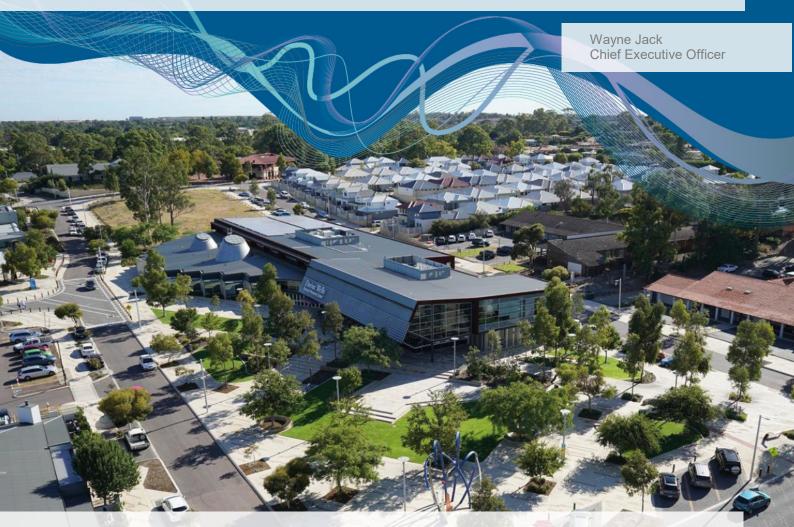


### **Ordinary Council Meeting**

8 September 2021

### Agenda

Notice is hereby given of the Ordinary Meeting of Council to be held in the Council Chambers, City of Kwinana Administration Centre commencing at 5:30pm.



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

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### 1 Opening and announcement of visitors

Presiding Member to declare the meeting open and welcome all in attendance.

### 2 Acknowledgement of country

### Presiding Member to read the Acknowledgement of county

*"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 and we pay our respects to their Elders past and present."* 

### 3 Dedication

### Councillor Sandra Lee to read the dedication

*"May we, the Elected Members of the City of Kwinana, have the wisdom to consider all matters before us with due consideration, integrity and respect for the Council Chamber.* 

May the decisions made be in good faith and always in the best interest of the greater Kwinana community that we serve."

### 4 Attendance, apologies, Leave(s) of absence (previously approved)

**Apologies** 

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

Councillor Dennis Wood from 19 August 2021 to 1 October 2021.

### 5 Public Question Time

In accordance with the *Local Government Act 1995* and the *Local Government* (*Administration*) *Regulations 1996*, any person may during Public Question Time ask any question.

In accordance with Regulation 6 of the *Local Government (Administration) Regulations 1996*, the minimum time allowed for Public Question Time is 15 minutes.

A member of the public who raises a question during Question Time is to state his or her name and address.

Members of the public must provide their questions in writing prior to the commencement of the meeting. A public question time form must contain all questions to be asked and include contact details and the form must be completed in a legible form.

Please note that in accordance with Section 3.4(5) of the *City of Kwinana Standing Orders Local Law 2019* a maximum of two questions are permitted initially. An additional question will be allowed by the Presiding Member if time permits following the conclusion of all questions by members of the public.

### 6 Receiving of petitions, presentations and deputations:

### 6.1 Petitions:

A petition must -

- (a) be addressed to the Mayor;
- (b) be made by electors of the district;
- (c) state the request on each page of the petition;
- (d) contain at least five names, addresses and signatures of electors making the request;
- (e) contain a summary of the reasons for the request;
- (f) state the name of the person to whom, and an address at which, notice to the petitioners can be given; and
- (g) be respectful and temperate in its language and not contain language disrespectful to Council.

The only motion which shall be considered by the Council on the presentation of any petition are -

- a) that the petition be received;
- b) that the petition be rejected; or
- c) that the petition be received and a report prepared for Council.

### 6.2 **Presentations:**

In accordance with Clause 3.6 of the *Standing Orders Local Law 2019 a presentation is the* acceptance of a gift, grant or an award by the Council on behalf of the local government or the community.

Prior approval must be sought by the Presiding Member prior to a presentation being made at a Council meeting.

Any person or group wishing to make a presentation to the Council shall advise the CEO in writing before 12 noon on the day of the meeting. Where the CEO receives a request in terms of the preceding clause the CEO shall refer it to the presiding member of the Council committee who shall determine whether the presentation should be received.

A presentation to Council is not to exceed a period of fifteen minutes, without the agreement of Council.

### 6.3 Deputations:

In accordance with Clause 3.7 of the *Standing Orders Local Law 2019*, any person or group of the public may, during the Deputations segment of the Agenda with the consent of the person presiding, speak on any matter before the Council or Committee provided that:

- (a) the person has requested the right to do so in writing addressed to the Chief Executive Officer by noon on the day of the meeting.
- (b) setting out the agenda item to which the deputation relates;
- (c) whether the deputation is supporting or opposing the officer's or committee's recommendation; and

#### 6.3 DEPUTATIONS

(d) include sufficient detail to enable a general understanding of the purpose of the deputation.

A deputation to Council is not to exceed a period of fifteen minutes, without the agreement of Council.

### 7 Confirmation of minutes

### 7.1 Ordinary Meeting of Council held on 25 August 2021:

COUNCIL DECISION
###
MOVED CR

SECONDED CR

That the Minutes of the Ordinary Meeting of Council held on 25 August 2021 be confirmed as a true and correct record of the meeting.

### 8 Declarations of Interest (financial, proximity, impartiality – both real and perceived) by Members and City Officers

Section 5.65(1) of the Local Government Act 1995 states:

A member who has an interest in any matter to be discussed at a council or committee meeting that will be attended by the member must disclose the nature of the interest —

- (a) in a written notice given to the CEO before the meeting; or
- (b) at the meeting immediately before the matter is discussed.

Section 5.66 of the Local Government Act 1995 states:

If a member has disclosed an interest in a written notice given to the CEO before a meeting then —

- (a) before the meeting the CEO is to cause the notice to be given to the person who is to preside at the meeting; and
- (b) at the meeting the person presiding is to bring the notice and its contents to the attention of the persons present immediately before the matters to which the disclosure relates are discussed.

### 9 Requests for leave of absence

### COUNCIL DECISION ### MOVED CR

### SECONDED CR

That Councillor ...... be granted a leave of absence from ...... to ...... inclusive.

### 10 Items brought forward for the convenience of those in the public gallery

### 11 Any business left over from previous meeting

### 12 Recommendations of committees

When the recommendations of a Committee are placed before the Council, the adoption of recommendations of the Committee is to be moved by -

- (a) the Presiding Member of the Committee if the Presiding Member is a Council member and is in attendance; or
- (b) a Council member who is a member of the Committee, if the Presiding Member of the Committee is not a Council member, or is absent; or
- (c) otherwise, by a Council member who is not a member of the Committee.

### 13 Enbloc reports

Nil

### 14 Reports - Community

### 14.1 City of Kwinana Social Strategy (2021-2025)

#### SUMMARY:

Council endorsed the final draft of the *City of Kwinana Social Strategy (2021-2025)* and approved a formal advertising period to commence for any final community feedback at the 23 June 2021 Ordinary Council Meeting, prior to adoption by Council.

The report for that meeting outlined the comprehensive community engagement that took place in developing the Strategy including workshops with young people, seniors, the Aboriginal community and all of the City's Advisory Groups, as well as well attended workshops with the City's major community organisations and clubs. There was also widespread surveying including via the City's online Love My Kwinana Engagement Hub. The Boola Maara Many Hands Advisory Group also reviewed the final draft and endorsed it prior to it going to Council on 23 June 2021.

The purpose of this report is to provide an update on the formal comment period, and for Council to formally adopt the City of Kwinana Social Strategy 2021-2025.

#### **OFFICER RECOMMENDATION:**

That Council adopt the City of Kwinana Social Strategy (2021-2025) as detailed in Attachment A.

### **DISCUSSION:**

Council endorsed the final draft of the *City of Kwinana Social Strategy (2021-2025)* at the 23 June 2021 Ordinary Council Meeting. This included approval to undertake a final formal comment period to seek any final comments on the Strategy prior to formal adoption.

As comprehensive engagement was undertaken to inform and review earlier drafts, the formal advertising for further comment on the final draft consisted of a three-week open submission period through the City's 'Love My Kwinana' engagement platform. This comment period was promoted via the City's social media platforms and via direct notification to key stakeholder groups.

Additional feedback on the final draft was also sought from key staff across the organisation.

No further feedback or comments were received through this engagement, and no changes have been noted to the *Social Strategy (2021 – 2025)* previously endorsed by Council at the 23 June Ordinary Council meeting, as detailed in Attachment A.

The Social Strategy (2021 – 2025) is now final and ready for formal adoption by Council.

### 14.1 CITY OF KWINANA SOCIAL STRATEGY (2021-2025)

Following adoption by Council, the Social Strategy will be printed for distribution to key stakeholders, internal staff and Elected Members, and used to guide the direction of future City programs, services and infrastructure in the Social environment.

As referenced in the Strategy, it will then cascade to inform complimentary service area Action Plans. In line with the direction provided by the Strategy, and using the approach set out in the new Engagement Framework, each service area will undertake actionfocused engagement with community and stakeholders to inform the specific activity the City will pursue to address the Social Strategy Priorities, detailed in the Action Plans. This engagement will also be used to explore potential partnerships in delivering the actions, and continue to develop stakeholder relationships. These Action Plans will replace many of our current service level Strategies and Plans as they expire.

