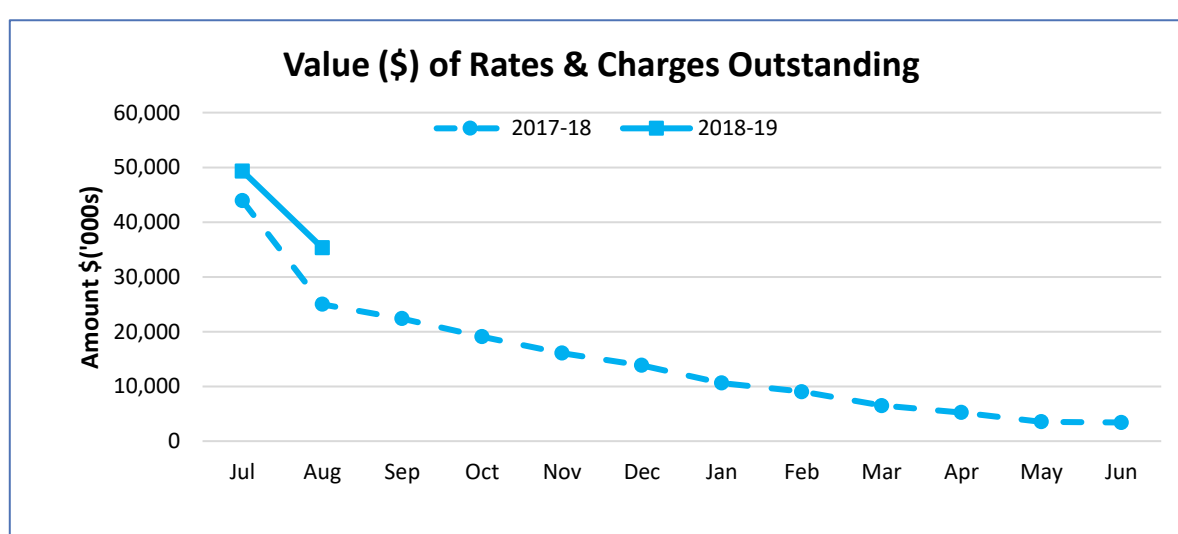
**Note 4: Budget Amendments**

GL Code	Description	Increase / (Decrease) to Net Surplus Position	Amended Budget Surplus / (Deficit)
		\$	\$
<b>27/06/2018 Annual Budget Adoption</b>			
			0
<b><u>Items not requiring Council Approval as per OCM 27/06/2018 Council Decision 210</u></b>			
<b>Grant received from Children's Book Council of Australia to cover fees of authors, illustrators and storytellers</b>			
400104.1106.60	Library - Op Exp - Advertising and Promotions	(1,200)	
300018.1297.15	Library - Op Rev - Library Contributions	1,200	
		0	0
<b>Transfer Library software expenditure from IT budget to Library budget</b>			
400761.2020.64	Computing Infrastructure - Corporate Applications	12,000	
400104.1124.60	Library - Computer Services	(12,000)	
		0	0
<b>Transfer program income and expenditure to be managed by the Recquatic</b>			
400275.2034.60	Recquatic operating expenditure - Senior Sational	(3,000)	
400275.2035.60	Recquatic operating expenditure - Active Women	(3,000)	
300234.2034.30	Recquatic operating income - Senior Sational	1,550	
300234.2035.30	Recquatic operating income - Active Women	1,550	
400094.1600.60	CDO Recreation & Leisure operating expenditure - Senior Sational	3,000	
400094.1600.60	CDO Recreation & Leisure operating expenditure - Active Women	3,000	
300158.1600.30	CDO Recreation & Leisure operating income - Senior Sational	(1,550)	
300158.1600.30	CDO Recreation & Leisure operating income - Active Women	(1,550)	
		0	0
<b>Transfer funds to miscellaneous expendible equipment to Community Centres Admin budget</b>			
400708.1144.60	Community Centres Admin - Expendable Equipment	(4,000)	
400733.1144.60	Bertram Community Centre - Expendable Equipment	1,000	
400731.1144.60	Darius Community Centre - Expendable Equipment	2,000	
400732.1144.60	Wellard Community Centre - Expendable Equipment	1,000	
		0	0
<b><u>Items approved by Council falling outside Council Decision 210</u></b>			
<b>08/08/2018 Additional funds required for the completeion of DCA 13 Local Sporting Ground with Community Sports Facility</b>			
600019.1002.60	Capital expenditure - Kwinana Tennis Courts fencing	(150,000)	
700013.1917.06	Transfer from reserve - Future Community Infrastructure Reserve	150,000	
		0	0
<b>22/08/2018 Capital projects funded in 2017/18 that were not finalised, requiring funds to be carried forward to 2018/19</b>			
600023.1565.60	Capital expenditure - Kwinana Tennis Courts fencing	(7,000)	
600008.1568.60	Capital expenditure - Medina Oval bitumenise entrance and carpark	(22,727)	
600015.1002.60	Capital expenditure - Building Contingency	29,727	
		0	0
<b>Amended Budget Surplus / (Deficit)</b>			<b>0</b>

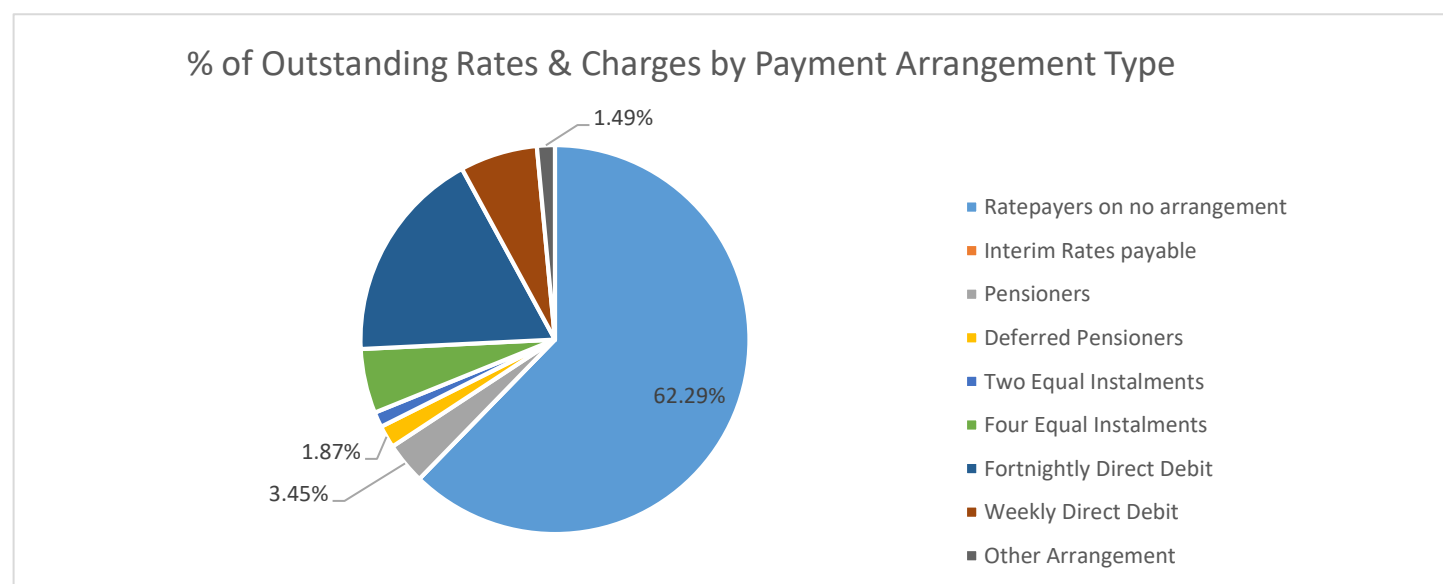
**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 5(a): Receivables - Rates & Charges**

Receivables - Rates & Charges Receivable	31 Aug 2018	30 June 2018
	\$	\$
Opening Arrears Previous Years	4,275,903	3,360,788
Levied this year	48,381,884	46,715,340
<u>Less</u> Collections to date	(15,898,524)	(45,056,420)
<u>Less</u> Excess Rates received	(799,399)	(743,805)
<b>Rates &amp; Charges Collectable</b>	<b>35,959,864</b>	<b>4,275,903</b>
Less Pensioner Deferred Rates	(671,204)	(678,782)
<b>Net Rates &amp; Charges Collectable</b>	<b>35,288,660</b>	<b>3,597,121</b>
% Outstanding	72.94%	7.70%



Outstanding Rates & Charges by Payment Arrangement Type	31 Aug 2018	
	\$	%
Ratepayers on no arrangement	22,397,749	62.29%
Interim Rates payable	0	0.00%
Pensioners	1,241,312	3.45%
Deferred Pensioners	671,204	1.87%
Two Equal Instalments	455,978	1.27%
Four Equal Instalments	1,925,677	5.36%
Fortnightly Direct Debit	6,414,527	17.84%
Weekly Direct Debit	2,317,426	6.44%
Other Arrangement	535,991	1.49%
	<b>35,959,864</b>	<b>100.00%</b>



