

# **Ordinary Council Meeting**

8 March 2017

#### **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

#### **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:**

DEPUTY MAYOR PETER FEASEY
CR R ALEXANDER
CR W COOPER
CR S LEE
CR B THOMPSON
CR D WOOD

MS J ABBISS - Chief Executive Officer
MS C MIHOVILOVICH - Director City Strategy
MS M BELL - Corporate Lawyer

MR P NEILSON - Acting Director City Development

MR E LAWRENCE - Director Corporate and Engineering Services

MRS B POWELL - Director City Living

MS A MCKENZIE - Council Administration Officer

Members of the Press 0
Members of the Public 12

#### 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 Dennis Wood 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):

Mayor Carol Adams from 27 February 2017 to the 11 March 2017 inclusive. Councillor Sheila Mills from 7 March 2017 to the 14 March 2017 inclusive.

#### 4 Public Question Time:

#### 4.1 Cindy Collis, Parmelia

#### Question 1

Is the City aware of the excessively high number of house burglaries and general opportunistic thefts of personal items from residents cars throughout Parmelia? This has been ongoing now for at least six months with the same few individuals, well known to local law enforcements. I am here tonight in support with others, as a witness and a victim.

#### Response

The Deputy Mayor referred the question to the Chief Executive Officer.

The Chief Executive Officer advised that the City has become aware as one of the residents of Perriam Avenue contacted Mayor Adams recently in relation to this matter. The Mayor has responded and said that she was happy to have a meeting with the residents. Unfortunately the Mayor is currently on a Leave of Absence but that offer still very much remains and the City intends to meet with the local Police to find out of their awareness and the strategies they are putting in place to address the issue. The City can act as a facilitator in that regard.

#### 4.2 Penny Bishop, Parmelia

#### Question 1

Will the Council consider with the crime spree that is happening, in the street of Perriam Avenue, Parmelia working with Western Power in having more street lights put in very dark areas of the street of concern?

#### Response

The Deputy Mayor advised that the City will assess the lighting in the street to determine if it meets the standard lumens applicable. If it does not meet the requirements, the City will determine the appropriate action required, develop a plan to be presented to Western Power for approval and implement.

#### Question 2

Is the Council really working in conjunction with the Noongar Elders, working to solve the Aboriginal Youth problems in Parmelia and surrounding areas as the robbery from the 7 March 2017 at 14:10pm of Perriam Close, Parmelia, from CCTV clearly demonstrates three young youths of indigenous descent committing a crime and with the video evidence I am asking the question why are they not in school? Why are they roaming the streets and committing offences? What are the plans to eliminate this problem?

#### Response

The Deputy Mayor advised that the City convenes a group of Local Service Providers whose focus is implementing youth diversionary strategies. One outcome is that the City is working with local Aboriginal Elders at the Darius Wells Library and Resource Centre trialling a program where Aboriginal Elders engage with local Aboriginal youth providing them with a connection to cultural and out reach support. The program has operated for six weeks and finished last week. The evaluation of this program has shown positive results. Discussions are currently under way as to how the program can be formalised into a community partnership and operate at other locations such as the Adventure Park.

If the CCTV footage can be made available and the youth are recognisable the City's Youth Team can work with the appropriate service providers to provide strategies with regard to the youth involved and their families.

#### Question 3

As the Police cannot enter a property without a warrant, why is it that clear CCTV shows a trail bike rider with no helmet and passengers can go up and down a street to a particular property and then when reported can do nothing. Can you explain the point of reporting?

#### Question 4

Why with the crime rate that is happening from the statistics shown is the Kwinana Police Station closed on the weekend? Is this because of the lack of man power? Or is this due to not an operational area?

#### Response

The Deputy Mayor advised that questions 3 and 4 each relate to the WA Police and should be taken up directly with them. The City is happy to convene a meeting with the Officer in Charge at the Kwinana Police Station to discuss the policing issues and the appropriate options. The City's City Assist Officers will attend when requested and will also take the appropriate action. The City encourages residents to report a crime or suspicious behaviour by calling Crime Stoppers or reporting it on their website. If Police attendance is required please call 131 444 or if it is an emergency 000.

The Deputy Mayor stated that Policing is a State issue and there is currently a State Election on and suggested speaking to the local Member of Parliament or candidates.

#### Question 5

Why is the Council not upgrading this area, where they are clearly updating the town centre? Why is the area a face value (town centre) only? Why are residents (people who rent or owners) not being more regulated for presentation and compliance of the Council and its Regulations.

#### Response

The Deputy Mayor took the question on notice.

#### Question 6

Kwinana's Environment Team is working with community groups to establish a formal approach to community gardens, please explain what they are doing? Is this for verges as this is the only land you own, the City?

#### Response

The Deputy Mayor referred the question to the Chief Executive Officer.

The Chief Executive Officer advised that the City works with community groups and there is currently one community garden that is operating, one that is proposed and one that is on land managed by the City. The community gardens are at Sloans Cottage, the Kwinana Community Share Project and the other proposed community garden is in Bertram in a Parks and Recreation Reserve. The City provides access to the land as well as limited assistance with regard to advice, materials, labour and irrigation. The community members that participate in the community gardens have shown great passion for these areas and have created strong bonds within the group and to the location. The City really considers this worthwhile fostering and supporting.

The Chief Executive Officer further advised that in regards to verges the City will provide support to assist residents to plant a low growing local native garden on their verge. This program commences in May 2017 and that includes a free Verge Gardening Workshop, a free bottle of soil wetter and a bag of soil conditioner to all Verge Gardening Workshop participants. The City provides free self loaded mulch from the carpark at Chalk Hill, subsidised local native seedlings and a verge gardening tips document is also available on the City's website. Any residents wanting to be kept up to date about these activities can contact the City's Environment Department and be added to a mailing list.

#### 4.3 Georgina Callaway, Parmelia

#### Question 1

In relation to the recent spate of robberies in the Parmelia area is the Council working in conjunction with local Police to deal with this issue? If so, what actions do they have in place to address the issue? If not, is there anything as a community we can do to help?

I have read about a Council in New South Wales where someone reports a crime and it sends an email to the local government, where security then go around. Maybe then the security that does go around for Kwinana could go around and focus and target the areas where these things are occurring.

#### Response

The Deputy Mayor referred the question to the Chief Executive Officer.

The Chief Executive Officer advised that the City has implemented a City Assist Service which is designed to provide a security presence, noting that they do not have the powers and authorities of the Police, so in terms of the actions that they can undertake there are some limitations.

In the meeting that the City will hold with the Police we will certainly raise the issue and see if there is any opportunity for the very instant feedback you have mentioned. The City receives past statistics on a quarterly basis. When the City has met with Police previously their resourcing and prioritisation of response is based on the number of reported incidents. What you can do to help is to encourage all residents in the area to report any incidents as it gives the Police the argument and data they need to have more resources for you.

#### 4.4 Amelia Barker, Parmelia

#### Question 1

What is my right to protect or defend myself in my house?

#### Response

The Deputy Mayor referred the question to the Chief Executive Officer.

The Chief Executive Officer advised that she can not provide advice as she is unable and unqualified due to it being a legal question and a question in the very first instance to make to the Police. It is a very difficult question of law as to what a person, even in their own home is able to do in their own defence.

The City does have an opportunity for residents to apply for a subsidy towards security measures for their home to make it a bit safer. The Chief Executive Officer referred to the Director City Living regarding the terms of the subsidy.

The Director City Living took the question on notice to determine eligibility based on information that will be provided.

The Director City Living further advised that she may be able to arrange to contact the Community Safety Arm of the Police and they do have an advisory service where they can advise people on a whole range of safety matters and also seek additional resources for the residents regarding making your home safe.

#### 4.5 Mark Ward, Leda

#### Question 1

Generally what people's concerns are when they bring them up from whether it be the Police, Council or State Government I would generally consider it lip service, meetings etc. With offenders in this area, a majority of them are repeat offenders potentially, are they known to the Police? Do they have Parole Officers or are they out on bail? How many people who work for the City, in terms of what we can do at a Council level, work in City Assist and work in diversion programs?, how many hours do we have wrapped up in this problem where we could maybe tackle it in a different way?. Are we working with Parole Officers? Are we working with the guys who let them out on bail? Are we when a Judge gives a light sentence, are we approaching courts? Because realistically they go through the motions and they are out again. What can we do from a Council point of view that will actually target the problem? For instance GPS tracking is available in Western Australia if these people are repeat offenders and continuously go through the merry-gorounds of being on parole. In Leda there is a local community watch on Facebook and it states when a certain individual has been let out and for everyone to 'batten down the hatches' why isn't he on GPS tracking? Why isn't someone in City Assist or diversion programs or someone who is a FTE employee of the City actually getting in and mingling with all of the other departments and actually doing something to get to the root of the problem?. Now the root of the problem is realistically family and there is not a lot we can do there but in terms of tracking, technologies these days is advanced quite far I'm sure there are systems worldwide that are out there that can actually monitor when criminals step outside the bounds of where they are meant to be. Why aren't we doing something rather than the general lip service that comes back to the people that are victims, and actually do something with the authorities with the technologies that are out there?. To give people some comfort, peace of mind and some action rather than just talk.

#### Response

The Deputy Mayor referred the question to the Chief Executive Officer.

The Chief Executive Officer said that she appreciated the whole multitude of issues raised and explained that a large number of the issues raised are with the judicial system, the operation of which is governed by State Legislation, and a large number of points raised need to be asked at the State level. The City has a role in terms of advocacy but are bound by legislation not to duplicate services of other agencies.

Mr Ward queried if they are visibly failing can we assist? Can we generate the time of City Officers to have outcomes?

The Chief Executive Officer referred to the specific example provided of the City having access to GPS tracking data which is something that she could not imagine the State Government allowing.

Mr Ward clarified, and said that what he is saying is that in Council as a body we know that some people have been released from Juvenile Detention and we are anticipating a crime wave.

The Chief Executive Officer advised that the City is not provided with that information nor can the City access that information.

The Chief Executive Officer continued with her response and stated that a large number of the issues raised are not issues where a Local Government either:

- a) has authority, or
- b) is allowed to offer services because they are services that are provided by a State Government agency.

As the Deputy Mayor alluded to earlier, raising those issues with the local candidates and at the moment you have a Local Member who is the Deputy Opposition Leader, I would suggest a lot more outcomes could be achieved having conversations at that level, because that is the body, that is where the power exists and that is where the legislation can be changed. The City can certainly advocate and push it up the chain but in terms of getting legislation amended, when there is public pressure put on Members of Parliament particularly in the run up to an Election you will find that you can be equally, if not more effective than a local council putting those same points forward.

#### 5 Applications for Leave of Absence:

#### COUNCIL DECISION

438

**MOVED CR B THOMPSON** 

SECONDED CR R ALEXANDER

That Councillor Wendy Cooper be granted a leave of absence from 1 April 2017 to 19 April 2017 inclusive.

CARRIED 6/0

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

Nil

#### 7 Community Submissions:

**COUNCIL DECISION** 

439

**MOVED CR B THOMPSON** 

SECONDED CR S LEE

That the Standing Orders be suspended.

CARRIED 6/0

#### 7.1 Cindy Collis, Parmelia regarding the Chisham Oval Ablution Block

Having been involved in concerns for this area since 1995 I find myself in a quandary as to what it is we need to do to save this valuable asset. What surprises me even more is we often hear and see written in many City publications the need for more community consultation within the City in regards to changes to such areas.

It is evident that this has not been the case in this current decision, but it point blank this is what is to happen. I was shocked to see this as I had been on the City's website two weeks ago to look for any development or other for the Chisham Oval and surrounds precinct, the results being nil.

It is also believed that a 30 minute Community Briefing inadequate at this time and only seven days from this date to acquire further information on the above. At this time I would like the matter to be bought before Council for an extension of time in the first instance allowing reconsideration and presentation of previous submissions. Then after much discussion sit down with the appropriate departments for a far better long term resolution which will allow us all to move on.

#### **COUNCIL DECISION**

440

**MOVED CR B THOMPSON** 

**SECONDED CR S LEE** 

That the Standing Orders be reinstated.

CARRIED 6/0

#### 8 Minutes to be Confirmed:

#### 8.1 Ordinary Meeting of Council held on 22 February 2017:

**COUNCIL DECISION** 

441

**MOVED CR S LEE** 

**SECONDED CR B THOMPSON** 

That the Minutes of the Ordinary Meeting of Council held on 22 February 2017 be confirmed as a true and correct record of the meeting.

CARRIED

9	Referred Standing / Occasional / Management /Committee
	Meeting:

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 Extension to the Operational Timeframe of Development Contribution Plan for Development Contribution Area 1

#### **SUMMARY:**

The purpose of this report is for Council to consider a resolution to extend the operational timeframe of the Development Contribution Plan (DCP) for Development Contribution Area 1 (DCA1) covering the area comprising Bertram, Parmelia (northeast), Orelia (east) and Wellard (west) under Schedule V of the City of Kwinana Town Planning Scheme No. 2 (Scheme or TPS2).

The operational life of current DCA1 was due to expire on 20 December 2016. At its meeting held on 22 February 2017, Council considered and supported the re-advertising of TPS Amendment No 132 which will expand the spatial area of the current DCP but also, once gazetted, extend the operational life for the DCP for a further 20 years from the gazettal date.

In the interim however, it is necessary to extend the operational timeframe of the current DCP for DCA1 to enable the equitable and efficient functioning of the DCP. In this regard, it is considered that an extension of two years, from 21 December 2016 until 21 December 2018, is appropriate. This would allow sufficient time for TPS Amendment 132 to be finally gazetted.

#### OFFICER RECOMMENDATION:

That Council extend the operational timeframe, pursuant to Clause 6.16.5.8 of the City of Kwinana Town Planning Scheme No. 2, of the Development Contribution Plan for Development Contribution Area 1 under Schedule V of the Scheme for two years until 21 December 2018.

#### **DISCUSSION:**

The current DCP for DCA1 was operational for a period of 5 years from its gazettal date, being 22 June 2007. Further operational timeframe extensions were then granted via Council Resolution, with the current extension valid until 20 December 2016. This reflected the timing of the delivery of infrastructure but also the anticipated time taken to amend the current DCA via TPS Amendment 132.

This current recommendation to extend the operational timeframe of DCA1 is due to the need to re-advertise the proposed Amendment pursuant to Regulation 46(2)(a) of the *Planning and Development (Local Planning Scheme) Regulations* 2015. This was a requirement of the Western Australian Planning Commission (WAPC).

The purpose of a DCP is to:

- a) provide for the equitable sharing of the costs of Infrastructure between Owners;
- b) ensure that Cost Contributions are reasonably required as a result of the subdivision and development of land in a Development Contribution Area; and
- c) co-ordinate the timely provision of Infrastructure.

15.1 EXTENSION TO THE OPERATIONAL TIMEFRAME OF DEVELOPMENT CONTRIBUTION PLAN FOR DEVELOPMENT CONTRIBUTION AREA 1

Clause 6.16.5.8 of the Scheme makes provision for the period of operation of the DCP, while Provision 2.4.3 of DCA1 within Schedule V of the Scheme enables the operational timeframe of the DCP to be extended. While the reference contained within Provision 2.4.3 refers to an incorrect Clause of the Scheme, the key intent to enable the operational timeframe to be extended remains valid.

The City needs to extend the operational timeframe of the DCP as these plans have a finite timeframe in which to operate. Without an extension to this timeframe, the City will not be able to seek development contributions.

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

Planning and Development Act, 2005. City of Kwinana TPS No.2

#### FINANCIAL/BUDGET IMPLICATIONS:

It is vital that the current DCP be extended to safeguard existing and potential future development contributions. This will ensure that the provision of infrastructure occurs on an equitable and appropriate basis.

#### **ENVIRONMENTAL IMPLICATIONS:**

No environmental implications have been identified as per this report.

#### STRATEGIC/SOCIAL IMPLICATIONS:

Extending the operational timeframe of the DCP for 2 years will enable the re-advertising, assessment, and adoption by Council of Amendment 132. It will also allow its consideration by the WAPC and Minister for Planning for final gazettal. It will ensure that the provision of infrastructure occurs on an equitable and appropriate basis for new development areas in the interim.

#### **RISK IMPLICATIONS:**

Risk Event	Civil infrastructure not adequately planned for and delivered (eg roads, bridges and culverts)	
Risk Theme	Business and community disruption	
Risk Effect/Impact	Service Delivery	
Risk Assessment Context	Strategic	
Consequence	Major	

## 15.1 EXTENSION TO THE OPERATIONAL TIMEFRAME OF DEVELOPMENT CONTRIBUTION PLAN FOR DEVELOPMENT CONTRIBUTION AREA 1

Likelihood	Almost certain	
Rating (before treatment)	Extreme	
Risk Treatment in place	Reduce - mitigate risk	
Response to risk treatment required/in place	Extension of the timeframe for the operation of Development Contribution Plan No 1 ensures the funding and delivery of infrastructure appropriate for the needs of the City's future residents.	
Rating (after treatment)	Low	

#### **COUNCIL DECISION**

442

**MOVED CR D WOOD** 

#### **SECONDED CR W COOPER**

That Council extend the operational timeframe, pursuant to Clause 6.16.5.8 of the City of Kwinana Town Planning Scheme No. 2, of the Development Contribution Plan for Development Contribution Area 1 under Schedule V of the Scheme for two years until 21 December 2018.

CARRIED 6/0

# 15.2 Modified Mandogalup West Local Structure Plan (Version 2) – Lots 682 and 52 Rowley Road, Mandogalup

#### SUMMARY:

The Western Australian Planning Commission (WAPC) is seeking the City of Kwinana's (City) comments on a modified version (Version 2) of the Mandogalup West Local Structure Plan (MWLSP) (Attachment 1).

An earlier version of the MWLSP (Version 1) (Attachment 2) has been previously considered by Council, including consideration of the submissions received during the public advertising period. The main issues of concern raised by the City and the submitters were:-

- a) the width of the Kwinana Industrial (including Air Quality) Buffer (KIB) and how it impacts on the MWLSP;
- b) provision of public open space associated with the primary school within the KIB;
- c) provision of an active playing field inside the KIB; and
- d) traffic access and egress to Rowley Road.

Council subsequently recommended at its meeting on 22 July 2015 that Version 1 be refused and recommended that a number of modifications be made to the MWLSP. Council's recommendation is outlined in the Discussion Section of this report.

Following Council's recommendation, the City and WAPC have worked with the proponent to include the modifications in the MWLSP.

Version 2 of the MWLSP includes all of the modifications that were recommended by the City and WAPC in relation to Version 1. The most significant modifications relate to:-

- a) relocating the local playing field from within the KIB to an area centrally located within the Mandogalup urban cell;
- b) relocating the primary school from an area near the boundary of the KIB to an area centrally located within the Mandogalup urban cell; and
- c) re-configuration of the road network to ensure the best long term access to Rowley Road.

The City's assessment of Versions 1 and 2 of the MWLSP are outlined in the Discussion Section of this report. The Department of Planning (DoP) has requested the City's comments on Version 2 of the MWLSP, by 27 January 2017. The City has been granted an extension by the DoP and is required to report to DoP, as soon as practical, following the Council meeting on 8 March 2017.

The City's officers (Planning, Engineering and Environment) consider that the modifications to Version 2, as described in this report, resolves the key issues (and implement the modifications) that were the reasons for Council recommending that the MWLSP (Version 1) be refused. On this basis, the City recommends that Version 2 of the proposed MWLSP is suitable to be forwarded to the WAPC in accordance with clause 20 of the *Planning and Development Regulations 2015* (P&D Regulations) subject to the Officer Recommendations provided below.

The MWLSP area is adjacent to the Mandogalup East Local Structure Plan (MELSP) area. Council recently supported a modified version of the MELSP (Version 3) (Attachment 3) at an Ordinary Meeting of Council on 8 February 2017.

#### OFFICER RECOMMENDATION:

That Council advises the Western Australian Planning Commission (WAPC) that it supports Version 2 of the Mandogalup West Local Structure Plan (MWLSP) (Attachment 1) subject to the following:

- a) Inclusion of a statement in the MWLSP text requiring the preparation of the following management plans to the City's satisfaction as part of the subdivision application process:
  - i. Urban Water Management Plan
  - ii. Landscape Feature and Tree Retention Plan
  - iii. Fauna Management Plan
  - iv. Peel Main Drain Rehabilitation Plan
- b) That the proponent's *Landscape Principles Plan* be amended prior to the lodgement of a subdivision application, in consultation with the City, to clearly state that purpose of the northern POS is to preserve existing significant trees and areas of significant native bushland.
- c) That a condition be imposed on future subdivision applications requiring the preparation of a Landscape Feature and Tree Retention Plan in accordance with City's Landscape Feature and Tree Retention Policy to ensure that the retention of trees is optimised.
- d) A revised *Local Water Management Strategy* being submitted to the City and WAPC prior to the lodgement of a subdivision application and the accompanying Urban Water Management Strategy.
- e) The environmental information in the MWLSP report should be updated and reviewed, particularly in relation to the recent listing of Banksia Woodlands on the Swan Coastal Plain, as a *Threatened Ecological Community* under the *Environmental Protection and Biodiversity Conservation Act 1999.*
- f) That a Peel Main Drain Rehabilitation Plan be prepared as a condition of subdivision, to guide the rehabilitation of the Peel Main Drain. The City is of the view that the sections of the Peel Main Drain, situated within the MWLSP and MELSP, should be enhanced / rehabilitated in the same manner so that the Peel Main Drain can function as a cohesive multi-functional lineal area of open space.
- g) That a mix of interface treatments to the power easement be provided (rather than an interface of rear of lots for the full length of the easement) to improve amenity and allow better integration and connectivity with the community.
- h) That a condition be imposed on future subdivision applications requiring the preparation and implementation of low maintenance landscape management plan for the power easement.

- i) That a condition be imposed on future subdivision applications requiring the preparation and finalisation of a noise assessment and a noise management plan, in accordance with State Planning Policy 5.4, to ensure that future residents are not exposed to unacceptable noise levels from traffic on Rowley Road.
- j) Forward this *Ordinary Council Meeting Report* and Council's resolution to the WAPC pursuant to clause 20 of the *Planning and Development Regulations* 2015.

#### **DISCUSSION:**

#### Background

MWLSP Version 1

Version 1 of the MWLSP (Attachment 1) was submitted to the City, by the proponent, in June 2014. Version 1 was advertised for public comment during November and December 2014. That version of the MWLSP proposed to locate the playing field that was being shared with the primary school site, within the KIB (The primary school was situated outside of the buffer but adjacent to the KIB boundary).

Version 1 of the MWLSP and the twelve submissions that were received during the public comment period were considered at an Ordinary Meeting of Council, on 22 July 2015. At that meeting, Council recommended that Version 1 be refused for the following reasons:

- a) the public open space (POS) associated with the primary school should not be located within the 1.5km Alcoa Residue Disposal Area (RDA) buffer;
- b) the MWLSP required modification to ensure the provision of a suitably sized POS area for active recreational needs in accordance with the City's Community Infrastructure Planning. This POS area should be situated outside the buffer area and within the Urban zoned land. The provision of the POS may well require a redesign of the balance of the LSP (eg. the location of roads, Local Centres and POS); and
- c) clear and agreed transport arrangements and delivery are required to provide confidence to Council that it can support the LSP. Main Roads had objected to a key entry interchange off Rowley Road proposed by the proponent's of MWLSP. This will be a critical intersection for the Mandogalup urban cell.

#### MWLSP (Version 2)

The proponent has submitted a second version of the MWLSP, in response to Council's resolution on 22 July 2015 (above).

City Officers are of the view that the modifications to Version 2, described below, resolve the issues given by Council for recommending that the MWLSP (Version 1) be refused.

#### a) Primary School and Local Playing Field

In Version 1 of the MWLSP, a local sports ground was situated within the KIB (outside of the boundary of the MWLSP). A 3.5ha primary school site (situated inside the boundaries of the MWLSP and MELSP) was situated adjacent to the local playing field, with the intention that the primary school would share a portion of the local playing fields.

Primary school playing fields are generally regarded as a sensitive land use and the City was of the view that the primary school's playing field should not be located within the KIB. The Department of Health expressed similar views.

The modifications in Version 2, include relocation of the primary school site and local playing field so that these facilities are centrally located within the Mandogalup urban catchment and are no longer situated within, or adjacent, to the KIB (as previously proposed in Version 1). The primary school site and playing fields are split between the MWLSP and MELSP.

The size, location and configuration of the local playing field in a shared use arrangement with the primary school (as proposed in Version 2) has been supported by the Department of Education. The City is also satisfied that the size, location and configuration of the local playing field shown in Version 2 will ensure that the necessary sports facilities will fit on the site.

#### b) Road network

Version 1 of the MWLSP was reliant on permanent access to Rowley Road via a neighbourhood connector road situated within the MWLSP. Main Roads advised that it would not permit a long term connection from either the MWLSP (or MELSP) to Rowley Road because Rowley Road will become a four lane divided road and access will be tightly controlled. Main Roads advised that future access to Rowley Road from both the MWLSP and MELSP should be via the proposed Rowley Road/Hammond Road interchange, located to the west.

A north - south road connection under Rowley Road (through to Barfield Road) was once being touted by the City of Cockburn. However, Main Roads and the DoP have advised that a connection under Rowley Road (at Barfield Road) would not be viable and it is not included in Version 2.

At its meeting, help on 11 November 2015, Council resolved that it did not support long term connection from the MELSP and MWLSP, directly to Rowley Road and advised the WAPC that:

The road network in the MWLSP and MELSP should be revised to provide a Neighbourhood Connector to Hammond Road. Future long term access to Rowley Road from both the MWLSP and MELSP should be via the proposed Rowley Road/Hammond Road interchange.

Version 2 has been modified by the proponent, so that long term access will be via Hammond Road, once it has been extended. This modification complies with Main Roads, WAPC and the Council's positions. Short to medium term access will be via Rowley Road until the necessary roads and have been constructed to allow access via Hammond Road.

#### OTHER ELEMENTS ASSESSED BY THE CITY OF KWINANA

In addition to the main matters of concern discussed above, the City has also assessed Version 2 of the MWLSP against the following matters, (including the objectives and requirements of *Liveable Neighbourhoods*). A number of recommendations concerning these matters is included in the Officer Recommendations section of this report. An assessment of these matters was not included in the previous report to Council because City Officers recommended that the MWLSP be refused as it had significant flaws, (the recommendation was subsequently endorsed by Council).

#### a) Peel Main Drain

The Landscape Concept report (attached to Version 2 of the MWLSP) explains that the section of the Peel Main Drain, situated within the MWLSP, will be enhanced as an environmental feature, to reflect the cultural heritage of the site and provide an important east west green link and recreation corridor.

The proponent of the MELSP (which adjoins the MWLSP) proposes to rehabilitate that section of the Peel Main Drain situated within the MELSP, as a landscaped living stream in similar manner to the rehabilitation of the Peel Main Drain in Honeywood. (The details of the proposed rehabilitation are outlined in the Landscape and Public Open Space Strategy for the MELSP).

The City is of the view that the sections of the Peel Main Drain, situated within the MWLSP and MELSP, should be enhanced / rehabilitated in the same manner so that the Peel Main Drain can function as a cohesive multi-functional lineal area of open space.

The City will request that a *Peel Main Drain Rehabilitation Plan* be prepared as a condition of subdivision, to guide the rehabilitation of the Peel Main Drain to a desired consistent standard with the MELSP.

#### b) <u>Community Design</u>

The report for Version 2 of the MWLSP states that a range of lot sizes are intended to be provided to facilitate a diversity of dwelling types. The *Lot Type Plan* within the MELSP report shows locations where medium density lots will be provided.

The MWLSP (Version 2) proposes a yield of approximately 900 dwellings. This equates to 12.4 dwellings per gross *Urban* zoned hectare or 15.76 dwellings per net site hectare. The yield falls short of *Direction 2031* which requires 15 dwellings per gross hectare and *Liveable Neighbourhoods* which requires 22 dwellings per net hectare. This is despite an increase in the minimum density from R20 to R30 in Version 2. Given that the Mandogalup area will not have the type of land uses (an activity centre or train station) that act as a community focus and warrant medium density development, the City is satisfied with the proposed lot sizes and housing types that will be provided.

#### c) Lot Layout

Smaller lots are generally situated within a walkable catchment of the primary school and along vistas to significant areas of POS.

The majority of the lots have been able to achieve solar orientation, particularly an east – west alignment.

#### d) Public Open Space

Version 2 of the MWLSP provides 5.81ha (10.6%) of POS, including 5.37ha of unrestricted POS (9.8% of gross subdivisible area) and 0.44ha of restricted POS (0.8% of gross subdivisible area).

The City will request that a *Landscape Feature and Tree Retention Plan* be prepared as a condition of subdivision, to guide the development of the open space.

#### e) <u>Biodiversity (Vegetation, Flora and Fauna) & Retention of Significant Trees</u>

There is approximately 27 hectares of bushland within the MWLSP area containing Jarrah, Flooded Gum, Melaleuca and Banksia species in excellent condition. The low point of this area contains a complex of species in a condition that is comparable to, and in better condition than, the nearby Conservation Category Wetlands. The potential for conservation significant species to be present at the site is evidenced by Department of Parks and Wildlife records for endangered species on the site. Fauna trapping at nearby smaller degraded sites, have identified several conservation significant species as having significant local populations.

The City is of the view that the majority of the bushland in the MWLSP area is likely to have significant environmental values and be suitable for conservation, however, the City acknowledges that the MWLSP area is already zoned *Urban* in the *Metropolitan Region Scheme* and was assessed by the Environmental Protection Authority prior to being rezoned from *Rural* to *Urban Deferred*. For this reason, the area of native remnant vegetation that the City is able to conserve through negotiation is limited to bushland that can be conserved within POS.