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

There are currently no legal or policy implications related to the Draft Social Strategy. Continuous community and key stakeholders' feedback will inform the implementation of the Action Plans and evaluation of the Social Strategy.

#### FINANCIAL/BUDGET IMPLICATIONS:

The adoption of the Social Strategy will only incur minor printing costs, with any subsequent implementation costs identified through Action Plans and in turn the annual business planning and budget preparation processes.

### **ASSET MANAGEMENT IMPLICATIONS:**

There are no asset management implications as a result of this report or its recommendations, other than how the Social Strategy may influence normal business assessment of asset priorities, changes or new asset considerations.

### ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:

There are no environmental or public health implications as a result of this report or its recommendations.

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following outcomes detailed in the *Strategic Community Plan 2021 - 2031* and *Corporate Business Plan 2020-2025*.

Plan	Outcome	Social Strategy Priority
Strategic Community	A naturally beautiful	1.2 Deliver initiatives that
Plan	environment that is enhanced	enhance the use of public
	and protected	open space and natural
		environment reserves

14.1 CITY OF KWINANA SOCIAL STRATEGY (2021-2025)

	1	
Strategic Community Plan	Infrastructure and services that are sustainable and contribute to health and wellbeing	1.5 Provide infrastructure that enhances opportunities for recreation, play and relaxation
Strategic Community Plan	A unique vibrant and healthy City that is safe, connected and socially diverse	2.4 Facilitate initiatives that encourage social interaction and connection at both a local and community-wide level
Strategic Community Plan	Visionary leadership dedicated to acting for its community	2.9. Demonstrate organisational leadership and best practice in inclusion and diversity including meeting all requirements under relevant Acts and regulations
Strategic Community Plan	Create strong regional connections that will improve residents' ability to access jobs, training, goods and services	3.1 Use diverse informing methods to improve community awareness of the full range of programs, events, services, infrastructure and information available
Strategic Community Plan	A unique vibrant and healthy City that is safe, connected and socially diverse	4.3 Ensure community planning, infrastructure, transport, services and programs provide for safe use and participation
Strategic Community Plan	A resilient thriving economy with exciting opportunities	6.6 Provide opportunities to establish a thriving creative economy
Corporate Business Plan	Services for an active community	1.1 Facilitate a diverse range of active lifestyle opportunities
Corporate Business Plan	Quality education for all ages	3.4 Improve education and training outcomes and promote a culture of lifelong learning
Corporate Business Plan	A community who help each other	5.2 Support and provide programs and services to support community members facing barriers to their development and wellbeing
Corporate Business Plan	A vibrant arts culture	6.3 Support community activation and participation in arts, culture, events and heritage initiatives

### 14.1 CITY OF KWINANA SOCIAL STRATEGY (2021-2025)

Corporate Business Plan	A sense of place and heritage	6.4 Identify, capture, conserve and manage natural, heritage and cultural assets, stories and collections
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### **COMMUNITY ENGAGEMENT:**

### March 2021 – April 2021 (Developing the draft Social Strategy)

To inform the Social Strategy the City initially conducted sixteen face-to-face consultation sessions with targeted key stakeholders and the community to seek their input into the development of the Draft Social Strategy, with more than 200 people participating. Diverse specific demographic focus groups were held, including groups with Aboriginal and Torres Strait Islander people, young people, seniors, culturally and linguistically diverse communities, City Advisory Groups, clubs and resident groups. The final draft was also formally endorsed by the Boola Maara Many Hands Advisory Group prior to consideration by Council. Surveying was also undertaken including via the City's online Love My Kwinana Engagement Hub.

July 2021 – August 2021(Feedback on the final draft Social Strategy)

As noted above, advertised for feedback for three weeks.





## Social Strategy 2021-2025



### Acknowledgement of Country

The City of Kwinana acknowledges the Traditional Custodians of the land on which we live, work, and play, the Nyoongar people. We recognise their connection to the land and local waterways, their resilience and commitment to the community, and pay our respect to Elders past and present.

The City of Kwinana is committed to the journey of conciliation and respects Aboriginal and Torres Strait Islander people's connection to the Country as the Traditional Custodians of the land. The City of Kwinana's mission is to work together with the Kwinana community to build positive relationships between Aboriginal and Torres Strait Islander communities and non-Aboriginal communities. Throughout this journey, the City aims to promote and assist with the development of pathways and opportunities in support of Aboriginal and Torres Strait Islander communities that are meaningful, mutually beneficial, and sustainable.



### Message from the Mayor

I am pleased to present the City of Kwinana's Social Strategy (2021-2025) which will serve as a guiding vision to deliver many important outcomes to ensure everyone in our community is able to take full advantage of the many opportunities that are available to them in Kwinana.

The City of Kwinana's population is projected to have 85,000 residents by 2036 and includes a wonderful mix of cultures, people, places, groups and communities that give Kwinana a unique identity.

We have much to celebrate and love about Kwinana but like any community we also face some challenges, so the City is committed to planning and delivering pragmatic and dynamic responses to the needs of both our existing and future community as it grows and changes.

The Social Strategy provides direction for implementing the City's Strategic Community Plan social aspirations in more detail, by articulating a Social Vision, Social Strategy Outcome Themes and a set of Social Strategy Priorities. It is underpinned by our Engagement Policy and Engagement Framework, which encourages strong stakeholder and community relationships and collaboration.

I hope you find the Social Strategy informative and aspirational, I invite you to continue having conversations with the City to assist us to develop and deliver our actions that this Social Strategy informs.

Yours sincerely

**Carol Adams OAM** 

Mayor, City of Kwinana

### Acknowledgement of Country Message from the Mayor 1. Introduction

2. Who we are

Contents

3. What we currently do to address social prioritie

4. How We Developed the Social Strategy

5. Consultation feedback

6. Social Strategy Vision and Principles

7. Social Strategy Outcome Themes and Priorities

8. Evaluation, Reviewing and Reporting

9. Invitation

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### I. Introduction

### 1.1 Background

In the past, the City has developed a range of varied strategies and plans that were often overlapping. Some of these included the Multicultural Action Plan; Youth Strategy; Lifelong Learning Plan; Crime Prevention and Community Safety Plan and others. They each contained different levels of strategic and action-oriented content. The Social Strategy has consolidated the strategic content of these previous stand-alone strategies and plans into one streamlined document, with the action-oriented content transitioning to specific operational level Action Plans.

The City works from a strength-based approach, and the Social Strategy isn't a 'gap-based' document. The strategic priorities outlined in the Social Strategy capture both what we already do well and should continue to focus on, as well as where we can focus additional efforts and resources.

The Social Strategic Priority statements intentionally avoid specifying different cohort groups or demographics to enhance conciseness and inclusiveness. Where specific actions need to be tailored to different demographic or cohort groups, these would be detailed in the Action Plans.

Consultion with community and key stakeholders' across different backgrounds was integral to ensuring that the Social Strategy reflects our community's collective vision and aspirations for the future. Ongoing engagement will be conducted with specific stakeholders and community groups to inform the development of the Action Plans.

The Social Strategy supports the City's Strategic Community Plan in delivering its social outcomes. It is an integrated approach that will deliver prioritised social outcomes based on continuous community engagement.

### 1.2 Purpose

The Social Strategy provides a set of strategic social priorities determined through community engagement, to drive actions that strengthen existing initiatives, guide future responses, and inform organisational improvement.

### 1.3 Objectives

The objectives of the Strategy are to

- Identify current and emerging social issues, community priorities and articulate strategies to respond to current or projected needs and aspirations;
- Leverage established relationships and maintain ongoing consultation with the community to facilitate their participation and engagement in future planning and program delivery;
- Develop an integrated social planning framework for planning, implementing and reporting on socially focused initiatives.

### 1.4 Strategic planning context

The Social Strategy sits under the Strategic Community Plan (2021-2031). It will deliver the community's social strategic priorities and provide direction for implementing the City's Strategic Community Plan (SCP) aspirations. The City's Action Plans then sit at a level below the Social Strategy and specifically state the programs, infrastructure, services and policies that will be implemented to address those priorities identified in the Social Strategy, including who will be responsible, the resources required, partners involved and measures of success.

The Social Strategy will be reviewed every four years, in the year following the Strategic Community Plan review in order to be informed by it, with the Action Plans being dynamically changing documents that will annually inform our Corporate Business Plan and Budget development processes. The below diagram shows how our strategic planning cascades into outcomes.



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Vision!	

### 2. Who we are

### Size

The City of Kwinana is a local government area within Western Australia (WA). It is located in the outer southern suburbs of Perth's metropolitan area, approximately 38 kilometres south of the Perth central business district. The community is located within extensive native bushland and public open space. The City contains a total land area of nearly **120** square kilometres.

The demographic statistics for this document have been sourced from Forecast ID, the Australian Bureau of Statistics information on Data by Region and Government of Western

Australia South Metropolitan Health Service report on City of Kwinana Health and Wellbeing Profile 2019.