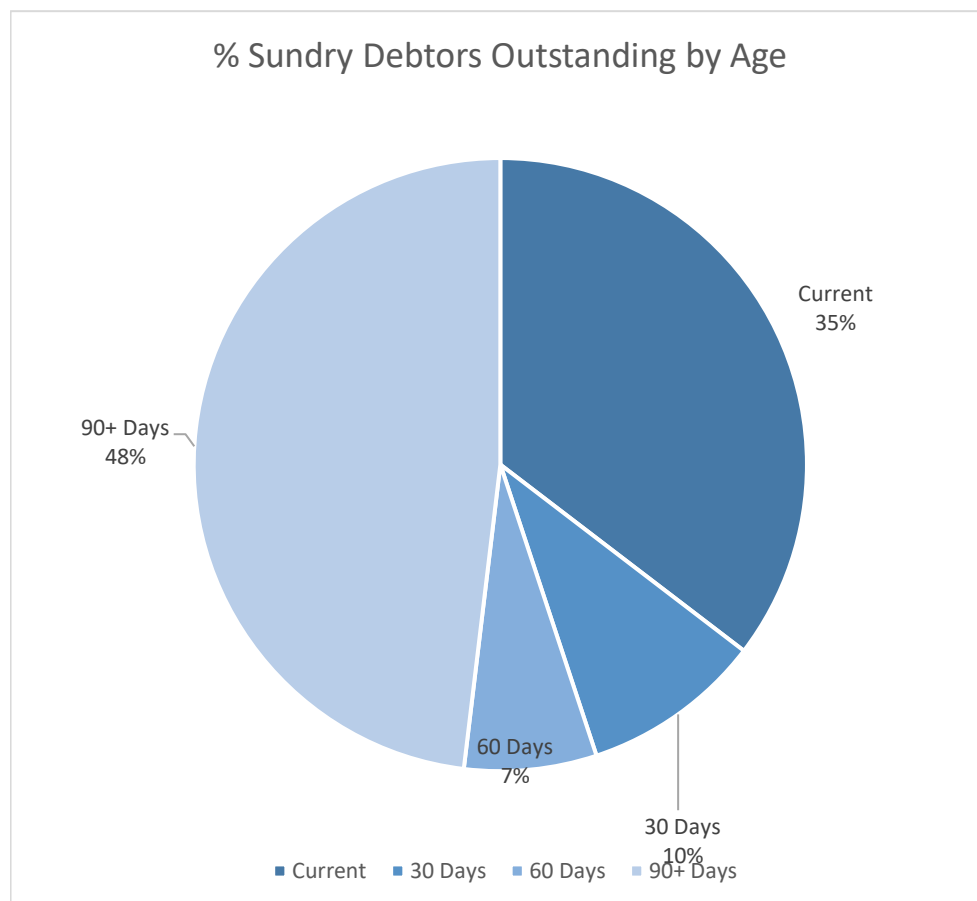
**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 5(b): Receivables - General**

**Receivables - General**

	Current	30 Days	60 Days	90+ Days	Total
	\$	\$	\$	\$	\$
Sundry Debtors	194,977	52,524	38,472	264,994	550,967
Infringements Register					114,916
<b>Total Receivables General Outstanding</b>					<b>665,883</b>

Amounts shown above include GST (where applicable)



**Sundry Debtors Outstanding Over 90 Days Exceeding \$1,000**

Debtor #	Description	Status	\$
<b>Banksia Park Management Fees to be recouped upon sale of unit</b>			
1497.11	Banksia Park Fees	Invoice will be paid in September.	2,323
<b>Debts with Fines Enforcement Registry</b>			
1825.07	Court awarded fines and costs	With Fines Enforcement Registry. Payments are being received.	2,773
2442.07	Court imposed fine	No payments received. With Fines Enforcement Registry.	5,732
2535.07	Dog attack prosecution costs	Regular payments ceased in 2015; with Fines Enforcement Registry.	6,444
2726.07	Planning and Development Act prosecution	FER confirmed that a Warrant of Commitment was issued with time served. Debt to be written off through Council.	20,171
3321.07	Dog fines and prosecution costs	Regular payments of \$25 per fortnight via Fines Enforcement Registry.	2,335
3485.07	Food Act prosecutions	No payments received. With Fines Enforcement Registry.	13,524
3909.07	Local Government Act prosecution	No payments received. With Fines Enforcement Registry.	3,652
3910.07	Local Government Act prosecution	Direct debit arrangement of \$30 per fortnight.	1,090
3936.07	Prosecution RO 706-709	Regular payments of \$150 per fortnight via Fines Enforcement Registry.	9,152
3953.07	Local Law prosecution	Regular payments of \$45 per fortnight via Fines Enforcement Registry.	2,554
4060.07	Littering Act prosecution	Direct debit arrangement of \$50 per fortnight.	2,512
4131.07	Dangerous Dog Prosecution	No payments received. With Fines Enforcement Registry.	4,654
<b>Other Sundry Debtors</b>			
296.04	Commercial Property Rent	Director City Legal in discussions with lessee.	8,384
303.04	Structural Maintenance Fee / Loan Repayments	Payment arrangement in place to have debt cleared by end of financial year.	8,559
854.04	Rent and Outgoings	Investigating dispute regarding CPI increase.	5,804
897.04	Deed of Settlement	Payment arrangement in place to have debt cleared by end of financial year.	125,000
3884.03	Removal of abandoned vehicle	Regular payments of \$40 per fortnight being received.	2,075
3922.03	Verge clean up costs	Legal to advise. Debt has been linked to property.	1,090
3951.06	Developer Contributions - Fairhaven Estate	Waiting on subdivision prior to payment as per agreement.	3,786
4123.07	Removal of Asbestos	No reply to correspondence. Debt has been linked to the property.	1,705
4162.04	Community Centre hire fees	Notice of demand sent 26/7/18.	1,488
4141.03	Hazard Reduction Braddock Rd Wellard	Final reminder sent with no response to date. Debt has been linked to the property.	2,048
<b>Total Debtors 90+ days &gt; \$1,000</b>			<b>236,855</b>



**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 6: Cash Backed Reserves**

	Adopted Budget				Current Budget				Actual					Variance
	Opening Balance	Transfers In (incl Interest (+))	Transfers Out (-)	Closing Balance	Opening Balance	Transfers In (incl Interest (+))	Transfers Out (-)	Current Budget Closing Balance	Opening Balance	Actual Transfers In (+)	Interest Earned (+)	Transfers Out (-)	YTD Closing Balance	Actual vs Current Budget
Reserve	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>Municipal Reserves</b>														
Aged Persons Units Reserve	765,541	308,844	(232,750)	841,635	765,541	308,844	(232,750)	841,635	748,731	0	4,116	0	752,847	(88,788)
Asset Management Reserve	501,595	8,721	(180,000)	330,316	501,595	8,721	(180,000)	330,316	501,595	0	3,876	0	505,471	175,156
Asset Replacement Reserve	748,122	263,007	(351,200)	659,929	748,122	263,007	(351,200)	659,929	498,122	0	6,325	0	504,448	(155,481)
Banksia Park Reserve	134,175	2,333	(49,738)	86,769	134,175	2,333	(49,738)	86,769	115,626	0	488	0	116,115	29,345
City Assist Initiative Reserve	100,401	1,743	(102,144)	(0)	100,401	1,743	(102,144)	(0)	100,401	0	1,025	0	101,426	101,426
Community Services & Emergency Relief Reserve	84,017	1,461	0	85,478	84,017	1,461	0	85,478	84,017	0	2,761	0	86,778	1,301
Contiguous Local Authorities Group Reserve	263,146	14,575	(20,000)	257,721	263,146	14,575	(20,000)	257,721	265,873	0	1,714	0	267,587	9,866
Employee Leave Reserve	4,119,629	71,623	(300,000)	3,891,252	4,119,629	71,623	(300,000)	3,891,252	4,231,588	0	7,263	0	4,238,851	347,599
Family Day Care Reserve	1,479,306	25,719	(805,560)	699,465	1,479,306	25,719	(805,560)	699,465	1,462,301	0	9,460	0	1,471,762	772,296
Future Community Infrastructure Reserve	1,538,389	26,746	(663,284)	901,851	1,538,389	26,746	(663,284)	901,851	1,381,900	0	10,516	0	1,392,416	490,565
Golf Course Cottage Reserve	28,033	487	0	28,520	28,033	487	(150,000)	(121,480)	28,033	0	184	0	28,217	149,696
Information Technology Reserve	1,890,703	32,871	(1,416,000)	507,574	1,890,703	32,871	(1,416,000)	507,574	1,890,703	0	5,124	0	1,895,827	1,388,253
Infrastructure Reserve	339,968	5,911	0	345,879	339,968	5,911	0	345,879	339,968	0	0	0	339,968	(5,910)
Refuse Reserve	8,698,885	180,697	(83,880)	8,795,702	8,698,885	180,697	(83,880)	8,795,702	8,736,657	0	65,833	0	8,802,490	6,788
Restricted Grants & Contributions Reserve	1,694,812	0	(1,694,812)	0	1,694,812	0	(1,694,812)	0	2,491,718	0	0	(885,044)	1,606,673	1,606,673
Settlement Agreement Reserve	160,000	2,782	0	162,782	160,000	2,782	0	162,782	160,000	0	1,049	0	161,049	(1,733)
Workers Compensation Reserve	330,200	5,741	0	335,941	330,200	5,741	0	335,941	338,710	0	1,692	0	340,403	4,462
Youth Engagement Reserve	130,412	2,264	(132,676)	0	130,412	2,264	(132,676)	0	144,651	0	2,344	0	146,995	146,994
<b>Sub-Total Municipal Reserves</b>	<b>23,007,334</b>	<b>955,524</b>	<b>(6,032,044)</b>	<b>17,930,814</b>	<b>23,007,334</b>	<b>955,524</b>	<b>(6,182,044)</b>	<b>17,780,814</b>	<b>23,520,596</b>	<b>0</b>	<b>123,771</b>	<b>(885,044)</b>	<b>22,759,323</b>	<b>4,978,509</b>
<b>Developer Contribution Reserves</b>														
DCA 1 - Hard Infrastructure - Bertram	1,851,461	182,424	(491,817)	1,542,068	1,851,461	182,424	(491,817)	1,542,068	1,887,549	0	17,866	0	1,905,415	363,347
DCA 2 - Hard Infrastructure - Wellard	1,772,974	429,946	(2,197,177)	5,743	1,772,974	429,946	(2,197,177)	5,743	1,877,524	0	15,236	0	1,892,760	1,887,017
DCA 4 - Hard Infrastructure - Anketell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DCA 5 - Hard Infrastructure - Wandi	1,286,174	661,998	(454,627)	1,493,545	1,286,174	661,998	(454,627)	1,493,545	1,309,321	0	4,737	0	1,314,059	(179,486)
DCA 7 - Hard Infrastructure - Mandogalup West	11,803	14,077	(159)	25,720	11,803	14,077	(159)	25,720	11,714	0	72	0	11,786	(13,934)
DCA 8 - Soft Infrastructure - Mandogalup	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DCA 9 - Soft Infrastructure - Wandi/Anketell	10,446,476	576,997	(141,136)	10,882,338	10,446,476	576,997	(141,136)	10,882,338	10,487,574	0	64,154	0	10,551,727	(330,610)
DCA 10 - Soft Infrastructure - Casuarina/Anketell	229,412	246,696	(3,099)	473,009	229,412	246,696	(3,099)	473,009	227,912	0	0	0	227,912	(245,097)
DCA 11 - Soft Infrastructure - Wellard East	5,734,336	1,081,744	(77,473)	6,738,607	5,734,336	1,081,744	(77,473)	6,738,607	5,944,905	0	44,818	0	5,989,722	(748,885)
DCA 12 - Soft Infrastructure - Wellard West	6,622,131	355,217	(89,468)	6,887,880	6,622,131	355,217	(89,468)	6,887,880	6,663,349	0	51,770	0	6,715,119	(172,762)
DCA 13 - Soft Infrastructure - Bertram	283,730	8,356	(3,833)	288,252	283,730	8,356	(3,833)	288,252	282,230	0	2,435	0	284,665	(3,588)
DCA 14 - Soft Infrastructure - Wellard/Leda	480,660	130,374	(6,494)	604,540	480,660	130,374	(6,494)	604,540	504,779	0	3,102	0	507,881	(96,659)
DCA 15 - Soft Infrastructure - City Site	144,189	23,788	(1,948)	166,029	144,189	23,788	(1,948)	166,029	158,315	0	1,362	0	159,677	(6,352)
<b>Sub-Total Developer Contribution Reserves</b>	<b>28,863,346</b>	<b>3,711,616</b>	<b>(3,467,231)</b>	<b>29,107,731</b>	<b>28,863,346</b>	<b>3,711,616</b>	<b>(3,467,231)</b>	<b>29,107,731</b>	<b>29,355,172</b>	<b>0</b>	<b>205,551</b>	<b>0</b>	<b>29,560,723</b>	<b>452,992</b>
<b>Total Reserves</b>	<b>51,870,680</b>	<b>4,667,140</b>	<b>(9,499,275)</b>	<b>47,038,545</b>	<b>51,870,680</b>	<b>4,667,140</b>	<b>(9,649,275)</b>	<b>46,888,545</b>	<b>52,875,768</b>	<b>0</b>	<b>329,322</b>	<b>(885,044)</b>	<b>52,320,046</b>	<b>5,431,501</b>