Following submission of the original version of the MWLSP (Version 1), in June 2014, the City identified an area of bushland, within the MWLSP area, with significant environmental values warranting conservation. The City liaised extensively with the proponent to ensure that this bushland was included within the northern POS area. The proponent has recently confirmed (email dated 14 February 2017) that the primary purpose of this area of POS is to preserve the existing major trees that have been surveyed on site. The proponent's intentions for the improvement and design of the space is described in the *Landscape Principles Plan* (Attachment 4).

However, the City does not consider that the proponent's intention to preserve the existing major trees is clearly conveyed in the Landscape Principles Plan (Attachment 4). The City's officers recommend that the Landscape Principles Plan should be amended to clearly state that purpose of the northern POS is to preserve the existing significant trees and significant areas of native bushland.

The City will request that a condition be imposed on future subdivision applications requiring the preparation of a *Landscape Feature and Tree Retention Plan* in accordance with City's *Landscape Feature and Tree Retention Policy* to ensure that the retention of trees is optimised.

The City's officers recommend that the final landscape plan, including the retention of significant bushland within the northern area POS is to developed in consultation with the City at the detailed design stage.

The City's officers also recommend that the environmental advice in the MWLSP report be updated and reviewed, particularly in relation to the recent listing of Banksia Woodlands on the Swan Coastal Plain, as a *Threatened Ecological Community* under the *Environmental Protection and Biodiversity Conservation Act*.

#### f) <u>Local Water Management Strategy</u>

A Local Water Management Strategy (LWMS) has been prepared by JDA on behalf of the proponent. The LWMS proposes that stormwater runoff from the MELSP area will be detained and infiltrated in POS areas and the power easement.

The City's Officers (Engineering) have reviewed the LWMS appended to the LSP and determined that the LWMS requires revision prior to its approval. Comments have been provided to the proponent's consultant so that the LWMS can be updated. Once a revised document is received by the City, it will be reviewed to determine compliance with the City's requirements.

The City will request that a condition be imposed on future subdivision applications requiring the preparation of an Urban Water Management Plan.

#### g) Activity Centres and Employment

Consistent with the City's draft *Local Commercial and Activity Centres Strategy*, a Neighbourhood (or Local Centre) is proposed within Version 2 of the MWLSP.

The proponent for the MWLSP undertook a *Retail Needs Assessment* for the Mandogalup urban cell in response to the uncertainty surrounding the requirement for a retail centre in the Mandogalup area. The report concluded that the Mandogalup urban cell would be under serviced for retail options and residents will need to travel almost twice as far as other urban communities to retail facilities. The report identified that a 750m² small supermarket based local centre is economically viable within the Mandogalup area.

A Neighbourhood Centre is shown in Version 2 of the MWLSP adjacent to the primary school and playing fields and is at a midpoint along the local distributor road that will connect Anketell and Rowley Roads.

#### h) <u>Bushfire Management</u>

The State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP 3.7) (WAPC 2015) and Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015) are the predominant documents used by decision making authorities and referral agencies during the consideration of strategic planning proposals, subdivisions and development applications.

SPP 3.7 states that local structure plans should be accompanied by a *Bushfire Management Plan* which includes a *Bushfire Hazard Level* assessment or *BAL Contour Map* for those areas identified as bushfire prone.

The majority of the MELSP area is identified as a *Bushfire Prone Area* in the *Map of Bushfire Prone Areas* (2016), therefore, a *Bushfire Management Plan* is required for the area to support the LSP in accordance with SPP 3.7.

The Guidelines state that the following matters should be addressed in the *Bushfire Management Plan:*-

- location of bushfire prone areas;
- avoidance of land use and development intensification extreme hazards areas;
- existing fire fighting infrastructure;
- existing and proposed road network and its effectiveness in a bushfire emergency; and
- integration of biodiversity protection in a bush fire management plan

The City's bushfire management consultant (Preplan) has advised that the *Bush Fire Management Plan* (Strategen Environmental Consultants Pty Ltd, November 2016) is consistent with the current *Guidelines for Planning in Bushfire Prone Areas*.

#### i) Power Easement

The City notes that a number of plans within the MWLSP report indicate that residential lots will back onto the power easement for the full length of the interface between the power easement and the abutting residential area.

The City is concerned that enclosing the power easement with rear fences will result in poor amenity, security and maintenance outcomes. The City recommends that a mix of interface treatments to the power easement be provided (rather than an interface of rear of lots for the full length of the easement) to improve amenity and allow better integration and connectivity with the community consistent with Crime Prevention Through Environmental Design principles.

The City recommends that a condition be imposed on future subdivision applications requiring the preparation and implementation of a low maintenance landscape management plan for the power easement.

#### j) Noise from Future Primary Freight Road

The amended MWLSP is situated to the south of Rowley Road which is identified as a Future Primary Freight Road in the WAPC's State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning.

The City will request that a condition be imposed on future subdivision applications requiring the preparation and finalisation of a noise assessment and a noise management plan, in accordance with State Planning Policy 5.4, to ensure that future residents are not exposed to unacceptable noise levels from traffic on Rowley Road.

The City will also request that a notice be placed on title to advise prospective purchasers of the noise impacts from Rowley Road, which is identified by the State government as a Future Primary Freight Road.

#### k) <u>Utilities</u>

The MWLSP area is able to be connected to water, sewer, electricity, gas and telecommunications services. It is normal practice for the WAPC to impose subdivision conditions requiring that these services be provided to an urban standard.

The servicing agencies did not raise any concerns with the MWLSP.

#### I) Acid Sulfate Soils

The Department of Environment Regulation's (DER) *Acid Sulfate Soil Risk Mapping* identifies approximately half of the MWLSP area as having a 'high' risk of acid sulfate soils within 3 metres of the surface. The remainder of the MWLSP area is mapped by DER as having a moderate to low risk of acid sulfate soils within 3m of the surface. Conditions are likely to be imposed by the WAPC on the subdivision requiring that acid sulfate soils are managed in accordance with the relevant WAPC's Guidelines.

#### m) Contaminated sites

The southern portion of the MWLSP area has historically been utilised for market gardening. As a consequence, the proponent is preparing a Preliminary Site Investigation to investigate the potential for contamination to be present on the site.

If any contamination is found on site the proponent will be required to rehabilitate the site to the satisfaction of the DER, pursuant to the *Contaminated Sites Act.* 

#### n) Sand Extraction

The City will require that the proponent apply for a sand extraction licence and a development application for extractive industry prior to any sand quarrying activities occurring on site.

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

For the purpose of the Councillors considering a financial or impartiality interest only, Qube Property Group (on behalf of Mandogalup Development Joint Venture) is the proponent and owner of Part Lots 682 and 52 Rowley Road, Mandogalup.

#### Relevant legislation

- Liveable Neighbourhoods State Planning Policy
- Planning and Development (Local Planning Schemes) Regulations 2015
  - Part 4 of the P&D Regulations sets out the requirements for the preparation, advertising and assessment of structure plans.
- Metropolitan Region Scheme;
- City of Kwinana Town Planning Scheme 2 and relevant local planning policies.

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

The City will be financially responsible for maintaining public open space, roads, verge trees and footpaths within the MWLSP area once the area has been developed.

#### **ENVIRONMENTAL IMPLICATIONS:**

Metropolitan Region Scheme (MRS) Amendment 1114/33 to rezone Mandogalup from 'Rural' to 'Urban Deferred' was assessed by the EPA under section 48A of the *Environmental Protection Act 1986* (EP Act). The EPA advised, in a letter dated 13 March 2006, that Amendment 1114/33 did not require "formal assessment" under the EP Act and provided advice and recommendations. In particular, the EPA advised that it had not assessed the following issues in its assessment of Amendment 1114/33:

- Drainage
- Peel Harvey catchment
- Wetlands
- Remnant vegetation

- Fauna
- Contamination
- Air emissions
- Noise and vibration

The EPA's decision to not "formally assess" Amendment 1114/33 was on the basis that the environmental issues listed above can be resolved during subsequent stages of the planning process. If significant environmental impacts are not resolved as part of the planning process (eg. local structure plan), then future subdivision and developments may be referred to the EPA under section 48I of the EP Act. Section 48I places the onus on the WAPC (subdivision) or the City (development applications) to determine if proposals (subdivision/development) are likely to cause significant environmental impacts and whether they should be referred to the EPA for assessment.

The City's Officers recommend that the final landscape layout including the retention of significant bushland within the northern area POS is to be developed in consultation with the City at the detailed design stage.

The City recommends that the environmental advice in the MWLSP report should be updated and reviewed, particularly in relation to the recent listing of Banksia Woodlands, on the Swan Coastal Plain, as a *Threatened Ecological Community* in the *Environmental Protection and Biodiversity Conservation Act.* 

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following objectives and strategies detailed in the *Strategic Community Plan* and *Corporate Business Plan 2016-2021*.

STRATEGIO	C COMMUNITY PLAN 2015-2025	CORPORATE BUSINESS PLAN 2016 – 2021	
OBJECTIVE	STRATEGY	ACTION	
3.2 Ensure high levels of environmental protection are achieved in new developments.	3.2.3 Ensure, where practicable, retention of remnant vegetation and natural systems within new residential subdivisions.	3.2.3.1 Ensure retention, where practicable, of remnant vegetation and encourage the retention of trees and other flora within new residential subdivisions above the 10% minimum required.	
3.5 Encourage and exercise best practice water management.	3.5.1 Implement the City of Kwinana Water Conservation Plan, the Peel and Cockburn Catchment Regional Water Program and adopt Water Sensitive Urban Design Technical Guidelines in order to maximise water quality, recovery and reuse.	3.5.1.6 Implement the Water Conservation Plan	
4.1 Residents are provided with a range of multifunctional community places and accessible recreation facilities.	4.1.1 Implement the City of Kwinana's Community Infrastructure Plan that identifies the location, nature and anticipated construction date of new community and	4.1.1.2 Ensure Developer Contribution Schemes are aligned with the Community Infrastructure Plan.	
	recreation facilities.	4.1.1.5 Reach a formal agreement with public and private education providers for shared use of facilities in accordance with the Community Infrastructure Plan.	
4.2 The community has easy access to well equipped, quality parks and public open spaces.	4.2.1 In accordance with regulatory standards and the Community Infrastructure Plan, provide active recreation opportunities and develop public open space and infrastructure in new developments.	4.2.1.1 Implement the City's public open space development standards to ensure best practice standards are implemented and ongoing maintenance costs are minimised.	
4.4 Create diverse places and spaces where people can enjoy a variety of lifestyles with high	4.4.6 Ensure that an appropriate density of development is achieved that accommodates projected population growth and is balanced	4.4.2 Encourage and promote the design of places of activity and enjoyment	
levels of amenity.	against community expectations.	4.4.6 Ensure that an appropriate density of development is achieved that accommodates projected population growth and is balanced against community expectations	
		4.4.9 Engage with developers on infrastructure and sustainability issues.	

#### **COMMUNITY ENGAGEMENT:**

The City advertised Version 1 of the MWLSP between the 28 November and 19 December 2014 in accordance with the P&D Regulations. Advertising included the placement of a notice in a local newspaper, on the City's webpage and the erection of a sign on site inviting submissions to be lodged with the City on the LSP.

Under the City's *Community Engagement Policy*, adopted by the City in March 2016, the proposed MELSP is classified as a high impact proposal. The processes of engagement undertaken by the City during November and December 2014, for the MWLSP, were consistent with the processes outlined in the *Community Engagement Policy* (Community Engagement Matrix) adopted by the City, in March 2016.

The submissions received during the advertising period for Versions 1 of the MWLSP have been previously considered by Council. The main issues of concern were the:

- a) width of the KIB and how it impacts on the MWLSP;
- b) provision of public open space associated with the primary within the 1.5km buffer;
- c) provision of an active playing field inside the KIB; and
- d) traffic access to Rowley Road.

#### **RISK IMPLICATIONS:**

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

Risk Analysis	Description	
Risk Event	The WAPC could approve the MELSP if the City fails to provide timely advice in accordance with the procedures set out in the Planning and Development Regulations. This could result in development progressing without due regard for the City's planning policies and objectives.	
Risk Theme	Failure to fulfil statutory regulations or compliance requirements	
Risk Effect/Impact	Compliance	
Risk Assessment Context	Strategic	
Consequence	Moderate	
Likelihood	Possible	
Rating (before treatment)	Moderate	
Risk Treatment in place	The City has project management procedures in place to ensure that statutory timelines are met or that an alternative timeline is negotiated with the responsible authority (ie WAPC).	
Response to risk treatment required/in place	The City is to give due regard to the MELSP when providing advice to the WAPC in relation to subdivision applications and making decisions in relation to development applications.	
Rating (after treatment)	Moderate	

#### **COUNCIL DECISION**

443

#### MOVED CR B THOMPSON

#### SECONDED CR S LEE

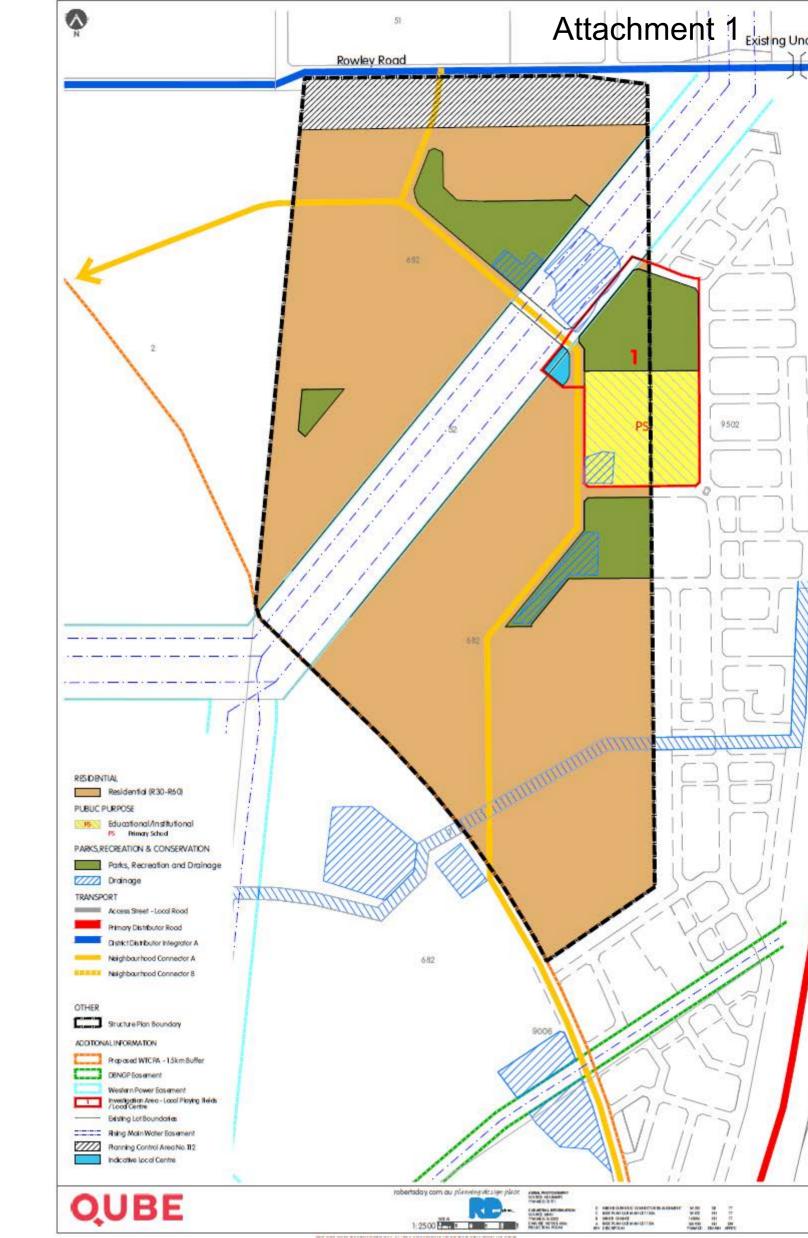
That Council advises the Western Australian Planning Commission (WAPC) that it supports Version 2 of the Mandogalup West Local Structure Plan (MWLSP) (Attachment 1) subject to the following:

- a) Inclusion of a statement in the MWLSP text requiring the preparation of the following management plans to the City's satisfaction as part of the subdivision application process:
  - i. Urban Water Management Plan
  - ii. Landscape Feature and Tree Retention Plan
  - iii. Fauna Management Plan
  - iv. Peel Main Drain Rehabilitation Plan
- b) That the proponent's Landscape Principles Plan be amended prior to the lodgement of a subdivision application, in consultation with the City, to clearly state that purpose of the northern POS is to preserve existing significant trees and areas of significant native bushland.
- c) That a condition be imposed on future subdivision applications requiring the preparation of a Landscape Feature and Tree Retention Plan in accordance with City's Landscape Feature and Tree Retention Policy to ensure that the retention of trees is optimised.
- d) A revised *Local Water Management Strategy* being submitted to the City and WAPC prior to the lodgement of a subdivision application and the accompanying Urban Water Management Strategy.
- e) The environmental information in the MWLSP report to be updated and reviewed, particularly in relation to the recent listing of Banksia Woodlands on the Swan Coastal Plain, as a *Threatened Ecological Community* under the *Environmental Protection and Biodiversity Conservation Act 1999.*
- f) That a Peel Main Drain Rehabilitation Plan be prepared as a condition of subdivision, to guide the rehabilitation of the Peel Main Drain. The City is of the view that the sections of the Peel Main Drain, situated within the MWLSP and MELSP, should be enhanced / rehabilitated in the same manner so that the Peel Main Drain can function as a cohesive multifunctional lineal area of open space.
- g) That a mix of interface treatments to the power easement be provided (rather than an interface of rear of lots for the full length of the easement) to improve amenity and allow better integration and connectivity with the community.
- h) That a condition be imposed on future subdivision applications requiring the preparation and implementation of low maintenance landscape management plan for the power easement.

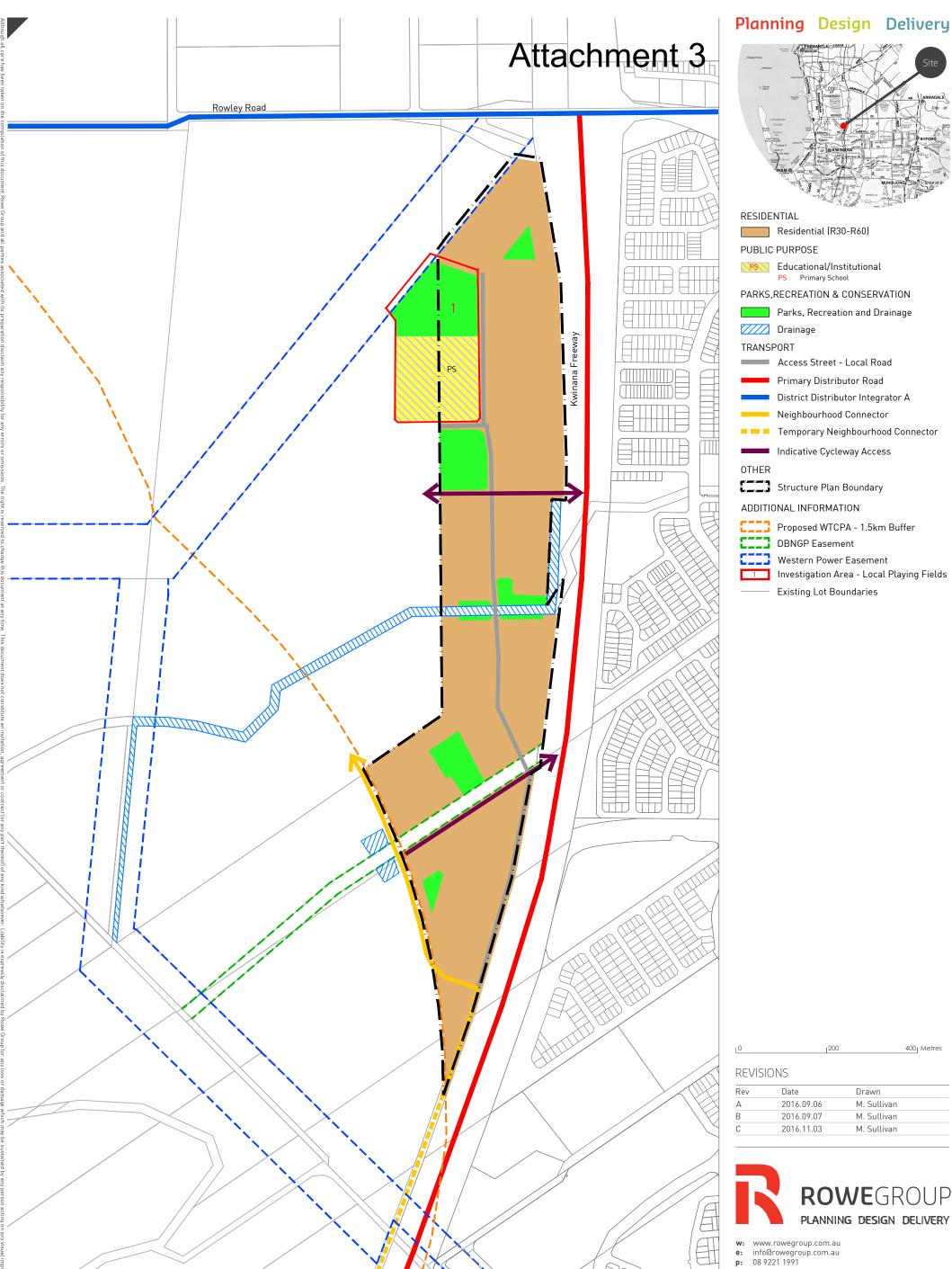
- i) That a condition be imposed on future subdivision applications requiring the preparation and finalisation of a noise assessment and a noise management plan, in accordance with State Planning Policy 5.4, to ensure that future residents are not exposed to unacceptable noise levels from traffic on Rowley Road.
- j) Forward this *Ordinary Council Meeting Report* and Council's resolution to the WAPC pursuant to clause 20 of the *Planning and Development Regulations 2015*.

CARRIED 6/0

NOTE – That the Officers Recommendation has been amended at point e, to remove the word 'should' and replace it with the word 'to' to make it more definitive.







Mandogalup East Local Structure Plan

PARKS, RECREATION & CONSERVATION Parks, Recreation and Drainage District Distributor Integrator A

Proposed WTCPA - 1.5km Buffer

Investigation Area - Local Playing Fields

# M. Sullivan



2016-09-06

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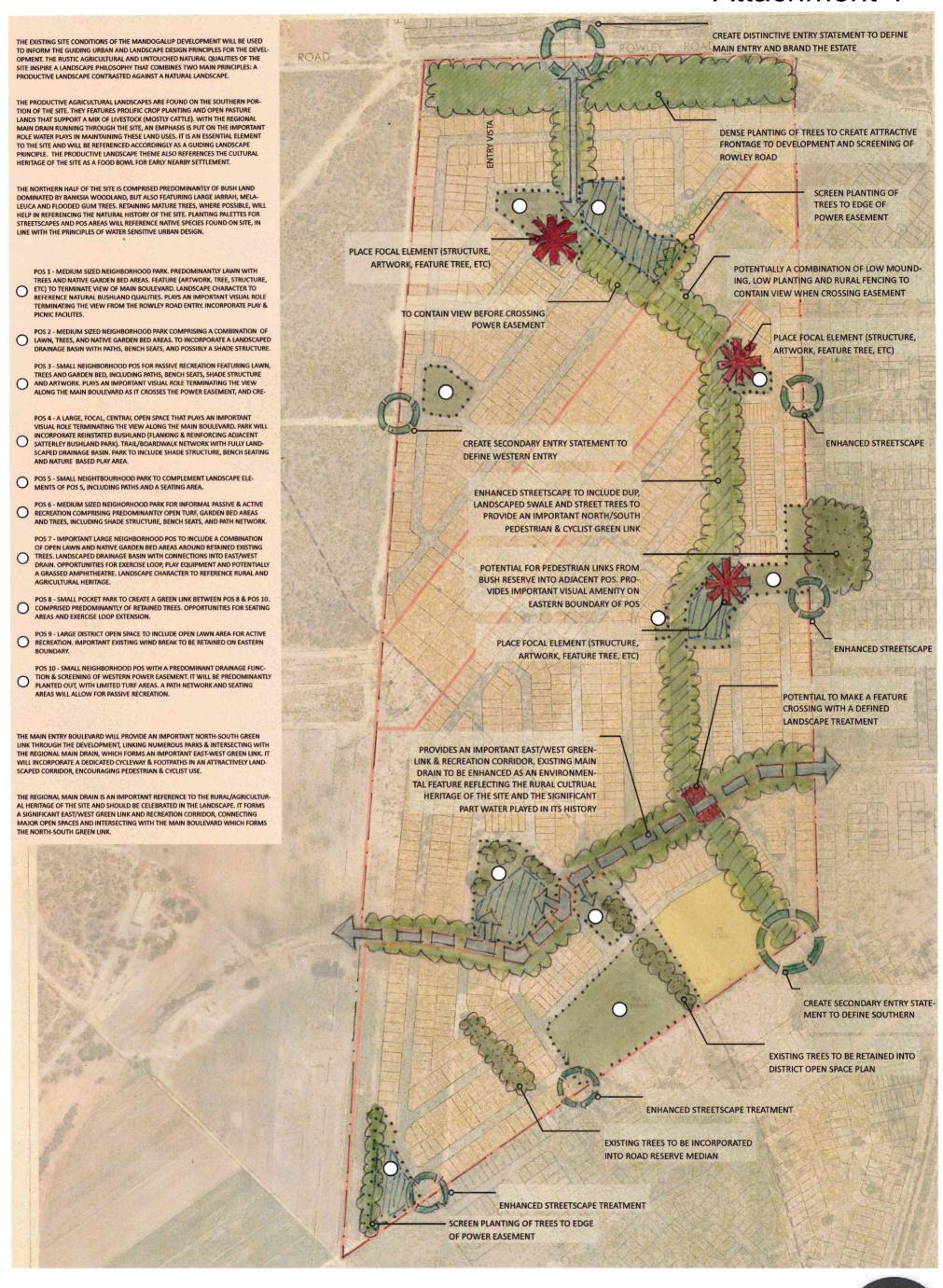
R. Cumming

M. Sullivan

PCG 94

Date Drawn: Scale: Satterley Property Group Designer: Projection: Plan ID: 7282A-STR-07-C

# Attachment 4



MANDOGALUP DEVELOPMENT PREPARED FOR QUBE PROPERTY GROUP PTY LTD



**JUNE 2014** 



# mandogalup local structure plan - volume a

(part one + part two)

lots 682 and 52 rowley road, mandogalup

PREPARED BY ROBERTSDAY FOR QUBE PROPERTY GROUP

ON BEHALF OF MANDOGALUP DEVELOPMENT JOINT VENTURE

DECEMBER 2016



#### **CLIENT**

# QUBE PROPERTY GROUP ON BEHALF OF MANDOGALUP DEVELOPMENT JOINT VENTURE

#### PROJECT TEAM

ROBERTSDAY
COSSIL AND WEBLEY
JDA
TRANSCORE
STRATEGEN
TAKTICS 4
LLOYD GEORGE ACOUSTICS

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## STRUCTURE PLAN ENDORSEMENT STATUS

Certified that the agreed Structure Plan No was adopted by resolution of the Western Australian Planning Commission on
Signed for and on behalf of the Western Australian Planning Commission
An officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:
Witness
Date
And by resolution of the Council of the City of Kwinana on
And the seal of the City of Kwinana was pursuant to the Council's resolution hereunto affixed in the presence of:
Mayor, City of Kwinana
Chief Executive Officer, City of Kwinana  Date
This Structure Plan is prepared under the provisions of Part 6.17 of Town Planning Scheme No. 2.

## **TABLE OF MODIFICATIONS**

Modification No.	Description of Modification	Endorsed by Council	Endorsed by WAPC	

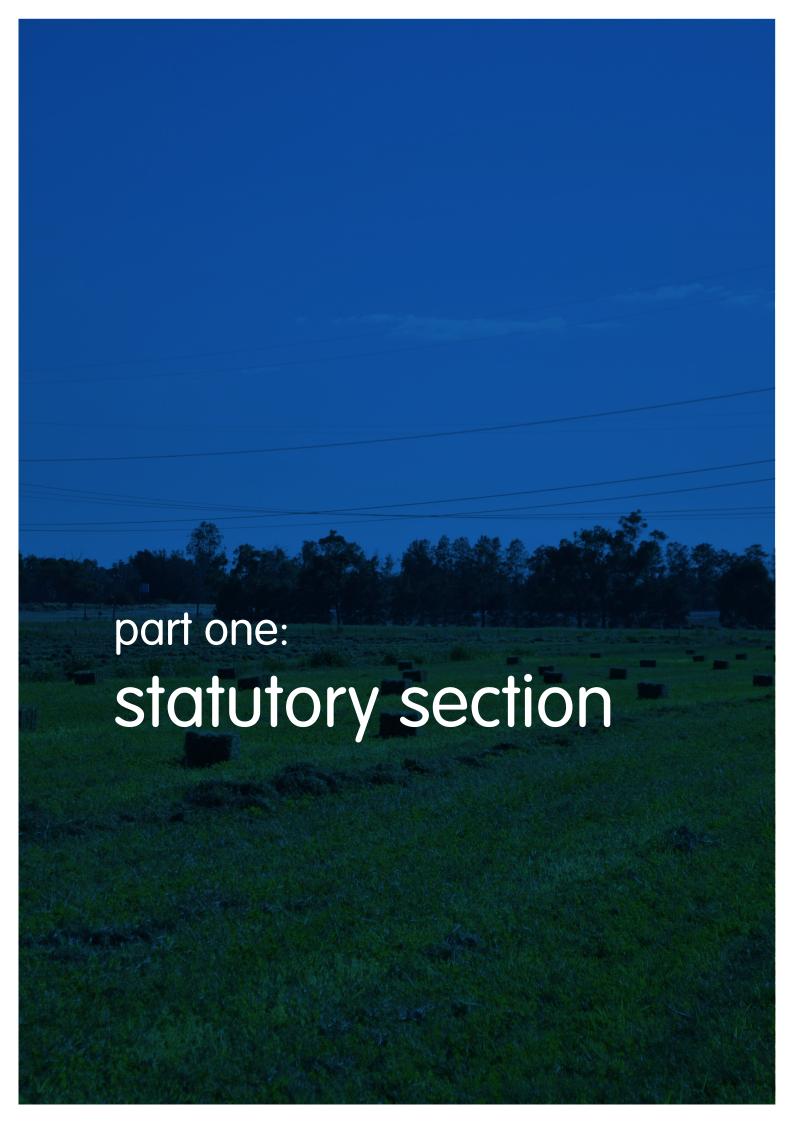
## **EXECUTIVE SUMMARY**

The Local Structure Plan (LSP) is prepared over Lot 682 and Lot 52, Mandogalup.