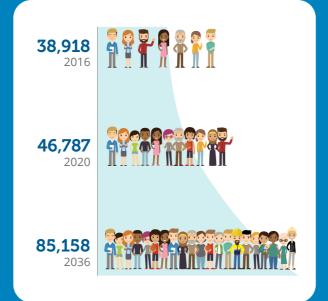
### Age

In 2019, the median age of residents was 33 years, with females having a median age of 32.9 years and males 33.2 years.

The City's population is made up of **16.6% people** aged 0-9 years, 18.4% young people aged between 10-24 years, and people aged between **25-49** years accounting for the largest proportion of 42%. Seniors aged 55-84 years account for 23% of the City's total population.

### Population

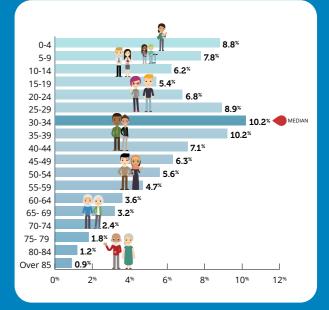
The City of Kwinana is one of the fastestgrowing local goverment areas in WA. The City's total population increased from 38,918 in 2016 to 46,787 in 2020. It is estimated that the population will increase to **85,158** by **2036**. The population density is 3.90 persons per hectare.

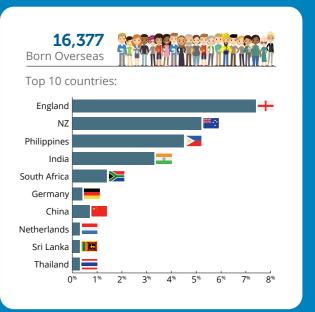


### Cultural diversity

In 2016, the percentage of the total population who identified as **Aboriginal and Torres Strait** Islanders was 3.6%, compared to Perth (3.1%) and Australia (2.8%).

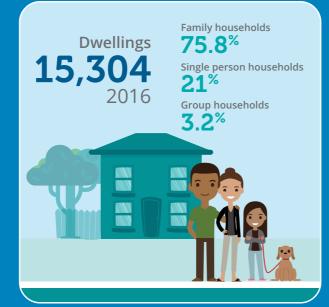
A total of 16,377 (42%) of residents were born overseas. There has been a notable increase in the proportion of people of Filipino (4.9%), Indian (4%) and Chinese (2.4%) ancestry. The ten top countries of origin of overseas-born residents are listed to the right. Approximately 19% of residents speak other languages apart from **English at home.** These languages included Tagalog (2.3%), Filipino (1.6%), Punjab (1.3%), Mandarin (1.2%) and Hindi (0.8%).

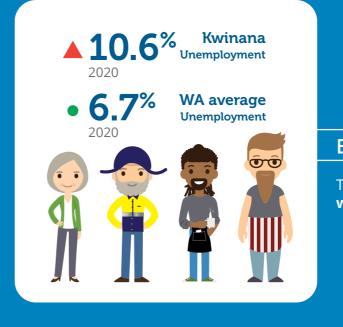




### Dwelling and household composition

In 2016, the City had 15,304 dwellings, with 89.7% occupied and 10.3% unoccupied. The average number of bedrooms per occupied private dwelling was 3.4. **75.8% were family households, 21.0% were single-person households and 3.2% were group households.** There was a higher proportion of couple families with children and single-parent families than the Perth average. 33.5% of total families were couple families, and 12.8% were one-parent families when compared with 32.3% and 9.8% respectively for Greater Perth.





### Socio-economic disadvantage



The Socioeconomic indexes scores for areas (SEIFA) consist of social and economic variables such as income, educational attainment, employment and the number of unskilled workers. SEIFA scores are based on a national average of 1,000 and areas with the lowest scores are the most disadvantaged.

According to the 2016 ABS Census data, the **City of Kwinana had a SEIFA Index of Disadvantage score of 972, ranking at the 47th percentile nationally** (just below average). The Greater Perth average is 1,026, with neighbouring Local Governments including Cockburn at 1033 (85th percentile), Rockingham at 1,001 (69th percentile), and Serpentine Jarrahdale at 1,040 (87th percentile).

In relation to household income, the median household income was \$1,471 per week,

compared to a Western Australian average of \$1,595. 17.7% of households earned a 'high income' (top 20% of household incomes nationally) and 15.9% were 'low income' households (bottom 18% of

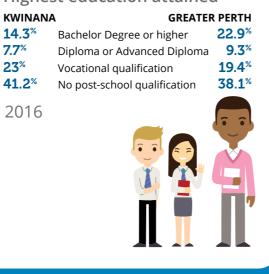
household incomes nationally), compared with 24.8% and 15.7% respectively for Greater Perth.

### Education

In 2016, almost all suburbs have lower levels of educational attainment compared to the Western Australian average, with the newer suburbs attaining the highest average levels of education in Kwinana.

**44.9% of people aged 15 and over held post-school qualifications and 41.2% had no qualifications**, compared with 51.7% and 38.1% respectively for Greater Perth.

### Highest education attained



### Health and disability

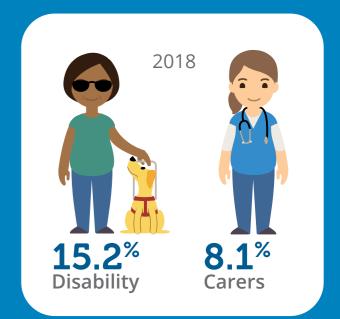
In 2018, **15.2% of people had a disability**, including 3.8% with severe and 7.7% with mild core activity limitations. **8.1% of the population** were carers of someone with a disability.

Based on the South Metropolitan Health Service report on City of Kwinana Health and Wellbeing Profile 2019:

- 43% of adults were not active
- 67% of adults were overweight or obese
- 23.4% of adults drank alcohol at a high-risk level for long term harm.
- 21% of adults smoked
- 52% of adults ate less than two serves of fruit daily
- 94% of adults ate less than five serves of vegetables daily
- 35% of adults ate meals from fast outlets at least weekly
- 16% of adults had current high blood pressure
- 1,038 of adults were hospitalised due to injuries from accidental falls between 2012-2016
- 22% of adults have been diagnosed with a mental health problem in the last 12 months

### Employment

The **unemployment rate in December 2020 was 10.6%**, compared to Greater Perth 6.7%.



# 3. What we currently do to address social priorities

Cultural Celebrations

The City plays a crucial role in facilitating community well-being and provides support, advocacy and coordination of services to improve residents' quality of life, working in partnership with the State and Federal Governments and community service organisations and groups. The City currently provides a wide range of services in a prioritised and financially sustainable manner to address the needs of our diverse community, with some examples being:



### 4. How We Developed the Social Strategy

The Social Strategy Outcome Themes and Strategic Priorities were developed through the following processes.

### 4.1 Desktop review of the City's existing strategies and plans

The City had a range of existing socially focused strategies and plans that had been developed with extensive community engagement. These plans provided a good baseline of endorsed strategic priorities that informed the development of an initial set of draft Social Strategy Themes and Priorities. These formed the basis for our consultation with the community, where we asked the community to give us feedback on whether the Social Strategy Priorities are still current and relevant or whether they needed refinement.

### 4.2 Strategic Community Plan consultation

In 2020, the "Love my Kwinana" campaign was created to engage with the community and to provide the opportunity for the Kwinana community to review the City's Strategic Community Plan (SCP) (2021-2031). The main goal of the SCP was to understand community vision and high-level strategic priorities across environmental, economic, social and governance areas. The SCP community engagement process was a two-phased exercise. The first engagement phase was conducted with Kwinana's community to understand the broad vision and aspirations for the future. The second engagement phase gained feedback on the new draft strategic direction as well as the City's proposed future key projects.

This consultation identified some community social priorities including 'a lack of physical activity' and 'maintain the unique identity of Kwinana'.





#### **Background research** 4.3

Evidence-based findings from relevant research publications, government reports and other credible sources of information were used to analyse the trends and forecasts relevant to the Strategy.

This included data from the City's Community Services and Wellbeing Scorecards which surveys a representative sample of local residents about how the City is performing in various aspects of our services and programs. This emphasised that our library, recreational and youth programs, facilities and services were highly regarded, as well as a need for improving community safety.

### 4.4 Benchmarking

To obtain the information needed to support the continuous improvement of our services and to identify opportunities, best practices from interstate and Western Australian local government authorities were also considered.

### 4.5 Social Strategy project reference team

An internal project reference team was established, consisting of key City Officers across different organisational business units. The team provided their own expertise and input to inform the Social Strategy development, as well as follow-up support including direction setting, draft document review and delivering community and stakeholder consultation sessions.

### 4.6 Stakeholder and community consultation

The research, benchmarking and review of previous plans guided the development of draft Social Outcomes Themes and Social Strategy Priorities, to provide a basis for consulting with the community to ensure contemporary relevance and check for new and emerging priorities and aspirations.