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 7: Disposal of Assets**

Asset Number	Asset Description	YTD Actual				Budget			
		Net Book Value	Proceeds	Profit	(Loss)	Net Book Value	Proceeds	Profit	(Loss)
		\$	\$	\$	\$	\$	\$	\$	\$
	<b>Motor Vehicles</b>								
5061	Plant Replacement - P402					19,875	14,000		(5,875)
5060	Plant Replacement - P403					19,875	14,000		(5,875)
5080	Plant Replacement - P407					19,111	8,000		(11,111)
5597	Plant Replacement - P435					22,222	24,000	1,778	
5705	Plant Replacement - P445					20,979	13,000		(7,979)
5876	Plant Replacement - P457					16,275	12,000		(4,275)
5859	Plant Replacement - P460					29,111	18,000		(11,111)
5884	Plant Replacement - P461					18,645	23,000	4,355	
5871	Plant Replacement - P464					21,750	23,000	1,250	
5838	Plant Replacement - P465					22,959	8,000		(14,959)
5809	Plant Replacement - P467					26,583	24,000		(2,583)
5872	Plant Replacement - P462					23,208	13,000		(10,208)
5983	Plant Replacement - P490					18,601	13,500		(5,101)
5831	Plant Replacement - P455					26,584	24,000		(2,584)
5856	Plant Replacement - P459					29,111	23,000		(6,111)
5093	Plant Replacement - P406					17,750	7,000		(10,750)
5885	Plant Replacement - P463					23,208	13,000		(10,208)
5666	Plant Replacement - P437					21,500	8,000		(13,500)
	<b>Plant &amp; Equipment</b>								
2587	Plant Replacement Program - 7 X 4 Box Trailer with Water Tank and 5.5 Hp Pump - P148					0	1,000	1,000	
4957	Plant Replacement Program - Agrizzi Rota Slasher 72 inch - P413					0	1,000	1,000	
3974	Plant Replacement Program - Cat Skid Steer Loader - P347					25,600	20,000		(5,600)
3722	Plant Replacement Program - Hino 300 Series 816 Crew Cab Truck - Parks - P324					35,486	25,000		(10,486)
4083	Plant Replacement Program - Massey Ferguson Tractor - Parks - P354					51,333	30,000		(21,333)
3842	Plant Replacement Program - Mitsubishi Canter Tip Truck - Infra - P333					29,750	15,000		(14,750)
2819	Plant Replacement Program - Salloy Boxtop Trailer with Water Tank and Pump - P199					189	1,000	811	
3407	Plant Replacement Program - Disposal Only					20,540	12,000		(8,540)
3447	Plant Replacement Program - Disposal Only					4,062	5,000	938	
5646	Plant Replacement Program - KAP Ride on Mower with Catcher - replace P444					18,001	6,000		(12,001)
3481	P289 Tip Truck from 17/18	30,784	22,176		(8,608)	30,233	25,000		(5,233)
		<b>30,784</b>	<b>22,176</b>	<b>0</b>	<b>(8,608)</b>	<b>612,539</b>	<b>423,500</b>	<b>11,132</b>	<b>(200,172)</b>
	<b>Net Profit/(Loss)</b>				<b>(8,608)</b>				<b>(189,040)</b>

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

Note 8: Rating Information	YTD Actual							Budget					
	Rate in	Number of Properties	Rateable Value	Rate Revenue	Interim Rates	Back Rates	Total Revenue	Number of Properties	Rateable Value	Rate Revenue	Interim Rate	Back Rate	Total Revenue
<b>RATE TYPE</b>	\$		\$	\$	\$	\$	\$		\$	\$	\$	\$	\$
<b>Differential General Rate</b>													
<b>Gross Rental Value (GRV)</b>													
Improved Residential	0.07999	13,585	236,241,336	18,859,093	37,005	6,919	18,903,017	13,549	235,768,136	18,859,093	529,676	-	19,388,769
Improved Special Residential	0.07120	815	19,427,651	1,372,308	10,941	-	1,383,249	807	19,273,991	1,372,308	-	-	1,372,308
Light Industrial and Commercial	0.09043	136	23,421,923	2,118,044	-	-	2,118,044	136	23,421,923	2,118,044	-	-	2,118,044
General Industry and Service Commercial	0.08647	320	35,560,611	3,074,926	-	-	3,074,926	320	35,560,611	3,074,926	-	-	3,074,926
Large Scale General Industry and Service Commercial	0.08909	46	46,905,960	4,178,852	-	-	4,178,852	46	46,905,960	4,178,852	-	-	4,178,852
Vacant Residential	0.16828	401	8,038,760	1,375,819	(23,055)	(5,371)	1,347,393	415	8,175,770	1,375,819	-	-	1,375,819
Vacant Non Residential	0.10304	33	2,287,380	235,692	-	-	235,692	33	2,287,380	235,692	-	-	235,692
<b>Unimproved Value (UV)</b>													
General Industrial	0.01759	3	121,200,000	2,131,908	-	-	2,131,908	3	121,200,000	2,131,908	-	-	2,131,908
Mining	0.00847	25	39,960,000	338,461	-	-	338,461	25	39,960,000	338,461	-	-	338,461
Urban/Urban Deferred	0.00505	143	245,861,000	1,241,497	101	-	1,241,598	143	245,841,000	1,241,497	-	-	1,241,497
<b>Sub-Totals</b>		<b>15,507</b>	<b>778,904,621</b>	<b>34,926,600</b>	<b>24,992</b>	<b>1,548</b>	<b>34,953,140</b>	<b>15,477</b>	<b>778,394,771</b>	<b>34,926,600</b>	<b>529,676</b>	<b>-</b>	<b>35,456,276</b>
<b>Minimum Payment</b>	<b>Minimum</b>												
<b>Gross Rental Value (GRV)</b>	<b>\$</b>												
Improved Residential	\$1,036	1,430	1,658,878	1,481,480	-	-	1,481,480	1,430	16,916,772	1,481,480	-	-	1,481,480
Improved Special Residential	\$1,036	4	6,228	3,108	1,036	-	4,144	3	40,820	3,108	-	-	3,108
Light Industrial and Commercial	\$1,348	25	31,800	33,700	-	-	33,700	25	274,661	33,700	-	-	33,700
General Industry and Service Commercial	\$1,348	34	47,994	45,832	-	-	45,832	34	299,022	45,832	-	-	45,832
Large Scale General Industry and Service Commercial	\$1,348	0	-	-	-	-	-	0	-	-	-	-	-
Vacant Residential	\$1,036	959	923,572	992,488	1,036	4,405	997,929	958	4,987,503	992,488	-	-	992,488
Vacant Non Residential	\$1,036	2	-	2,072	-	-	2,072	2	4,320	2,072	-	-	2,072
<b>Unimproved Value (UV)</b>													
General Industrial	\$1,348	0	923,572	-	-	-	-	0	-	-	-	-	-
Mining	\$1,348	15	47,994	20,220	-	-	20,220	15	186,557	20,220	-	-	20,220
Rural	\$1,036	64	1,658,878	66,304	-	-	66,304	64	9,608,600	66,304	-	-	66,304
<b>Sub-Totals</b>		<b>2,533</b>	<b>5,298,916</b>	<b>2,645,204</b>	<b>2,072</b>	<b>4,405</b>	<b>2,651,681</b>	<b>2,531</b>	<b>32,318,255</b>	<b>2,645,204</b>	<b>-</b>	<b>-</b>	<b>2,645,204</b>
		<b>18,040</b>	<b>784,203,537</b>	<b>37,571,804</b>	<b>27,064</b>	<b>5,954</b>	<b>37,604,821</b>	<b>18,008</b>	<b>810,713,026</b>	<b>37,571,804</b>	<b>529,676</b>	<b>-</b>	<b>38,101,480</b>
Concession							-						-
<b>Amount from General Rates</b>							<b>37,604,821</b>						<b>38,101,480</b>
Ex-Gratia Rates							-						-
Specified Area Rates							-						-
<b>Totals</b>							<b>37,604,821</b>						<b>38,101,480</b>