The LSP proposes the subdivision and development of land for residential, education and recreation purposes.

**TABLE 1:** Structure Plan Summary Table

Item	Data	Section number referenced within the Structure Plan report
Total area covered by the Structure Plan	72.89	Section 1.3.2
Estimate area of each land use proposed:		Section 3.0
Residential:	35.47ha	
Public Open Space	6.05ha	
Existing Drainage Reserve:	0.70ha	
Primary School:	2.013ha	
Road Reserve:	15.91ha	
Transmission Line Land:	10.55ha	
Planning Control Area:	4.53ha	
Estimated lot yield:	900 Lots	Section 3.4
Estimated number of dwellings	900 Dwellings	Section 3.4
Estimated residential nett site density	15.76 Dwellings per site ha	Section 3.4
Estimated population	1852	Section 3.4
Number of high schools	0	Section 3.7
Number of primary schools	1	Section 3.7
Estimated commercial floor space	0	Section 3.8
Estimated number and % of public open space:	10% POS Provision	Section 3.3
Regional open space District open space	1 park	
Estimated area and number:		Section 3.3
Neighbourhood parks Local parks	2 parks 1 parks	
Estimated number and area of natural area and biodiversity assets	0ha	Section 3.3



#### 1.0 Structure Plan Area

This Structure Plan applies to the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map (refer Plan 1 situated at the end of Part 1 of this Structure Plan report).

#### 2.0 Operation

This Structure Plan comes into effect on the day it is approved by the Western Australian Planning Commission.

#### 3.0 Staging

Development of the site will generally be from North to South. A first stage will be developed adjacent Rowley Road extending to the existing overhead powerlines.

# 4.0 Subdivision and Development Requirements

- 4.1 Residential densities for the structure pan area are the residnetial densities shown on the Local Structure Plan Map, and as indicatively shown at Figure 8.
- 4.2 The Local Structure Plan is to provide for a minimum of 10% public open space in accordance with the WAPC's Liveable Neighbourhoods requirements. Public open space is to be provided generally in accordance with the Local Structure Plan Map.
- 4.3 This Structure Plan is supported by a Bushfire Management Plan (BMP). Any land falling within 100 metres of a bushfire hazard identified in the BMP is designated as a Bushfire Prone Area for the purpose of the Building Code of Australia.
- 4.4 Notifications on Title

The Council shall recommend to the Western Australian Planning Commission that a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate of Title to suitably repond to the following:

- a) The Bushfire Management Plan for lots with a Bushfire AttackLevel (BAL) rating of 12.5 or higher;
- b) Tranposrt noise for lots that are the subject of noise levels exceeding the noise target as per State Planning Policy 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning.

#### 4.5 Management Plans

The council shall recommend to the Western Australian Planning Commission that a condition be imposed on the grant of subdivision approval to respond to the following as identified by the structure plan:

- a) A mosquito and midge management plan; and
- b) An Urban Water Management Plan

## part one **statutory**

#### 5.0 Local Development Plans

A local Development Plan is required in the following circumstances:

- a) Lots with an area of 260 square metres or less;
- b) Irregular shaped lots;
- Lots where specific vehicle access and egress control is required;
- d) Lost abutting public open space;
- e) Lots with particular site constraints; and
- f) Lots subject of a notification on title.

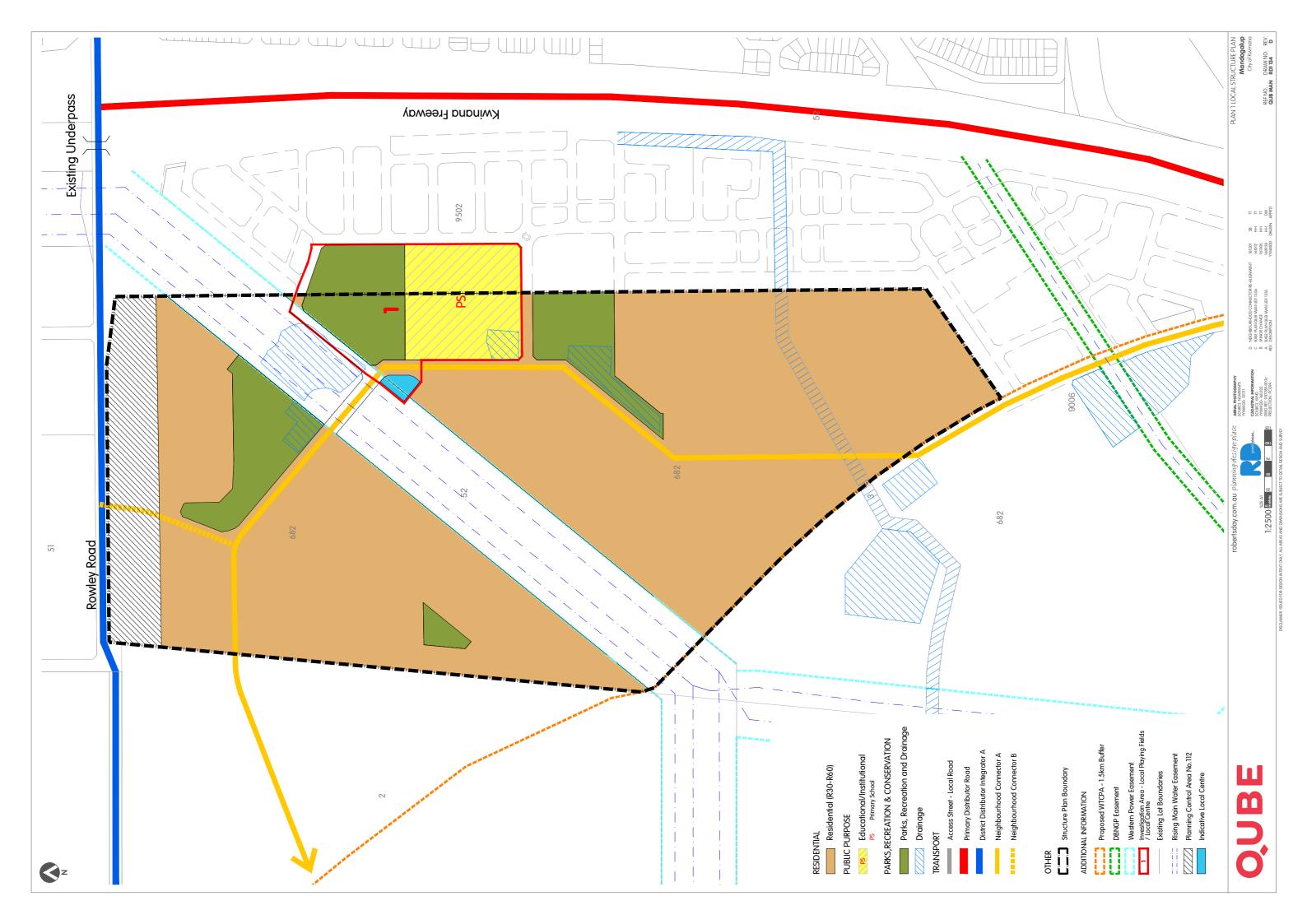
#### 6.0 Other requirements

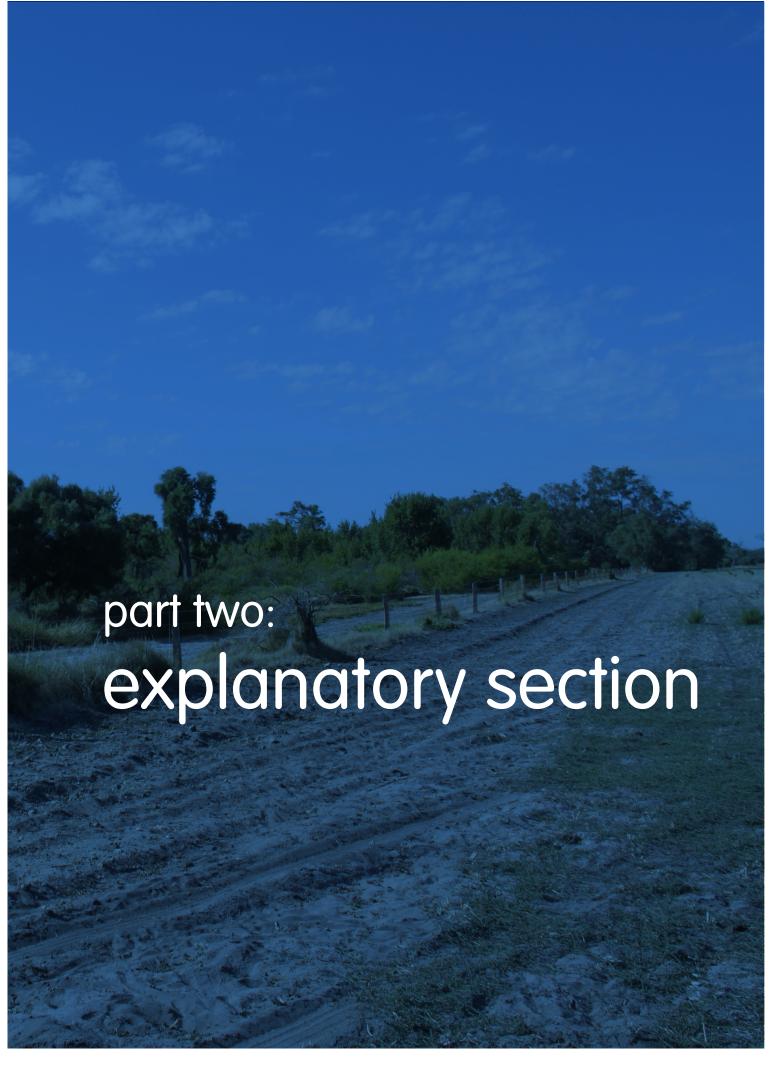
#### **6.1** Developer Contribution Arrangements

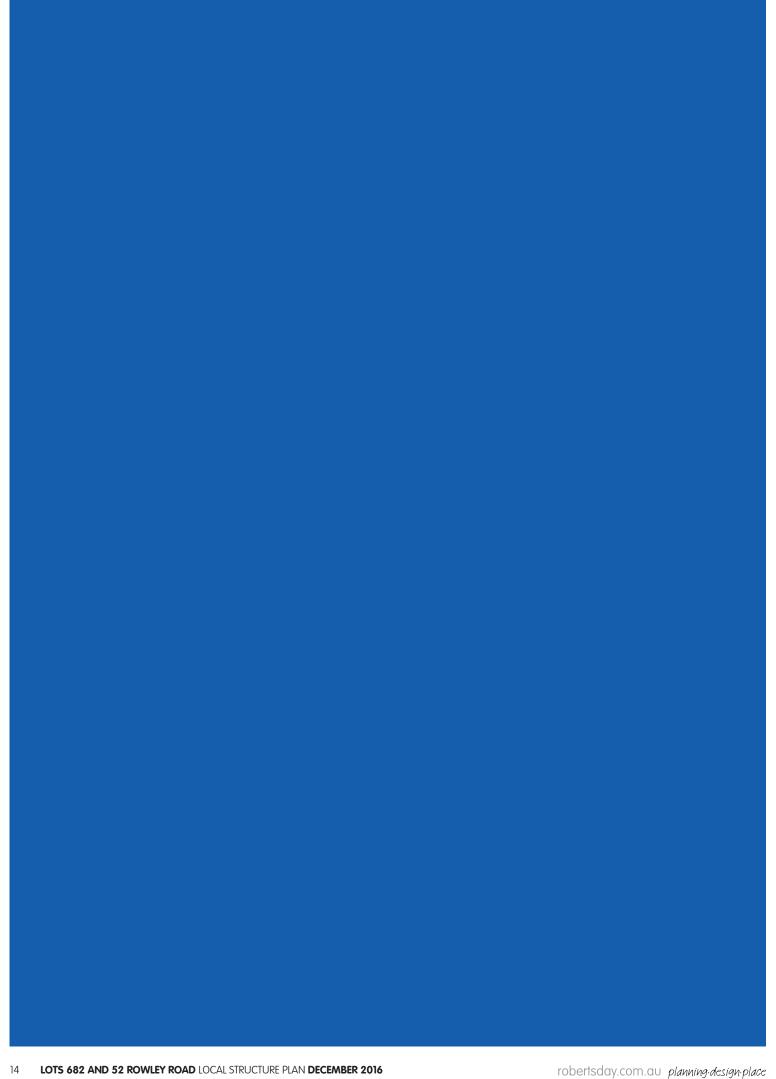
Under the City of Kwinana Town Planning Scheme No.2, the following development contribution arrangements apply and/or are contemplated.

- a) Development Contribution Area 8 for the funding of community infrastructure; and
- b) Development Contribution Area 6 for "hard" infrastructure.









#### 1.0 Planning Background

#### 1.1 Introduction and Purpose

This Local Structure Plan (LSP) has been prepared by RobertsDay for QUBE Property Group, on behalf of Mandogalup Development Joint Venture, the legal proprietor of Lot 682 and Lot 52, Mandoglaup (subject site).

The purpose of the LSP is to facilitate the coordination of future zoning, subdivision and development of the subject site.

#### 1.2 Project Team

The following multi-disciplinary project team have been engaged by QUBE to progress the preparation of the LSP:

- Landowner: Mandogalup Development Joint Venture
- Urban Design and Statutory Planning: RobertsDay
- Engineering: Cossil and Webley

Drainage: JDA

Traffic: Transcore

• Environmental / Bushfire: Strategen

Retail: Taktics 4

Acoustic: Lloyd Georges Acoustics

#### 1.3 Land Description

#### 1.3.1 Location

The LSP site is located within the South-West subregion of the Perth metropolitan area. It is contained within the municipality of the City of Kwinana, approximately 25 kilometres south of the Perth Central Business District, 9 kilometres north of the Kwinana Town Centre and 6 kilometres south of Cockburn Central (refer Figure 1: Regional Context).

The subject site is bound by Rowley Road to the north, neighbouring urban land to the east and neighbouring Rural land to the west and south respectively. To the east of the site lies the Kwinana Freeway and Mandurah Rail Line. The site has strong access to employment, retail, recreation and regional public and private transport (refer Figure 2: Local Context).



FIGURE 1: Regional Context

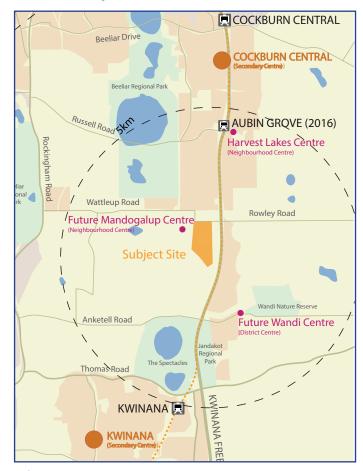


FIGURE 2: Local Context

#### 1.3.2 Area and Land Use

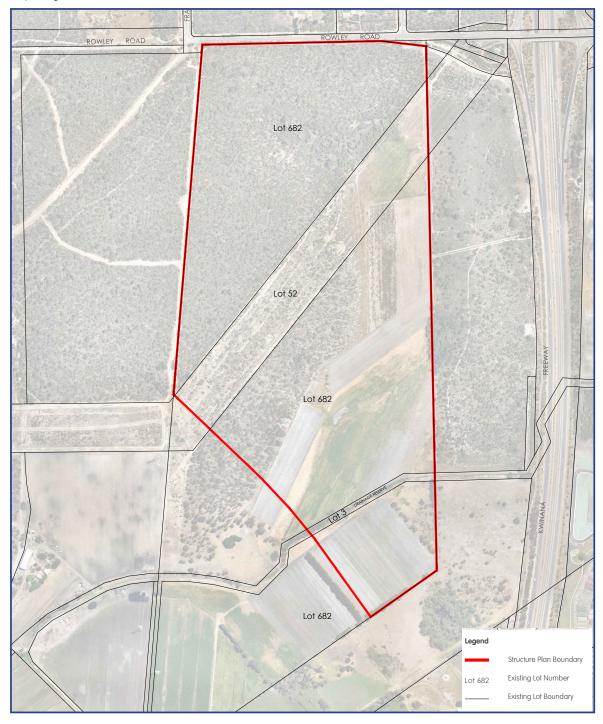
The site has a total land area of 72.89 hectares. It is traversed by a 132 and 330 kv power line easement running north-east to south-west, totalling 11.32 hectares in area. An existing drainage reserve, being the Peel Main Drain, also runs east west across the southern portion of the site.

The subject site is currently utilised for rural and horticultural purposes. The northern portion of the site contains an area of remnant bushland.

#### 1.3.3 Legal Description and Ownership

The subject site is comprised of portions of and legally described as Lot 682 and Lot 52, Rowley Road, Mandogalup, owned by Mandogalup Development Joint Venture (Refer Figure 3: Aerial Photo).

FIGURE 3: Aerial Photo



#### 1.4 Planning Framework

#### 1.4.1 Zoning and Reservations

#### 1.4.1.1 Metropolitan Region Scheme

The current Metropolitan Region Scheme (MRS) zonings and reservations are shown on Figure 4.

The majority of the site is zoned "Urban" under the MRS, with one small area zoned "Urban Deferred". This is located on the site's northern boundary and is associated with the eventual upgrading, road widening and noise attenuation measures of Rowley Road (Planning Control Area No. 95).

The Western Australian Planning Commission (WAPC) initiated MRS Amendment 1114/33 in June 2006 to rezone approximately 352 ha of land in Mandogalup from MRS Rural to Urban Deferred. This was one of a group of Amendments in the district to facilitate the urbanisation of land as prescribed by the Jandakot Structure Plan (JSP - described in further at section 1.4.2.1 below).

The Amendment was recommended for final approval by the WAPC but held in abeyance following objections from Alcoa regarding potential dust impacts from the Alcoa residue disposal area located to the west of the landholding. The "Review of the Kwinana Air Quality Buffer – Position Paper (WAPC 2008)" identified an area 1 km from the nearest residue disposal area (Area F) as "subject to further investigation" due to potential impacts of dust, noise and visual amenity arising from the operation of the residue storage area.

Amendment 1114/33 was finally approved and became effective in November 2009 in a modified form transferring approximately 181 ha of land outside the 1km 'investigation area' (of the original 352 ha proposed) to the Urban Deferred zone.

The south western boundary of the LSP area is defined by the outer edge of the Revised Kwinana Industrial (including air quality) Buffer, as of 21 September 2010. (here in referenced to as KIB), being the extent of the urban zone. Further information on the KIB and its impact on the LSP area are provided in the following sections of this report.

In proposing the reduced Amendment area, the Minister directed the WAPC under Section 17 of the Planning and Development Act 2005 as follows:

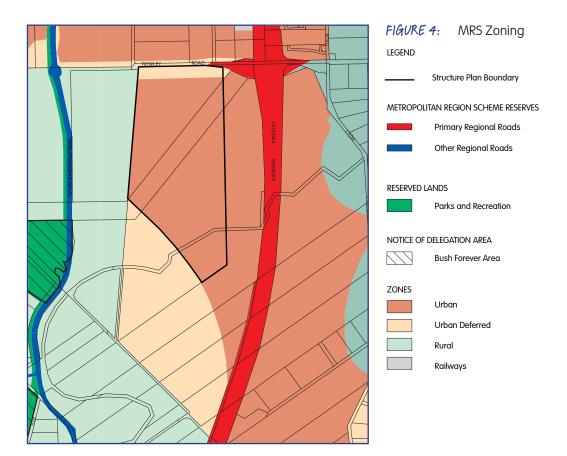
No decision to transfer land in the Mandogalup locality from the Rural or Urban Deferred zone to the Urban zone is to be made without the approval of Cabinet and the Minister responsible at the time of the Metropolitan Region Scheme and amendments or changes proposed to be made to it. No such decision will be made until the Kwinana Air Quality Buffer has been finalised, clearly indicating what land is within a buffer and should remain in the Rural or Urban Deferred zone and what land is outside a buffer area and therefore could be transferred to the Urban zone, subject to whatever other planning circumstances may apply to the subject land at the time.

In September 2010, the WAPC reviewed its position following completion of dust monitoring and modelling studies undertaken by Alcoa. The WAPC, on advice from the Kwinana Buffer Review Committee, resolved to retain the 1 km buffer and an additional 0.5 km non-residential "transition zone" to be referenced in public documents and Memorials on Certificates of Titles. In May 2011, following objections from landowners, the WAPC resolved to confirm the 1 km buffer and 0.5 km non-residential transition zone but with the specific acknowledgement that the extent of the buffer and transition zone will be reviewed in five years time (May 2017).

In May 2011, Roberts Day on behalf of Qube Property Group and Satterley Property Group lodged an application with the WAPC to lift the "Urban Deferred" zoning over the portion of land outside the 1.5km buffer zone. This request was subsequently approved and gazetted and is the latest action affecting the zoning of the land.

The site is surrounded by "Urban" zoned land to the north and east and "Rural" land to the west and south-west. Further east of the site is the "Primary Regional Road" reserve associated with the Kwinana Freeway.

The proposed LSP covers the "Urban" zoned land and a small portion of "Urban Deferred" being PCA No.95.



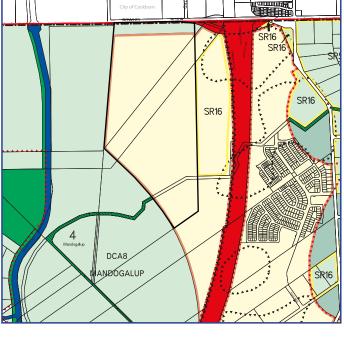
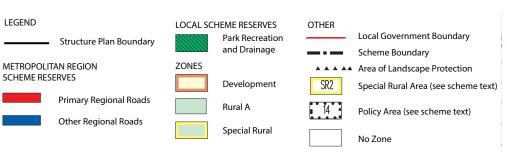


FIGURE 5: Town Planning Zoning



#### 1.4.1.2 City of Kwinana Town Planning Scheme No. 2 (TPS 2)

As part of the process of lifting the "Urban Deferred" zoning under Clause 27 of the MRS, a request using the provisions of Section 126 (3) of the Planning and Development Act was lodged by the City of Kwinana for the concurrent rezoning of the land to a "Development" zone under TPS 2. This request was agreed by the WAPC and therefore approved upon gazettal. The portion of land outside the KIB is therefore zoned "Development", with the Scheme map to be updated in due course. The area within the KIB buffer remains zoned "Rural".

Under the provisions of Part 6.17 of TPS 2, subdivision, use and development of land shall be in accordance with an approved LSP. The current TPS zoning is provided in Figure 5.

#### 1.4.2 Regional and Sub-Regional Structure Plan

#### 1.4.2.1 Jandakot Structure Plan

In 1993, a Select Committee Report on Metropolitan Development and Groundwater Supples reviewed the boundaries of the Jandakot Underground Water Pollution Control Area (JUWPCA). This review decreased the extent of the JUWPCA and as a result, revealed an area that was now without any strategic planning for future use and development. The Jandakot Structure Plan (JSP) was prepared over this subsidiary piece of land and was subsequently adopted in August 2007.

The JSP sets out the broad strategic planning framework for the 'U' shaped parcel of land surrounding the Rural Water Protection area (Refer Figure 6). It covers an area of land up to Rowley Road to the north and Millar and Jackson Roads to the south, dealing explicitly with the issues of both groundwater and storm water management. The JSP requires that a Local Water Management Strategy (LWMS), consistent with the Jandakot Water Resources Management Strategy (JWRMS) be prepared and lodged with any subsequent Local Structure Plans (LSP).

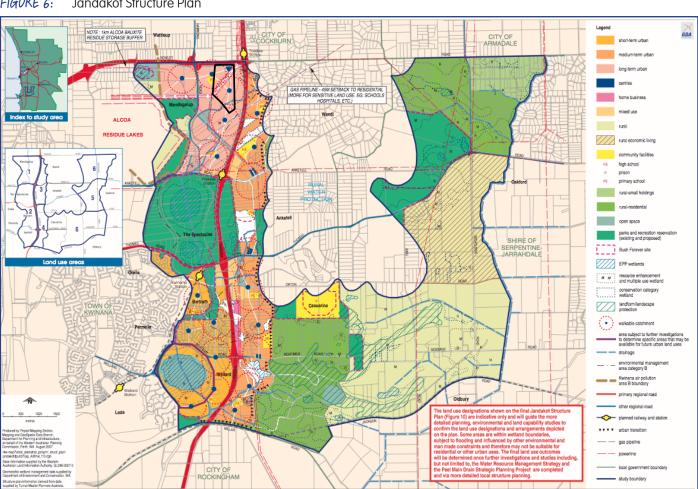


FIGURE 6: Jandakot Structure Plan

The JSP projects a population of approximately 40,000 residents within the JSP area and outlines the general location of conservation areas, primary schools and transport links. The specific details of these aspects, such as the coordination of development and remnant vegetation protection were limited. Subsequently these formed the basis of further investigations associated with the Draft District Structure Plan known as the Eastern Residential Intensification Concept (ERIC) through the then Town of Kwinana, discussed in further detail below.

The Mandogalup LSP is in accordance with the provisions of the JSP.

#### 1.4.2.2 Draft District Structure Plan - Eastern Residential Intensification Concept (ERIC)

ERIC was prepared by the then Town of Kwinana in November 2005 and provides an additional level of detail compared to that provided within the JSP (refer figure 7). In particular, it expands upon the opportunities and constraints inherent to the land and 'defines a framework by which urban subdivision and development is able to occur in an orderly and co-ordinated manner'.

The proposed Mandogalup LSP is generally in accordance with the Draft ERIC. The LSP provides a response to more detailed site-specific analysis as requested in ERIC such as flora and fauna, water management, noise controls and traffic management and those requirements emanating from Statement of Planning Policies (SPP).

FIGURE 7: Eastern Residential Intensification Concept

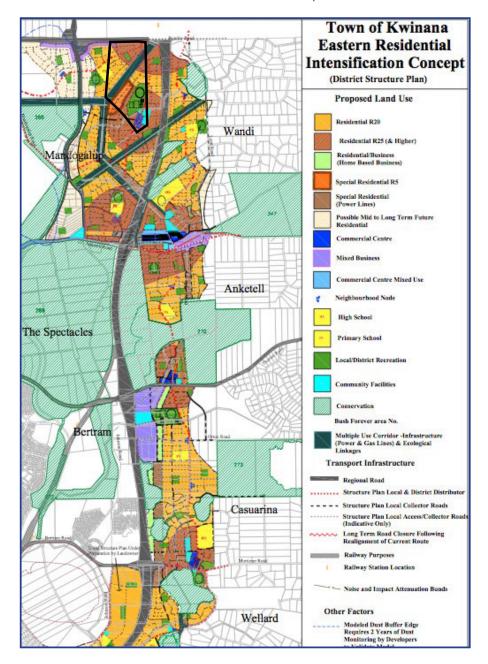
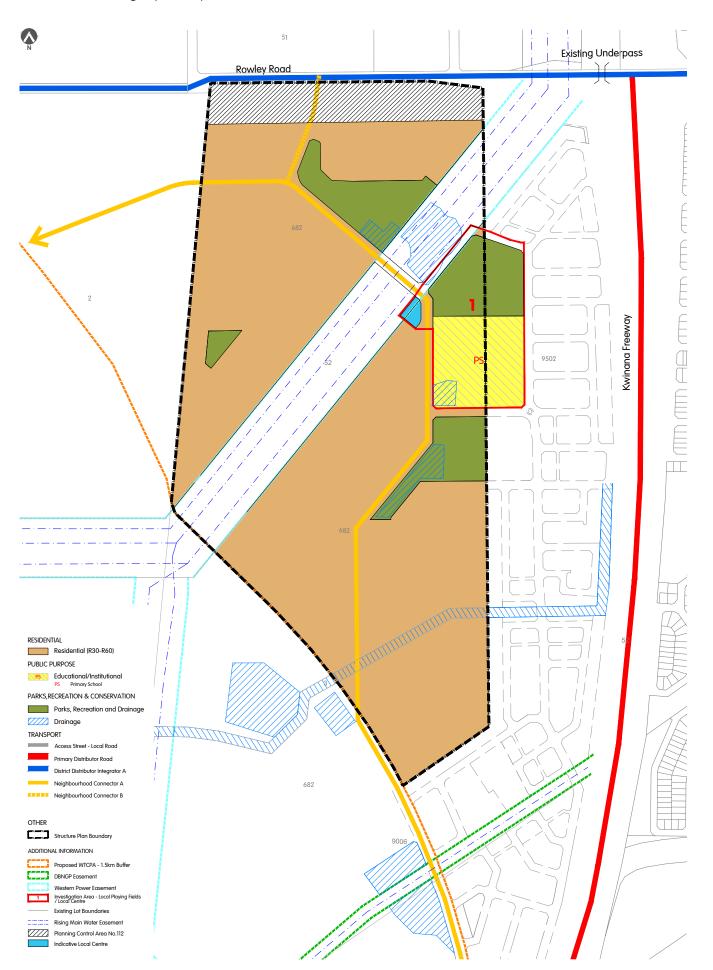


FIGURE 8: Mandogalup Concept Plan



### 1.4.3 Planning Strategies

#### 1.4.3.1 Directions 2031 and Beyond

Directions 2031 and Beyond (Directions 2031) is the high-level spatial framework and strategic plan for the Perth and Peel metropolitan region. Directions 2031 provides a framework for the detailed planning and delivery of housing, infrastructure and services necessary for various growth scenarios presented within the document.