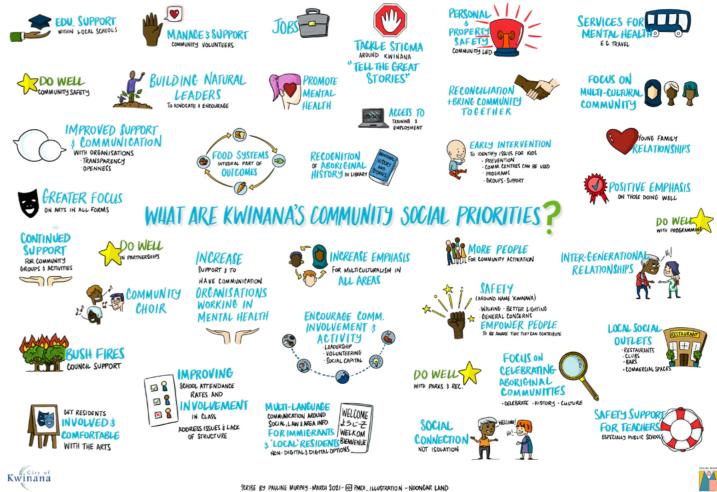
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The City is committed to adhering to the International Association of Public Participation (IAP2) Code of Ethics for our community engagement processes. This includes being purposeful in design; building trust with participants; being clear on the role of participants; being open in providing information; being respectful of community differences and advocating fairly about the input provided. In alignment with this evidence-based approach, we utilised engagement methods that suited our community and stakeholders.

Between March and April 2021, the City conducted sixteen face-to-face consultation sessions with targeted key stakeholders and the community to seek their input, with over 200 people participating.

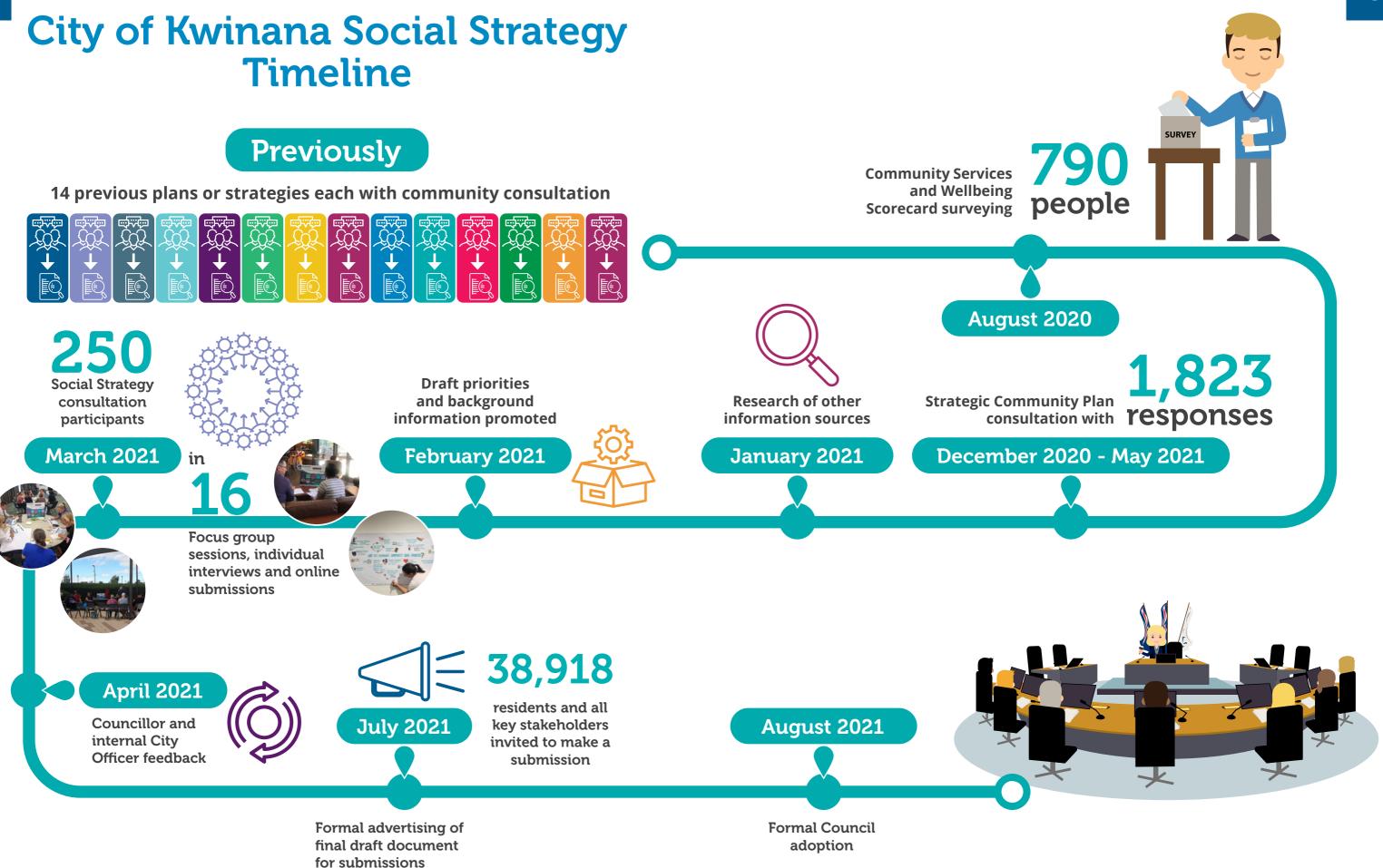
Diverse specific demographic focus groups were held, including with Aboriginal and Torres Strait Islander people, young people, seniors, culturally and linguistically diverse communities, advisory groups, clubs and resident groups. Furthermore, Councillors of the City of Kwinana were provided with an opportunity to provide their feedback, along with internal City Officers.

The community was also provided with an opportunity to provide their feedback via an online portal through the City's Love My Kwinana Engagement Hub. A detailed consultation report has been developed and distributed to those who provided input, and is available on request from the Citv.



# Timeline

Previously



### 5. Consultation feedback

### 5.1 Overall Social Strategy approach

Overall, the approach of integrating the varied City's strategies and plans into a consolidated format in the form of a Social Strategy capturing strategic priorities, supported by specific Action Plans that were more dynamic, was well-received by engagement participants. Community priorities that were raised aligned with the draft strategic priorities provided for consultation, with some minor amendments made to provide clarification or points of additional emphasis.

#### What our community asked us to continue doing well 5.2

As well as supporting the Draft Social Strategy Priorities generally, community feedback showed they particularly valued the City's current focus on:

- Providing and enhancing community spaces including parks and infrastructure that enables people to meet and connect;
- · Maintaining and celebrating our identity of a green natural environment and encourage the use and enjoyment of these green spaces;
- Delivering and supporting place activations and community events;
- Supporting community and organisations with capacity building staff, grants and other • supports;
- Delivering key community centres and their programs including the Recquatic, Darius Wells Library and Resource Centre and Zone Youth Space.

### 5.3 What our community asked us to focus on

The following summarises the particular areas the community has asked the City to further emphasise:

- Further inclusive efforts that promote tolerance, the celebration of diversity and coming together in harmony;
- Enhanced collaboration to build meaningful relationships and work together in partnership;
- Improving education and employment outcomes; ٠
- Promotion of social connection and networks within the community;
- Promotion of healthy and active lifestyles;
- Help to achieve a safe and secure community.

Our community also provided us a great deal of valuable detail including specific priority cohort groups for different priorities, and even suggestions for actions. These are captured in the Consultation Report and forwarded to relevant City Officers for consideration when developing their Action Plans.

### 5.4 Consultation driven amendments

We listened to our community feedback, and changes were made to reflect the identified focus areas. For example, we heard about community feedback on the importance of healthy eating, and programs to promote active transportation. We made changes and added emphasis on preventative health and motivation to adopt an active lifestyle for a healthier community.

Furthermore, in consideration of community feedback some Social Strategy Priorities that have similar objectives were either deleted or combined to reduce duplication. Additionally, to provide further emphasis on the City's differing responsibilities towards community safety and supporting wellbeing, the original draft 'Social Strategy Theme 4' called "Supported and Safe" was separated into two distinct Themes: "Safe and Resilient", and "Caring and Supported".

Similarly, we were able to determine that some draft Social Strategy Priorities focused on working in partnership with community or building upon existing strengths, reinforced our draft Principles that were relevant across all our priorities. As a result, some of the Priority wording that duplicated the wording of the Principles was refined.





### 6 Social Strategy Vision and Principles

As a result of the community input we were able to better understand how we should work across all the Priorities, leading to some refining of our Social Strategy Principles. The refining of the Social Strategy Outcome Themes also enabled us to articulate an overarching vision for the Social Strategy.

### 6.1 Vision

The City's Strategic Community Plan outlines the Council's overall vision for the City as 'a unique and livable City, celebrated for and connected by its diverse community, natural beauty and economic opportunities'.

The SCP also outlines two Outcomes of particular relevance to the Social Strategy: Outcome 3 'Infrastructure' and services that are sustainable and contribute to health and wellbeing'; and Outcome 4 'A unique, vibrant and healthy community that is safe, connected and socially diverse'.

The below Social Strategy Vision aims to capture those socially focused aspirations: To develop a vibrant, healthy, inclusive, safe, and capable community that is socially connected, with a shared sense of well-being and a unique identity and cultural richness that is celebrated'.

### 6.2 Principles

Our work towards achieving the Social Strategy Priorities will be guided by the following Principles.

Collaboration



We will endeavour to build and maintain relationships with our community and stakeholders, using a collaborative approach to decide what actions are the best options to attend to the community social priorities. We will be working together wherever possible to deliver actions and ensure that these relationships are interconnected to enhance coordination and reduce duplication.