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 9: Information on Borrowings**

(a) Debenture Repayments

Particulars	01 Jul 2018	New Loans		Principal Repayments		Principal Outstanding		Interest Repayments	
		Actual	Current Budget	Actual	Current Budget	Actual	Current Budget	Actual	Current Budget
		\$		\$	\$	\$	\$	\$	\$
<b>Governance</b>									
Loan 99 - Administration Office Renovations	761,573	0	0	0	89,773	761,573	671,800	0	51,364
Loan 107 - Administration / Chambers Building Refurbishment	0	0	2,268,000	0	0	0	0	0	0
<b>Education &amp; Welfare</b>									
Loan 96 - Youth Specific Space	147,840	0	0	0	25,366	147,840	122,474	0	11,654
Loan 100 - Youth Specific Space	1,521,312	0	0	0	122,515	1,521,312	1,398,797	0	79,645
<b>Recreation and Culture</b>									
Loan 94 - Wellard Sports Pavilion	204,824	0	0	0	46,488	204,824	158,336	0	13,704
Loan 95 - Orelia Oval Pavilion	354,815	0	0	0	60,878	354,815	293,937	0	27,970
Loan 97 - Orelia Oval Pavilion Extension	1,685,138	0	0	0	198,641	1,685,138	1,486,497	0	113,653
Loan 102 - Library & Resource Centre	7,421,567	0	0	0	0	7,421,567	7,421,567	0	386,720
Loan 104 - Recquatic Refurbishment	3,350,000	0	0	0	0	3,350,000	3,350,000	0	159,125
Loan 105 - Bertram Community Centre	1,296,840	0	0	0	0	1,296,840	1,296,840	0	50,827
Loan 106 - Destination Park - Calista	1,516,532	0	0	0	96,111	1,516,532	1,420,421	0	57,307
<b>Transport</b>									
Loan 98 - Streetscape Beautification	1,028,122	0	0	0	121,193	1,028,122	906,929	0	69,341
Loan 101 - City Centre Redevelopment	2,500,000	0	0	0	0	2,500,000	2,500,000	0	79,250
<b>Self Supporting Loans</b>									
<b>Recreation and Culture</b>									
Loan 103B - Golf Club Refurbishment	282,849	0	0	0	16,168	282,849	266,681	0	11,202
	<b>22,071,412</b>	<b>0</b>	<b>2,268,000</b>	<b>0</b>	<b>777,133</b>	<b>22,071,412</b>	<b>21,294,279</b>	<b>0</b>	<b>1,111,762</b>

(b) New Debentures

No new debentures were raised during the reporting period.



**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**
























**Note 10: Trust Fund**

Funds held at balance date over which the City has no control and which are not included in this statement are as follows:

Description	Opening Balance 01 Jul 2017	Amount Received	Amount Paid	Closing Balance 31 Aug 2018
	\$	\$	\$	\$
Hall Security Bonds	70,953	31,501	(27,000)	75,454
Footpath & Kerbing Security Deposits	410,680		(50,270)	360,410
Sports Forfeiture Security Deposits	200			200
Bus Hire Security Deposits	3,000	500	(500)	3,000
Demolition Security Deposits	2,351			2,351
Miscellaneous Deposits	82,423	395	(270)	82,548
Footpath Construction Bonds	2,000			2,000
Land Subdivision Bonds	588,211			588,211
Road Maintenance Bonds	293,234	33,324	(6,624)	319,934
Landscaping Subdivision Bonds	138,787			138,787
Planning Advertising Bonds	0			0
Mortimer Road - Community Trust	10,421			10,421
ATU Landscaping Bonds	2,378			2,378
Landscaping Development Bonds	64,477			64,477
Subdivision Handrails	15,395			15,395
APU Security Bonds	15,481			15,481
Off Road Vehicles	1,510			1,510
Councillor Nomination Deposits	0			0
DCA Contingency Bonds	265,736			265,736
Contiguous Local Authorities Group (CLAG)	200			200
Retention Funds	37,524	25,818	(8,793)	54,549
Public Open Space Cash In Lieu	200,061			200,061
	<b>2,205,022</b>	<b>91,538</b>	<b>(93,456)</b>	<b>2,203,103</b>




































**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 11: Capital Acquisitions**

Assets	Total YTD Actual	Budget		YTD Budget	YTD Variance	Comment
		Adopted Annual Budget	Current Annual Budget			
	\$	\$		\$	\$	
 Level of completion indicator, please see table at the end of this note for further detail.						
<b>Buildings</b>						
 Arts & Cultural Centre Upgrade - Stage 1 of 2	745	100,000	100,000	9,091	8,346	
 Automated Gates - Recquatic Front Counter	0	90,000	90,000	8,182	8,182	
 Banksia Park Retirement Village Building Renewals	0	90,000	90,000	8,182	8,182	
 Building Contingency	0	100,000	70,273	9,091	9,091	
 Building Renewals - Darius Wells	0	25,000	25,000	2,273	2,273	
 Building Renewals - Kwinana Senior Citizens Centre	0	100,000	100,000	9,091	9,091	
 Building Renewals - Margaret Feilman	0	15,000	15,000	1,364	1,364	
 Building Renewals - Thomas Oval Netball Clubrooms	0	6,500	6,500	591	591	
 Building Renewals - Wheatfield Cottage	0	20,000	20,000	1,818	1,818	
 Building Upgrades - CCTV Administration Building	0	100,000	100,000	9,091	9,091	
 Building Upgrades - Medina	0	100,000	100,000	9,091	9,091	
 Callistemon Court Retirement Village Building Renewals	0	192,750	192,750	17,523	17,523	
 DCA 12 - Local Sporting Ground with Community Centre / Pavilion - Wellard West	0	294,300	294,300	26,755	26,755	
 DCA 14 - Local Sporting Ground with Pavilion Extension (Wellard/Leda)	0	261,484	261,484	23,771	23,771	
 DCA 9 - Local Sports Ground Clubroom (Clubroom construction cost)	0	107,500	107,500	9,773	9,773	
 Solar Panels Upgrade	0	30,000	30,000	2,727	2,727	
 Administration Building & Civic Centre - Stage 1 of 2	0	2,268,000	2,268,000	206,182	206,182	
 Callistemon Court Retirement Village Building Upgrade	0	40,000	40,000	3,636	3,636	
 Entry Statement	723	18,000	18,000	1,636	913	
 DCA 13 - Local Sporting Ground with Community Sports Facility	126,339	328,516	478,516	161,527	35,188	
 Family Daycare Building Replacement of Playroom, Kitchenette and Toy Library	0	650,000	650,000	59,091	59,091	
 <b>Buildings Total</b>	<b>127,807</b>	<b>4,937,050</b>	<b>5,057,323</b>	<b>580,485</b>	<b>452,678</b>	
























CITY OF KWINANA  
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY  
For the Period Ended 31 August 2018