Directions 2031 identifies growth scenarios for low, medium and high-density rates of infill and greenfield development. The Connected City scenario is identified as the preferred growth scenario, which was then modeled to determine the area of greenfield land that will be required for a city of 3.5 million people. Consistent with the outcomes of this approach, Directions 2031 sets a target of 15 dwellings per gross urban zoned hectare of land in development areas.

Directions 2031 is supported by a series of Sub—Regional Strategies which provide information about the levels of expected population growth in individual local government areas. The Sub- Regional Strategies also identify development opportunities and prospects for increased density within greenfield areas to facilitate achievement of the housing targets set in Directions 2031.

#### 1.4.3.2 Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy

The subject site is located in the south-west sub-region of the Draft Outer Metropolitan Strategy. The south-west sub-region is forecast to supply an extra 54,580 dwellings under the adopted 'Connected City' approach of Directions 2031. The draft strategy identifies the subject site and surrounding area as 'urban zoned undeveloped' with an estimated yield of 2200 dwellings (site MA1). The strategy also identifies an additional 400 ha of land to the south and west of the subject land as "Urban Expansion Area 2011-2015" (Site MA2) with a target of 4500+ dwellings subject to the resolution of the KIB.

#### 1.4.3.3 Draft Perth and Peel @ 3.5 million

It is anticipated that more than 3.5 million people will live in Perth and Peel by 2050. The Perth and Peel @ 3.5 million plans provide a strategic planning framework on how to accommodate this substantial population increase without impacting on our way of life, natural environment and physical infrastructure. The four draft sub-regional planning frameworks details where future homes and jobs should be located and where important environmental assets should be avoided and protected.

# 1.4.3.4 Draft South Metropolitan Peel Sub-regional Planning Framework Towards Perth and Peel @ 3.5 million

The Draft South Metropolitan Peel Sub-regional Planning Framework represents a whole state Government approach to managing the future urban form within the sub-region. The South Metropolitan Peel sub-region is proposed to accommodate more than 1.26 million people, over 507,000 homes and approximately 430,000 jobs.

The sub-regional Planning Framework identifies sufficient land to meet the increased demand for residential dwellings. The subject land at Mandogalup is identified on the Draft Sub-regional plan as "urban". The dwelling target yield of 900 achieves a density greater than the 12.4 dwellings per gross urban zoned hectare of land. This proposed density ensures the subject land is helping deliver an urban form in accordance with the State Government objectives and strategic planning policy, given the constraints associated with the subject land.

#### 1.4.3.5 Liveable Neighbourhoods

Liveable Neighbourhoods was prepared by the Western Australian Planning Commission to implement the objectives of the State Planning Strategy and deliver the strategies and actions of metropolitan spatial frameworks. As an operational policy of the WAPC, it guides the design and assessment of Structure Plans (regional, district and local), subdivision and development for new urban areas. Its aims include promoting the design of walkable neighbourhoods; places that offer community and a sense of place; mixed uses and active streets; accessible and sustainable parks; energy efficient design; and a variety of lot sizes and housing types.

# 1.4.3.6 City of Kwinana Draft Local Commercial and Activity Centres Strategy

The City of Kwinana Draft Local Commercial and Activity Centres Strategy was prepared to provide background information and input to inform the preparation of the City's new Local Planning Strategy (LPS). The document reviews and responds to the state policy setting (in particular SPP 4.2) and analyses the current configuration and future requirements for activity centres within the City based upon retail trends and population projections.

In alignment with the draft ERIC District Structure Plan, the strategy models a neighbourhood centre for the Mandogalup area, which would form part of a broader hierarchy of centres that service the current and future population of Kwinana. Based upon the model, the neighbourhood centre location was reallocated to Wandi, north of the proposed District Centre in a thin wedge of urban land. In addition, a local centre (up to 800sqm) was allocated on Anketell Road west of the freeway to service the future residents of Mandogalup.

Given the uncertainty surrounding the appropriate location of a neighbourhood centre to service the Mandogalup residents, a Retail Needs Assessment has been prepared by Taktics 4 to guide the appropriate location, size and nature of commercial activity (Appendix A).

The report concludes that based upon the current distribution of centres (as per the Commercial and Activity Centre Strategy), the future residents of Mandogalup would need to travel almost twice as far as most urban communities to gain access to supermarkets at Harvest Lakes Neighbourhood Centre and Wandi District Centre. Based upon a 1.5km radius as a primary catchment, there is a clear spatial opportunity in the Mandogalup area for the provision of a supermarket based centre. This centre is most logically located on Mandogalup Road where it can serve north and south catchments when access restrictions onto Rowley Road result in a full access intersection at Mandogalup Road. The proposed neighbourhood centre is discussed in further detail at section 3.8: Activity Centres and Employment.

#### 1.4.3.7 City of Kwinana Local Housing Strategy

The Draft City of Kwinana Local Housing Strategy was prepared in February 2007, is provided as an appendix to the Draft Local Planning Strategy and facilitates the review of and amendments to TPS 2. The intent of the strategy is to promote a broader range of housing types, encourage development of suitable sites, protect existing residential areas from incompatible land uses and preserve areas of remnant vegetation.

The strategy identifies a housing strategy that promotes medium density housing in close proximity to Public Open Space, Neighbourhood centres and transport nodes and more traditional lot sizes for areas not within close proximity to these services.

The proposed LSP is in accordance with the principles identified in the strategy and the proposed residential densities and housing typologies are discussed in further detail at section 3.4.

#### 1.4.3.8 Local Planning Policy – Public Open Space

The City of Kwinana's LPP – Public Open Space has been prepared to ensure POS is well planned, equitably distributed and appropriate to the needs of the local residents. The policy outlines general principles, minimum standards, rates of provision and locational requirements for POS provision. In addition, the policy outlines a range of development standards to be complied with.

The requirements outlined within the POS policy have influenced the LSP design through the distribution of public open space within a walkable catchment of all residential properties and their envisaged passive and active recreation uses. This is explained in further detail within Section 3.3 of this report. Issues pertaining to the detailed design of POS will be resolved at the subdivision stage.

#### 1.4.4 Policies

#### 1.4.4.1 Statement of Planning Policy

Development of land must generally be consistent with any relevant State Planning Policies (SPP) which are prepared and adopted by the WAPC under statutory procedures set out in Part 3 of the Planning and Development Act 2005. The WAPC and local governments must have due regard to the provisions of SPP's when preparing or amending regional and district planning schemes and when making decisions on planning matters. Details of the SPPs relevant to the site are provided below.

#### 1.4.4.2 State Planning Policy 2.9 - Water Resources

The purpose of this policy is to guide development of land that may impact on water resources in the state. Under the policy, water resources include "water in the landscape with current or potential value to the community or environment". This incorporates features such as wetlands and waterways, surface water, groundwater, drinking water catchments and sources, stormwater and wastewater. The policy aims to ensure that the quality and quantity of water resources in the state are not adversely affected by development and land use. The LSP design and LWMS ensure the quality of water collected and infiltrated through the site does not impact the landscape and environment qualities of the locality.

# 1.4.4.3 State Planning Policy 3 - Urban Growth and Settlement

This policy sets out the principles and considerations to apply to planning for urban growth settlement in Western Australia. The policy aims to facilitate sustainable patterns of urban growth and settlement.

The objectives of the policy are:

- To promote a sustainable and well planned pattern of settlement with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space.
- To manage growth and development of urban areas in response to social and economic needs of the community and in recognition of the relevant climatic, environmental, heritage and community values and constraints.
- To promote the development of sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and cenvenient access to employment services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.

#### 1.4.4.4 State Planning Policy 4.1 - State Industrial Buffer

The purpose of the State Industrial Buffer Policy is to provide a consistent state wide approach for the protection and long-term security of industrial zones, transport terminals (including ports) other utilities and special uses. It also provides for the safety and amenity of surrounding land uses, including residential.

The south west boundary of the LSP area is defined by the outer-edge of the Revised Kwinana Industrial (including Air Quality) Buffer as of 21 September 2010.

Th LSP is in accordance with the provisions of SPP 4.1 including the identification of the buffer area and exclusion of sensitive land uses within it.

# 1.4.4.5 State Planning Policy 5.4 - Road and Rail Transport and Freight Considerations in Land Use Planning

SSP 5.4 Road and Rail Transport and Freight Considerations in Land Use Planning addresses transport noise from within major transport corridors, including primary freight routes, and its impact on nearby noise -sensitive land uses.

The policy is relevant where there is proposed new noisesensitive development (i.e. residential) in the vicinity of an existing or future major road, rail or freight handling facility.

As per the provisions of SPP5.4, Rowley Road is classified as a major road and the primary freight connection between the Freeway and Kwinana Industrial area. To ensure Rowley Road can be upgraded to perform this strategic role and limit land use conflicts, a Planning Control Area was introduced to the portion of land surrounding the area (PCA No. 95). PCA 95 affects the northern most portion of the site and extends85 metres from the road centreline into Lot 682. The extent of the PCA was determined to allow for both the upgrade of the road and accommodate any noise attenuation measures. The LSP design and acoustic report confirms future residential housing will not be impacted by the future freight route

## 1.4.4.6 State Planning Policy 3.7 - Planning in Bushfire Prone Areas

In response to SPP 3.7 a Bushfire Management Plan (BMP) for the subject land has been prepared by Strategen.

The BMP proposes that "Asset Protection Zones (APZ's) be implemented at all interfaces where proposed development abuts classified vegetation to ensure future dwellings are afforded an appropriate level of low fuel defendable space. The width of the APZ is required to be a minimum of 20m wide in order to ensure proposed residential development achieves a Bushfire Attack Level (BAL) of BAL - 29 or lower.

Formal Hazard Separation Zones (HSZ's) will not be required around the APZ's for the site as the APZ's will be sufficient to ensure the proposed residential development will achieve a rating of BAL 29 or lower.

Where possible vegetation clearing will occur through the site on a staged basis and in advance where necessary, to ensure residential building construction is not impacted by temporary vegetation located on a future development stage that is yet to be cleared.

#### 2.0 Site Conditions and Constraints

#### 2.1 Biodiversity and Natural Area Assets

Given the current agricultural land uses being performed on the land (market gardens and grazing), portions of the site are predominantly cleared of native vegetation and degraded from an ecological perspective. Remnant vegetation on the land exists in the northern and central portion of the land which varies from "Very Degraded" to "Excellent" condition in the north-west corner of the site where Banksia Woodland is present.

Cardno completed a Flora, Vegetation, Fauna and Wetland Assessment and survey for the area in 2005, with a subsequent study being undertaken by Plantecology Consulting in 2012. During the surveys, no Declared Rare, Priority or Significant flora species were located within the site pursuant to the Wildlife Conservation Act 1950 or the Environmental Protection and Biodiversity Conservation Act 1999. No Threatened Ecological Communities were located during the time of survey and are not thought to occur within a 5km radius of the site.

An assessment of the likely occurrence of each fauna species identified by the Environmental Protection and Biodiversity Conservation Act 1999 Protected Matters database has also been undertaken. Of the species, the Forest Red-Tailed Black Cockatoo and the Carneby's Black Cockatoo were likely to be found within the area, in addition to a number of migratory species.

The northern portion of the site is currently fully vegetated and reflects woodland vegetation of the Bassendean Complex Central and South. The vegetation is dominated by an overstorey of low banksia and sheoak over an understorey of emergent eucalypts, shrubs and grasses. The central component contains a small area of low banksia woodlands. The remaining central and southern portions of the project area have been cleared for agricultural purposes.

The survey completed by Plantecology in 2012 also identified areas of existing trees worthy of retention including Jarrahs and Malaleucas, which have helped to identify and configure areas of POS. The development of the parks will aim to retain the trees where possible, subject to engineering constraints. Given the extent of environmental studies completed over the subject land over the years, Strategen have provided a letter outlining an overview of the work completed to date. The letter concludes that the vegetation does not pose a constraint to development and also expands upon various other environmental considerations including contamination, acid sulphate soils and fauna. This overview is provided at Appendix B.

The proposed clearing of 38.7 ha of native vegetation was referred under the EPBC Act and determined to be a "controlled action". Approval was granted for clearing of the native vegetation subject to the purchase of suitable off-set land.

#### 2.2 Landform and Soils

The subject land undulates from the highest point in the north-west corner on Rowley Road at around 42AHD down to the natural low point of the old Mandogalup Swamp at 13 AHD. A relatively steep ridge runs through the middle of the subject land in a north-east/south-west alignment with the land falling in an eastern and southern direction. An additional low point also exists within the power line easement, which currently forms a natural, low-lying drainage point.

The subject land forms part of the Bassendean Dune system consisting of Bassendean Sands and Bassendean Sands overlying Clayey Sand of the Guildford formation. Small portions of Peaty Clay and Sandy Silt exist on the site but are not considered to constrain the development of the site. Further details are contained within the Engineering Services Report provided as Appendix C.

The majority of the subject land is Moderate to Low Risk of ASS occurring within 3 metres from the soil surface with a small portion of High Risk. The potential presence of ASS is not considered a major constraint to development, however, it is anticipated that the presence of Acid Sulfate Soils will be managed through the development of an Acid Sulfate Soils Management Plan prior to development commencing.

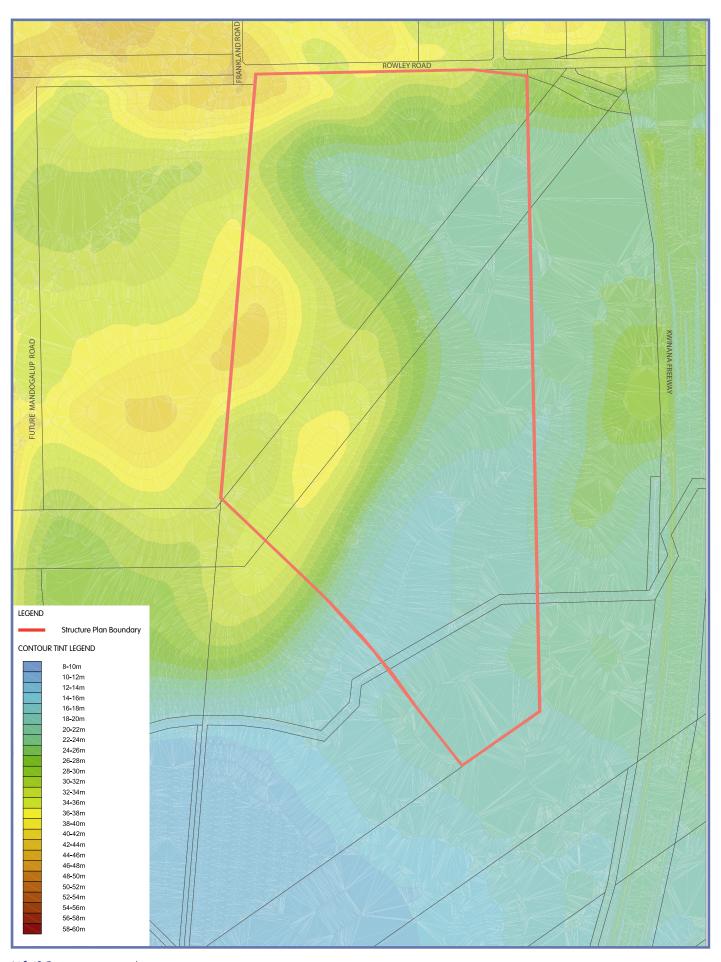


FIGURE 9: Topography

#### 2.3 Groundwater and Surface Water

The site is subject to the provisions of the SPP No.2.1 – The Peel Harvey Coastal Plain given the importance of the regionally significant wetland chain and its location within the catchment of the Ramsar listed wetlands of the Peel Inlet—Harvey Estuary. The Estuary is impacted by surface drainage from the area via the Peel Main Drain and the Serpentine River. As such, acceptable regional ground water levels and quality require consideration.

The Peel Harvey Catchment Council supports urbanisation of land within the catchment based on completion of water management strategies in accordance with regional water management strategies and design criteria.

The JSP recommended extensive regional water modelling be undertaken to protect these environmental assets. The Jandakot Drainage and Water Management Plan No.3 (Peel Main Drain Catchment) (JDWMP) identified acceptable regional ground-water levels and an arterial drainage scheme and key design criteria to be addressed through further water management planning.

In accordance with the JDWMP, a District Water Management Plan (DWMS) was prepared and subsequently approved, facilitating the lifting of urban deferment in accordance with the Better Urban Water Management (2008) framework.

To facilitate the development of the proposed LSP, a Local Water Management Plan (LWMS) has also been prepared to further refine and implement district and local drainage and groundwater quality requirements. The LWMS is provided at Appendix D with its strategies discussed in further detail at section 3.6.

An existing drainage reserve being the Peel Main Drain traverses the southern portion of the site grading from the eastern boundary to the west and will continue to perform a role in the stormwater collection and disposal strategy.



▲ Peel Main Drain and adjacent vegetation

#### 2.4 Bushfire Hazard

In accordance with environmental advice and approvals, the site will be largely cleared of native vegetation and therefore bushfire hazard within the site itself will be limited. Where existing vegetation is proposed to be retained within areas of POS, individual overstorey trees will not pose a significant bush fire risk to future assets of the site. The parks will be largely grassed, with small planted areas that will not be of sufficient size or density to pose a risk.

Remnant vegetation will also exist within PCA No 95. It is considered appropriate to retain a vegetated screen directly adjacent to Rowley Road, where overstorey trees are preserved to create an entry into the subject site. The remainder of the area will be cleared and earthworked, providing a significant buffer.

To the east of the site on Lot 9019, a combination of Flooded Gum open forest and Banksia low woodland in excellent condition are proposed to be retained in an area of POS. The area is classified as an 'extreme' bush fire hazard and a hazard rating will be assigned through the Fire Management Plan prepared for the adjacent development.

The management of bushfire in relation to the proposed residential development is detailed in the BMP as prepared by Strategen which comprises Appendix E.



▲ Existing bushland on Lot 9019 to be retained

#### 2.5 Heritage

The Department of Indigenous Affairs Aboriginal Heritage Inquiry System lists the Mandogalup Swamp / The Spectacles (Subject land 3427) as an "Other Heritage Subject land" (Stored) meaning it has been assessed and determined as not being a site under the Aboriginal Heritage Act 1972.

The subject land is not subject to any specific heritage lands identified on the City of Kwinana Municipal Heritage Inventory (2008).

# 2.6 Planning Control Area No. 95 and Rowley Road

The subject site is directly south of Rowley Road, which is classified as a District Distributor A Road in the Main Roads WA Functional Road Hierarchy document. Rowley Road has been identified as a primary freight route to the Kwinana Industrial Area and future container port. In the future Rowley Road, will be constructed to four lanes divided according to Main Roads WA and will have significant upgrades to on and off ramps to the Kwinana Freeway.

To protect the function of this important future route, Planning Control Area No 95 was introduced in 2011 and updated in 2013, affecting land on the northern border of the subject site. PCA 95 aims to ensure potential future land use conflicts are minimised and allow for the upgrade of the intersection onto the Freeway. In addition, the Planning Control Area incorporates required noise attenuation buffers as a result of the road's upgrade.

The land associated with PCA 95 is zoned 'Urban Deferred' and the proposed LSP design reflects this by not proposing land use and development controls over the land.

#### 2.7 Neighbouring Property - Satterley Land

The subject site sits to the west of Lot 9019, being the portion of land between the Kwinana Freeway and the sites eastern and southern boundary. Local Structure Planning for the site is currently being managed by Satterley Property Group.

Ongoing collaboration between Qube, Roberts Day, Satterley Property Group and their planning consultant Rowe Group has taken place to ensure extensive coordination between the two communities. In particular, the subdivision designs ensure the alignment of local roads, distribution of POS, residential property boundaries, service provision and staging.

In particular, efforts have been taken to ensure the equitable provision of the required primary school and associated playing fields. This has resulted in the required primary school being located on the boundary of the two sites, where the flat land is ideally suited to school and playing field use. The associated provision of land for these uses has been divided based upon the gross area of each landholding within the defined catchment (discussed in further detail at section 3.7.

Both Qube and Satterley Property Group have agreed to the proposed design and associated access arrangements.

#### 2.8 Overhead Powerline Easement

An existing overhead Powerline Easement traverses the site running north east to south west and is associated with the power network to the Kwinana Industrial Area and Power Station to the west of the site and the wider metro grid to the south and north. The easement has been selectively cleared including portions that are actively used for market gardening purposes. An easement is in place, which identifies a series of land use parameters which allow for appropriate private ownership and low key utilisation of the land, including the existing market gardening activities.

With the broader residential development of the surrounding land it is clear the present traditional market gardening activities can not continue and with increasing concerns in relation to bushfire risk that the area can not be left as a scrub regrowth area. Western Power's interest is in not owning the land, but preserving the functionality of the current easement. The City of Kwinana, has agreed tp accept vesting of the powerline easement land as restricted public open space. A portion of the easement land will be used for drainage purposes.

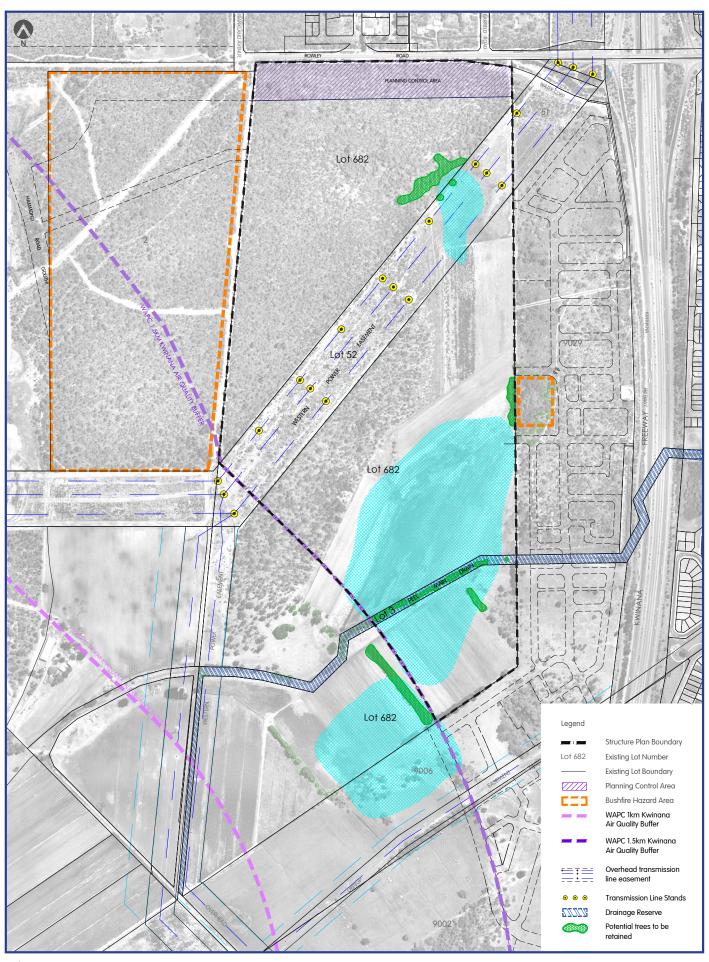


FIGURE 10: Opportunities and Constraints

#### 3.0 Land Use and Subdivision Requirements

### 3.1 Design Philosophy and Guiding Principles

The scale of the subject site and adjoining land provides a very unique opportunity for a fully contained and self sufficient residential neighbourhood. The subject site is the defining centrepiece of that neighbourhood and has been designed with the vision of being the lush and communal meeting point, in keeping with the proud historical origins of the immediate area as a Group Settlement Scheme and food bowl for the wider district.

The key guiding principals that have shaped the design of the community are:

- The Complete Neighbourhood with the emphasis on both provision and connection to all the essential retail, education, recreation, transport and housing choices;
- A Garden Setting a central grand avenue with a network of parklands providing a lush green setting;
- Pedestrian and Cycle First with an interconnected series
  of footpaths and dedicated central cycleway linking the
  entire neighbourhood, optimising the opportunity to cycle
  to work, sport, retail and providing commuter connections
  to the Aubin Grove rail station, increasing transport options
  and reducing freeway congestion;
- A Sense of Place with a celebration of its elevation and sense of topography, integration with its natural drainage system and wetland edge environment and retention and focus of vistas on drainage lines and tree belts central to its rural history; and
- Housing for All with a wide range of lot sizes, housing types and price points including traditional homes, and compact lots.

Based on the above guiding principles, the LSP design can deliver a connected and functional neighbourhood that will cater for the growing local community of Mandogalup. In accordance with the current Structure Plan guidelines this plan is indicative only and subject to change and refinement as the community evolves.

The proposed design is overlayed on the opportunities and constraints plan in Figure 11.

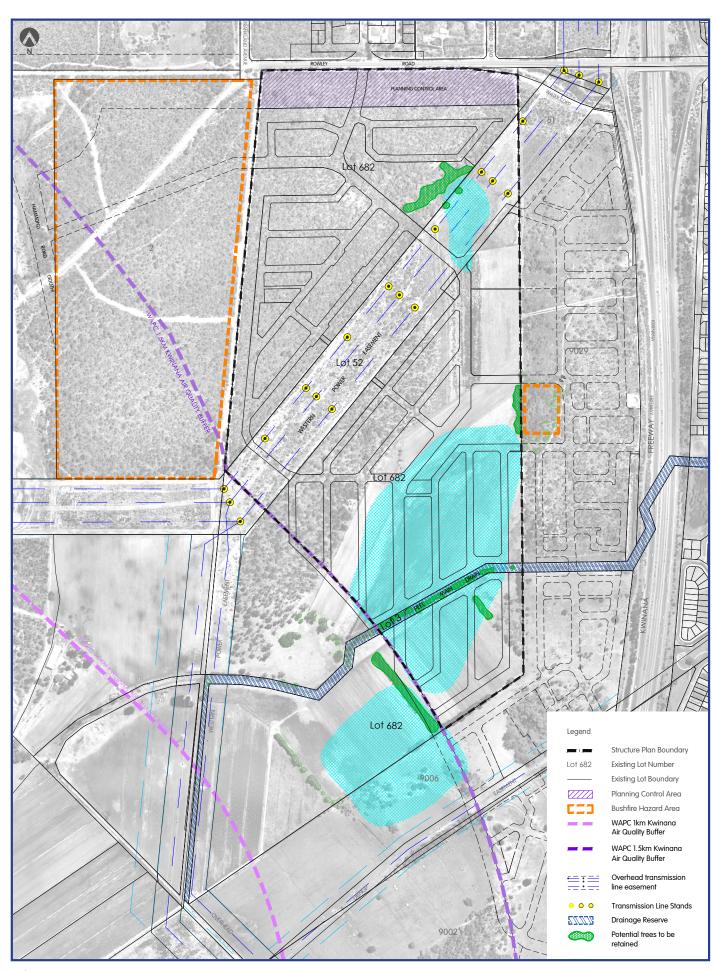


FIGURE 11: Concept Design Overlay

#### 3.2 Land Use

The proposed LSP provides for residential, recreation and educational land uses. In accordance with the policy framework for the site, the majority of the land is identified for residential purposes. The residential blocks have been configured to respond to the constraints of the land and careful consideration has been given to the transmission line easement.

Where possible areas of POS have been positioned to allow for the retention of existing trees and collocated with the natural low points on site. The positioning of the school and the associated playing fields has also responded to the flattest and lowest portion of land, to reduce earthworks and allow the development to reflect the natural drainage patterns at work and the opportunity to share the land contribution.

The low point running north south through the subject site has been acknowledged and has to large extent dictated the location of the north-south connector, providing the opportunity for a key walking and cycling route through the whole community, particularly towards the proposed school site. An overview of the LSP land uses and its key elements is provided in Table 1 & 2.

Item	
Total area covered by the Structure Plan	72.89ha
Estimate area of each land use proposed:	
Residential:	35.47ha
Public Open Space	6.05ha
Existing Drainage Reserve:	0.70ha
Primary School:	2.013ha
Road Reserve:	15.91ha
Transmission Line Easement:	10.55ha
Planning Control Area:	4.53ha
Estimated lot yield:	900 Lots
Estimated number of dwellings	900 Dwellingss
Estimated population	1852
Number of primary schools	1
Estimated number and % of public open space:	10% POS
Estimated area and number:	Provision
District open space	1 park
Neighbourhood parks	2 parks
Local parks	1 parks

TABLE 2: LAND USE SUMMARY

#### 3.3 Open Space

Public Open Space is generally configured around a central avenue forming a green corridor flowing through and connecting the entire neighbourhood. A series of parks along the avenue strengthen the recreational and land value of both the avenue and major areas of open space. This will perform the role of breaking the road into legible, smaller sections and create vistas towards and through these areas of amenity.

A series of complimentary secondary links also cross connect each of the parks creating a network of walking circuits for the community.