Strengths Based



We will have a positive approach and appreciate the strengths and contributions of our community organisations and individuals. We will also work to support and enhance those existing strengths to achieve outcomes.



Place Approach



Social Justice



Goal Oriented



Integrated



We understand that our communities are diverse, we will work together with the community wherever necessary in tailored and best suitable ways that identify the unique communities and places that make up the City.

We will be a strong advocate for social justice by identifying ways we can enhance equity, tolerance, accessibility, human rights and dignity. We will be mindful not to be populist and act in the interests of those members of our community under-represented, and also those most vulnerable and disadvantaged.

We will set clear goals that focus on achieving genuine outcomes and impacts that are financially sustainable. There will be a strong emphasis to measure progress towards the goals and objectives, and we will provide feedback to community on how we are progressing.

The Social Strategy will be well integrated within the City's wider planning framework, and cascade seamlessly to Action Plans that provide a clear link between the strategic priorities and operational actions we undertake to address them.

### 7 Social Strategy Outcome Themes and Priorities

Following the comprehensive engagement process, the City has identified six Social Strategy Outcome Themes to categorise the associated Strategic Social Priorities, as outlined in the following tables.



### Social Strategy Outcome Theme 1: Healthy and Active

Objective	Social Strategy Priority		
	1.1	Facilitate a diverse range of active lifestyle opportunities	
	1.2	Deliver initiatives that enhance the use of public open space and natural environment reserves	
	1.3	Reduce barriers to in active lifestyle activities	
A physically	1.4	Promote physical, mental and nutritional health with a focus on prevention and motivation	
and mentally healthy and active	1.5	Provide infrastructure that enhances opportunities for recreation, play and relaxation	
community	1.6	Support local services and programs that promote healthy relationships	
	1.7	Promote active transportation including walking and cycling	
	1.8	Address relevant requirements under the Public Health Act and Environmental Health Protection guidelines and regulations.	



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Objective

~ 4

	2.1	Facilitate improve to enhance coord
	2.2	Plan for open and developing suitat interaction
	2.3	Value and support consider how new contribute to red
Equitable and	2.4	Facilitate initiative connection at both
inclusive social connection and engagement wit	2.5	Support and deliv diversity and the harmony
community life	2.6	Facilitate and pro volunteering
	2.7	Promote and pro leadership, engag
	2.8	Facilitate progran intergenerational
	2.9	Demonstrate org inclusion and dive under relevant Ac
		12 March 199

### **Social Strategy Priority**

- ed stakeholder relationships and networks dination and collaboration
- d accessible community spaces when ble facilities to facilitate community
- ort the importance of social connections and w and existing programs and services can ducing social isolation
- ves that encourage social interaction and oth a local and community-wide level
- iver programs that promote awareness of importance of inclusivity, tolerance and
- omote diverse opportunities for
- ovide opportunities for civic participation in gement and decision making
- ms that provide opportunities for al interaction
- ganisational leadership and best practice in versity including meeting all requirements cts and regulations



### Social Strategy Outcome Theme 3: Informed and Capable

Objective	Social Strategy Priority		
	3.1 Use diverse informing methods to improve community awareness of the full range of programs, events, services, infrastructure and information available		
Information, learning and	3.2 Assist community members and organisations to build upon their own strengths and develop their capacity		
development opportunities enhance individual	3.3 Develop programs and infrastructure that facilitate diverse learning opportunities and the exchange of information and knowledge		
and community capacity	3.4 Improve education and training outcomes and promote a culture of lifelong learning		
	3.5 Enhance employment and entrepreneurial opportunities		
	3.6 Facilitate intergenerational knowledge-sharing and mentoring opportunities		





Social Strategy Outcome Theme 4: Safe			
Objective	Soci	al Strategy Priority	
Safe enjoyment of community life	4.1	Develop awarenes priority safety issu	
	4.2	Facilitate accurate misperception of c	
	4.3	Ensure community services and progr participation	
	4.4	Advocate to respo resources and acti	
	4.5	Improve local com neighbourliness	
	4.6	Encourage commu crime	
	4.7	Plan and prepare f and community re	

### fe and Resilient

- ess campaigns and initiatives to address ues
- e crime and safety awareness to reduce crime
- ty planning, infrastructure, transport, grams provide for safe use and
- onsible authorities for appropriate tions to reduce crime
- mmunity pride-of-place and
- unity-led safety initiatives and reporting of
- for emergency management, recovery esilience



# Objective Vibrancy and creativity thriv our unique ide and achieveme are celebrated

	Soci	al Strategy Priori
	6.1	Encourage creati Kwinana's history
	6.2	Provide significar and celebration
ve and	6.3	Support commur culture, events an
ntity ents	6.4	ldentify, capture, and cultural asse
	6.5	Facilitate commu
	6.6	Provide opportur economy



### Social Strategy Outcome Theme 5: Caring and Supported

Objective	Social Strategy Priority		
Challenges to wellbeing are supported by a caring community	5.1	Engage with at-risk community members proactively and connect them to relevant supports	
	5.2	Support and provide programs and services to support community members facing barriers to their development and wellbeing	
	5.3	Advocate to responsible authorities and service providers for increased capacity to support community members facing barriers to their wellbeing	
	5.4	Facilitate life-skills programs to develop independence and self-sufficiency	
	5.5	Advance community awareness and advocacy for human rights and social justice	
	5.6	Enhance interagency coordination to reduce duplication and collaborate on support efforts	
	5.7	Plan for housing diversity and advocate for appropriate housing support	



### Social Strategy Outcome Theme 6: Vibrant and Celebrated

### ity

- tive processes which explore and celebrate ry, stories, identity and cultural diversity
- Int events and activities to promote vibrancy
- inity activation and participation in arts, and heritage initiatives
- e, conserve and manage natural, heritage ets, stories and collections
- unity art projects in public spaces
- inities to establish a thriving creative
- 6.7 Highlight and acknowledge community achievements



### 8 Evaluation, Reviewing and Reporting

### 8.1 Monitoring and reviewing outcomes against Social Strategy Priorities

27

The Social Strategy informs and then works hand in hand with specific Action Plans.

It is at the Action Plan level where specific measures will be developed to assess the impact and success of our actions. These might include participant experience measures, community satisfaction measures, long term census and SEIFA changes. Each specific action will be aligned to relevant Social Strategy priorities so that we can monitor and assess the collective impact of our efforts against each Social Strategy outcome theme.

### 8.2 Social Strategy evaluation

The Social Strategy will be reviewed formally every four years, in the year following the City's Strategic Community Plan (SCP) review so it can be informed by the SCP.

We will engage with our community and stakeholders to measure their assessment of how well we worked in line with the Social Strategy Principles, and consult about how the Strategy and Priorities need to be updated with new or changed social priorities.



### 9. Invitation

The City is keen to work with community members, organisations, businesses or other stakeholders to to continue to develop the Kwinana that we love.

We would like to know if you wish to be involved in our ongoing development and implementation of our Action Plans. Your involvement will assist us to determine the specific programs, services, policies and infrastructure that are required to address our Social Strategy Priorities.

Please contact or engage with us in the Love My Kwinana Engagement Hub at **lovemykwinana.com** 

### Contacting the City of Kwinana

Q	In person	<	Connect
	Corner Gilmore Avenue and Sulphur Road, Kwinana WA 6167		<ul><li>www.facebook.com/cityofkwinana</li><li>www.instagram.com/cityofkwinana</li></ul>
$\square$	By post		🕥 www.twitter.com/CityofKwinana
	PO Box 21, Kwinana WA 6966	SIGNHP	Sign up to eNews
	Online		signup.kwinana.wa.gov.au
-	www.kwinana.wa.gov.au	1	Read online
@	By email		www.kwinana.wa.gov.au/publications
Ŭ	customer@kwinana.wa.gov.au	<b>9=0=3</b>	Interpreter
C	By phone	Interpreter	TIS National 131 450
	9439 0200		



### 15 Reports – Economic

Nil

### **16 Reports – Natural Environment**

### 16.1 Proposed Waste Local Law

#### SUMMARY:

The existing City of Kwinana' By-laws that apply to waste management have been reviewed as required by the City's Waste Management Plan. It was found that the existing by-laws are not aligned with the current goals of the Western Australian Waste Strategy 2030 (WS 2030), and best practices for municipal waste and recycling services.

Updated compliance and enforcement mechanisms are required for the City and community to achieve the waste recovery and minimisation targets required by the WS 2030.

The model Waste Local Law template provided by the Western Australian Local Government Association and adopted by many metropolitan local governments is proposed as the foundation of a new City of Kwinana Waste Local Law.

The proposed Waste Local Law has wider powers to direct and infringe for noncompliances in household waste and recycling practices inclusive of verge bulk and green waste collections.

In accordance with section 3.12 of the *Local Government Act 1995*, the proposed Waste Local Law is required to be advertised for public submissions before it can be considered by Council for adoption.

### **OFFICER RECOMMENDATION:**

#### That Council:

• Note that the purpose and effect of the City of Kwinana Waste Local Law are as follows:

#### Purpose

The objective of this local law is to regulate the storage, collection and disposal of waste and refuse from premises and waste facilities in the City.

#### Effect

Unless otherwise authorised, the storage, collection and disposal of waste and refuse within the City must be carried out in accordance with the provisions of the local law.