Note 11: Capital Acquisitions

Assets	Total YTD Actual	Budget				Comment
		Adopted Annual Budget	Current Annual Budget	YTD Budget	YTD Variance	
<b>Plant, Furniture and Equipment</b>						
<b>Furniture and Equipment</b>						
 Design and Replacement of Mayoral Chains	0	10,000	10,000	909	909	
<b>Computing Equipment</b>						
 City Website Redevelopment	0	70,000	70,000	6,364	6,364	
 Corporate Business System Renewal - Implementation	0	1,191,000	1,191,000	108,273	108,273	
 Self Check Touchscreen Computer & Workstation - Library	0	7,000	7,000	636	636	
<b>Plant and Equipment</b>						
 CFWD Disability Hoist - Recquatic *Replaces W12459*	0	12,000	12,000	1,091	1,091	
 CWD Fixed Variable Notice Board *Replaces W12494*	0	70,000	70,000	6,364	6,364	
 Plant Replacement Program - 7 X 4 Box Trailer with Water Tank and 5.5 Hp Pump - P148	0	7,000	7,000	636	636	
 Plant Replacement Program - Agrizzi Rota Slasher 72 inch - P413	0	9,000	9,000	818	818	
 Plant Replacement Program - Cat Skid Steer Loader - P347	0	90,000	90,000	8,182	8,182	
 Plant Replacement Program - Hino 300 Series 816 Crew Cab Truck - Parks - P324	0	80,000	80,000	7,273	7,273	
 Plant Replacement Program - Massey Ferguson Tractor - Parks - P354	0	85,000	85,000	7,727	7,727	
 Plant Replacement Program - Mitsubishi Canter Tip Truck - Infra - P333	0	120,000	120,000	10,909	10,909	
 Plant Replacement Program - Salloy Boxtop Trailer with Water Tank and Pump - P199	0	7,000	7,000	636	636	
 Plant Replacement Program - Toro Ground Master Ride on Mower - Capital Maintenance - P499	0	7,000	7,000	636	636	
 Plant Replacement Program - Toro Rear Discharge Ride on Mower - P500	0	7,000	7,000	636	636	
 Plant Replacement Program - KAP Ride on Mower with Catcher - replace P444	0	38,200	38,200	3,473	3,473	
<b>Motor Vehicles</b>						
 Plant Replacement - P402 - KWN1961	0	37,500	37,500	0	0	
 Plant Replacement - P403 - KWN1960	0	37,500	37,500	0	0	
 Plant Replacement - P406 - KWN1898	28,884	28,500	28,500	0	(28,884)	
 Plant Replacement - P407 - KWN1949	28,884	28,500	28,500	0	(28,884)	
 Plant Replacement - P435 - KWN1957	0	33,500	33,500	33,500	33,500	
 Plant Replacement - P437 - KWN1993	24,518	25,000	25,000	25,000	482	
 Plant Replacement - P445 - KWN1983	0	28,500	28,500	0	0	
 Plant Replacement - P455 - KWN1987	0	25,000	25,000	0	0	
 Plant Replacement - P457 - 1EXX509	0	41,500	41,500	0	0	
 Plant Replacement - P459 - 1EWW253	0	41,500	41,500	0	0	
 Plant Replacement - P460 - 1EWW269	0	41,500	41,500	0	0	
 Plant Replacement - P461 - 1EXX886	0	41,500	41,500	0	0	
 Plant Replacement - P462 - 1EWO612	0	25,000	25,000	0	0	
 Plant Replacement - P463 - 1GBJ678	0	41,500	41,500	0	0	
 Plant Replacement - P464 - 1EXM745	0	41,500	41,500	0	0	
 Plant Replacement - P465 - 1EWS395	40,319	53,500	53,500	412	(39,907)	
 Plant Replacement - P467 - KWN1984	33,424	35,000	35,000	0	(33,424)	
 Plant Replacement - P490 - 1GCH844	0	41,500	41,500	0	0	
 <b>Plant , Furniture and Equipment Total</b>	<b>156,029</b>	<b>2,458,200</b>	<b>2,458,200</b>	<b>223,476</b>	<b>67,447</b>	

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

























**Note 11: Capital Acquisitions**

Assets	Total YTD Actual	Budget				Comment
		Adopted Annual Budget	Current Annual Budget	YTD Budget	YTD Variance	
<b>Park and Reserves</b>						
 Bore - Current Condition 5 Cubicle & Pump Replacement Program	0	75,000	75,000	6,818	6,818	
 Bore - Renewal / Replacement	0	105,000	105,000	9,545	9,545	
 CFWD Family Daycare Play Equipment and Landscaping *Replaces W12573*	0	101,569	101,569	9,234	9,234	
 Fencing Replacement Program	0	57,000	57,000	5,182	5,182	
 KIA Street Tree Planting Program (B)	0	75,000	75,000	6,818	6,818	
 Kwinana Loop Trail	0	80,000	80,000	7,273	7,273	
 CFWD Medina Oval Lighting *Replaces W12591*	0	300,000	300,000	27,273	27,273	
 Parks and Reserves Renewals - Kwinana Adventure Park	0	40,000	40,000	3,636	3,636	
 Pimlico Crescent Maintenance (F)	0	110,000	110,000	10,000	10,000	
 Public Open Space Playgrounds Renewals - Exercise Equipment/Sport	0	5,000	5,000	455	455	
 Public Open Space Playgrounds Renewals - Goal Post Renewal	0	5,000	5,000	455	455	
 Public Open Space Playgrounds Renewals - Oval/Courts/Lights	0	8,000	8,000	727	727	
 Public Open Space Playgrounds Renewals - Park Furniture / Lights	0	6,000	6,000	545	545	
 Public Open Space Playgrounds Renewals - Prince RegenT Park Combination Unit and Rubber Softfall - Calista Oval Playgroun	0	100,000	100,000	9,091	9,091	
 Public Open Space Playgrounds Renewals - Casuarina Fire Station Reserve - Park Bench - Casuarina Reserve Park Seats (2) - Pe	0	8,000	8,000	727	727	
 Public Open Space Playgrounds Upgrade - Orelia Oval Additional Steps to meet grass	450	20,000	20,000	1,818	1,368	
 Public Open Space (POS) Upgrades - Parks for People Minor Projects	0	25,000	25,000	2,273	2,273	
 Public Open Space (POS) Upgrades - Parks for People Strategy	0	100,000	100,000	9,091	9,091	
 Sporting Infrastructure - Wandj Playing Fields (Honeywood)	0	89,100	89,100	8,100	8,100	
 Street Tree Planting Program (A) - Bertram Stage 2	0	65,000	65,000	5,909	5,909	
 Thomas Oval Lighting	0	495,000	495,000	45,000	45,000	
 Kwinana Tennis Courts - Fencing	24,923	0	22,727	22,727	0	Budget Variation approved by Council 22 August 2018.
 <b>Parks and Reserves Total</b>	<b>25,373</b>	<b>1,869,669</b>	<b>1,892,396</b>	<b>192,697</b>	<b>169,520</b>	












**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 11: Capital Acquisitions**

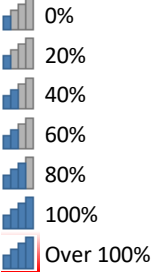
Assets	Total YTD Actual	Budget		YTD Budget	YTD Variance	Comment
		Adopted Annual Budget	Current Annual Budget			
<b>Roads</b>						
<b>Urban Road Grant Construction</b>						
 Road Reseal A - Gilmore Avenue - South bound lanes	0	380,490	380,490	34,590	34,590	
 Road Reseal C - Sulphur Road - Tanson road to Parmelia Ave	0	361,900	361,900	32,900	32,900	
 Road Reseal B - Orelia Avenue (Thomas Road to Chistmas Ave - Incl roundabout)	0	492,800	492,800	44,800	44,800	
<b>Black Spot Grant Construction</b>						
 Kwinana Beach Road (J)	2,691	48,253	48,253	4,387	1,696	
<b>Roads to Recovery Grant Construction</b>						
 Road Reseal D - Orelia Avenue - Nye Way to Chistmas Ave	0	181,500	181,500	16,500	16,500	
 Road Reseal E - Cowcher Way West & Ridley Way West From Derbal Street to Medina Avenue	0	253,000	253,000	23,000	23,000	
<b>DCA Funded Construction</b>						
 DCA 1 - Millar Road	0	436,703	436,703	39,700	39,700	
 DCA 1 - Wellard Road Upgrade – Bertram Road to Millar Road (Item J)	0	100,000	100,000	9,091	9,091	
 DCA 5 - Lyon Road - Cassowary to Kenby (Satterleys)	0	437,250	437,250	39,750	39,750	
<b>Municipal Road Construction</b>						
 Gilmore Avenue Pedestrian Crossing	0	60,000	60,000	5,455	5,455	
 Local Area Traffic Management B - Harlow Road Bollard Installation	0	17,188	17,188	1,563	1,563	
 Road Reseal F - Duckpond Road & Banksia Road intersection	0	82,500	82,500	7,500	7,500	
 Road Reseal G - Clementi Road	0	104,500	104,500	9,500	9,500	
 Road Reseal L - Henry Street A	0	44,000	44,000	4,000	4,000	
 <b>Roads Total</b>	<b>2,691</b>	<b>3,000,084</b>	<b>3,000,084</b>	<b>272,735</b>	<b>270,044</b>	
			0			
<b>Street Lighting</b>						
 Latitude 32 Lighting Changeover *Replaces 12757*	0	262,272	262,272	23,843	23,843	
 Street Lighting - Various Locations *Replaces W12554*	0	22,000	22,000	2,000	2,000	
 Street Lighting - Johnson Road/McWhirter Promenade	1,733	110,000	110,000	10,000	8,267	
 <b>Street Lighting Total</b>	<b>1,733</b>	<b>394,272</b>	<b>394,272</b>	<b>35,843</b>	<b>34,110</b>	
<b>Bus Shelter Construction</b>						
 Bus Shelters (Replaces W12553)	0	20,000	20,000	1,817	1,817	
 <b>Bus Shelter Construction Total</b>	<b>0</b>	<b>20,000</b>	<b>20,000</b>	<b>1,817</b>	<b>1,817</b>	
<b>Footpath Construction</b>						
 Footpath A - Rowley Road - Lyon Road to Freeway	0	55,000	55,000	5,000	5,000	
 Footpath Construction - between Adventure Park and Gilmore Avenue (W12557)	710	138,560	138,560	12,596	11,886	
 <b>Footpath Construction Total</b>	<b>710</b>	<b>193,560</b>	<b>193,560</b>	<b>17,596</b>	<b>16,886</b>	

CITY OF KWINANA  
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY  
For the Period Ended 31 August 2018

Note 11: Capital Acquisitions

Assets	Total YTD Actual	Budget				Comment
		Adopted Annual Budget	Current Annual Budget	YTD Budget	YTD Variance	
Drainage Construction						
 DCA 2 - Peel Sub N Drain - Lot 64 Woolcoot Rd & Lot 379 Millar, 27 & 201 Mortimer Rd's	0	1,916,198	1,916,198	174,200	174,200	
 DCA 2 - Peel Sub N2 Drain - Lot 64 Woolcoot Rd	0	257,025	257,025	23,366	23,366	
 Drainage A - Burlington Street Drainage Sump	1,953	93,500	93,500	8,500	6,547	
 Drainage B - Gilmore Avenue	0	33,000	33,000	3,000	3,000	
 Drainage C - Sulphur Road - Tanson To Parmelia	0	39,600	39,600	3,600	3,600	
 Drainage Construction Total	1,953	2,339,323	2,339,323	212,666	210,713	
Car Park Construction						
 Medina Oval - Bituminise entrance & Carpark	39	0	7,000	7,000	6,961	Budget Variation approved by Council 22 August 2018.
 Car Park Construction Total	39	0	7,000	7,000	6,961	
 Capital Expenditure Total	316,335	15,212,158	15,362,158	1,544,314	1,230,175	