The areas of POS have also been located to take into consideration the possibility of retaining existing mature trees and key topographical features such as high and low points. In addition to helping create the green spine of the development, the POS is also configured to ensure the majority of residents are within 400 metres of a park that can be used for a variety of uses. This has resulted in the proposed park sizes ranging from 3000sqm for smaller pocket parks to larger parks of approximately 2.4 hectares (refer figure 12). This range in POS sizes will create spaces that are fit for purpose and provide for both passive and active recreation.

The overall provision of POS will be a minimum of 10% of the net subdivisible area and has been calculated in line with Liveable Neighbourhoods as outlined in Table 3. Given the flexibility afforded through the Structure Plan, the schedule is considered indicative only and may be subject to change through subdivision and detailed design of the site when an updated schedule is to be provided.

Given the importance of the POS spine in the creation of amenity and identity for the future community in Mandogalup, Plan E have prepared a Landscape Principles Plan, which is provided at Appendix F. The plan details functional, locational and philosophical aspects of the POS design and displays a photomontage of the key design features to be incorporated at the development stage. Character and theming of the landscape features include enhancement of existing natural bushland and materiality and public art to create a sense of place and connection with the past and present agricultural use.

The POS helps to configure and dictates the design of other major features of the development including the location of higher density residential lots, movement networks, water management features and links to educational facilities. The neighbourhood configuration therefore responds to the POS locations and draws amenity through the development with a series of vistas, vista terminations and lots with a direct outlook across green spaces. This is anticipated to be further defined through the planting of primary and secondary street trees to encourage a community with strong links to it's garden setting.











Proposed landscape character and theming

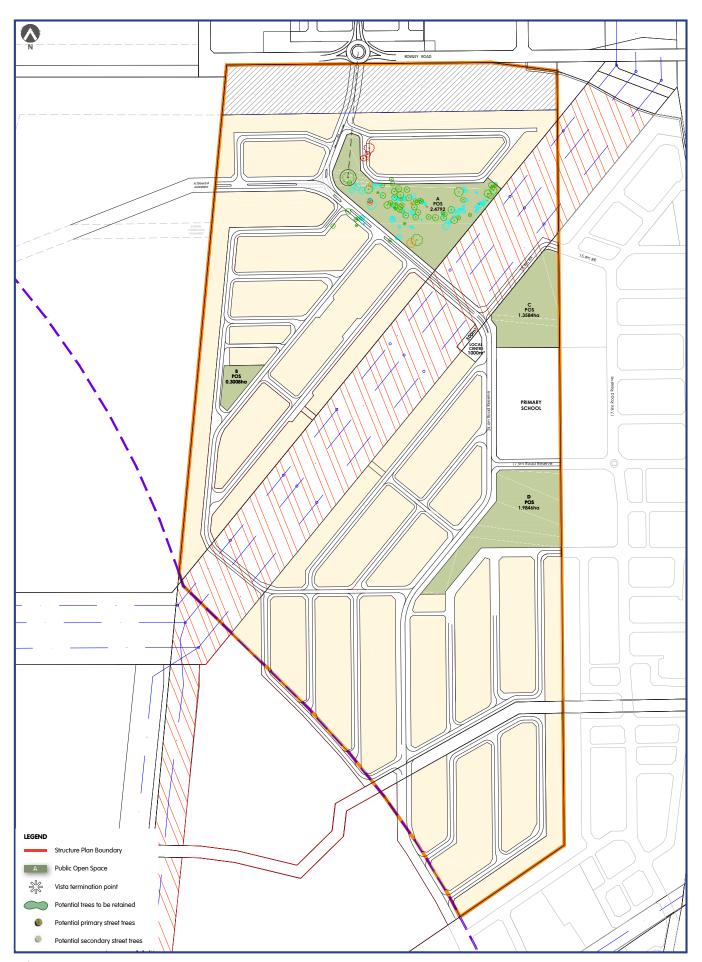


FIGURE 12: POS Plan

Site Area (Local Structure Plan boundary)			72.89ha
Less			
Peel Main Drain	0.7ha		
1:1 yr Drainage	0.31ha		
Power Easement Land	10.55ha		
PCA	4.53ha		
Total		16.09ha	
56.8 ha Net Site Area			
Deductions			
Primary School	2.013ha		
Nett Subdivisible Area			54.78ha
POS @ 10%			5.48ha
Public Open Space Contribution			
May comprise:			
Min 80% unrestricted POS	4.38ha		
Min 20% restricted use POS	1.1ha		
Total Required POS			5.48ha
POS Reference Number	TOTAL	Unrestricted	Restricted
		Urban POS Sites (ha)	Urban POS sites (ha)
А	2.4792ha	2.2692ha	0ha
В	0.3008ha	0.3008ha	0ha
С	1.3584ha	1.3584ha	0ha
D	1.9846ha	1.4446ha	0.44ha
Total	6.123ha	5.373ha	0.44ha
Total POS Provision			5.813ha (10.6%)

TABLE 3: INDICATIVE POS SCHEDULE

#### 3.4 Residential

With the site located more than 400 metres from the proposed neighbourhood centre to the west of the site, effort was required to create areas of high amenity that would enable pockets of increased residential density. The key north-south avenue and the areas of POS situated around this design feature has created the main source of amenity and it is envisaged that pockets of medium density laneway development will be located along this spine. This allows the proposed cottage product to have a direct outlook to the parks and minimise vehicle access across the cycleway.

Front loaded cottage product and compact lots are also envisaged within the Structure Plan area, with these smaller lots generally located within a walkable catchment of the primary school and along key vistas to significant areas of POS, where reduced areas of private open space can be compensated with increased amenity of nearby public parks.

The remainder of the residential lots are envisaged as more traditional R30 reflecting the fact that the development is further than 400 metres from a centre of any kind and responding to constraints on the land including the future freight route of Rowley Road and the power line easement.

The overall density for the proposed development is anticipated to be approximately 900 dwellings on various lot types resulting in an overall density of 12.4 dwellings per gross urban hectare (refer Table 3). Once significant site constraints that are unable to be developed are considered (in particular the power line easement, Planning Control Area and Peel Main Drain), the overall density increases to 15.76 dwellings per site hectare. This is considered appropriate for the site considering its location and context.

Specifically, the only appropriate location to focus density residential development is adjacent areas of POS. This strategy has been adopted as reflected in figure 13 Lot Type Plan.

Given the flexibility of the proposed statutory provisions of this Structure Plan however, the size of lots and associated dwellings will respond to market conditions at the time of subdivision application. Specific R-Codes will be assigned to lots through a Density Sites Plan lodged with an application for subdivision.

Despite the unusual geometry of the site, the majority of lots have also been able to achieve optimal solar orientation, particularly east west. The design ensures solar passive energy gains.

The proposed plan at Figure 13 outlines the anticipated lot types to achieve the guiding principle of "housing for all".

Lot Type	R-Code	Lot Size	Lots	%
Traditional	R20 – R25	300 – 899	578	64%
Medium Density	R30 – R60	120 – 599	322	36%
TOTAL			900	100%

TABLE 4: Indicative lot yields

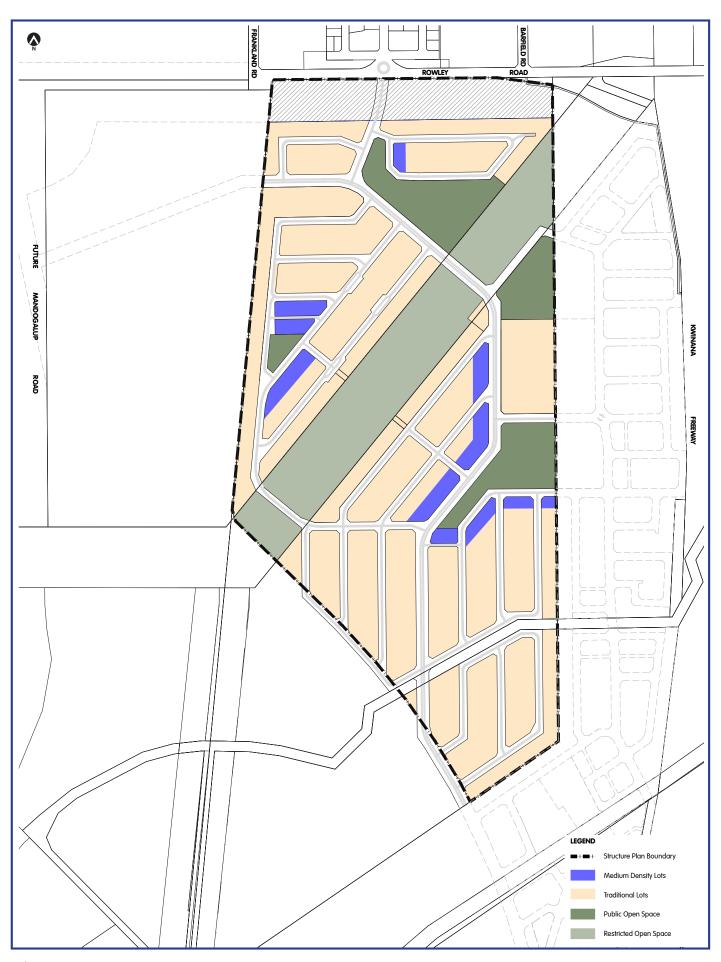


FIGURE 13: Lot Type Plan

### 3.5 Movement Networks

The overall movement network has been designed to optimise walking and cycling environments, particularly the central cycleway spine and cross connections to the Principle Shared Path located to the west of Kwinana Freeway. This will allow uninterrupted cycleway access from the Mandogalup neighbourhood through to the Aubin Grove rail station, optimising the use of public transport and increasing commuter options to the city.

The interconnected network of streets with dual use and pedestrians paths also provide ready access to localised areas of high amenity and walking circuits connecting parks, the primary school and the future neighbourhood centre. In addition, it allows sight lines, vista points and visual connections through to retained vegetation emphasising its importance in creating a sense of place for the community.

The proposed street network has also made extensive and significant effort to avoid viewlines and associated visual impacts of the high voltage powerlines. A degree of flexibility has been adopted in relation to block lengths in light of the broader benefits of the street network in creating and safeguarding amenity for the community.

The hierarchy of streets within and adjacent to the LSP area is based on the hierarchy defined within Liveable Neighbourhoods. The proposed design provides for a permeable, interconnected road network that allows for the free flow of pedestrians, cyclists and motorists within the LSP area. The discussion below relates to the Road Hierarchy Plan provided as Figure 14 and the Cycle/Footpath Plan provided as Figure 15.

Given the importance of the North South Neighbourhood Connector A road as the key entry and exit point into the new Mandogalup neighbourhood, significant consideration has informed its ultimate design. As mentioned at section 3.3, the connector road will link the community to areas of amenity and the primary school, which have been positioned to emphasise the key north south axis. In addition, the proposed cross section for the Neighbourhood Connector A is an innovative design that will allow for the development of a multi functional movement route for all members of the community. As well as performing its function of channelling traffic through the area, the road will be designed with off-road cycle paths, footpaths on both sides, on-street parking, and will be planted with street trees to emphasise its position as a central meeting point and its avenue nature. The placement of the road also emphasises the natural fall of the land, with it entering the LSP area through a natural amphitheatre at POS A, before following an existing contour to provide a flat connection through the neighbourhood to the primary school.

Rowley Road is classified as a District Distributor A Road in the Main Roads WA Functional Road Hierarchy document and is currently constructed as a rural standard single carriageway. It provides an east/west linkage between South Western Highway, Tonkin Highway, Kwinana Freeway and Rockingham Road and has been identified as a primary freight route to the Naval Base and Kwinana Beach Industrial Area.

In the future, it will be constructed to four lanes divided according to Main Roads WA. To protect this function, Planning Control Area No 95 was introduced on the northern border of the subject site to ensure potential land use conflicts are minimised and allow for the future upgrade of the intersection onto the Freeway. In addition, the Planning Control Area incorporates any required buffers or noise attenuation measures as a result of the road's upgrade.

Rowley Road also provides the main point of access into the subject site through its intersection with the proposed north south Neighbourhood Connector A/B road. The intersection is proposed at an appropriate distance to ensure the full functioning of Freeway access in the future. When development first occurs, the proposed Neighbourhood Connector will create a full access intersection with Rowley Road. As Rowley Road is progressively upgraded to a two lane standard, a roundabout will be constructed to perform this role. Ultimately, when Mandogalup Road is extended, the Neighbourhood Connector intersection will be downgraded to a left in left out, with full access being transferred to the west.

Key pedestrian and cyclist routes are also configured around the streets mentioned above within the LSP area. An off road cycleway will run along the North South Neighbourhood Connector, providing a safe bike link from existing infrastructure on Rowley Road, through the neighbourhood, past the primary school, and development to the south. Access Streets B and C will also be provided with Dual Use Paths to connect cyclists to the future Neighbourhood Centre, and to the regional bike networks and principal shared path that exists along the freeway and represent a significant opportunity for the site. Footpaths are also proposed throughout the entire neighbourhood. The key pedestrian and cyclist routes will be planted with street streets to emphasise the safe, green networks that will be developed throughout the area and promote walking and cycling as sustainable transportation alternatives.

A Transport Assessment Report has been prepared in support of the LSP and provides a detailed analysis of existing and proposed infrastructure, traffic generation calculations and intersection treatments. It is provided at Appendix G.



Proposed cycleway character

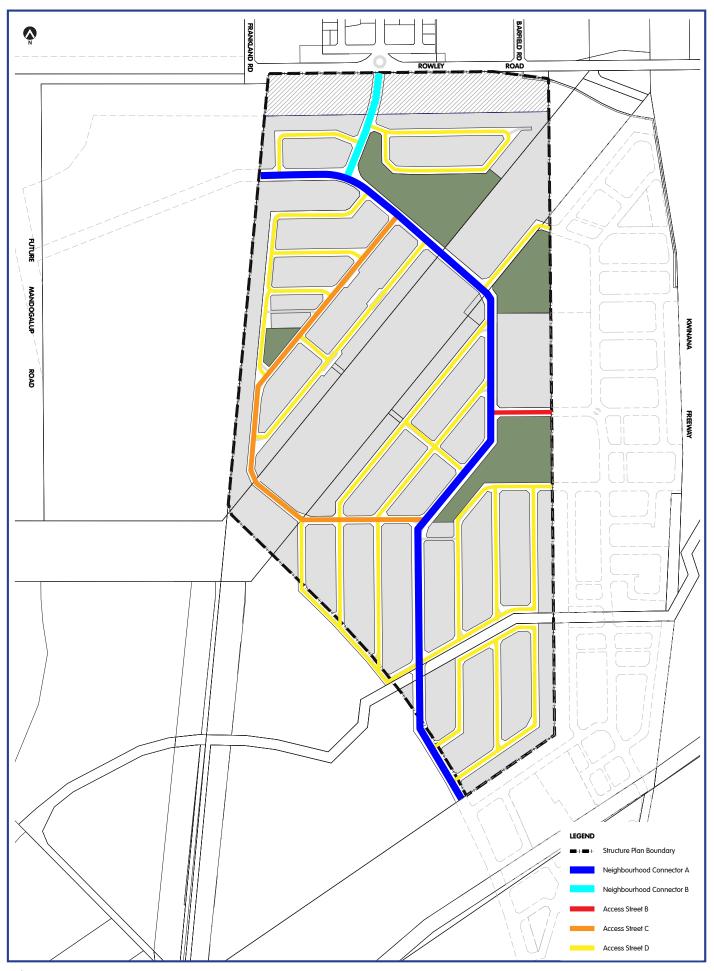


FIGURE 14: Road Hierarchy Plan

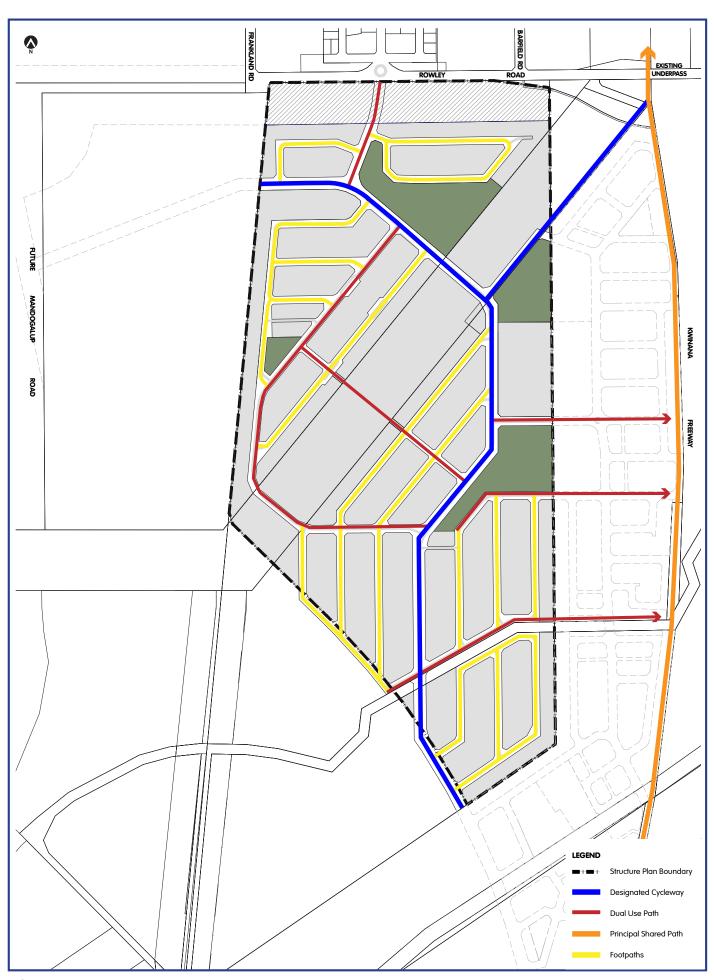


FIGURE 15: Cycle/Footpath Plan

## 3.6 Water Management

A Local Water Management Strategy (LWMS) for the LSP has been prepared by JDA and is provided at Appendix D. The LWMS requires stormwater runoff generated from the proposed development of the site be detained and infiltrated on site in POS greas in accordance with the DWMS.

Groundwater recharge will be maximised through the adoption of 'Best Management Practices' that promote the dispersion and infiltration of runoff as close to source as possible. The LWMS proposes the diversion of runoff into a pit and pipe network combined with inter-allotment drainage soakwells to infiltrate runoff from building roofs and private open space areas and the disposal of road runoff into infiltration basins within POS areas.

Drainage from public roads and lanes is to be collected via conventional gullies. The drainage collection and conveyance system will be designed to cater for the runoff from storms with up to a 1 in 5 year recurrence interval. A series of interconnected detention basins will store runoff to the predevelopment peak flow rates for the 5, 10 & 100 year ARI events. The dispersion of stormwater disposal throughout the site will maximise the area of recharge down through the soil profile to the shallow aquifer, thereby maximising the potential for nutrient stripping and water quality improvements.

As identified on the Structure Plan map, overflow drainage from POS area A is proposed to accommodated within the power easement. The amount as identified in the LWMS is considered acceptable given the area already performs this role and is a natural low point on the site. The use of the area in this regard minimises the need for earth working and reduces the impact of drainage on the adjoining POS. This again acknowledges the natural fall of the land and the proposed developments north-south road axis. The drainage areas are non-sensitive land uses and allow for the purposeful use of the land whilst the buffer is still in operation. Both areas will be developed to a low maintenance rural standard to reflect the current zoning status of the area and reduce the overall management burden on Council compared to full integration and 'urban' standard upgrades.

### 3.7 Education Facilities

The expected population in the Mandogalup area creates a catchment for a future primary school within the area. This catchment for the Mandogalup Primary School is contributed to by both the proponents of this LSP and Satterley Property Group, being the owners of land to the east of the subject site.

Given the importance of the North South Avenue in providing an ideal walking and cycling route along a flat and high amenity area, it was integral that the primary school be located in close proximity to this fundamental design feature. The proposed location responds to this objective, and ensures a primary school site that is adjacent to this piece of community infrastructure that encourages parents and children to enjoy an independent and sustainable journey to school.

The school site has been located in a central location relative to the two landholdings (Qube and Satterley). The primary school is proposed to be co-located with the City of Kwinana's shared use playing fields.

We propose the Primary School and Playing fields be shown on the structure plan as an 'Investigation Area'. The Investigation Area can accommodate either the option of the Primary School and Playing Fields being adjacent, or the option of there being a stand alone 4ha Primary School in the event the Playing Fields were located in the land currently zoned Rural.

## 3.8 Activity Centres and Employment

A Retail Needs Assessment (appendix A) has been prepared by Taktics 4 in response to uncertainty surrounding the requirement for a retail centre in the area. The report concludes that the community of Mandogalup would be underserviced for retail options and would need to travel almost twice as far as other urban communities to gain access to everyday goods and services. In short, the report indicated a clear spatial opportunity in the Mandogalup area for the provision of a small supermarket-based centre.

The retail needs assessment identified that a 750sqm small supermarket based local centre is economically viable within the Mandogalup area.

The proposed Local Centre on the western boundary of the subject site will sufficiently service the future residents of Mandogalup. The centre will provide for day-to-day goods, services, community facilities and employment opportunities. The proposed small supermarket local centre is expected to be developed following the establishment of a sufficient catchment in the new residential neighbourhoods.

For higher order goods and services, it is expected that the future Mandogalup residents will utilise the secondary centres of Kwinana and Cockburn, with both being approximately 6-7km south and north of the subject site respectively. These centres, in addition to the Kwinana and Henderson Industrial areas are expected to provide a wide variety of jobs and employment opportunities for the growing, diverse community.

The City's draft Local Commercial and Activity Centre's Strategy identifies Mandogalup as having a retail need/ potential of 1,000m² in 2026 which is projected to increase to 1,500m² in 2031.

An 'Investigation Area - Local Centre' is shown on the LSP. The site is strategically located adjacent to the Primary School and playing fields, and is mid-point along the local distributor road which will connect from Anketell Road to Rowley Road. If required, the site will serve well as a lower order convenience facility integrated with the central community hub.

# 3.9 Infrastructure Coordination, Servicing and Staging

An Engineering Servicing Report was prepared by Cossil and Webley to progress the proposed LSP. The report concludes that no major issues preclude the development of the LSP area. The Engineering Servicing Report is provided as Appendix C, with a summary of the major findings provided below.

### 3.9.1 Sewer

The site forms part of the Water Corporation's Thompson's Lake waste water reticulation system and planning has been undertaken to develop strategies for providing deep sewerage to urban land within the area. The site is proposed to be serviced by connection to a future DN300 reticulation sewer, discharging to a future type 180 Waste Water Pumping Station 98-174B located off site to the south of the proposed development. More detailed assessment of the current Water Corporation planning for the site has been undertaken by VDM Group through work associated with the neighbouring, western landholding.

### 3.9.2 Water Reticulation

The Site is located within the current boundary of the Water Corporation's Water Supply Scheme and overall planning for the scheme has made provision for residential development over the subject land.

The Water Corporation has however indicated that water distribution planning for the area is under review. The current planning indicates that the site will ultimately be serviced by extension of an existing 610mm distribution main in Hammond Road that currently terminates north of the intersection with Russell Road. This extension is a Water Corporation capital project, and would be extended south as demand requires.

### 3.9.3 **Power**

Electrical consultant UDP has advised that the proposed development can be supplied from the existing HV cable located on the northern side of Rowley Road.

All power to the Mandogalup development will be underground and fed from transformers located strategically within the site.

## 3.9.4 Gas

ATCO Gas has advised that the proposed development can be supplied with reticulated gas via a connection to the existing system, approximately 1.3km north of the site.

## 3.9.5 Telecommunications

The National Broadband Network Company are able to prioritise new developments of more than 100 dwellings to have optic fibre infrastructure installed. As a number of surrounding developments in the immediate vicinity are within NBN Co's fibre footprint, extension of the current network does not pose an issue for the area.

Under the current scheme, the developer is required to enter into an agreement with NBN Co to provide design and pit and pipe infrastructure which is handed over free of charge to NBN upon completion. NBN Co will then cover the cost of fibre deployment and any off-site extensions required to service the development.

## 3.9.6 Staging

The proposed staging allows for lots adjacent Rowley Road to be brought to market first, given their ease of servicing and access.

The vegetated screen adjacent Rowley Road within PCA 95 will provide an entry into the neighbourhood, as will the area of POS adjacent the north south avenue road. In addition, it allows for a wide variety of lot types to be released to market.

The development will then generally progress in a southerly direction, with each stage proposing the creation of POS as well as housing to ensure amenity for the growing neighbourhood. The timing of the release of lots through Mandoglaup will depend on relevant sales rates.

## 3.10 Developer Contribution Arrangements

The Town of Kwinana has undertaken extensive investigation into the physical and community infrastructure required to progress development of the wider urban growth corridor. The proposed Amendments to TPS2 now formalise the development contributions sought for both 'hard' infrastructure (Amendment 100A) and 'soft' infrastructure (Amendment 115/145).

The Amendments were both advertised in 2009.

Amendment 115 has been finally adopted by the City and WAPC. This Amendment has been superseded by the more recent Amendment 145.

Amendment 100 A proposed revised development contributions for the Mandogalup area through and adjustment to the contribution area and facilities for DA8. Qube lodged a submission in December 2015 objecting to the Amendment and the need for wider ocntributions on the basis that facilities and infrastructure for the reduced development cell (now limited to the zoned Qube and Satterley land outside of the 1.5km interim buffer) can be provided by the two primary landowners through standard subdivision conditions and private agreement in relation to co-ordination of services. In particular it is noted;

- Primary School is now centrally located and shared prorata between the two owners;
- There is a shared playing field accommodated within the 10% POS provision and shared pro-rata, that meets the active recreation needs of the reduced development cell;
- The local distributor road network, including interim connection to the regional network, as and when required;
- Hammond Road (south of Rowley) servers a district purpose benefiting a wide range of existing rural and future residential and industrial land owners and is not a cost that should be borne by Qube and Satterley, in accordance with the need and nexus requirements of SPP3.6; and
- The two landowners are entering a private agreement for the co-ordination and contribution to trunk service connections.



## 16 Reports – Civic Leadership

# 16.1 Control of dogs in certain public places (dog exercise areas and places where dogs are prohibited) - Dog Act 1976 (WA)

## **SUMMARY:**

Utilising the powers conferred by s 31(3A) of the *Dog Act 1976* a local government may specify a public place under its care and control to be a dog exercise area or a place where dogs are prohibited. The local government is required to give 28 days local public notice as defined in s 1.7 of the *Local Government Act 1995* to the community of its intention to specify a public place as a dog exercise area or a place where dogs are prohibited.

### OFFICER RECOMMENDATION:

That Council approve the local public notice of its intention to specify the following:

- 1. Such places as dog exercise areas.
  - Harry McGuigan Park, Medina Avenue, Medina (Reserve 24172)
  - Littlemore Park, Littlemore Road, Orelia (Reserve 30086)
  - Skottowe Parkway, Cromer Gardens, Parmelia (Reserve 40922)
  - Peace Park Reserve, Parmelia Avenue, Parmelia (Reserve 33949)
  - Sloans Reserve, Wellard Road, Leda (Reserve 25132)
  - Daintree Loop Reserve, Centennial Avenue, Bertram (Reserve 47259)
  - Harrison Way Reserve, Harrison Way, Calista (Reserve 30326)
  - Djilba Reserve, Djilba View. Leda (Reserve 43072)
  - Gabor Park, Dalrymple Dr, Leda (Reserve 43889)
  - Riley Park, Robbins Rt, Leda (Reserve 41394)
  - Rogan Park, Prockter Gdns, Leda (Reserve 41570)
  - Hennessy Park Reserve, Hennessy Avenue, Orelia (Reserve 30736).
  - Seabrook Way Reserve, Seabrook Way, Medina (Reserve 33240)
  - Wellard Reserve, Wellard Road, Wellard (Reserve 40218)

## Advice Notes

An area declared as a Dog Exercise area does not apply to land; which has been set apart by the City of Kwinana as a children's playground; an area being used for sporting or other activities, as permitted by the City of Kwinana, during the times of such use; or a public carpark.

- 2. Approve local public notice of its intention to specify such places as places where dogs are prohibited.
  - A public building, shop or business premises, with the exception of a shop or business premises where dogs are sold, unless permitted by a sign;
  - A theatre or picture garden;
  - All premises or vehicles classified as food premises or food vehicles under the *Food Act 2008*;

- A public swimming pool;
- Land which has been set apart by the City of Kwinana as a children's playground;
- Kwinana Golf Course Reserve No. 25309 and:
- All beaches within the boundaries of the City of Kwinana.

#### DISCUSSION:

The City of Kwinana's previously administered dog exercise and prohibited areas under its Dog Local Law. A change to legislation amended this requirement and dog exercise areas and places where dogs are prohibited can now be approved by Resolution of Council.

The areas which have been detailed in this report are consistent with areas previously legislated as dog exercise areas under the City's Dog Local Law. The areas recommended as places where dogs are prohibited are consistent with areas previously declared as places where dogs are prohibited.

The City is required to give 28 days local public notice of its intention to specify dog exercise areas or places where dogs are prohibited. Following the public notice period, any submissions will be reviewed and a further report will be presented to Council to approve.

## **LEGISLATIVE/POLICY IMPLICATIONS:**

## Dog Regulations 2013;

# 37. Transitional regulation: provisions of certain local laws have no effect after 31 July 2014

- (1) In this regulation Place control provision means a provision of a local law that was made under the Dog Act 1976 section 51(b), (ba) or (bb) before 1 November 2013 (the day on which section 51 (b), (ba) and (bb) were deleted by the Dog Amendment Act 2013 section 56 (a)).
- (2) Each place control provision has not effect after 31 July 2014.

## Dog Act 1976;

## 31. Control of dogs in certain public places

- (2B) A local government may, by absolute majority as defined in the *Local Government Act 1995* section 1.4, specify a public place, Or a class of public place, that is under the care, control or management of the local government to be a place where dogs are prohibited
  - (a) At all times; or
  - (b) At specified times.