- Approve state-wide and local public notices of its proposal to make the City of Kwinana Waste Local Law, as at Attachment A.
- Approve state- wide and local public notices of its proposal to repeal City of Kwinana by-laws 12, 13, 14, 14A, 14B, 14C, 14D, 14E, 14F, 14G, 15, 15A, 16, 17, 18, 19 as published in the Government Gazette 14 July 1989, as at Attachment B.

### 16.1 PROPOSED WASTE LOCAL LAW

### DISCUSSION:

The City's existing local laws on waste were adopted in the *City of Kwinana By-Laws*, and includes waste local laws that relate primarily to household kerbside waste collection and hygiene issues in 1989.

The amended *City of Kwinana By-Laws 1989* did not align with directions in waste management encompassed in successive State Waste Strategies or the aims of current recycling practices. Consequently, the existing by-law does not reflect current *Waste Strategy 2030* targets on diverting household waste from landfill, increased material recovery targets, minimisation of waste generation or current industry practice.

Additionally, the *Health Act 2016* has transferred the powers to make Health Local Laws relating to waste to the provisions of the *Local Government Act* and the *Waste Avoidance and Resource Recovery Act 2007*. This requires all existing health and waste bylaws made by the City under the *Health Act 1911 Model By-Laws* to be repealed by July 2022. To ensure that the City can make new local laws that relate to waste the existing bylaws, 12, 13, 14, 14A, 14B, 14C, 14D, 14E, 14F, 14G, 15, 15A, 16, 17, 18, 19, of as published in the Government Gazette 14 July 1989 must be repealed before July 2022.

The City's Strategic Waste Management Plan in recognition of changes in waste management also identified the need to update the City's existing by-laws. It is proposed to repeal existing local laws relating to waste and gazette a new waste local law. The new waste local law will be made under the powers of the *Waste Avoidance and Resource Recovery Act 2007*, and the *Local Government Act 1995* and be titled the City of Kwinana Waste Local Laws. The proposed waste local law is predominantly drafted from the Western Australian Local Government Association's *Model Waste Local Law*. This model waste law has been adopted by several metropolitan and regional local governments that have repealed their previous waste by-laws or local laws that were gazetted under the provisions of the *Health Act 1911*.

The proposed waste local laws include provisions that allow;

- Authorised persons appointed by local government to perform the functions of the local law.
- The power for the City to raise fees and charges for waste services.
- Power for the City to provide a waste service.
- The requirement for the City to supply and charge a fee for the provision of receptacles to a premise used for residential purposes.
- Duties and liabilities of residential owners or occupiers for the depositing of wastes, use and management of general waste, recycling and organic collection receptacles.
- General duties and liabilities of residential owners and occupiers in regards to hygiene, pest control and nuisance arising from the use of receptacles for waste collection.
- Duties and liabilities of residential owners, occupiers and scavengers regarding depositing of wastes for verge collections.
- Duties and liabilities for the public entering waste facilities.
- Defines, collectable wastes and non-collectable wastes (hazardous wastes).
- Powers for the authorised persons to issue directions or raise modified penalties for non-compliance or offences under the local law.

### 16.1 PROPOSED WASTE LOCAL LAW

### LEGAL/POLICY IMPLICATIONS:

Section 3.12 of the *Local Government Act 1995* sets out the procedure to be followed to make a local law as follows:

- The purpose and effect of the proposed local law needs to be included in the agenda and minutes of this meeting;
- State-wide and local public notice that the City intends to make a local law and its purpose and effect. Also, that copies are available for public comment over a six-week period;
- Provide a copy to the Minister for Local Government;
- Consider any submissions made before making the local law;
- Publish the local law in the Government Gazette;
- Give local public notice of when the local law comes into operation and that copies are available;
- Provide an explanatory memorandum of the process used to the Minister for Local Government Requires the repeal of existing City of Kwinana by-laws 12, 13, 14, 14A, 14B, 14C, 14D, 14E, 14F, 14G, 15, 15A, 16, 17, 18, 19 as published in the Government Gazette 14 July 1989.

### FINANCIAL/BUDGET IMPLICATIONS:

Cost of advertising of the proposed local law in state-wide and local papers is estimated to be \$900. The cost of publication of the local law in the Government Gazette at a cost of \$272.55 per page (16 pages), is estimated at \$4,361, with a total cost of \$5,261 once adopted by Council.

### **ASSET MANAGEMENT IMPLICATIONS:**

There are no direct asset management implications associated with this report.

### **ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:**

### **Environmental Implications:**

The recommendations and proposal have the potential to;

- improve the environment by providing compliance mechanisms to reinforce positive community practices to improve recycling practices.
- Assist in reducing littering and nuisances associated with verge-side bulk and green waste collections carried out by the City.
- Assist in the adoption of sustainable practices for the management of wastes to protect the environment and assist mitigation of greenhouse gas emissions from disposal of community wastes.

### Public Health Implications:

The recommendation/proposal has the potential to -

• cause a significant improvement to Sanitation; Environmental Quality; Neighbourhood Amenity; Disease Prevention;

### 16.1 PROPOSED WASTE LOCAL LAW

### STRATEGIC/SOCIAL IMPLICATIONS:

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

Plan	Outcome	Objective
Strategic Community Plan 2021-2031	3. Infrastructure and services that are affordable and contribute to health and wellbeing.	3.1 Develop quality, affordable infrastructure and services designed to improve the health and wellbeing of the community.
	5. Visionary leadership dedicated to acting for its community.	5.4 Establish a culture of continuous improvement, achieving high levels of business excellence.

### **COMMUNITY ENGAGEMENT:**

Community engagement is proposed to take place in the form required by section 3.12(3) of the *Local Government Act 1995* – Procedure for making local laws and includes the requirement to give state-wide public notice that the local government proposes to make a local law the purpose and effect of which is summarised in the notice.



### City of Kwinana Proposed Waste Local Law 2021



### City of Kwinana

### **PROPOSED WASTE LOCAL LAW 2021**

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### Waste Avoidance and Resource Recovery Act 2007 Local Government Act 1995

### City of Kwinana

### PROPOSED WASTE LOCAL LAW 2021

Under the powers conferred on it by the *Waste Avoidance and Resource Recovery Act 2007*, the Local Government Act 1995 and under all other enabling powers, the Council of the City of Kwinana resolved on [date] to make the following local law.

### PART 1 — PRELIMINARY

### 1.1 Citation

This Local Law may be cited as the City of Kwinana Waste Local Law 2021.

### 1.2 Commencement

This local law comes into operation 14 days after the date of its publication in the *Government Gazette*.

### 1.3 Application

This local law applies throughout the district.

### 1.4 Repeal

The following clause of the Town of Kwinana Health Act 1911 Model By-Laws published in the Government Gazette on 17 July 1963 are hereby repealed:

(a) 15,15A,16,17,18,19.

The following clause of the Town of Kwinana Health Act 1911 Model By-Laws published in the Government Gazette on 14 July 1989 are hereby repealed:

(a) 12,13,14,14A,14B,14C,14D,14E,14F,14G.

### 1.5 Definitions

(1) In this local law unless the context requires otherwise —

*authorised officer* means a person appointed by the local government under section 9.10 of the LG Act to perform any of the functions of an authorised officer under this local law;

collectable waste means local government waste that is not-

- (a) liquid refuse;
- (b) liquid waste; or
- (c) non-collectable waste;

*collectable waste receptacle* means a receptacle for the deposit and collection of collectable waste that is—

(a) a recycling waste receptacle;

- (b) a general waste receptacle; or
- (c) an organic waste receptacle;

*collection*, when used in relation to a receptacle, means the collection and removal of collectable waste from the receptacle by the local government or its contractor;

*collection day* means the day determined by the local government for the collection of collectable waste in the district or a part of the district;

*collection time* means the time on the collection day determined by the local government for the collection of collectable waste in the district or a part of the district;

costs of the local government include administrative costs;

district means the district of the local government;

*general waste receptacle* means a receptacle for the deposit and collection of collectable waste that is not recycling waste;

LG Act means the Local Government Act 1995;

*LG Regulations* means the *Local Government (Functions and General) Regulations* 1996;

local government means the City of Kwinana;

local government waste has the same meaning as in the WARR Act;

non-collectable waste has the meaning set out in Schedule 1;

occupier in relation to premises, means any or all of the following-

- (a) a person by whom or on whose behalf the premises are actually occupied; or
- (b) a person having the management or control of the premises;

*organic waste* means waste that decomposes readily, such as garden waste or food waste;

*organic waste receptacle* means a receptacle for the deposit and collection of organic waste;

owner has the same meaning as in the LG Act;

*public place* includes a place to which the public ordinarily have access, whether or not by payment of a fee;

receptacle, means a receptacle-

- (a) that has been supplied for the use of the premises by the local government or its contractor, or which has otherwise been approved by the local government; and
- (b) the waste from which is collected and removed from the premises by the local government or its contractor;

*recycling waste receptacle* means a receptacle for the deposit and collection of recycling waste;

recycling waste means-

- (a) paper and cardboard;
- (b) plastic containers comprised of polyethylene terephthalate or high-density polyethylene;
- (c) glass containers;
- (d) steel containers;
- (e) aluminium containers;
- (f) liquid paper board; and
- (g) any other waste determined by the local government to be recycling waste;

*specified* means specified by the local government or an authorised officer, as the case may be;

*suitable enclosure* means an enclosure for the storage and cleaning of receptacles on a premises as approved by the local government;

*street alignment* means the boundary between the land comprising a street and the land that abuts the street;

WARR Act means the Waste Avoidance and Resource Recovery Act 2007;

**WARR Regulations** means the Waste Avoidance and Resource Recovery Regulations 2008;

waste has the same meaning as in the WARR Act;

*waste facility* means a waste facility, as defined in the WARR Act, that is operated by the local government; and

waste service has the same meaning as in the WARR Act.