Level of Completion Indicators (Percentage YTD Actual to Annual Budget)



CITY OF KWINANA  
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY  
For the Period Ended 31 August 2018

**Note 12: Schedule of Grants, Subsidies & Contributions**

Description	Current Annual Budget	YTD Actual as at 31/08/18	Comments
<b>Operating Grants, Subsidies &amp; Contributions</b>			
<b>Community Amenities</b>			
PTA Bus Shelter Subsidy	13,000	-	
SMCC - KIC Coastcare in the KIA	10,000	10,000	
SMCC - BP Coastcare	10,000	-	
SMCC - Perth Region NRM for SMCC	5,000	-	
SMCC - Tronox Adopt a Beach	5,000	5,000	
SMCC - Degremont Adopt a Beach	5,000	-	
Alcoa - Challenger Beach Rehabilitation	16,000	-	
NATE - Seedling Subsidy Scheme	2,000	499	
<b>Education and Welfare</b>			
Banksia Park Operating Cost Contribution	331,344	54,870	
Family Daycare - Mainstream Childcare Benefit Subsidy	3,000,000	727,883	
Family Daycare - Subsidy Other	45,000	10,433	
Family Daycare - Inclusion Subsidy Scheme	5,000	1,061	
CCB Subsidy	1,500,000	161,353	
Subsidy Other	10,000	2,526	
NGALA My Time Program	10,500	2,640	
Operational Subsidy - Aboriginal Resource Worker	30,500	-	
Youth Social Justice Program	172,561	43,140	
Youth Incentive Sponsorship	35,000	-	
Youth Pathways Strategy Grant	2,500	-	
Skate Park Activation Grant	5,000	-	
Good Spirit Learning Program Grant	20,000	-	
Youth Wellbeing Benchmark Survey Grant	5,000	-	
Art Therapy Youth Grant	50,000	-	
<b>General Purpose Funding</b>			
Local Government General Purpose Grant	737,676	119,330	
Local Government General Purpose Grant - Roads	669,912	94,610	
Non Rateable Property - Dampier to Bunbury Natural Gas Pipeline Corridor	170,000	-	
<b>Health</b>			
Mosquito Management Contributions (CLAG)	10,000	5,580	
Department of Health - Larvicide	1,000	-	
<b>Law Order &amp; Public Safety</b>			
Department Fire and Emergency Services - ESL	161,000	-	
Department Fire and Emergency Services - LEMC Aware Grant	4,000	-	
<b>Recreation &amp; Culture</b>			
Arts - Harmony & Reconciliation	5,000	-	
Sponsorship - Big Concert	60,000	62,500	
Childrens Festival	35,000	-	
Youth Festival	10,000	-	
Music in the Schools/Community	5,000	-	
Recreation - KidSport (DLGSC)	150,000	3,350	
Library Contributions & Donations	5,000	3,272	
Shared Use Agreements	108,702	-	
Recquatic Holiday Program DEDU payments	78,421	13,553	
Volunteer Centre - Thank a Volunteer Event	1,500	-	
<b>Transport</b>			
Main Roads Annual Direct Grant	104,611	-	
Main Roads Street Light Subsidy	5,000	-	
Main Roads Maintenance Contribution	70,000	-	
<b>Total Operating Grants, Subsidies &amp; Contributions</b>	<b>7,680,227</b>	<b>1,321,600</b>	

**CITY OF KWINANA**  
**NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY**  
**For the Period Ended 31 August 2018**

**Note 12: Schedule of Grants, Subsidies & Contributions**

Description	Current Annual Budget	YTD Actual as at 31/08/18	Comments
<b>Non-Operating Grants, Subsidies &amp; Contributions</b>			
<b>Community Amenities</b>			
DCA 1 - Hard Infrastructure - Bertram	127,900	-	
DCA 2 - Hard Infrastructure - Wellard	377,733	-	
DCA 4 - Hard Infrastructure - Anketell	-	633,006	
DCA 5 - Hard Infrastructure - Wandi	624,121	-	
DCA 7 - Hard Infrastructure - Mandogalup (west)	13,729	-	
DCA 9 - Soft Infrastructure - Wandi / Anketell	269,358	411,499	
DCA 10 - Soft Infrastructure - Casuarina/Anketell	239,940	-	
DCA 11 - Soft Infrastructure - Wellard East	912,873	-	
DCA 12 - Soft Infrastructure - Wellard West	160,201	-	
DCA 14 - Soft Infrastructure - Wellard / Leda	116,219	42,759	
DCA 15 - Soft Infrastructure - Townsite	19,542	2,291	
<b>Recreation &amp; Culture</b>			
Department of Infrastructure - Thomas Oval Lighting	150,000	-	
Department of Education - Wandi Playing Fields	25,500	-	
Lotterywest - Kwinana Loop Trail	37,670	-	
<b>Transport</b>			
City of Cockburn - Contribution to Footpath	25,000	-	
Federal Road Grant - Roads to Recovery	388,966	-	
State Road Grant - Main Roads WA Regional Road Grant	748,600	-	
State Road Grant - State Black Spot	48,253	19,301	Kwinana Beach Road
<b>Total Non-Operating Grants, Subsidies &amp; Contributions</b>	<b>4,285,605</b>	<b>1,108,856</b>	



## 16.2 Review of Beekeeping Fees and Charges

### DECLARATION OF INTEREST:

Councillor Wendy Cooper declared an impartiality interest due to her son in law having a bee hive.

Mayor Carol Adams declared an indirect financial interest due to her husband recently purchasing a single beehive and being an attendee of the Kwinana Bee Group. The outcome of the agenda item will either impose a fee to be paid or not given he only has a single hive.

Mayor Carol Adams exited the Council Chambers at 7:22pm and Deputy Mayor Peter Feasey took the position as the Chair.

### SUMMARY:

The City's *Bee Keeping Local Law 2002* requires any person who keeps bees on land to hold a permit. All persons keeping bees or any hives in Western Australia (WA) are also required to be registered as beekeepers under the *Biosecurity and Agriculture Management Identification and Movement of Stock and Apiaries Regulations 2013*.

There is growing interest in beekeeping from the community. Both the Department of Primary Industries and Regional Development (DPIRD) and the WA Apiarists' Society (WAAS) have reported a significant increase in membership with a majority being amateur beekeepers. Whilst there has been a growing community interest in beekeeping locally, this has not necessarily translated into increased local registrations. It has been suggested that beekeepers have avoided applying to the City due to higher fees charged for beekeeping approvals.

A review of beekeeping fees and charges across 15 other local governments revealed that the City's fees and charges for the beekeeping permit was the highest in comparison. Accordingly, an amendment to the City's 2018/19 Schedule of Fees and Charges has been proposed after reconsidering the service requirements in regulating beekeeping within the City of Kwinana.

### OFFICER RECOMMENDATION:

That Council authorise the amendment of Beekeeping fees and charges in the City of Kwinana 2018/2019 Schedule of Fees and Charges, as per Attachment A and following provision of 21 days public notice.

NOTE – AN ABSOLUTE MAJORITY OF COUNCIL IS REQUIRED

### DISCUSSION:

#### Beekeeping: a growing interest

Urban beekeeping, which involves the keeping of one or more bee hives in the urban city areas as a hobby, rather than a commercial pursuit, has been a growing trend over the past few years. 95% of the registered beekeepers, also known as apiarists, are amateurs often with just one or two hives in their backyard. This is sufficient to obtain some honey

## 16.2 REVIEW OF BEEKEEPING FEES AND CHARGES

for the householder, and to also assess the effect of variations in management practices between the two hives on the bee colonies.

There are a number of reasons for the increased interest in beekeeping:- the increased amount of publicity in the media, the increased recognition of the vital role in pollination of fruit and vegetable crops in home gardens, and the growing demand for healthy and organic foods. The social benefits include enjoyment of beekeeping as a hobby by individuals and interest groups such as WA Apiarists' Society (WAAS) who meet to learn, share and promote the craft of beekeeping.

### **Public health concerns and nuisance**

Honey bees are housed in bee hives and each hive may contain a colony of up to 50,000 bees that usually includes a queen bee, male drone bees and female worker bees. Honey bees historically play a critical role in the commercial industry due to pollination of many species of horticultural and agronomic crops. Feral bees are honey bees that colonise trees and other structures.

Nuisance bee activity can involve managed bees or feral bees. Most nuisance from bee activity is caused by the propensity of bees to sting when they perceive a threat to their hive. However, bees away from the hives are also perceived by the public as a threat. Bee stings have the potential to cause severe allergic reactions that could lead to anaphylactic shock.

The City's *Bee Keeping Local Law 2002* enables the authorised officers to deal with nuisances and to make assessments on the requirements of beekeeping.

### **Costs associated with beekeepers registrations**

All persons keeping bees or any hives in WA are required to be registered as beekeepers under the *Biosecurity and Agriculture Management Identification and Movement of Stock and Apiaries Regulations 2013*. This legislation is administered by Department of Primary Industries and Regional Development (DPIRD). Currently, the registration of a hive costs \$75 for three years and additional annual fee of \$15 plus \$1.10 per hive for the Agricultural Produce Commission to allow authorities to monitor hives to control disease.

The City of Kwinana currently requires all beekeepers to be registered under the City's *Bee Keeping Local Law 2002*. The total current costs associated with registering as a beekeeper in Kwinana is \$288, with a cost breakdown as follows:

- \$72 application fee for permit.
- \$144 site inspection fee.
- \$72 permit fee.