- (3A) A local government may, by absolute majority as defined in the *Local Government Act 1995* section 1.4, specify a public place, or a class of public place, that is under the care, control or management of the local government to be a dog exercise area.
- (3B) A local government may, by absolute majority as defined in the *Local Government Act 1995* section 1.4, specify a public place that is under the care, control or management of the local government to be a rural leashing area.
- (3C) At least 28 days before specifying a place to be -
  - (a) A place where dogs are prohibited at all times or at a time specified under subsection (2B); or
  - (b) A dog exercise area under subsection (3A); or
  - (c) A rural leashing area under subsection (3B),

A local government must give local public notice as defined in the *Local Government Act 1995* section 1.7 of its intention to so specify.

## FINANCIAL/BUDGET IMPLICATIONS:

As these areas were previous dog exercise areas and places where dogs are prohibited, there should be no changes to the City's maintenance funds.

## **ASSET MANAGEMENT IMPLICATIONS:**

No asset management implications have been identified as a result of this report; however, there will be minor ongoing maintenance costs in relation to the installation of signage and waste disposal units.

## **ENVIRONMENTAL IMPLICATIONS:**

No environmental implications have been identified as a result of this report

### STRATEGIC/SOCIAL IMPLICATIONS:

The City of Kwinana Strategic Community Plan 2015 – 2025 provides that Council will;

**Strategy 4.2.1** "provide active recreation opportunities and develop public open space and infrastructure in new developments"

**Strategy 4.2.2** "provide the community with functional, accessible and practical open parks and play spaces for a diverse range of users"

Strategy 4.4.2 "encourage and promote the design of places of activity and enjoyment"

### **RISK IMPLICATIONS:**

There are currently no areas within the City which are specified dog exercise areas. As such the City Assist team could theoretically pursue breaches of legislation in regards to the control of dogs under the Dog Act 1976 for residents exercising their dogs in areas which were previously gazetted. This risk will be removed when Council resolve by absolute majority to specify the listed exercise areas after public advertising and consideration of submissions.

## **COUNCIL DECISION**

444

**MOVED CR S LEE** 

### **SECONDED CR R ALEXANDER**

That Council approve the local public notice of its intention to specify the following:

- 1. Such places as dog exercise areas.
  - Harry McGuigan Park, Medina Avenue, Medina (Reserve 24172)
  - Littlemore Park, Littlemore Road, Orelia (Reserve 30086)
  - Skottowe Parkway, Cromer Gardens, Parmelia (Reserve 40922)
  - Peace Park Reserve, Parmelia Avenue, Parmelia (Reserve 33949)
  - Sloans Reserve, Wellard Road, Leda (Reserve 25132)
  - Daintree Loop Reserve, Centennial Avenue, Bertram (Reserve 47259)
  - Harrison Way Reserve, Harrison Way, Calista (Reserve 30326)
  - Djilba Reserve, Djilba View. Leda (Reserve 43072)
  - Whyatt Park, Dalrymple Dr, Leda (Reserve 43889)
  - Riley Park, Robbins Rt, Leda (Reserve 41394)
  - Rogan Park, Prockter Gdns, Leda (Reserve 41570)
  - Hennessy Park Reserve, Hennessy Avenue, Orelia (Reserve 30736).
  - Seabrook Way Reserve, Seabrook Way, Medina (Reserve 33240)
  - Wellard Reserve, Wellard Road, Wellard (Reserve 40218)

#### Advice Notes

An area declared as a Dog Exercise area does not apply to land; which has been set apart by the City of Kwinana as a children's playground; an area being used for sporting or other activities, as permitted by the City of Kwinana, during the times of such use; or a public carpark.

- 2. Approve local public notice of its intention to specify such places as places where dogs are prohibited.
  - A public building, shop or business premises, with the exception of a shop or business premises where dogs are sold, unless permitted by a sign;
  - A theatre or picture garden;
  - All premises or vehicles classified as food premises or food vehicles under the Food Act 2008:

- A public swimming pool;
- Land which has been set apart by the City of Kwinana as a children's playground;
- Kwinana Golf Course Reserve No. 25309 and;
- All beaches within the boundaries of the City of Kwinana.

CARRIED 6/0

NOTE – That the Officer Recommendation has changed to reflect Council resolution number 208 on 25 May 2016 at the Ordinary Council Meeting that Gabor Park, Dalrymple Dr, Leda (Reserve 43889) changed its name to Whyatt Park, Dalrymple Dr, Leda (Reserve 43889).

# 16.2 Local Public Notice of Proposed Disposition by way of lease of Lot 1876 Harman Street, Leda (Caretaker's Cottage)

## **SUMMARY:**

The City of Kwinana assumed control of Lot 1876 Harman Street, Leda (Caretaker's Cottage on Sloan's Reserve) on 1 July 2015. There is not a formal lease agreement in place. The tenant has been occupying the premises since May 2015. It will be proposed that the tenant enter into a formal lease agreement after the advertising period concludes. A Council report will be prepared for Council to approve the Mayor and Chief Executive Officer to execute the lease agreement that will be presented.

This report seeks Council approval to give local public notice of the proposed disposition by way of lease of Lot 1876 Harman Street, Leda, known as the Caretaker's Cottage, on Sloan's Reserve.

## **OFFICER RECOMMENDATION:**

### That Council:

- 1. Give local public notice of the proposed disposition by way of lease of the Caretaker's Cottage, on Sloan's Reserve, Lot 1876 Harman Street, Leda in accordance with Section 3.58(3)(a) and (4) of the Local Government Act 1995.
- 2. Advertise the proposed rent to be \$200 per week.

### **DISCUSSION:**

Previously, the Caretaker's Cottage was managed via Ray White Kwinana, on behalf of the Kwinana Heritage Group. The Kwinana Heritage Group rented out the Caretaker's Cottage in order to generate income for its operations. After discussions between City of Kwinana staff and Kwinana Heritage Group representatives, it was agreed that the City is better placed to manage the cottage, and as a result, it was not included in the new Management Agreement and that the City provide \$10,000 per annum in lieu of the rent income that would have been received if the Kwinana Heritage Group remained as the landlord. The City assumed control of and responsibility for the cottage at the commencement of the new Management Agreement, which was on 1 July 2015. Currently, there is not a formal lease agreement in place between the City of Kwinana and the tenant.

The market rent valuation has been carried out on the premises by Pember Wilson & Eftos and was received on 19 January 2017. The Market rental value, as detailed in Confidential Attachment A, has been determined to be \$200 per week, or \$10,400 per annum excluding GST and outgoings.

The tenant has requested a reduction in rent, to an amount of \$150 per week. The reasons are detailed in Confidential Attachment B. City Officers have considered the request and as a result of the recent market rental valuation, City Officers recommend the rent for the Caretaker's Cottage, on Sloan's Reserve to be \$200 per week.

16.2 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE OF LOT 1876 HARMAN STREET, LEDA (CARETAKER'S COTTAGE)

### **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.
- (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:

There are financial/budget implications identified as a result of this report.

The current budget income for 2016/2017 is \$14,040. If Council approve the revised rent, the revised budget estimate for 2016/2017 will be \$13,340. The difference of \$700 will be absorbed from other lease revenue received in 2016/2017 financial year.

The provision of the Local Public Notice advertisement will cost approximately \$200 and will be funded from the GOVADV account.

### **ASSET MANAGEMENT IMPLICATIONS:**

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

16.2 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE OF LOT 1876 HARMAN STREET, LEDA (CARETAKER'S COTTAGE)

## **ENVIRONMENTAL IMPLICATIONS:**

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

## STRATEGIC/SOCIAL IMPLICATIONS:

Plan	Objective	Strategy
Corporate Business Plan	6.3 Maximise the value of the City's property assets	6.3.1 Develop the City's Land Asset Management Plan and acquire, manage and dispose of Council land assets on the basis of the adopted recommendations

## **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 the Caretaker's Cottage, on Sloan's Reserve, Lot 1876 Harman Street, Leda in accordance with Section 3.58(3)(a) and (4) of the Local Government Act 1995. Should Council resolve not to give local public notice, as per Section 3.58 of the Local Government Act 1995, 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 the Caretaker's Cottage, on Sloan's Reserve, Lot 1876 Harman Street, Leda.
Rating (after treatment)	Low

16.2 LOCAL PUBLIC NOTICE OF PROPOSED DISPOSITION BY WAY OF LEASE OF LOT 1876 HARMAN STREET, LEDA (CARETAKER'S COTTAGE)

## COUNCIL DECISION 145 MOVED CR D WOOD

## **SECONDED CR W COOPER**

## **That Council:**

- 1. Give local public notice of the proposed disposition by way of lease of the Caretaker's Cottage, on Sloan's Reserve, Lot 1876 Harman Street, Leda in accordance with Section 3.58(3)(a) and (4) of the Local Government Act 1995.
- 2. Advertise the proposed rent to be \$200 per week.

CARRIED 6/0

# 16.3 Local Public Notice of Proposed Road Closure of a Portion of Kenby Chase, Wandi

### SUMMARY:

The City was approached by Rowe Group to initiate a formal application to permanently close a portion of Kenby Chase, Wandi. The portion of road reserve that is being requested to be closed on Kenby Chase currently has a road reserve width of approximately 20 metres; therefore, the specific purpose of this request is to reduce the portion of road reserve width in accordance with the Local Structure Plan, keeping it in line with the Liveable Neighbourhoods cross-section for an Access Street C.

This report seeks Council approval to give local public notice of the proposed road closure of a portion of Kenby Chase, Wandi.

At the Ordinary Council Meeting on 23 September 2015, Council approved a road closure of a portion of Kenby Chase where the road reserve was amalgamated into Lots 54 and 55, for the purpose of subdivision as part of the then proposed residential development.

### **OFFICER RECOMMENDATION:**

That Council give local public notice of the proposed road closure of a portion of Kenby Chase, Wandi, as detailed in Attachment A and in accordance with Section 58(3) of the Land Administration Act 1997.

### **DISCUSSION:**

Rowe Group acts on behalf of Blokk Property Australia in relation to the development of their landholdings within the approved Wandi (south) Local Structure Plan (LSP) area, being Lots 60 and 61 Kenby Chase, Wandi, as detailed in Attachment A. The current approved Wandi (south) LSP depicts the intended development layout for the locality, as detailed in Attachment B.

As part of the planning and development process for the subject land, Rowe Group is specifically requesting that the City initiates the road closure process for the portions of Kenby Chase road reserve abutting Lots 60 and 61 Kenby Chase, Wandi, as detailed in Attachment A.

Rowe Group has confirmed the portion of the existing Kenby Chase road reserve proposed for closure is approximately 455 square metres in total, as detailed in Attachment A.

The proposed closed portion of Kenby Chase is intended to be amalgamated with the adjoining lands, being Lots 60 on Deposited Plan 18485 (Certificate of Title Volume 1934 and Folio 60) and 61 (No. 3) Kenby Chase on Deposited Plan 18485 (Certificate of Title Volume 1934 and Folio 61). Rowe Group has confirmed the subject land is currently under the control of its client, Blokk Property Australia.

16.3 LOCAL PUBLIC NOTICE OF PROPOSED ROAD CLOSURE OF A PORTION OF KENBY CHASE, WANDI

Kenby Chase is planned to be upgraded to an urban standard, and constructed to a 15.4 metre access street C cross-section. Kenby Chase currently has a road reserve width of approximately 20 metres; therefore, the specific purpose of this request is to reduce the reserve width in accordance with the LSP, keeping it in line with the Liveable Neighbourhoods cross-section for an access street C. The requirement for the upgrade of Kenby Chase will be included as a condition of subdivision approval for the adjoining land.

Council approved a portion of Kenby Chase road reserve to be closed in 2015 and amalgamated into Lots 53, 54 and 55.

Rowe Group is progressing a minor LSP amendment and an application for the subdivision of Lots 60 and 61 Kenby Chase has been lodged concurrently with the subject request. Subsequently, this application seeks to complete the upgrade requirements for the portions of Kenby Chase, outlined in Attachment A. The portion of Kenby Chase proposed to be closed will be amalgamated with Lots 60 and 61 and the proposed plan of subdivision is reflective of this, as detailed in Attachment C.

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

### **Land Administration Act 1997**

## 58. Closing roads

(3) A local government must not resolve to make a request under subsection (1) until a period of 35 days has elapsed from the publication in a newspaper circulating in its district of notice of motion for that resolution, and the local government has considered any objections made to it within that period concerning the proposals set out in that notice.

### FINANCIAL/BUDGET IMPLICATIONS:

There are financial/budget implications identified as a result of this report.

The City has received payment of the administration fee in the amount of \$1,575 from Blokk Property Australia to meet the costs for the initiation of this road closure process.

The provision of the Local Public Notice advertisement will cost approximately \$200 and will be funded from the GOVADV account.

## **ASSET MANAGEMENT IMPLICATIONS:**

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

### **ENVIRONMENTAL IMPLICATIONS:**

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

16.3 LOCAL PUBLIC NOTICE OF PROPOSED ROAD CLOSURE OF A PORTION OF KENBY CHASE, WANDI

## STRATEGIC/SOCIAL IMPLICATIONS:

Plan	Objective	Strategy	
Corporate Business Plan	10.1 Planning	· · · · · · · · · · · · · · · · · · ·	
		long term strategic land	
		use planning for the	
		social, economic and	
		environmental wellbeing	
		of the City	

## **RISK IMPLICATIONS:**

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

Risk Event	That Council does not give local public notice of the proposed road closure of a portion of Kenby Chase, Wandi in accordance with Section 58(3) of the Land Administration Act 1997. Should Council resolve not to give local public notice, as per Section 58 of the Land Administration Act 1997, the closure process cannot proceed.
Risk Theme	Inadequate engagement practices
Risk Effect/Impact	Service Delivery
Risk Assessment Context	Operational
Consequence	Minor
Likelihood	Unlikely
Rating (before treatment)	Low
Risk Treatment in place	Avoid
Response to risk	This report is in relation to giving local public notice of
treatment required/in	the proposed road closure of a portion of Kenby
place	Chase, Wandi.
Rating (after treatment)	Low

## **COUNCIL DECISION**

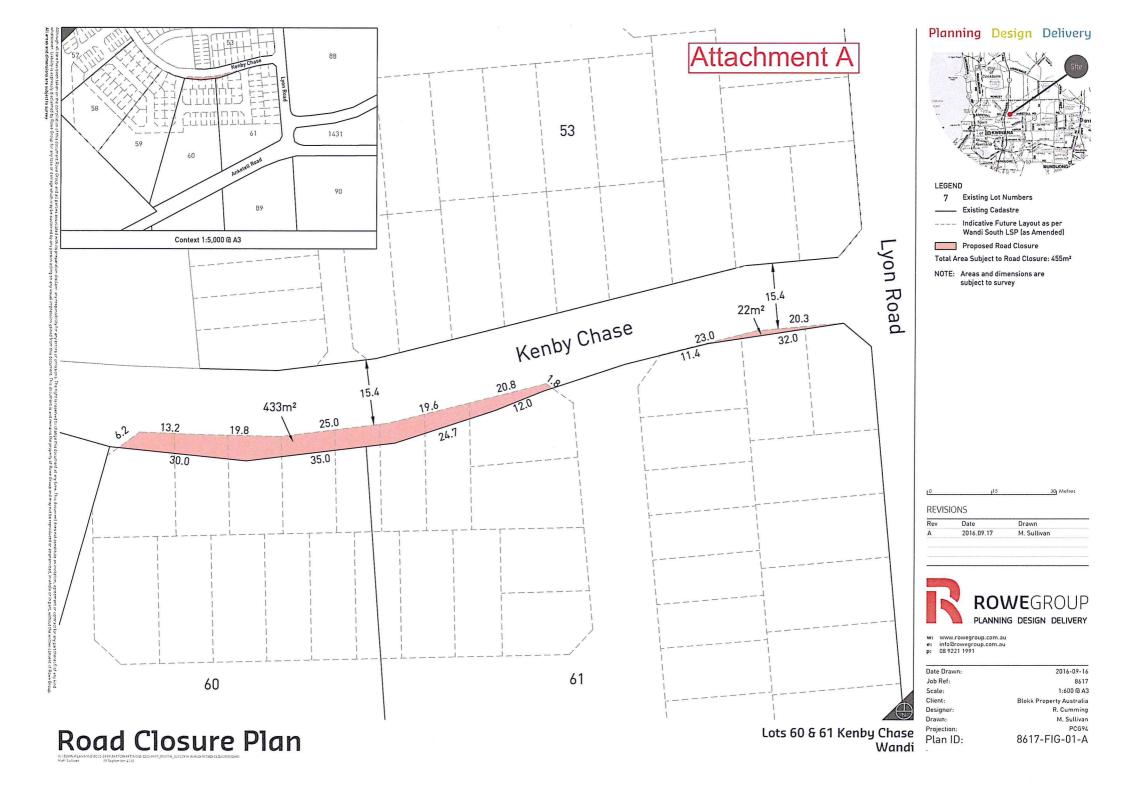
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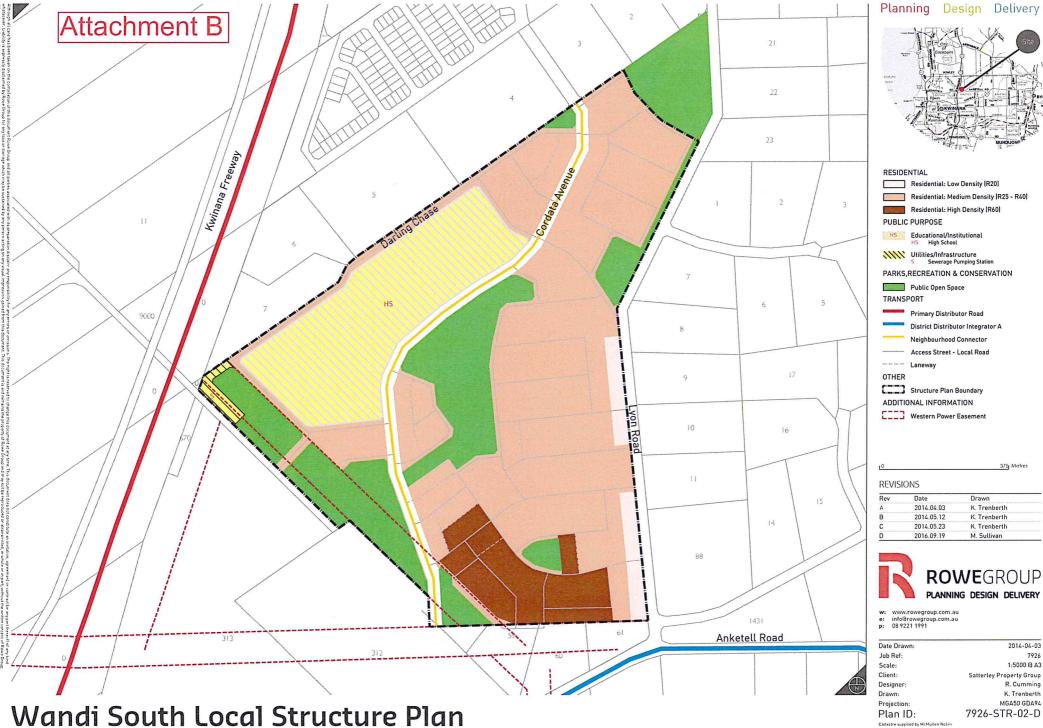
## **MOVED CR B THOMPSON**

## **SECONDED CR R ALEXANDER**

That Council give local public notice of the proposed road closure of a portion of Kenby Chase, Wandi, as detailed in Attachment A and in accordance with Section 58(3) of the Land Administration Act 1997.

CARRIED 6/0





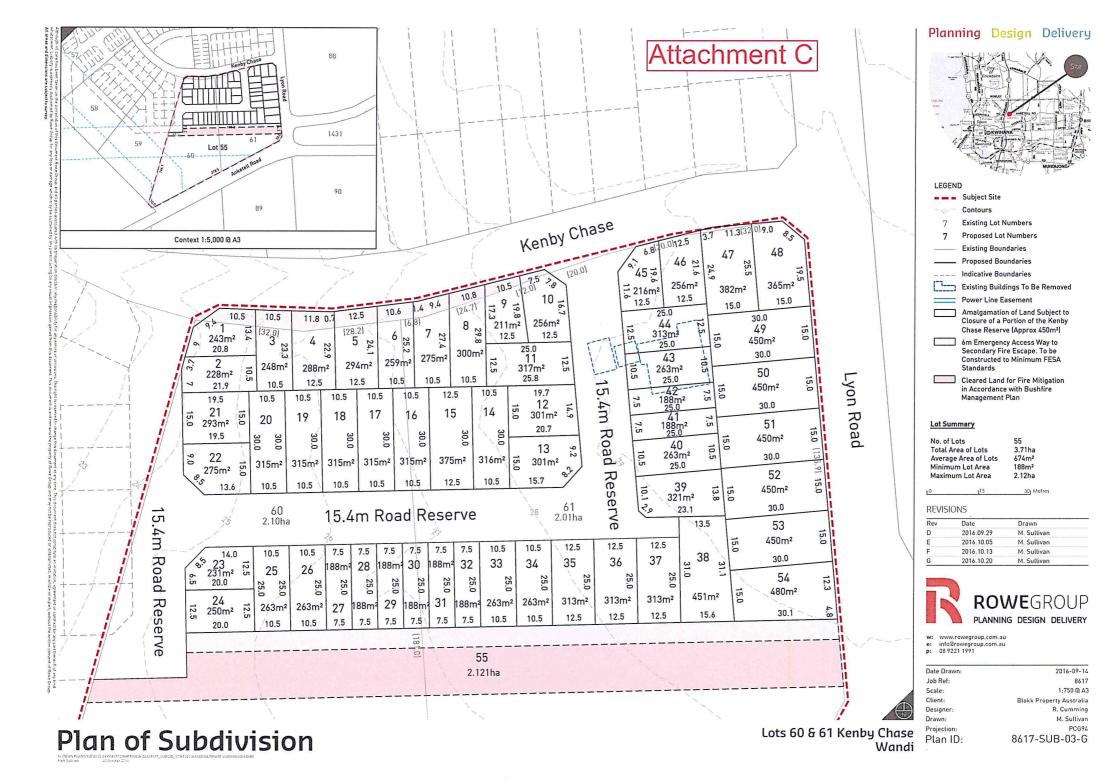
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R. Cumming

K. Trenberth MGA50 GDA94



## 16.4 City of Kwinana Waste Management Strategy

## **SUMMARY:**

This report seeks Council adoption of the City of Kwinana Waste Management Strategy, as attached.

By June 2020 the West Australian Resource Recovery Act (WARR Act 2007) requires 65% of waste collected from metropolitan areas to be diverted from landfill. The City of Kwinana consequently needs to develop and implement changes to waste collection and waste management services in order to achieve this diversion rate by the target date. MRA Consulting Group was appointed to develop a Waste Management Strategy for the City (attached) to assist with this objective.

In developing the strategy, MRA Consulting Group assessed existing and proposed alternative waste disposal options. They examined four options:

- (1) Business as Usual;
- (2) Energy from Waste;
- (3) Green Organics Three Bin system (GO); and
- (4) Food Organics Green Organics (FOGO) and kitchen caddy Three Bin system.

Utilising a multi criteria analysis in combination with MRA's Consolidated Cost Model, MRA Consulting Group concluded that the energy from waste option is the most viable waste disposal service to be adopted by the City of Kwinana.

In line with this conclusion it should be noted that the City has already agreed to supply the Kwinana WTE Project Co Pty Ltd with domestic general waste when the project is operational. However, implementation of this option is dependant on the energy from waste facility being completed within the agreed schedule. Should the energy from waste facility's completion be delayed beyond the agreed schedule of completion, or never be completed, the City will need to review future waste options based on the Strategy and comparative analysis undertaken by MRA Consulting Group.

The Waste Management Strategy outlines Kwinana's current situation with regard to waste collection and disposal services, it's aspirations with regard to future service delivery in this area, and an implementation pathway to achieve the required diversion rate by the target date, as per the requirements stipulated under the WARR Act 2007.

### **OFFICER RECOMMENDATION:**

That Council:

- 1. Adopt the City of Kwinana Waste Management Strategy (attached), prepared by MRA Consulting Group, and implement the recommended actions, utilising a two bin system for weekly waste and fortnightly recycle collections.
- Review the waste disposal options examined by MRA Consulting Group should there be delays with the Kwinana WTE Project Co Pty Ltd 's energy from waste facility, beyond agreed schedules of completion, and determine an alternative waste disposal option.

### **DISCUSSION:**

Waste management in Western Australia is overseen by the State Government's Waste Authority through the provisions of the West Australian Resource and Recovery Act 2007 (WARR Act).

The WARR Act reflects the principles set out in the Environmental Protection Act 1986 and its primary objective is to contribute to both sustainability and the protection of human health and the environment. It promotes:

- The most efficient use of resources, including resource recovery and waste avoidance:
- A reduction in environmental harm, including pollution through waste;
- A consideration of resource management through avoidance of unnecessary resource consumption and disposal; and
- Resource recovery, which includes reuse, reprocessing, recycling and energy recovery.

The WARR Act also requires the creation of a state-wide waste strategy by the WA Waste Authority, the purpose of which is to provide:

- A long term strategy for continuous improvement of waste services, waste avoidance and resource recovery, benchmarked against best practice; and
- Targets for waste reduction, resource recovery and the diversion of waste from landfill disposal.

Strategic targets have been set based on known recovery performance during 2009/10 with the target for metropolitan waste being set at 65% diversion from landfill by 30 June 2020 (from 29% in 2009/10). Beyond 2020 diversion rates of metropolitan waste from landfill are expected to increase.

To incentivise diversion of waste from landfill a waste levy is charged for every tonne of waste disposed at landfill based facilities, and the levy is planned to increase incrementally for the foreseeable future, thereby encouraging the development of alternative methods of processing and disposing of waste.

Alternative waste disposal methods such as recycling, composting, mulch production, reuse of materials, energy from waste, and waste minimisation are all methods that fit within the waste hierarchy currently.

The increase in alternative methods of waste disposal has resulted in a number of available choices to dispose of waste, offering the potential to be environmentally sustainable, efficient and economical, and compliant with the legal and policy requirements of the State Government.

With regard to local government choosing alternative waste disposal and recycling methods, careful consideration needs to be given to the most appropriate fit and factors such as transport cost, community demographics and behaviours, newness of technology, and existing or proposed waste infrastructure must be considered along with cost and sustainability issues.

Against this backdrop MRA Consulting Group was commissioned by the City of Kwinana to develop a Waste Management Strategy that will provide direction with regard to the efficient and cost effective management of waste and delivery of waste collection services into the future.

MRA Consulting Group has wide experience of waste and recycling issues locally and nationally. They have worked on projects such as the Southern Metropolitan Regional Council's Strategic Management Plan at a time of change for that organisation. MRA Consulting is also well versed in existing West Australian waste infrastructure and current proposals for alternative waste disposal facilities. Nationally they bring their experience of, and familiarity with the performance of waste services in other States.

The proposed Waste Strategy developed by MRA Consulting Group has attempted to address the issues outlined above by investigating currently available and proposed waste disposal options, based on predictions over a 10 year period.

Consolidated cost modelling, multi criteria analysis weighting methods that incorporate economic, environmental, social, political and legal compliance criteria have been utilised in the assessment of possible waste disposal options.

In developing the Waste Strategy, MRA Consulting Group examined four options for the future of the City's waste services. Note: The City has a pre-existing agreement with Kwinana WTE Project Co Pty Ltd (Phoenix Energy) for the provision of the City of Kwinana's municipal waste.

**Option 1:** "Business as usual" option retaining a two bin system, 240 litre general waste bin collected weekly and disposed of at Millar Road landfill facility, combined with a fortnightly 240/360 litre recycle bin with processing at the SMRC's Bannister Road Resource Recovery Centre, and quarterly green/ six monthly hard waste verge collections.

**Option 2:** Energy from waste, utilising the same two bin collection system as "the business as usual" option, with general waste disposed of at the proposed Kwinana WTE Project Co Pty Ltd facility in Kwinana Beach. The current fortnightly 240/360 litre recycle bin processed at a recycling facility and quarterly green/six monthly hard waste verge collections remain unchanged under this option.

**Option 3:** Considers a Green Organics collection (GO), utilising a three bin system, with a third 240 litre Garden Organics bin collected fortnightly, and processed into compost at the SMRC's RRRC Banister Road facility. A 240 litre general waste bin collected weekly disposed at a landfill, and a 240 litre recycle bin processed at a recycling facility are featured in this option. Under this option green waste verge collections would be reduced or ceased.

**Option 4:** Considers a weekly FOGO (Food and Green Organics) collection including a kitchen caddy collection service, using a three bin system. The service consists of a 240 litre FOGO bin collected weekly and disposed of by composting at the SMRC RRRC Bannister Road facility. An additional kitchen caddy for kitchen Food Organics is provided to the householder to assist separation of organics. A 240 litre general waste bin is collected fortnightly and disposed of to landfill. A 240 litre recycle bin is also collected fortnightly and processed at a recycling facility. Green waste verge collections would also be reduced or ceased under this option.

As stated previously the assessment of the waste disposal options was based on consolidated cost modelling, qualitative analysis and multi analysis criteria (MCA). Costings were based on gate fees of the facilities modelled, plus a once off capital cost of implementing the three bin system, in the first year and amortised over a ten year period. Quantitative criteria used were cost, resource recovery rates, greenhouse gas emissions and vehicle kilometres travelled by collection vehicles. Qualitative criteria used were integration with current city waste services, policy alignment with State legislation and community acceptance of proposed changes to waste services.