(2) Where, in this local law, a duty or liability is imposed on an owner or occupier, or on an owner and occupier, the duty or liability is taken to be imposed jointly and severally on each of the owners or occupiers.

## 1.6 Local public notice of determinations

Where, under this local law, the local government has a power to determine a matter-

- (a) local public notice, under section 1.7 of the LG Act, must be given of the matter determined;
- (b) the determination becomes effective only after local public notice has been given;
- (c) the determination remains in force for the period of one year after the date that local public notice has been given under subclause (a);
- (d) after the period referred to in subclause (c), the determination continues in force only if, and for so long as, it is the subject of local public notice, given annually, under section 1.7 of the LG Act; and
- (e) the determination must be recorded in a publicly accessible register of determinations that must be maintained by the local government.

## 1.7 Rates, fees and charges

The local government's powers to impose rates, fees and charges in relation to waste services are set out in sections 66 to 68 of the WARR Act and sections 6.16 and 6.17 of the LG Act.

## 1.8 Power to provide waste services

The local government's power to provide, or enter into a contract for the provision of, waste services is dealt with in section 50 of the WARR Act.

## PART 2 — LOCAL GOVERNMENT WASTE

## 2.1 Supply of receptacles

- (1) The local government is to supply, for the use of each premises that are, or are capable of being, occupied or used for residential purposes, one or more receptacles for the collection and removal, from those premises, of collectable waste.
- (2) The owner of premises to which subclause (1) applies must—
  - (a) ensure that the fee or charge (if any) imposed by the local government in relation to each receptacle is paid to the local government; and
  - (b) ensure that each receptacle is used, in respect of those premises, in accordance with this local law.
- (3) In the case of multiple residential premises, where it is considered that individual receptacles for each premises would not be practical, the local government may vary the number and type of receptacles to be supplied for the collection and removal, from those premises, of collectable waste.

## 2.2 Suitable enclosure or areas.

- (1) In the case of multiple and grouped residential premises, where it is considered that individual receptacles for each residence would not be practical, the local government may exercise discretion as to the number of receptacles to be supplied for the collection and removal, from those residence, of collectable waste.
- (2) For the purposes of this clause, a "suitable enclosure or area" means an enclosure or area that is maintained to ensure—
  - (a) of sufficient size to accommodate all receptacles used on the premises but in any event having a floor area not less than a size approved by the local government;
  - (b) Constructed of brick, concrete, corrugated compressed fibre cement sheet or other material of suitable thickness approved by the local government;
  - (c) Having adequate walls and gates as approved by the local government to provide sufficient screening and access to receptacles for disposal and collection of wastes.
  - (d) Consist of a smooth and impervious floor -
    - (i) of not less than 75 millimetres in thickness; and
    - (ii) Which is evenly graded to an approved liquid refuse disposal system; and

- (iii) Which is constructed and maintained to provide occupants access to receptacles in a suitable enclosure.
- (iv) Which is provides for the easy access to and the movement of receptacles for waste collection.
- (e) The enclosure connected to an adequate supply of water and an adequate drainage and discharge point.

## 2.3 Deposit of waste in receptacles

- (1) An owner or occupier of a premises must not deposit or permit to be deposited in a receptacle any non-collectable waste.
- (2) A person must not deposit waste in a receptacle that has been provided for the use of other premises without the consent of the owner or occupier of those premises.

## 2.4 General waste receptacles

- (1) An owner or occupier of premises must not deposit or permit to be deposited in a general waste receptacle—
  - (a) where the receptacle has a capacity of 240 litres—more than 70 kilograms of collectable waste; or
  - (b) where the receptacle has any other capacity—more than the weight determined by the local government.
- (2) Where the local government supplies recycling waste receptacles, an owner or occupier of premises must not deposit or permit to be deposited in a general waste receptacle any recycling waste.
- (3) Where the local government supplies organic waste receptacles, an owner or occupier of premises must not deposit or permit to be deposited in a general waste receptacle any organic waste.

## 2.5 Recycling waste receptacles

An owner or occupier of premises must not deposit or permit to be deposited in a recycling waste receptacle—

- (a) anything other than recycling waste for which that receptacle was provided by the local government for those premises;
- (b) where the receptacle has a capacity of 140 litres more than 50 kilograms of recycling waste;
- (c) where the receptacle has a capacity of 240 litres more than 70 kilograms of recycling waste;
- (d) where the receptacle has a capacity of 360 litres more than 70 kilograms of recycling waste; and
- (e) where the receptacle has any other capacity more than the weight as specified on the receptacle.

## 2.6 Organic waste receptacles

An owner or occupier of premises must not deposit or permit to be deposited in an organic waste receptacle—

- (a) anything other than the particular type of organic waste for which that receptacle was provided by the local government for those premises;
- (b) where the receptacle has a capacity of 140 litres more than 50 kilograms of organic waste; or
- (c) where the receptacle has a capacity of 240 litres more than 70 kilograms of organic waste; or
- (d) where the receptacle has any other capacity more than the weight determined by the local government.

## 2.7 Direction to place or remove a receptacle

- (1) The local government or an authorised officer may give a written direction to an owner or occupier of specified premises—
  - (a) to place a receptacle in respect of those premises for collection; or
  - (b) to remove a receptacle in respect of those premises after collection.
- (2) The direction under subclause (1) may specify when the placement or removal is to occur, or where the receptacle is to be placed, or both.
- (3) An owner or occupier of premises must comply with a direction given under this clause.

## 2.8 Duties or liabilities of owner or occupier

- (1) An owner or occupier of premises must-
  - (a) except for a reasonable period before and after collection time, keep each receptacle in a storage space or area that is behind the street alignment;
  - (b) take reasonable steps, if placing a receptacle for collection on the verge adjoining the premises, or other area as determined by the local government, ensure that, within a reasonable period before collection time, each receptacle is —
    - (i) within 1 metre of the carriageway;
    - (ii) placed so that it does not unduly obstruct any footpath, cycle way, right-of-way or carriageway; and
    - (iii) facing squarely to the edge of and opening towards the carriageway,

or in such other position as is approved in writing by the local government or an authorised officer;

- (c) take reasonable steps to ensure that the premises are provided with an adequate number of receptacles; and
- (d) if the receptacle is lost, stolen, damaged or defective, notify the local government, as soon as practicable, after the event.

(2) Where, in this local law, a duty or liability is imposed on an owner or occupier, or on an owner and occupier, the duty or liability is taken to be imposed jointly and severally on each of the owners or occupiers.

## 2.9 Exemption

- (1) An owner or occupier of premises may apply in writing to the local government for an exemption from compliance with the requirements of clause 2.8(b) or (c).
- (2) The local government or an authorised officer may grant, with or without conditions, or refuse an application for exemption from compliance under this clause.
- (3) An exemption granted under this clause must state—
  - (a) the premises to which the exemption applies;
  - (b) the period during which the exemption applies; and
  - (c) any conditions imposed by the local government or the authorised officer.
- (4) An exemption granted under this clause ceases to apply
  - (a) if the local government decides, on reasonable grounds, that there has been a failure to comply with a condition of the exemption; and
  - (b) from the date that the local government informs the owner or occupier of its decision under clause 2.8(4)(a).

## 2.10 Damaging or removing receptacles

A person, other than as authorised by the local government, must not—

- (a) damage, destroy or interfere with a receptacle; or
- (b) except as permitted by this local law or as authorised by the local government or an authorised officer, remove a receptacle from any premises to which it was delivered by the local government or its contractor.

## 2.11 Verge collections

- (1) Where the local government has advertised a verge waste collection (such as a green waste, or a bulk waste, verge collection) a person, unless with and in accordance with the approval of the local government or an authorised officer—
  - (a) must deposit waste only during the period of time, and in accordance with other terms and conditions, as advertised by the local government in relation to that verge waste collection; and
  - (b) must otherwise comply with those terms and conditions or remove wastes on the adjacent verge of the premises to the adjacent premises.
  - (c) when waste has been deposited on a verge that does not comply with the periods of time and or the terms and conditions of the services as advertised by the City, the local government or an authorised person may give a written direction to an owner or occupier to remove wastes from the verge.
  - (d) An owner or occupier of premises must comply with a direction given under this clause.

- (2) Where waste has been deposited on a verge for a verge waste collection, a person other than as authorised by the local government, must not remove any of that waste for a commercial purpose but may remove it for any other purpose.
- (3) Except where waste is lawfully removed from a verge under this clause, a person must not disassemble or tamper with any waste deposited on a verge for a verge waste collection so as to increase the risk of harm to any person.