A benchmarking review has found that the City's total fees and charges for beekeeping at \$288 are the highest when compared to 15 other local governments. Seven of these local governments impose an application fee, which ranges from \$67.50 to \$230, but do not charge other fees.

As part of the application process, a number of local governments conduct an initial inspection to ensure compliance with the local laws prior to registration. Other local governments inspect only when a complaint is received.

## 16.2 REVIEW OF BEEKEEPING FEES AND CHARGES

Before establishing bee hives on any land within the City of Kwinana, beekeepers are required to provide the following information to support the application:

- A plan showing the location of each hive with adequate setbacks to any thoroughfare, public place or adjoining land, sources of water supply and barrier screens that affect flight paths.
- Written consent of the owner of the land.
- Number of hives and the size of the land.
- A copy of registration certificate issued by DPIRD.
- Comments from all adjoining neighbours to assist City's considerations on potential nuisances and health risks.

Currently, a site inspection is undertaken before a beekeeper's permit is issued.

It is of concern that the DPIRD have reported that there are 28 beekeepers currently registered and situated in the Kwinana area. DPIRD have not revealed the identities of these beekeepers. However, only two beekeepers are registered with the City of Kwinana.

### **Proposed changes to the beekeeping fees and charges**

By charging for beekeeping, the City ensures that the cost of managing the nuisance and public health hazards associated with beekeeping are partially recovered. Section 6.16 of the *Local Government Act 1995* allows a local government to impose and recover a fee or charge for this service.

However, from the benchmarking review conducted and to ensure that beekeepers register with the City of Kwinana, it is proposed that the fees and charges are amended in the following manner as per Attachment A:

- Beekeepers registering one or two hives will not be charged any fees.
- The introduction of a combined application and permit fee of \$34.50 for beekeepers intending to register more than two hives. This fee is reduced to reflect the actual administration costs for processing both the application and permit.
- The site inspection fee of \$144 will remain the same, but will now only be conducted and charged for beekeepers registering more than two hives. An inspection is necessary to ensure compliance of the beekeeping requirements due to potential increase to health and nuisance risks.
- The \$72 fee for the application is removed.
- The \$72 permit fee is removed.
- The fee for removal of bees remains unchanged.

The amendments to the City's 2018/19 Schedule of Fees and Charges have been proposed after taking into consideration the service requirements.

## 16.2 REVIEW OF BEEKEEPING FEES AND CHARGES

### LEGAL/POLICY IMPLICATIONS:

#### **Local Government Act 1995 states:**

##### **s2.7. Role of council**

- (1) The council —
  - (a) governs the local government's affairs; and
  - (b) is responsible for the performance of the local government's functions.
- (2) Without limiting subsection (1), the council is to —
  - (a) oversee the allocation of the local government's finances and resources; and
  - (b) determine the local government's policies.

##### **s6.16. Imposition of fees and charges**

- (1) A local government may impose\* and recover a fee or charge for any goods or service it provides or proposes to provide, other than a service for which a service charge is imposed.
- (2) A fee or charge may be imposed for the following:
  - (a) providing the use of, or allowing admission to, any property or facility wholly or partly owned, controlled, managed or maintained by the local government;
  - (b) supplying a service or carrying out work at the request of a person;
  - (c) subject to section 5.94, providing information from local government records;
  - (d) receiving an application for approval, granting an approval, making an inspection and issuing a licence, permit, authorisation or certificate;
  - (e) supplying goods;
  - (f) such other service as may be prescribed.
- (3) Fees and charges are to be imposed when adopting the annual budget but may be:
  - (a) imposed\* during a financial year; and
  - (b) amended\* from time to time during a financial year.

\* Absolute majority required.

##### **s6.17. Setting level of fees and charges**

- (1) In determining the amount of a fee or charge for a service or for goods a local government is required to take into consideration the following factors —
  - (a) the cost to the local government of providing the service or goods; and
  - (b) the importance of the service or goods to the community; and
  - (c) the price at which the service or goods could be provided by an alternative provider.

##### **s6.19. Local government to give notice of fees and charges**

If a local government wishes to impose any fees or charges under this Subdivision after the annual budget has been adopted it must, before introducing the fees or charges, give local public notice of —

- (a) its intention to do so; and
- (b) the date from which it is proposed the fees or charges will be imposed.

### FINANCIAL/BUDGET IMPLICATIONS:

It is anticipated that the proposed new fees may result in more beekeepers applying for a permit for beekeeping. This may result in a minor increase to the annual health budget income.



**16.2 REVIEW OF BEEKEEPING FEES AND CHARGES**

The cost of advertising a public notice in the local paper is estimated to be \$500 and this amount is proposed to be funded from the Public Health Advertising budget.

**ASSET MANAGEMENT IMPLICATIONS:**

No asset management implications have been identified as a result of this report or recommendation.

**ENVIRONMENTAL IMPLICATIONS:**

Beekeeping provides positive environmental impacts through the role of bees as pollinators, to allow reproduction of plant species including food crops.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcomes and objectives detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	Regulatory and legal	6.8 Provide services and advice to the community and all stakeholders to comply with statutory obligations to achieve a healthy community and environment

**COMMUNITY ENGAGEMENT:**

There are no community engagement implications as a result of this report.

To encourage any unregistered or new beekeepers to register with the City, the DPIRD and the WAAS will be notified of the changes to the City's beekeeping fees and charges following adoption, with a request to distribute the information to local beekeepers.

**PUBLIC HEALTH IMPLICATIONS**

The proposed amendments to the fees and charges for beekeeping has the potential to improve the following determinants of health and factors by creating a balance between an improved environmental outcome and management of the associated nuisance:

- Built environment – neighbourhood amenity.
- Socio-economic factors – income.

**16.2 REVIEW OF BEEKEEPING FEES AND CHARGES****RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	The City does not amend the changes to the fees and charges
Risk Theme	Failure to fulfil statutory regulations or compliance requirements
Risk Effect/Impact	Compliance
Risk Assessment Context	Strategic
Consequence	Minor
Likelihood	Likely
Rating (before treatment)	Moderate
Risk Treatment in place	Reduce - mitigate risk
Response to risk treatment required/in place	Amend the City's 2018/19 Schedule of Fees and Charges as per the proposed amendments.
Rating (after treatment)	Low

**COUNCIL DECISION****301****MOVED CR W COOPER****SECONDED CR D WOOD**

**That Council authorise the amendment of Beekeeping fees and charges in the City of Kwinana 2018/2019 Schedule of Fees and Charges, as per Attachment A and following provision of 21 days public notice.**

**CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL****7/0**

*Mayor Carol Adams returned to the Council Chambers at 7:24pm and resumed her position as the Chair.*

## **Attachment A**

### **Amendments to the City's 2018/19 Schedule of Fees and Charges**

**Add the following:**

<b>Fee and Charge Description</b>	<b>Proposed Amended Statutory Indicator</b>	<b>Proposed GST Included</b>	<b>Proposed 2018/2019 Amended Fee \$</b>
<b>Bees</b>			
Application for permit to keep bees	No	No	No charge for up to two hives  \$34.50 for more than two hives
Site inspection fee	No	No	\$144 for more than two hives
Removal of bees based on quotation in response to written request or Notice to remove bees issued by Manager Environmental Health Services.	Requires written quotation and letter of agreement from owner or occupier. Any outstanding service Fees and charges remaining after the due date shall have imposed a late fee.	No	\$144 + Cost of Contractor + administration fee of 30% of the cost

**Remove the following:**

<b>Fee and Charge Description</b>	<b>Statutory Fee Indicator</b>	<b>GST Included</b>	<b>2018/2019 Adopted Fee \$</b>
<b>Bees</b>			
Application for permit to keep bees	No	No	\$72
Site inspection fee	No	No	\$144
Permit fee	No	No	\$72
Removal of bees based on quotation in response to written request or Notice to remove bees issued by Manager Environmental Health Services.	Requires written quotation and letter of agreement from owner or occupier. Any outstanding service Fees and charges remaining after the due date shall have imposed a late fee.	No	\$144 + Cost of Contractor + administration fee of 30% of the cost

**16.3 Local Public Notice of Proposed Disposition by way of Lease – Part of 4 Beacham Crescent, Medina, between the City of Kwinana and Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware**

**DECLARATION OF INTEREST:**

Councillor Merv Kearney declared a financial interest as MT and SE Kearney own Kearns Garden, Hardware and Pets, Councillor Kearney exited the Council Chambers at 7:24pm.

Mayor Carol Adams declared an impartiality interest due to the lessee being a fellow Elected Member.

Deputy Mayor Peter Feasey declared an impartiality interest due to the lessee being a fellow Elected Member.

Councillor Wendy Cooper declared an impartiality interest due to the lessee being a fellow Elected Member.

Councillor Sandra Lee declared an impartiality interest due to the lessee being a fellow Elected Member.

Councillor Sheila Mills declared an impartiality interest due to the lessee being a fellow Elected Member.

Councillor Matthew Rowse declared an impartiality interest due to the lessee being a fellow Elected Member.

Councillor Dennis Wood declared an impartiality due to the lessee being a fellow Elected Member.

**SUMMARY:**

This report seeks Council approval to give local public notice of the proposed disposition by way of lease of part of 4 Beacham Crescent, Medina to Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware ABN 72 845 535 167, as the prospective lessee.

**OFFICER RECOMMENDATION:**

That Council:

1. give local public notice of the proposed disposition by way of lease of a part of 4 Beacham Crescent, Medina to Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware ABN 72 845 535 167, in accordance with Sections 3.58(3)(a) and (4) of the *Local Government Act 1995 (WA)*; and
2. advertise the proposed rent to be \$5,500 per annum, as detailed in Attachment A.