The assessment identified Option 2 Energy from Waste – two bin system as ranking the highest, with Option 1 Business as Usual ranking second most effective across the multi criteria analysis.

Option 2 is comprised of residual waste going to an energy from waste facility as per the City's agreement with Kwinana WTE Project Co Pty Ltd, and comingled recyclables being processed at a Materials Recovery Facility. The key advantages of this option are:

- The diversion of material from landfill is maximised by energy from waste technology;
- The option is compatible with the City's commitment to supply waste tonnes to the Kwinana WTE Project Co Pty Ltd facility.

While the Waste Strategy identifies energy from waste as the preferred methodology for managing the City's waste, it also identifies risks that the City should note:

- The gate fee on which the contract with Kwinana WTE Project Co Pty Ltd is based is very competitive compared with landfill, however, it is low compared to existing energy from waste facilities internationally;
- Uncertainty as the facility is not built yet;
- Throughput tonnage uncertainty;
- Inability for the City to be fully insulated from gate fee increases; and
- Existing operational/technology risk and the absence of reference plants operating in the Australian context.

However, once the facility begins operations these risks are expected to decrease over time.

Along with recommending Option 2 as the pathway Kwinana should pursue with regard to the processing and disposal of general waste and recyclables, the strategy also suggests that a waste education programme be introduced to target waste management behaviour, using improved waste education material and efforts that focus on:

- Reduction of contamination of recycling bins;
- Correct placement of items in waste and recycling bins;
- Additional programmes to educate on the use of FOGO bins if implemented;
- Increase uptake rate of 360 litre bins for those households with inadequate recycling capacity;
- Education on the Container Deposit Scheme (when implemented by the State Government).
- Education of community on waste avoidance i.e. worm farming, home composting initiatives;
- Involvement on reuse schemes such as Garage Trail Sale to reduce hard waste to disposal or recycling facilities;
- Educate the community on the waste hierarchy; and
- Educational and promotional media packages to improve recycling in public places.

To that end Council did approve funds in the 2016/17 budget to employ a waste education officer and provision has been made for this position to continue in the long term financial plan, funded from the Waste Reserve.

The Waste Strategy also suggests that the City may wish to participate in a limited FOGO trial with the SMRC, to be carried out at 200 houses that have historically been audited for waste and recycling.

In terms of implementation of the proposed Waste Strategy, the following actions are recommended:

- Council adoption of the draft Waste Management Strategy.
- Seek tenders for the collection and disposal of general and recyclable wastes building in the requirements to transport to the Kwinana WTE Project Co Ltd Pty facility when completed and making provision for a FOGO trial and full FOGO roll out if required (current contracts expire 30 June 2017).
- Seek tenders for the collection and disposal of bulk waste on the current basis of 4 green waste and 2 verge collections per year, making provision for reduction in service levels should FOGO be introduced (current contracts expire 30 June 2017).
- Implement a comprehensive community education and behaviour change programme with respect to recycling and reuse.
- Continue to make available and promote 360 litre recycling bins to householders with insufficient capacity.

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

The energy from waste option for waste collection and disposal permits the City of Kwinana to meet the obligations of the Waste Supply Agreement between the City of Kwinana and Kwinana WTE Project Co Pty Ltd.

Additionally Council resolved at its ordinary meeting on the 9 March 2016;

## Council Decision 132;

"that the City of Kwinana will only give consideration to the introduction of a residue waste third bin system (using a red lid bin) when a direction for such a collection system change is received from the State Government Waste Authority as a mandatory requirement".

The energy from waste option allows for Council Decision 132 to be achieved.

## FINANCIAL/BUDGET IMPLICATIONS:

The energy from waste option (Option 2) does not require the additional outlay to purchase extra bins as would Options 3 and 4, nor does it require an increase in the frequency of collections and transport costs.

Council has approved funds in the 2016/17 budget to employ a waste education officer and provision has been made for this position to continue in the long term financial plan, funded from the Waste Reserve.

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

The costings utilised for the waste strategy are based on amortising the cost of proposed changes to waste collection services over a ten year period.

### **ENVIRONMENTAL IMPLICATIONS:**

All waste options contained in the waste management strategy have environmental and sustainability benefits.

The Business as Usual waste option currently prohibits the City of Kwinana from meeting the waste from landfill diversion rate of 65%, required to be met by June 2020 under the objectives of the WA Waste Strategy and Waste Hierarchy.

Energy from waste facilities require EPA approval, licensing and monitoring to ensure environmental protection is achieved.

## STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following objectives and strategies detailed in the Strategic Community Plan and/or Corporate Business Plan.

Plan	Objective	Strategy
Strategic Community Plan	3.6 "Understand the impacts of climate change and take a risk management approach to addressing these effects in the future planning.	3.6.1; Implement where practicable the recommendations of the Southern Metropolitan Regional Council" Climate Change Risk Assessment Report (2009) and encourage further regional research to address the effects of climate change on emergency, asset and coastal management as well as biodiversity and the economy.

## **COMMUNITY ENGAGEMENT:**

Community satisfaction with waste collection services is regularly gauged through the biennial Community Perceptions Survey. The survey was last conducted in 2016 with the following results:

Satisfaction with weekly general waste and fortnightly recycling collections

	General Waste	Recycling
Excellent	23%	21%
Good	44%	35%
Okay	27%	24%
Poor	4%	12%
Terrible	2%	8%

Feedback received on dissatisfaction with the services tends to be concentrated on the frequency of the recycling collection service, with some residents expressing preference for a weekly recycling collection service.

However, best practice guidelines for recycling indicate that supply of larger 360 litre recycling bins to households requiring greater capacity is preferable to introduction of a weekly collection service, from both a cost and environmental impact perspective i.e. cost of fuel and emissions from collection vehicles. For this reason the City of Kwinana has introduced the option for residents to request a 360 litre recycling bin, and retained the fortnightly collection cycle.

## **RISK IMPLICATIONS:**

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

Risk Event	<ul> <li>Proposed Kwinana WTE Project Co Pty Ltd facility does not proceed, or is not completed on time – Waste Strategy recommended option cannot be implemented.</li> </ul>
Risk Theme	<ul> <li>Business and community disruption.</li> <li>Failure to fulfil statutory or compliance requirements.</li> </ul>
Risk Effect/Impact	<ul> <li>Service delivery - option of waste disposal methods to meet required State Government targets may be subject to change.</li> <li>Financial – Change in waste disposal methods may result in different cost modeling outcomes.</li> <li>Environment - Change in waste disposal methods may result in different emissions profiles.</li> </ul>
Risk Assessment Context	Under the provisions of the WARR Act the City must provide a domestic waste service to residents.

Consequence	Major
Likelihood	• Possible
Rating (before treatment)	High
Risk Treatment in place	<ul> <li>Share - Share with another party</li> <li>Prepare contingency plans - in event risk occurs, have back up options for waste disposal.</li> </ul>
Response to risk treatment required/in place	<ul> <li>The City to have an additional preferred waste disposal plans in place should the energy from waste option fail.</li> <li>Waste education programme to be rolled out to maximise opportunities for source separation of waste at household level.</li> </ul>
Rating (after treatment)	• Low

# COUNCIL DECISION 447 MOVED CR W COOPER

SECONDED CR S LEE

## **That Council:**

- 1. Adopt the City of Kwinana Waste Management Strategy (attached), prepared by MRA Consulting Group, and implement the recommended actions, utilising a two bin system for weekly waste and fortnightly recycle collections.
- 2. Review the waste disposal options examined by MRA Consulting Group should there be delays with the Kwinana WTE Project Co Pty Ltd 's energy from waste facility, beyond agreed schedules of completion, and determine an alternative waste disposal option.

CARRIED 6/0



# City of Kwinana Waste Management Strategy

20/02/2017





## Mike Ritchie & Associates Pty Ltd trading as MRA Consulting Group

ABN: 13 143 273 812

Suite 409, Henry Lawson Building

19 Roseby Street

**DRUMMOYNE NSW 2047** 

**AUSTRALIA** 

Phone: +61 408 663 942

Email: info@mraconsulting.com.au

www.mraconsulting.com.au

Author:	James Moverley, Dimitris Dimoliatis
Checker:	Dimitris Dimoliatis, Mike Ritchie
Approver:	Dimitris Dimoliatis

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### Disclaimer

This report has been prepared by Mike Ritchie and Associates (trading as MRA Consulting Group (MRA)) for the City of Kwinana in accordance with the terms and conditions of appointment. MRA (ABN 13 143 273 812) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.



# Strategy at a glance

## Where are we today?

The City of Kwinana (Kwinana) is home to an estimated population of 37,149 residents. Kwinana currently offers a kerbside garbage and comingled recycling collection service to residential properties. Garbage is collected weekly and transported directly to Millar Road landfill. Comingled recycling is collected fortnightly and processed through a Materials Recovery Facility (MRF). Kwinana also offers bi-annual hard waste and white goods collections and a quarterly green waste collection.

Kwinana wishes to improve on its current operations through the development and implementation of a comprehensive Waste Management Strategy (Strategy). To establish a detailed understanding of current operations, desktop analysis and site stakeholder consultation was conducted.

## Where do we want to get to?

Kwinana wishes to achieve a planned and collaborative approach to waste management, which is cost effective, supportive of the local community and economy and improves resource recovery in line with State diversion targets. Key aims include:

- 1. Implementing best practice disposal and recovery options for the delivery of kerbside waste and recycling services;
- 2. Educating the community to ensure positive waste separation behaviour change occurs;
- 3. Implement an efficient, clean and cost effective bulky waste collection service; and
- 4. Prevent and best manage litter and illegal dumping in the region through efficient placement of public place bins.

The Strategy will inform the waste collection and processing tender specifications employed by Kwinana to ensure that subcontractors achieve best practice at each facility.

## How will we get there?

Following the Multi Criteria Analysis (MCA) of several waste management options and based on Kwinana's priorities, the preferred kerbside system for achieving Kwinana's goals is a 2 bin system as follows:

- · Residual waste (incl. processing residuals) to Energy from Waste (EfW); and
- Comingled recycling to MRF.

The key advantages are that:

- The diversion of material from landfill is maximised by EfW; and
- This option is compatible with Kwinana's commitment to supply waste tonnes to the Phoenix EfW.

However, Kwinana acknowledges that a different method for the final disposal of residual waste might be required as a result of external factors. The WA government does not currently have a formal EfW policy. Therefore, if the state government decides to implement a policy for source separation to be maximised prior to the use of EfW, as other states have, Kwinana would need to pursue a different waste management system. Although further research would be carried out at the time, it is envisaged that in such a case Kwinana would employ a 3 bin FOGO system with residual garbage being supplied to the Phoenix EfW. The key advantages of this option would be:

- Option is compatible with Kwinana's commitment to supply waste tonnes to the Phoenix EfW;
- Maximisation of source separation at the household level; and
- Safe option from a policy perspective as only residuals are incinerated.



## How will the strategy be implemented?

In order to deliver best practice waste management and resource recovery services for residents, Kwinana will implement the Strategy following a staged process where each task is based on previous actions and forms the basis for subsequent work.

**Table 1 Summary of recommended actions** 

Recommended actions			
1	Strategy actions		
	Α	Review draft strategy findings and actions.	
	В	Seek clarification on government policy regarding 3 bin v 2 bin EfW – Waste Authority v Premier.	
	С	Finalise strategy findings and actions.	
	D	Adopt strategy findings and actions.	
2	Cont	ract actions	
	Α	Conduct a full review of waste management contracts.	
	В	Seek short term contracts for processing of waste and recyclables to remain flexible in view of the uncertainty regarding the effect of the CDL, Phoenix EfW and future regional arrangements	
	С	Use the Strategy to guide the tender specifications for renewal, particularly surrounding recycling contamination and compaction density.	
	D	Maintain current scope for compliant recyclables (e.g. allow soft plastics).	
	E	Explore the possibility to alter scope for hard waste collection to be \$/item.	
	F	Go to tender for kerbside and hard waste collection.	
	G	Engage contractor(s) to deliver waste services for Kwinana.	
	Н	Consider using NSW model contracts to reduce cost and risk after implementation of CDL.	
3	Infrastructure actions		
	Α	Seek update from Phoenix regarding facility opening.	
	В	Perform a trial with only a percentage of all MSW going to Phoenix.	
	С	Increase proportion of MSW incrementally until 100% of MSW is going direct to Phoenix.	
4	Colle	ection actions (dependent on state government policy)	
	Α	Perform a 3 bin FOGO trial on 200 households.	
	В	Implement 3 bin FOGO collection system across all households (if 2 bin EfW is restricted).	
5	Educ	ation/Engagement actions	
	Α	Develop a comprehensive resident behaviour change program aiming to improve recycling and waste management, through development of Recycle Right or similar model.	
	В	Continue Recycle Right or similar model campaign.	
6	Othe	er actions	
	Α	Make 360L recycling bins available.	
	В	Promote the use of home composting bins/worm farms.	
	С	Investigate options to participate in the ERF.	



# Glossary

Abbreviation	Definition		
ABS	Australian Bureau of Statistics		
ACCUs	Australian Carbon Credit Units		
AD	Anaerobic Digestion		
AWT	Advanced Waste Technology		
CDL	Container Deposit Legislation		
ССМ	Consolidated Cost Model		
C&D	Construction and Demolition (waste)		
C&I	Commercial and Industrial (waste)		
EfW	Energy from Waste		
EMRC	Eastern Metropolitan Regional Council		
EPA	Environmental Protection Authority		
ERF	Emissions Reduction Fund		
EU	European Union		
FOGO	Food organics and garden organics		
GHG	Greenhouse Gas Emissions		
GO	Garden organics		
GWP	Green Waste Processing		
Kwinana	City of Kwinana		
LGA	Local Government Area		
MBT	Mechanical Biological Treatment		
MCA	Multi criteria analysis		
MGB	Mobile Garbage Bin		
MHIEC	Mitsubishi Heavy Industries Environmental & Chemical Engineering		
MOU	Memorandum of Understanding		
MRA	MRA Consulting Group		
MRF	Materials Recovery Facility		
MSW	Municipal Solid Waste		
MUD	Multi-unit dwelling		
NACRO	National Association of Charitable Recycling Organisations		
NTCRS	National Television and Computer Recycling Scheme		
Phoenix	Phoenix Energy		
PMET	Pittsburgh Mineral & Environmental Technology		
RET	Renewable Emissions Target		
RRC	Rivers Regional Council		
RRRC	Regional Resource Recovery Centre		
SA	South Australia		
SMRC	Southern Metropolitan Regional Council		
WA	Western Australia		
WCF	Waste Composting Facility		
WHS	Work Health and Safety		
Wk	Weekly		



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# 1. Where are we today?

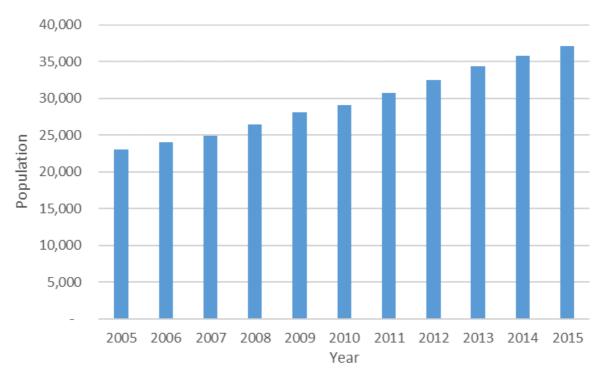
# 1.1 Demographics and geography

The City of Kwinana (Kwinana) is a Local Government Area (LGA) covering approximately 120 square kilometres of the southern part of metropolitan Perth.

The Australian Bureau of Statistics (ABS) estimated the LGA's resident population at 37,149 in 2015, an increase of more than 10,000 people since 2005 (Figure 1).

The highest percentage of residents are aged 0-14 years (22.5%) followed by residents aged 25-34 years (18.6%). The percentage of population between the ages of 15-24, 35-44 & 45-54 is relatively evenly spread at around 11-15% for each age bracket (ABS, 2012).

Figure 1 City of Kwinana population trend based on estimated resident population (ABS, 2015)



The 2011 Australian census indicated that there were 10,646 households in Kwinana, most of which are family households (31.7%).

Based on 2011 ABS Census data, the main employing industry is manufacturing (13.4%). Technicians and trade workers make up the biggest group of employees (17.1%), while 15.3% are employed as labourers and 13.2% as clerical and administrative workers. In terms of employment by age, wage and salary earners aged between 25-34 make up the majority of the workforce (29%), with wage and salary earners aged between 35-44 years making up 23.1%.

In 2016, waste collection services were provided to 14,888 households across Kwinana.



## 1.2 Southern Metropolitan Regional Council

Kwinana is a member of the Metropolitan Southern Regional Council (SMRC). The SMRC is a statutory LGA covering 340 square kilometres of the Southern Part of Metropolitan Perth (Figure 2) combined population of over 275,000 people. The other LGA's that are members of the SMRC are:

- · City of Cockburn;
- Town of East Fremantle;
- City of Fremantle; and
- · City of Melville.



Figure 2 SMRC member councils



## 1.3 Regional waste facilities and services

The greater Perth area encompasses a number of waste management facilities while a number of them are located within or in close proximity to Kwinana LGA (Figure 3).

### 1.3.1 Current waste facilities used by Kwinana

#### Millar Road Landfill

Kwinana disposes all its residual waste at Millar Road landfill. The City of Rockingham operates the Millar Road Landfill facility at Millar Rd West, Baldivis. The facility incorporates a landfill, transfer station, recycling centre and a waste education centre.

The facility accepts Class I Inert Waste, Class II Municipal Solid Waste (MSW) and Commercial Waste and Class III asbestos, quarry and contaminated soil waste. The facility is licensed to receive up to 20,000 tonnes per year of solid waste, up to 50,000 tonnes per year of Class I inert waste and up to 400,000 tonnes per year of Class II and III putrescible waste. The facility currently receives waste from SMRC, Eastern Metropolitan Regional Council (EMRC) and other local authorities within the region, accepting between 200,000 and 250,000 tonnes of waste per annum. At the current filling rate and cell approvals, the facility has an expected lifespan of over 30 year. However, its total capacity could be expanded further if required and approved.

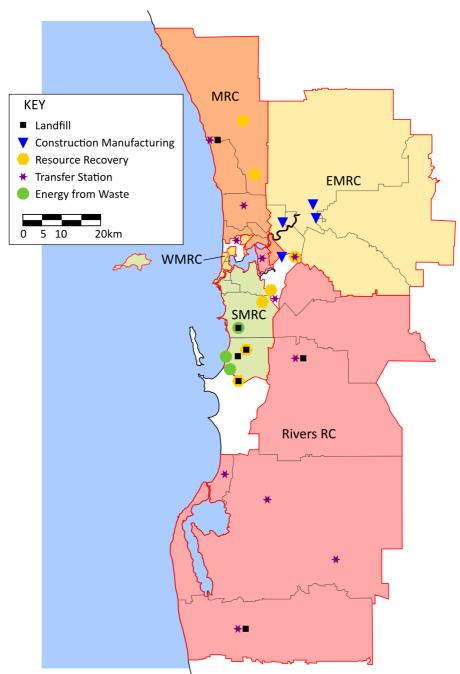
#### Materials Recovery Facility (MRF) at the Regional Resource Recovery Centre (RRRC)

Kwinana delivers all its kerbside recyclables to a MRF located at the, SMRC owned and operated, RRRC. The MRF takes recyclable material from all members of the SMRC, receiving approximately 35,000 tonnes per annum. Kwinana delivers approximately 3,293 tonnes per annum, providing approximately 10% of the total material accepted.

The MRF has a wider scope than most operating MRF's in Australia, with compliant materials including plastic films and bags, both material types that are not usually accepted by MRFs.



Figure 3 Waste management infrastructure in relation to regional council boundaries<sup>1</sup>



### 1.3.2 Waste infrastructure within Southern Perth

Additional waste facilities operating within Southern Perth include landfills, Advanced Waste Technology (AWT) facilities, and MRFs. Commercial operators manage most of these facilities, but there are also several council owned landfills, transfer stations and MRFs in operation.

There are also several waste facilities within the nearby Rivers Regional Council (RRC), EMRC, Mindarie Regional Council and Western Metropolitan Regional Council as well as in the neighbouring councils of City of Canning and City of Rockingham. All current facilities, as well as planned facilities (such as Energy from Waste (EfW) facilities), within the surrounding Regional Council areas, are shown in Figure 3.

<sup>&</sup>lt;sup>1</sup> Southern Metropolitan Regional Council Strategic Waste Management Plan, February 2016



#### 1.3.2.1 Existing waste infrastructure within Kwinana

#### The RRRC

SMRC owns and operates the RRRC. In addition to the MRF utilised by Kwinana, the RRRC encompasses a Green Waste Processing (GWP) operation and a Waste Composting Facility (WCF). The latter is a composting, drum-based, Mechanical Biological Treatment (MBT) AWT facility and the centrepiece of the RRRC.

### **Eclipse Resources**

Eclipse Resources operates a Class I Landfill and green waste recycling facility in Postans. The facility commenced operations in 2002 and accepts both inert waste for landfilling and source separated green waste for recycling.

#### **Thomas Road Landfill**

Wastestream Management operates a Class 2 landfill facility at Thomas Road, Kwinana Beach, which is leased from the City of Kwinana. The facility accepts approximately 500,000 tonnes per year up to the year 2024, as detailed in the existing development consent.

#### 1.3.3 Future waste infrastructure within Kwinana

No EfW facilities are currently operating in Australia on mixed residual waste streams but a number of proposals have been submitted, with a number of facilities having already received approval including one within the Kwinana LGA.

Phoenix Energy (Phoenix) secured Western Australia (WA) Environmental Protection Authority (EPA) approval for developing the *Kwinana Waste to Energy project*, an EfW facility in the Kwinana Industrial Area, south of Perth. Phoenix is a project development company that partners with established companies to deliver its projects. The Phoenix EfW Project will utilise Martin GmbH's Reverse Acting Stoker and Furnace (R-type) technology, which is licensed through Mitsubishi Heavy Industries Environmental & Chemical Engineering (MHIEC), Martin GmbH's exclusive partner for large parts of the Asia-Pacific region.

In selecting the Mitsubishi-Martin R-type technology, Phoenix has sought to ensure that the technology it deploys has been tried and tested. Phoenix cites the following factors as the main advantages of the R-type technology:

- Martin grate technology has been in commercial operation since 1959;
- Of the approximately 1,000 incinerator facilities operating worldwide, Martin GmbH has the largest market share, with its moving grate (stoker) furnace technology;
- Facilities operating in 33 countries, serving over 100 councils;
- Of the 4 grate models offered by Martin GmbH, the R-type grate has the largest installation base;
- The stoker grate technology has been demonstrated to be the most flexible of all the available options for management of a change of composition of the feedstock;
- The Martin grate stoker technology is inherently robust and flexible in efficiently recovering the embodied energy in the feedstock, even as the feedstock composition varies season to season and over time; and
- Excellent environmental performance adhering to European Union's (EU) Waste Incineration
  Directive.

The processing capacity of the Kwinana EfW Facility is proposed as follows:

- Up to 400,000t/yr of residual (post recycling) Municipal Solid Waste (MSW);
- Up to 100,000t/yr of C&I; and
- Generating an estimated 32MW of base load electricity to the grid.

The Kwinana EfW Facility is promising zero waste to landfill by reusing the ash produced in the combustion process to make by-products such as bricks and pavers.



Phoenix proposes to use the Brixx Technology developed by USA-based Pittsburgh Mineral & Environmental Technology (PMET) to produce building products. A 2005 trial demonstrated the technology by combining lime with fly and bottom ash from coal combustion by-products to produce a range of building products. However, the trial did not involve fly or bottom ash from waste incinerators. Online research has not revealed any instances of the Brixx technology being used commercially, while PMET has not responded to MRA Consulting Group's (MRA's) inquiries. Since the claim of zero waste to landfill cannot be verified, Kwinana will be monitoring developments in this space as part of the Strategy's actions.

### 1.3.4 Commitment to the Phoenix facility

Kwinana, through a Waste Supply Agreement, has a contractual obligation to supply a specified minimum tonnage of MSW per year to the *Kwinana Waste to Energy project* once the facility becomes operational. Should Kwinana wish to supply more waste, currently the facility has committed to accept up to a specified maximum tonnage of MSW per year from Kwinana.

## 1.4 Resident waste management behaviour

In terms of recycling rates, Kwinana is currently one of the lowest performing councils in the SMRC and the recent bin tagging trial identified a pressing need for more and improved resident waste education. During initial inspections, just 36% of households were correctly recycling all items, however, delivery of the program assisted to this level increasing to 69% of households and to an overall decrease in contamination. This program's success confirms that actively engaging the community can return significant improvements in behaviour.

#### **Kerbside waste collections**

Kerbside waste collection refers to the weekly collection of the general waste bin and the fortnightly collection of the recycling bin.

## 1.5 Contract management

Kwinana outsources both its kerbside waste collection and bulk verge collection with each awarded to a different company. There is a separate contract for the processing of Kwinana's recyclable material, in partnership with SMRC. As indicated in Table 2, all existing contracts are due to expire in July 2017. This provides an opportunity to alter the specifications detailed in the current contracts and ensure more favourable terms for Kwinana going forward.

Table 2 Kwinana kerbside collection and processing contracts

Contract type	Contract area	Service Provider	Term
Collection	Waste collection – MSW and Recycling	Cleanaway	July 2017
Collection and Disposal	Bulk Verge	Recycling WA	July 2017
Processing	Recyclable material	SMRC	July 2017

### 1.5.1 Recycling contract

Two of the key specifications involved in a recycling processing contract are: *contamination clause* and *compaction density*. If detailed correctly, both specifications can provide Kwinana with less stringent specifications to adhere to and the possibility to attain a more advantageous deal.

Kwinana's current contract for the receipt of recyclable material is with SMRC, with Cleanaway providing the collection and transfer to the SMRC MRF. The following specifications are provided in the current contract with SMRC.

#### **Contamination Clause**



In the current contract, the allowed contamination level is specified as a percentage by weight. If the observed contamination level exceeds a certain limit and the contamination clause is enforced strictly by SMRC, Kwinana would incur non-compliance penalties.

#### **Compaction Density**

A "Maximum Compaction Level" is identified in the current contract. If Kwinana delivers material of higher density to the SMRC MRF, significant charges are incurred.

The compaction density is important to the waste service provider who aims to maximise compaction in order to fit as much waste as possible into each truck. However, this is antagonistic to the recycling processor's (SMRC in this case) needs. Over compaction of the recyclable materials can limit the separation possible through the automated processes at MRFs.

Kwinana benefits from a higher compaction rate as it reduces the number of collection vehicles required to carry the same volume of waste. This reduces costs and traffic through the community.



# 2. Where do we want to get to?

#### 2.1 Vision

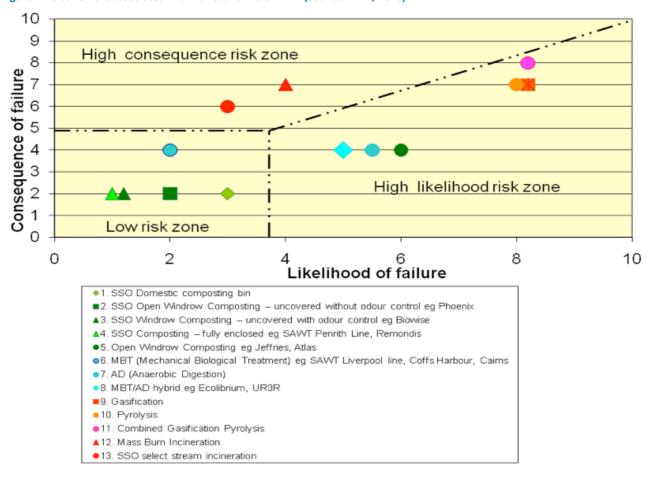
Kwinana wishes to achieve a planned and collaborative approach to waste management, which is cost effective, supportive of the local community and economy and improves resource recovery in line with State targets. Key tasks include:

- 1. Implementing best practice disposal and recovery options for the delivery of kerbside waste and recycling services;
- 2. Educating the community to ensure positive waste separation behaviour change occurs;
- 3. Implement an efficient, clean and cost effective bulky waste collection service;
- 4. Prevent and best manage litter and illegal dumping in the region through efficient placement of public place bins; and
- 5. Work towards achieving the *Western Australian Waste Strategy: "Creating the Right Environment"* target diversion of 65% by 2020 for MSW in the Metropolitan region.

## 2.2 Waste streams and technologies

Kwinana is interested in best practice disposal and recovery options for a number of waste streams, beyond the current kerbside residual service. To maximise resource recovery, in addition to public education and expanded material acceptance and bin infrastructure, it is possible to employ a range of technological solutions.

Figure 4 Relative risks associated with various forms of AWT (Source: MRA, 2016)



Each technology has a unique risk profile. Risks are a function of both the likelihood of failure and a measure of the consequence or severity of failure. Incinerators for example have a relatively low likelihood



of failure but the consequences of for example, any accidental dioxin emissions, are high. Figure 4 shows a relative risk profile matrix for various AWT technologies.

Windrow (open) and in-vessel (contained) composting facilities along with traditional landfills are considered more reliable options having been tried and proven in Australia over many years. Anaerobic Digestion (AD) is higher risk when applied to mixed waste streams. Food organics and bio-solids processing through AD is well developed. However, there are no examples of MSW processing through AD being successful in Australia with Brockwaste (using the DiCom technology) in Perth being the latest AD facility going into administration in Australia (although several companies claim success in facilities operating overseas).

Incineration is a robust and well-tested (outside of Australia) technology, while gasification and pyrolysis are not as established or implemented and therefore carry higher technology risk. Any move toward these technologies would constitute an increased risk profile for Kwinana.