**16.3 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE – PART OF 4 BEACHAM CRESCENT, MEDINA, BETWEEN THE CITY OF KWINANA AND MERVYN KEARNEY AND SUSAN KEARNEY TRADING AS KEARNS GARDEN CENTRE AND HARDWARE**

**DISCUSSION:**

The City of Kwinana (the City) is the owner of 4 Beacham Crescent, Medina more particularly described as Lot 115 on Deposited Plan 189850 being the whole of the land in Certificate of Title Volume 1884 Folio 390 (the Premises).

Part of the Premises, being approximately 1,700 square metres of land adjacent to 22 and 26 Seabrook Way, Medina (Leased Premises) were leased to Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware (Kearns Garden Centre) by way of a lease dated 2009, which expired on 31 August 2017. Notably, 22 and 26 Seabrook Way are owned by Mervyn and Susan Kearney.

In September 2017, Mervyn and Susan Kearney were advised that the abovementioned lease had expired and due to them still occupying the Leased Premises, the lease agreement would remain on a month to month basis until they vacated or a new lease was entered into. Mervyn and Susan Kearney confirmed that they intended to continue their tenancy and enter into a new lease with the City subject to Council approval.

Mervyn and Susan Kearney are now seeking to enter into a lease with the City for the Leased Premises.

A lease agreement is considered to be a disposition, and as such, a local government can only dispose of property if it gives local public notice of the proposed disposition, in accordance with Section 3.58(3)(a) of the *Local Government Act 1995*.

This report seeks Council approval to give local public notice of the proposed disposition by way of lease of part of the Leased Premises to Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware, as the prospective lessee. The proposed rent has been determined by an independent valuation (as per confidential Attachment B).

**LEGAL/POLICY IMPLICATIONS:**

***Local Government Act 1995***

**Section 3.58 (3) and (4) Disposing of property**

- (3) *A local government can dispose of property other than under subsection (2) if, before agreeing to dispose of the property —*
- (a) *it gives local public notice of the proposed disposition —*
    - (i) *describing the property concerned; and*
    - (ii) *giving details of the proposed disposition; and*
    - (iii) *inviting submissions to be made to the local government before a date to be specified in the notice, being a date not less than 2 weeks after the notice is first given;**and*
  - (b) *it considers any submissions made to it before the date specified in the notice and, if its decision is made by the council or a committee, the decision and the reasons for it are recorded in the minutes of the meeting at which the decision was made.*

**16.3 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE – PART OF 4 BEACHAM CRESCENT, MEDINA, BETWEEN THE CITY OF KWINANA AND MERVYN KEARNEY AND SUSAN KEARNEY TRADING AS KEARNS GARDEN CENTRE AND HARDWARE**

- (4) *The details of a proposed disposition that are required by subsection (3)(a)(ii) include —*
- (a) *the names of all other parties concerned; and*
  - (b) *the consideration to be received by the local government for the disposition; and*
  - (c) *the market value of the disposition —*
    - (i) *as ascertained by a valuation carried out not more than 6 months before the proposed disposition; or*
    - (ii) *as declared by a resolution of the local government on the basis of a valuation carried out more than 6 months before the proposed disposition that the local government believes to be a true indication of the value at the time of the proposed disposition.*

**FINANCIAL/BUDGET IMPLICATIONS:**

Cost of advertising in local papers is estimated to be \$300 and this amount is proposed to be funded from the Adopted Budget 2018/2019.

**ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications identified as a result of this report.

**ENVIRONMENTAL IMPLICATIONS:**

There are no asset management implications identified as a result of this report.

**STRATEGIC/SOCIAL IMPLICATIONS:**

This proposal will support the achievement of the following outcome and objective as detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	Business performance	5.6 Maximise the value of the City's property assets

**COMMUNITY ENGAGEMENT:**

There are no community engagement implications as a result of this report

**PUBLIC HEALTH IMPLICATIONS**

There are no public health implications as a result of this report

**16.3 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE – PART OF 4 BEACHAM CRESCENT, MEDINA, BETWEEN THE CITY OF KWINANA AND MERVYN KEARNEY AND SUSAN KEARNEY TRADING AS KEARNS GARDEN CENTRE AND HARDWARE**

**RISK IMPLICATIONS:**

The risk implications in relation to this proposal are as follows:

Risk Event	That Council does not support giving local public notice of the proposed disposition of part of 4 Beacham Crescent, Medina to Mervyn Kearney and Susan Kearney with sections 3.58(3)(a) and (4) of the <i>Local Government Act 1995</i> . If Council resolve not to give local public notice, as per Section 3.58 of the <i>Local Government Act 1995</i> , the disposition cannot proceed.
Risk Theme	Ineffective management of facilities/venues/events
Risk Effect/Impact	Financial
Risk Assessment Context	Operational
Consequence	Minor
Likelihood	Unlikely
Rating (before treatment)	Low
Risk Treatment in place	Avoid
Response to risk treatment required/in place	This report is in relation to giving local public notice of the proposed disposition of part of 4 Beacham Crescent, Medina
Rating (after treatment)	Low

**COUNCIL DECISION**

**302**

**MOVED CR P FEASEY**

**SECONDED CR W COOPER**

**That Council:**

- 1. give local public notice of the proposed disposition by way of lease of a part of 4 Beacham Crescent, Medina to Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware ABN 72 845 535 167, in accordance with Sections 3.58(3)(a) and (4) of the *Local Government Act 1995 (WA)*; and**
- 2. advertise the proposed rent to be \$5,500 per annum, as detailed in Attachment A.**

**CARRIED  
7/0**

*Councillor Kearney returned to the Council Chambers at 7:25pm.*



## NOTICE OF DISPOSAL OF PROPERTY BY WAY OF LEASE

### Part of 4 Beacham Crescent, Medina

In accordance with Section 3.58 of the *Local Government Act 1995*, the City of Kwinana hereby advertises its intention to dispose of the following property by way of lease;

Address:	Part of 4 Beacham Crescent, Medina
Parcel Identifier:	Part of Lot 115 on Deposited Plan 189850 being the whole of the land in Certificate of Title Volume 1884 Folio 390
Lessee:	Mervyn Kearney and Susan Kearney trading as Kearns Garden Centre and Hardware ABN 72 845 535 167
Market Rent Valuation:	\$5,500p.a (exclusive of GST)
Proposed Rent:	\$5,500p.a (exclusive of GST)
Valuer:	Pember WILSON & EFTOS (pwe) 220 Carr Place Leederville WA 6007
Date of Valuation:	12 June 2018.

For further information contact City Legal on (08) 9439 0428.

**Submissions** are required to be made in **writing** to PO Box 21, Kwinana, WA 6966, addressed to the **Chief Executive Officer** and to be received no later than 5pm, **XX XXX** 2018.

**JOANNE ABBISS**  
**CHIEF EXECUTIVE OFFICER**



## **17 Urgent Business**

Nil

## **18 Councillor Reports**

### **18.1 Councillor Wendy Cooper**

Councillor Wendy Cooper reported that she had attended the City of Kwinana Mayoral Chains meeting.

Councillor Cooper advised that she had attended the Multicultural Reference Group meeting whom are a delightful bunch of people and they had welcomed a new member from Japan.

Councillor Cooper mentioned that she had attended the Kwinana Marketplace's Eat Brighter Live Lighter Kwinana event.

Councillor Cooper reported that she had attended a tour of the new tavern 'The Well' in Wellard and that it will be a very positive vibe.

Councillor Cooper advised that she had attended the Disability Access and Inclusion Meeting and was pleased to announce that there is now a connecting path between Gilmore Avenue to the Adventure Playground, new steps at the Kwinana Tennis Club and easier access with a new path from the Retirement Village to Calista Oval.

### **18.2 Councillor Sandra Lee**

Councillor Sandra Lee reported that she had attended the Cancer Council Relay for Life and that it was an absolutely tremendous event which went for 24 hours and raised approximately \$60,000.

### **18.3 Councillor Matthew Rowse**

Councillor Matthew Rowse reported that he had attended the Joint Development Assessment Panel training.

Councillor Rowse advised that he had attended the Kwinana Conciliation Advisory Group Meeting where they discussed the RAP Plan.

Councillor Rowse advised that he had attended the Cancer Council Relay for Life and had the pleasure of being the Master of Ceremonies (MC) for two hours.

### **18.4 Councillor Dennis Wood**

Councillor Dennis Wood reported that he had attended the Disability Access and Inclusion Meeting.

## 18 COUNCILLOR REPORTS

Councillor Wood advised that he had attended the Cancer Council Relay for Life.

Councillor Wood mentioned that the Kwinana Model Railway Club had received several new members following the recent advert in the City of Kwinana Spirit.

## 19 Response to Previous Questions

Nil

## 20 Mayoral Announcements (without discussion)

Mayor Carol Adams reported that she had attended the following events:

- Police Remembrance Day
- City of Kwinana Bertram Big Top event
- Kwinana Marketplace Eat Brighter Live Lighter Promotion
- Relay for Life on Calista Oval

The Mayor advised that on Thursday along with the Director of City Regulation, Manager of Environment and a representative of the Casuarina Wellard Progress Association, she will be attending a meeting with the Minister for Mines, Mr Bill Johnson, to brief him on the Banksia Road sand mining proposal, the impact of a clearing license on the community, the lack of actual community or Council consultation by Hansons Pty Ltd since the mining lease was approved and the fact that the approval of the former Mines Minister to approve the sand mining in April 2016 was based on flawed and contradictory information.

The Mayor mentioned that the City is also in the process of trying to secure a meeting with the Federal Environment Minister, Melissa Pryce, and that she hopes that this will occur in November 2018.

The Mayor announced that this weekend she is looking forward to the City of Kwinana Positive Vibes Skate Park Event and hopes the weather holds, as she knows it is going to be a great event for the youth of Kwinana

## 21 Matters Behind Closed Doors

Nil

## 22 Meeting Closure

The Mayor declared the meeting closed at 7:35pm.