Kwinana is interested in utilising technological solutions for minimising waste to landfill while also maintaining a low risk profile. Table 3 presents Kwinana's preferred processing and disposal pathways for each waste stream.

Table 3 Best practice disposal and recovery options as applying to Kwinana

Waste stream	Primary options available	Kwinana preference
Putrescible waste (residual)	<ol> <li>Landfill</li> <li>Composting (to produce low-grade quality compost)</li> <li>EfW (eligibility dependent on the WA Energy from Waste Policy and bin systems implemented by Kwinana)</li> </ol>	<ul> <li>Send to Phoenix under agreement</li> <li>If economically viable, source separate organics at the kerbside (rather than recovering via an AWT designed for mixed residual waste) due to low throughput and high capital costs</li> <li>Compost source separated organics if economically viable (food, garden and paper)</li> </ul>
Recycling (dry recycling)	<ol> <li>MRF</li> <li>Sorting and haulage of comingled material to market</li> <li>Landfill</li> </ol>	Send to MRF
Garden organics (GO)	<ol> <li>Landfill</li> <li>Chipping and mulch (use as landfill daily cover)</li> <li>Composting</li> </ol>	<ul> <li>If implemented, source separate garden organics at the kerbside for composting</li> <li>Chip oversize material for daily cover or mulch material for community use</li> </ul>
Bulk household materials	<ol> <li>Self-haul to landfill/tip shops</li> <li>Scheduled pick up by Kwinana for haulage to landfill</li> <li>On call pick up by Kwinana for haulage to landfill</li> </ol>	<ul> <li>Improve tip shop facilities, if viable to do so</li> <li>Encourage residents to self-haul and separate bulky waste at the landfill to ensure users, rather than all residents, pay for waste disposal and that recovery rates are maximised</li> </ul>
Mattresses	Recycling of ticking (material), steel and foam	<ul> <li>Landfill mattresses unless a commercially viable option becomes available</li> <li>Recycling of mattresses could be coupled with a "Men's Shed" or similar community organisation</li> </ul>
E-Waste	<ol> <li>Landfill</li> <li>Recycling of precious metals (e.g. copper)</li> <li>National Television and Computer Recycling Scheme (NTCRS)</li> </ol>	<ul> <li>Investigate options for participation in the NTCRS</li> <li>Continue to remove copper prior to landfilling if compliant with Work Health and Safety (WHS) requirements</li> </ul>
Food waste	<ol> <li>Landfill</li> <li>Composting</li> <li>Anaerobic digestion (possible technology risk)</li> </ol>	<ul> <li>If economically viable, source separate at the kerbside</li> <li>Compost material locally</li> </ul>



## 2.3 Kwinana guiding principles

Kwinana's Strategic Community Plan 2015-2025 is a long-term strategic plan that develops common goals to guide the whole community in working together to achieve community aspirations.

During the development of this plan, each household was invited to participate in the Kwinana 2030 Visioning Survey. Waste services / verge collections were identified as one of the lowest priorities for change amongst residents.

A key aspiration from the plan is to promote the idea of 'its all here – services, facilities, diverse lifestyles'. An objective of this aspiration is to create diverse places and spaces where people can enjoy a variety of lifestyles. To achieve this, Kwinana has taken a proactive and strategic approach to planning for significant infrastructure needs for the future, such as waste disposal and recycling facilities to ensure that project timeframes are matched to population growth.

## 2.4 State targets

The Western Australian Waste Strategy: "Creating the Right Environment" was developed by the Waste Authority in 2012 and guides the State towards the long-term strategic direction and priorities for WA over the next decade, which includes providing knowledge, infrastructure and incentives to commence a shift to a low-waste society.

Strategic targets have been set based on known resource recovery performance during 2009/10. The targets are described as 'ambitious but achievable' improvements to Western Australia's resource recovery performance. While these targets are state-wide and include both the Commercial and Industrial (C&I) and Construction and Demolition (C&D) sectors, only domestic waste management falls within the realm and responsibility of Local Governments in the WARR Act 2007.

**Table 4 Western Australia Waste Strategy diversion targets** 

Waste Stream	2009/10 recovery	Diversion by 30 June 2020
MSW (Metropolitan Region)	26%	65%
MSW (Major regional centres)	15%	50%
<b>C&amp;D Waste</b> (State-wide)	29%	75%
C&I Waste (State-wide)	46%	70%

### 2.5 Relevant documentation

The documents presented in Table 5 provide the background knowledge for setting the baseline for the Strategy.

**Table 5 Data review summary** 

Information type	Documents/data	
Financial	City of Kwinana Current Contract Prices 2016	
Tenders and Contracts	<ul> <li>General Waste and Recycling Collection and Disposal Services Contract</li> <li>Bulk and Green Waste Verge Collection Services Contact</li> <li>Memorandum of Understanding (MOU) – Proposed sale of RRRC MRF</li> </ul>	
Waste composition	<ul><li>City of Kwinana Audit Report 2016</li><li>City of Kwinana Festival Audit Report 2014</li></ul>	
Waste tonnages	<ul> <li>City of Kwinana Waste Statistics 2010/11 to 2015/16</li> <li>City of Kwinana Bulk and Green waste tonnes 2007 to 2016</li> </ul>	



### 2.6 The Emissions Reduction Fund

The Direct Action Plan has replaced the Carbon Price Mechanism as the primary legislation directed at meeting Australia's commitment to reduce Greenhouse Gas (GHG) emissions. The Australian Government will reduce GHG emissions to 26-28 per cent below 2005 by 2030. This target is a step up from Australia's current target to reduce emissions to 5% below 2000 levels by 2020. Direct Action consists of a number of initiatives including:

- A \$2.5 billion Emissions Reduction Fund (ERF) to support direct action by business to reduce emissions;
- Boosting renewable energy, especially solar; and
- Support for emerging technologies through the Renewable Energy Target (RET).

Through the ERF, the Government purchases lowest cost abatement (in the form of Australian Carbon Credit Units (ACCUs)) from a wide range of sources, providing an incentive to businesses, households and landowners to reduce emissions.

In order to participate in the ERF, project proponents must carry out a project in accordance with a methodology determination to appropriately estimate abatement from certain activities. The Carbon Farming Initiative methodologies, which this policy replaces, provide the basis for the ERF methodologies - which are currently subject to consultation with industry and the public.

Approved methods for the waste and recycling sectors include:

- · Landfill gas capture and destruction;
- Alternative Waste Treatment; and
- Wastewater treatment.

New waste methods include:

- Diversion of Source Separated Organics (including Food and Garden waste);
- Biofilters;
- Energy from waste; and
- Waste avoidance projects.

The Direct Action Plan was passed into law in October 2014 and the first allocation of funds was held on April 15-16<sup>th</sup>. A total of 47 million tonnes of  $CO_2$ -e was purchased at an average price of \$13.95 per tonne. Of this, the waste industry accounts for nearly 17 million t  $CO_2$ -e or 35% of total volume purchased, proving that the waste industry continues to play a major role in emissions reduction efforts.

To make good on these contracts, create carbon credits and generate revenue, existing and prospective project proponents need to:

- Register a project with the Clean Energy Regulator as soon as possible;
- Forecast emissions over the next 7 years;
- Register for the next auction;
- Bid at auction;
- If successful, carry out the project, and report progress; and
- Deliver abatement in accordance with the delivery schedule.

If Kwinana decides to implement a kerbside organics service, it is likely that the project would be eligible to apply for ACCUs, introducing a new (albeit relatively small) revenue stream for Kwinana.

## 2.7 Resident waste management behaviour

As identified by the recent Bin Tagging Program, the current waste management behaviour of Kwinana residents is below average, yet, the results from the program indicate that with clear, effective education material the recycling performance of residents can be increased. This implies that although the current



education provided to residents is not adequate, significant improvements can be made through a persistent and targeted campaign.

Thus, Kwinana intends to improve its waste education material and efforts in order to improve the waste management behaviour of residents.

### 2.7.1 Community consultation feedback

In 2016, residents of Kwinana were asked to detail their waste management priorities through a survey extended to all members of the SMRC. The following conclusions were drawn and considered throughout the Strategy:

- Kwinana residents consider 'Building 'Waste to Energy' plants' to be more important than 'separating garden and food waste';
- However there still is very strong support for source separation of Food Organics and Garden Organics (FOGO) as 83% of residents living in Kwinana would like a third bin to be introduced. This is greater than the SMRC average of 76%;
- The majority of Kwinana residents would prefer to see a FOGO service introduced rather than just a Garden Organics (GO) service (53% for FOGO; 32% for GO);
- 55% of residents are willing to pay \$50 per year for the introduction of a 3<sup>rd</sup> bin, with that level increasing to 69% if the cost is reduced to \$12 per year;
- Residents of Kwinana consider the SMRC and RRRC's effectiveness to be significantly greater than other municipalities in the SMRC regarding the following aspects:
  - o Reducing waste to landfill;
  - o Removing contaminants from the waste stream; and
  - o Educating the community about waste reduction.
- Only 8% of residents in Kwinana were aware of the Recycle Right campaign;
- Approximately two thirds of Kwinana residents prefer waste education materials to be distributed via a Brochure / Flyer or waste calendar;
- 82% of Kwinana residents considered themselves to be delighted with their current weekly general waste collections, however, this is below the average across other SMRC municipalities of 91%;
- 65% of residents living in Kwinana considered themselves to be delighted with their current recycling collections. However, this is much lower than the average across SMRC councils (85%);
- 67% of Kwinana residents were delighted with GW verge collections, close to the 71% average across the whole of the SMRC;
- Only 55% of residents living in Kwinana were delighted with the current verge bulky waste collections; and
- Current education gaps for Kwinana residents seem to be surrounding recyclables in plastic bags; non-rinsed items and broken glass.

## 2.8 Contract management

The Strategy will inform the waste collection and processing tender specifications employed by Kwinana to ensure that subcontractors achieve best practice at each facility.

#### 2.8.1 Recycling contract

### **Contamination Clause**

To enable Kwinana to meet its vision and increase resource recovery, it is important that any progress in reducing contamination is given recognition. The best method for Kwinana to see this credit is through reduced penalty rates for a decrease in contamination. This can be achieved through the utilisation of banded contamination clauses, as opposed to a single defined contamination level.



Banded contamination levels offer the opportunity for Kwinana to make progress reducing the contamination located in recyclable material and see financial benefits for any reduction through an education program or another Bin Tagging program.

#### **Compaction Density**

The current compaction density requirements identified in the contract with SMRC are very stringent. According to a study performed by Anne Prince Consulting in South Australia (SA) in 2012<sup>2</sup>, the compaction density on collection vehicles has little effect on the recoverability of materials at a MRF. The study concluded that a compaction density of up to 200 kg/m³ is acceptable and that there is a minimal difference between compaction densities of 150 kg/m³ and 225 kg/m³.

Utilising these finding provides Kwinana with an opportunity to increase the compaction densities allowed to be delivered to the SMRC MRF. If the 'Maximum Compaction Level' can be increased, more competitive tender bids could be provided for the collection of recyclable material in Kwinana.

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<sup>&</sup>lt;sup>2</sup> Optimum Compaction Rate for Kerbside Recyclables for Zero Waste SA and Local Government Research and Development Scheme, 2012. Anne Prince Consulting.

Note: this study was performed in a region where a Container Deposit Legislation (CDL) has been implemented, slightly changing the composition of the recyclables.



# 3. How will we get there?

## 3.1 Kerbside options

Following evaluation of several waste management options<sup>3</sup> and considering Kwinana's priorities, a system utilising two bins (residual waste and comingled recycling) and EfW for all residual waste will be pursued by Kwinana. Its key advantages are that:

- The diversion of material from landfill is maximised by EfW; and
- This option is compatible with Kwinana's commitment to supply waste tonnes to the Phoenix EfW.

However, Kwinana acknowledges that a different method for the final disposal of residual waste might be required as a result of external factors. The WA government does not currently have a formal EfW policy. Therefore, if the state government decides to implement a policy for source separation to be maximised prior to the use of EfW, as other states have, Kwinana would need to pursue a different waste management system. Although further research would be carried out at the time, it is envisaged that in such a case Kwinana would employ a 3 bin FOGO system with residual garbage being supplied to the Phoenix EfW. The key advantages of this option would be:

- Option is compatible with Kwinana's commitment to supply waste tonnes to the Phoenix EfW;
- Maximisation of source separation at the household level; and
- Safe option from a policy perspective as only residuals are incinerated.

The Strategy acknowledges that there are considerable risks associated with EfW, including:

- The quoted EfW gate fee, whilst very competitive with landfill, is low compared to existing EfW facilities internationally;
- Uncertainty as the facility is not built yet;
- Throughput tonnage uncertainty;
- Inability to fully insulate Kwinana from gate fee increases in commercial contracts; and
- Existing operational/technology risk and the absence of reference plants operating in the Australian context.

## 3.2 Recycling contract management

Kwinana will attempt to alter the following specifications in the recyclable material processing contract:

#### **Contamination Clause**

Instead of the current contamination clause Kwinana would seek bands of contamination. These bands shall allow more variance for the contamination identified in Kwinana's recyclable material. For example:

- 0-5% contamination;
- 5-10% contamination;
- 10-15% contamination; and
- 15+% contamination.

#### **Compaction Density**

The current compaction density requirements identified in the Contract with SMRC are very stringent. It is recommended that when Kwinana seeks a new contract, the requirement for such a low compaction density is removed and a charge is only incurred when the compaction density is greater than 225kg/m<sup>3</sup>.

<sup>&</sup>lt;sup>3</sup> MRA completed thorough modelling utilising its bespoke consolidated cost model (CCM) to quantitatively analyse waste management options available to Kwinana. These outputs were combined with a qualitative assessment to ensure a quadruple bottom line (cost, environmental, governance and social) assessment was adhered to.



### 3.3 Waste education

A waste education program will target resident waste management behaviour using improved waste education material and efforts that focus on:

- Reduction of contamination of recycling bins;
- Correct placement of items in waste and recycling bins;
- Additional programs to educate on the use of FOGO bins if implemented;
- Increase uptake rate of 360 litre bins for those households with inadequate recycling capacity;
- Education of best management of the CDL scheme (when implemented);
- Education of community on waste avoidance i.e. worm farming /home composting initiatives;
- Involvement on reuse schemes such as Garage Sale Trail to reduce hard wastes to disposal or recycling faculties;
- · Educate community on waste hierarchy; and
- Educational and promotional media packages to improve recycling in public places.

### 3.4 3 bin FOGO trial

Although Kwinana has resolved not to go to a 3 bin system unless directed by the Waste Authority or Phoenix Energy's EFW facility does not get built, a FOGO trial will be carried out within the LGA within 2017 as part of a long running SMRC project involving specific Kwinana households. The City of Kwinana has been invited by the SMRC to participate in a limited FOGO 3 bin trial and current tender specifications are being written that allow for a FOGO trial to be carried out at 200 houses that have historically been audited for waste and recycling.



# 3.5 Further waste management considerations

In addition to the major aspects of waste management discussed previously, this Strategy will inform several other areas to achieve best practice waste management in Kwinana. Table 6 identifies these areas providing detail on the current situation, setting targets and outlining Kwinana's approach to addressing them.

**Table 6 Further waste management considerations** 

Item	Where are we today?	Where do we want to get to?	How will we get there?
360L recycling bin	Recycling is collected fortnightly in Kwinana, following best practice guidelines.  Residents can order a 360L recycling bin (to replace the current 240L bins) for a one-off fee of \$50 but uptake has remained very low.  The recent Bin Tagging Program undertaken by Kwinana, identified that in some suburbs up to 10% of bins were overflowing. This implies that compliant recyclables are being lost into the garbage stream (leakage of recyclables). This is supported further by the 2016 Kwinana Bin Audit findings showing that 23.5% of the garbage bin content was kerbside recyclables.	<ul> <li>Increase the resource recovery rate of comingled recyclables;</li> <li>Reduce the number of overflowing bins;</li> <li>Increased uptake of 360L bins; and</li> <li>Reduce the amount of leaked recyclables in the MSW bin.</li> </ul>	Kwinana will continue to offer a kerbside comingled recycling service on a fortnightly collection cycle.  Continue to offer 360L bins for households requiring increased capacity and give consideration to providing those bins for free. Experience in other councils around Australia, has shown that the increase in recovery of recyclable materials shall cover the capital cost of the 360L bins.



Item	Where are we today?	Where do we want to get to?	How will we get there?
	Kwinana currently offers the following hard waste collections:	A more efficient, cost effective hard waste collection service.	Perform community survey in Kwinana to confirm why residents are currently unhappy and conduct a willingness to pay study for different services.
	<ul><li>4 green waste collections per annum; and</li><li>2 bulky waste collections per annum.</li></ul>		Whilst further investigation is performed into hard waste collections, the following recommendations are made:
	The hard waste collection services in		Bulk green waste collection
	Kwinana are currently more than adequate, with most households being significantly over-serviced.		If a 3 <sup>rd</sup> bin is implemented, Kwinana will eliminate GW kerbside collections.
	-		Bulky waste collection
Hard waste collections	These services are provided by Western Maze Recycling Service.		Based on the outcomes of the study, Kwinana could modify its service offering and offer a combination of annual scheduled bulky waste collections and on-call services. In the meantime, Kwinana will continue to offer households 2 scheduled bulky waste collections per annum.
			Extra products
			In the upcoming contract renewal, Kwinana will explore the possibility of asking contractors to also provide collection cost estimates on a per large item basis, rather than simply on the usual per tonne basis. This has been found to reduce the hard waste collection cost in other jurisdictions.



Item	Where are we today?	Where do we want to get to?	Consulting Group How will we get there?
Container deposit legislation (CDL)	There is currently no CDL in WA. However, in other states, namely South Australia and Northern Territory, a CDL has been successfully implemented.  From July 2017, New South Wales (NSW) will also implement a CDL.  WA has announced that a CDL will be implemented in mid-2018 to complement the Western Australian Waste Strategy, help reduce littering and increase recycling.  Under the scheme, consumers will be able to get a refund on containers such as beer cans and bottles, soft drinks, bottled water, small flavoured milk drinks, sports drinks and spirit-based mixed drinks. The cost of the container deposit scheme will be built into the retail price of the packaged beverage.  The refund will be available from reverse vending machines and collection depots at parks, beaches and other public spaces across Western Australia.		



Item	Where are we today?	Where do we want to get to?	How will we get there?
	Approximately, 10% of households in Kwinana are identified as multi-unit dwellings (MUDs) <sup>4</sup> . MUDs are regularly identified as problem areas for many councils, including Kwinana. Generally, public housing developments are recognised as the worst performing areas.	A more efficient MUD collection system to improve resource recovery rates and enhance local amenity.	Number of MGBs
			A bin fullness study, predominantly aimed at MUDs, shall be performed to understand if current MGB capacity is sufficient.
			In the meantime, Kwinana will continue to offer 1 bin per 2/3 MUD residences. This is in-line with best practice.
Multi-unit	There are no MUDs in Kwinana that have waste chutes.		Evaluate the use of 660L and 1100L bins to reduce the number of bins however this is potentially more expensive due to milk-run requirement.
dwellings	Kwinana offers approximately 1 bin per 2/3 MUD residences.		Waste chutes
	Further problems with MUDs are caused with shared bins remaining on the kerb for a significant length of time post-collection. This causes several issues, predominantly surrounding local amenity.		Given the lack of floor space when building new MUDs, waste chutes are becoming a common feature of these developments. Kwinana will ensure it continues to deny waste chute construction for buildings up to 6 stories as they are recognised to severely increase contamination <sup>5</sup> . Given that for higher buildings, chutes are a necessity Kwinana will ensure the installation of dual chutes and combine with education should it become an issue.

<sup>&</sup>lt;sup>4</sup> Forecast.id. Available at: http://profile.id.com.au/kwinana/dwellings <sup>5</sup> https://www.mwrrg.vic.gov.au/assets/resource-files/MUDs-MFR3-Final-Report-MelbYarra.pdf



Item	Where are we today?	Where do we want to get to?	How will we get there?
Home composting bins /worm farm	Neither home composting bins nor worm farms are currently offered to residents of Kwinana.	Although home composting and worm farming does not equate to reduced waste generation per se, it does reduce the waste deposited in the kerbside bins, thus reducing the amount of waste Kwinana is responsible for removing.  Facilitating the use of home composting bins and worm farms by the community, can contribute towards Kwinana's vision of best practice resource recovery management.	<ul> <li>Kwinana will encourage households to set up a compost or worm farm, thus the tonnage of organic material entering the residual waste stream will be reduced.</li> <li>To achieve best results through this system, Kwinana will: <ul> <li>Attempt to negotiate discounts on home composting bins;</li> <li>Give consideration to setting up a voucher system for residents to purchase subsidised bins directly from retailers;</li> <li>If home composting is implemented: <ul> <li>Develop and deliver an information campaign to publicise the system; and</li> <li>Monitor system performance and deliver a long-term information and education campaign to support the long-term use of home composting bins and to recruit new participants.</li> </ul> </li> <li>Compost Revolution has been one successful program to date<sup>6</sup>.</li> </ul></li></ul>

<sup>&</sup>lt;sup>6</sup> More information available at: http://compostrevolution.com.au/about/



Item	Where are we today?	Where do we want to get to?	How will we get there?
Public place bins	Public place or litter bins are installed throughout the Kwinana municipality for the collection of public place waste. These bins are generally positioned in high use areas such as town centres, beaches, parks, bus stops and sports fields.  The type of bin and frequency of service varies from area to area.  Kwinana has begun to ask developers to include public place recycling bins, together with waste bins, in new parks.	Kwinana wishes to implement a more efficient public place bin system to improve productivity and customer satisfaction with the installation of public place recycle stations throughout the municipality.  This program is to be accompanied with a clear communication package to ensure contamination in the recycling bins is kept to a minimum.	To increase the number of public place recycling stations, Kwinana will:  • Identify high use areas suitable for the installation of more bins;  • Focus on educating residents on source separation and the use of public place bins;  • Continue to ensure all new parks include public place recycling bins; and  • Install public place recycling bins at Kwinana's major beaches and business districts.  Ensuring contamination is kept to a minimum is a more difficult challenge for councils to overcome. Best practice suggest that Kwinana should:  • Perform a public place garbage bin audit to understand what to recycle and required bin size;  • Execute a visual audit of garbage bins to understand required bin type and placement;  • Design effective communication and signage to develop key messaging; and  • Implement a program for ongoing maintenance of the recycling stations to maintain a safe and clean environment.



Item	Where are we today?	Where do we want to get to?	How will we get there?
Charity bins	There is no formal policy in place for the management of charity bins throughout Kwinana.	Badly managed and poorly located clothing bins can cause problems with illegal dumping and graffiti, therefore demonstrating the requirement for a clear policy to be implemented.  A more formal arrangement for charity bins such as those implemented by councils in NSW and Victoria, is the recommended best practice.	<ul> <li>Many councils follow similar guidelines to those shown below:</li> <li>All organisations to be registered under the Charitable Collections Act 1947;</li> <li>All organisations to be a member of the National Association of Charitable Recycling Organisations (NACRO) and agree to comply with the NACRO Code of Practice; and</li> <li>Guarantee that the clothing is collected, sorted and distributed by the charity named on the clothing bin and owning the bin.</li> <li>However, it is recommended that Kwinana explore the opportunity to commercialise this opportunity where the following advantages have been shown to be apparent in other jurisdictions:</li> <li>Value add to Kwinana;</li> <li>School education programs;</li> <li>Enhanced technology and infrastructure; and</li> <li>Exhibition of best practice resource recovery.</li> </ul>



# 4. How will the strategy be implemented?

This Strategy Action Plan presented in Table 7 details the recommended actions and their corresponding timeframe for implementation along with the relative priority of each action. This plan takes into consideration seasonal variations in waste generation and management systems, financial pressures and the lessons learnt from other councils that implemented FOGO systems. Where possible, risks will be mitigated using trials, consultation and education.

### **Table 7 Summary of recommended actions**

Recommended actions		2016/17	2017/18	2018/19	2019/20	2020/21	Priority	КРІ
	Strategy actions							
	A Review draft strategy findings and actions.						High	
1	B Seek clarification on government policy regarding 3 bin v 2 bin EfW – Waste Authority v Premier.						High	Finalised strategy Community feedback
	C Finalise strategy findings and actions.						High	Teedback
	D Adopt strategy findings and actions.						High	
	Contract actions							_
	A Conduct a full review of waste management contracts.						High	_
	Seek short term contracts for processing of waste and recyclables to remain flexible in view of the uncertainty regarding the effect of the CDL, Phoenix EfW and future regional arrangements.							
,	C Use the Strategy to guide the tender specifications for renewal, particularly surrounding recycling contamination and compaction density.						Medium	Streamlined contract management
2	D Maintain current scope for compliant recyclables (e.g. allow soft plastics).						Medium	Competitive tender bids
	Explore the possibility to alter scope for hard waste collection to be \$/item.						Medium	_
	<b>F</b> Go to tender for kerbside and hard waste collection contracts.						High	_
	<b>G</b> Engage contractor(s) to deliver waste services for Kwinana.						High	
	H Consider using NSW model contracts to reduce cost and risk after implementation of CDL.							
2	Infrastructure actions							_
	A Seek update from Phoenix regarding facility opening.						High	Obtain high recovery rates
	<b>B</b> Perform a trial with only a percentage of all MSW going to Phoenix.						Medium	High diversion from landfill
	C Increase proportion of MSW incrementally until 100% of MSW is going direct to Phoenix.						Medium	
	Collection actions (dependant on Action 1C)							
4	A Perform a 3 bin trial.						High	Source separation is maximised
	<b>B</b> Implement a 3 bin FOGO collection system across all households (if 2 bin EfW is restricted).						High	

City of Kwinana Waste Management Strategy

							6	MRA Consulting Group	
Re	commended actions	2016/17	2017/18	2018/19	2019/20	2020/21	Priority	КРІ	
	Education/Engagement actions								
5	To achieve the targets set at Section 3.3, including increasing recycling, develop a comprehensive resident behaviour change program through development of Recycle Right or similar model. Expand to include 3 bin FOGO if implemented.						High	<ul><li>Active community engagement</li><li>Reduced</li><li>contamination</li></ul>	
	B Continue Recycle Right or similar model campaign.						High	contamination	
	Other actions								
	A Continue offering 360L recycling bins.						High	Improved	
ь	B Promote the use of home composting bins/worm farms and consider offering equipment at reduced rates.						High		
	C Investigate options to participate in the ERF.						High	33.13.13	

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## References

Anne Prince Consulting, 2012, Optimum Compaction Rate for Kerbside Recyclables for Zero Waste SA and Local Government Research and Development Scheme, available at: http://www.zerowaste.sa.gov.au/upload/resource-centre/publications/reuse-recovery-and-recycling/ZWSA%20Compaction%20Study%20Final%20Feb%202013.pdf

Australian Bureau of Statistics, 2011, Estimated Resident Population – Far West and Orana.

Coonamble Shire Council, 2015, *Coonamble Shire Council Operational Plan 2015/16*, available at: file://Users/roslyn/Downloads/CSC+Operational+Plan+2015-16%20(1).pdf

Dubbo City Council, 2015, *Dubbo Regional Organics Processing Plan and Organic Waste Collection under Consideration*, available at: http://www.dubbo.nsw.gov.au/media-releases/dubbo-regional-organics-processing-plant-and-organic-waste-collection-under-consideration

Gilgandra Shire Council, 2011, Fit for the Future Local Government Reports, available at: http://www.gilgandra.nsw.gov.au/council/your-council/fit-for-the-future

Metropolitan Local Government Waste & Resource Recovery Fund, 2016, *Improving Resource Recovery with Residents at Multi-Unit Dwellings*, available at: https://www.mwrrg.vic.gov.au/assets/resource-files/MUDs-MFR3-Final-Report-MelbYarra.pdf

Mid-Western Regional Council, 2015, *Regional Organics Opportunity*, available at: http://www.midwestern.nsw.gov.au/Global/Our%20Council/Business%20Paper,%20Attachments%20and %20Minutes/2015/Feb%202015/18%20February%202015/6.2.21%20Report%20150218.pdf

Resource Recovery Biz, 2015, *Processing Cost No Barrier to FOGO*, available at: http://www.resourcerecovery.biz/news/processing-cost-no-barrier-fogo

Southern Metropolitan Regional Council, 2016, *Strategic Waste Management Plan*, available at: http://smrc.com.au/wp-content/uploads/key-docs/Business-Plans/160208%20SMRC%20SWMP\_DRAFT%208a%20-%20BDo%20changes2.pdf

## 17 Urgent Business

Nil

## **18 Councillor Reports**

## 18.1 Councillor Wendy Cooper

Councillor Wendy Cooper reported that she had attended the City of Kwinana Citizenship Ceremony and that it was a very special occasion.

#### 18.2 Councillor Sandra Lee

Councillor Sandra Lee reported that she had attended the City of Kwinana Citizenship Ceremony and that it was very enjoyable.

Councillor Lee mentioned that she had attended the Rockingham Kwinana Chamber of Commerce Business Leaders Breakfast.

## **18.3 Councillor Bob Thompson**

Councillor Bob Thompson reported that he had attended a meeting of the Koorliny Board of Management whom are progressing their Strategic Plan.

Councillor Thompson mentioned that he had attended a Rotary Fundraiser at the Kwinana Recquatic Centre which was a great fun day.

# 19 Response to Previous Questions

Nil

# 20 Mayoral Announcements (without discussion)

Deputy Mayor Peter Feasey acknowledged Mr Ziegelaar and several members of the City of Kwinana Youth Advisory Council in attendance.

## 21 Matters Behind Closed Doors

Nil

# **22 Meeting Closure**

The Deputy Mayor declared the meeting closed 8:02pm.

<u>Chairperson:</u> 22 March 2017