## PART 3 — GENERAL DUTIES

## 3.1 Duties of an owner or occupier

- (1) An owner or occupier of premises must—
  - take reasonable steps to ensure that a sufficient number of receptacles are provided to contain all waste which accumulates or may accumulate in or from the premises;
  - (b) ensure that each receptacle is kept in good condition and repair;
  - (c) take all reasonable steps to—
    - (i) prevent fly breeding and keep each receptacle free of flies, maggots, cockroaches, rodents and other vectors of disease;
    - (ii) prevent the emission of offensive or noxious odours from each receptacle; and
    - (iii) ensure that each receptacle does not cause a nuisance to an occupier of adjoining premises; and
  - (d) whenever directed to do so by the local government or an authorised officer, thoroughly clean, disinfect, deodorise and apply a residual insecticide to each receptacle.
  - (e) Whenever directed to do so by an authorised officer to take action to ensure that an adequate collection point for waste and recycle bins is provided.

## 3.2 Removal of waste from premises

- (1) A person must not remove any waste from a premises unless that person is—
  - (a) the owner or occupier of the premises;
  - (b) authorised to do so by the owner or occupier of the premises; or
  - (c) authorised in writing to do so by the local government or an authorised officer.
- (2) A person must not remove any waste from a receptacle without the approval of—
  - (a) the local government or an authorised officer; or
  - (b) the owner or occupier of the premises at which the receptacle is ordinarily kept.

## 3.3 Receptacles and containers for public use

A person must not, without the approval of the local government or an authorised officer-

- (a) deposit household, commercial or other waste from any premises on or into; or
- (b) remove any waste from,

a receptacle provided for the use of the general public in a public place.

## PART 4 — OPERATION OF WASTE FACILITIES

## 4.1 Operation of this Part

This Part applies to a person who enters a waste facility.

## 4.2 Hours of operation

The local government may from time to time determine the hours of operation of a waste

facility.

## 4.3 Signs and directions

- (1) The local government or an authorised officer may regulate the use of a waste facility—
  - (a) by means of a sign; or
  - (b) by giving a direction to a person within a waste facility.
- (2) A person within a waste facility must comply with a sign or direction under subclause (1).
- (3) The local government or an authorised officer may direct a person who commits, or is reasonably suspected by the local government or the authorised officer of having committed, an offence under this clause to leave the waste facility immediately.
- (4) A person must comply with a direction under subclause (3).

## 4.4 Fees and charges

- (1) Unless subclause (3) applies, a person must, on or before entering a waste facility or on demand by the local government or an authorised officer, pay the fee or charge as assessed by an authorised officer.
- (2) An authorised officer may assess the fee or charge in respect of a particular load of waste at a rate that applies to any part of that load, even if that rate is higher than the rate that would apply to any other part of the load.
- (3) Subclause (1) does not apply—
  - (a) to a person who disposes of waste in accordance with the terms of-
    - (i) a credit arrangement with the local government; or
    - (ii) any other arrangement with the local government to pay the fee or charge at a different time or in a different manner; and
  - (b) to the deposit of waste owned by the local government, or in the possession of an employee on behalf of the local government.

## 4.5 Depositing waste

- (1) A person must not deposit waste at a waste facility other than—
  - (a) at a location determined by a sign and in accordance with the sign; and
  - (b) in accordance with the direction of an authorised officer.

(2) The local government may determine the classification of any waste that may be deposited at a waste facility.

## 4.6 **Prohibited activities**

- (1) Unless authorised by the local government, a person must not—
  - (a) remove any waste or any other thing from a waste facility;
  - (b) deposit at a waste facility that is a landfill site any waste that is toxic, poisonous or hazardous, or the depositing of which is regulated or prohibited by any written law;
  - (c) light a fire in a waste facility;
  - (d) remove, damage or otherwise interfere with any flora in a waste facility;
  - (e) remove, injure or otherwise interfere with any fauna in a waste facility; or
  - (f) damage, deface or destroy any building, equipment, plant or property within a waste facility.
- (2) A person must not act in an abusive or threatening manner towards any person using, or engaged in the management or operation of, a waste facility.

## PART 5 — ENFORCEMENT

## 5.1 Objection and appeal rights

Division 1 of Part 9 of the LG Act applies to a decision under this local law to grant, renew, vary or cancel –

- (a) an approval under clause 2.7(b);
- (b) an exemption under clause 2.8(2);
- (c) an approval under clause 2.9(b);
- (d) an approval under clause 2.10(1);
- (e) an authorisation under clause 3.2(1)(c);
- (f) an approval under clause 3.2(2); and
- (g) an approval under clause 3.3.

## 5.2 Offences and general penalty

- (1) A person who fails to do anything required or directed to be done under this local law, or who does anything which under this local law a person is prohibited from doing, commits an offence.
- (2) A person who commits an offence under this local law is liable, on conviction, to a penalty not exceeding \$5,000, and if the offence is of a continuing nature, to a further penalty not exceeding \$500 in respect of each day or part of a day during which the offence has continued.

## 5.3 Other costs and expenses

- (1) A person who is convicted of an offence under this local law is to be liable, in addition to any penalty imposed under clause 5.2, to pay to the local government the costs and expenses incurred by the local government in taking remedial action such as—
  - (a) removing and lawfully disposing of toxic, hazardous or poisonous waste, noncollectable wastes or
  - (b) making good any damage caused to a waste facility.
- (2) The costs and expenses incurred by the local government are to be recoverable, as a debt due to the local government, in a court of competent civil jurisdiction.

## 5.4 Prescribed offences

- (1) An offence against a clause specified in Schedule 2 is a prescribed offence for the purposes of section 9.16(1) of the LG Act.
- (2) The amount of the modified penalty for a prescribed offence is that specified adjacent to the clause in Schedule 2.

## 5.5 Form of notices

- (1) Where a vehicle is involved in the commission of an offence, the form of the notice referred to in section 9.13 of the LG Act is that of Form 1 in Schedule 1 of the LG Regulations.
- (2) The form of the infringement notice given under section 9.16 of the LG Act is that of Form 2 in Schedule 1 of the LG Regulations.
- (3) The form of the infringement withdrawal notice given under section 9.20 of the LG Act is that of Form 3 in Schedule 1 of the LG Regulations.

## Schedule 1

## Meaning of 'non-collectable waste'

[clause 1.5(1)]

## non-collectable waste means -

- (a) hot or burning material;
- (b) household hazardous waste, including paint, acids, alkalis, fire extinguishers, solvents, pesticides, oils, gas cylinders, batteries, chemicals and heavy metals;
- (c) any other hazardous material, such as radioactive waste;
- (d) any explosive material, such as flares or ammunition;
- (e) electrical and electronic equipment;
- (f) hospital, medical, veterinary, laboratory or pathological substances;
- (g) construction or demolition waste;
- (h) sewage;
- (i) 'controlled waste' for the purposes of the Environmental Protection (Controlled Waste) Regulations 2004;
- (j) any object that is greater in length, width, or breadth than the corresponding dimension of the receptacle or that will not allow the lid of the receptacle to be tightly closed;
- (k) waste that is or is likely to become offensive or a nuisance, or give off an offensive or noxious odour, or to attract flies or cause fly breeding unless it is first wrapped in non-absorbent or impervious material or placed in a sealed impervious and leakproof container; and
- (I) any other waste determined by the local government to be non-collectable waste.

Eg. Use of Receptacles 41. An owner or occupier of premises shall -

- (a) not deposit or permit to be deposited in a receptacle
  - (i) more than 70 kilograms of rubbish or refuse;
  - (ii) hot or burning ash;
  - (iii) oils, motor spirit or other flammable liquid;
  - (iv) Liquids, including liquid paint or other solvent;
  - (v) Bricks, concrete, building rubble, earth or other like substances;
  - (vi) Drugs, dressings, bandages, swabs or blood samples unless placed in a sealed impervious and leak-proof container;
  - (vii) Hospital, medical, veterinary, laboratory or pathological substances containing blood unless placed in a sealed impervious and leak-proof container;

- (viii) Syringes, needles, surgical hardware, broken glass, sharps or other sharp objects unless placed in a sealed impervious leak-proof and impenetrable container;
- (ix) used condoms unless placed in a sealed, impervious and leak-proof container;
- (x) cytotoxics, radioactive substances and dangerous chemicals;
- (xi) Sewage, manure, nightsoil, faeces or urine;
- (xii) any object which is greater in length, width, or breadth than the corresponding dimension of the receptacle or which will not allow the lid of the receptacle to be tightly closed; or
- (xiii) rubbish or refuse which is or is likely to become offensive or a nuisance, or give off an offensive or noxious odour, or to attract flies or cause fly breeding unless it is first wrapped in non-absorbent or impervious material or placed in a sealed
- (xiiii) asbestos containing materials, asbestos cement materials, brake linings, and insulation products.

# Schedule 2

## **Prescribed Offences**

[clause 5.4(1)]

ltem No.	Clause No.	Description	Modified Penalty
1	2.1(2)(a)	Failing to pay fee or charge	\$350
2	2.1(2)(b)	Failing to ensure lawful use of receptacle	\$350
3	2.2(1)	Failing to keep an enclosure thoroughly clean and disinfected	\$250
4	2.2(2)	Failing to maintain a suitable enclosure or area	\$250
5	2.3(a), (b), (c), (d)	Failing to maintain a suitable enclosure or area	\$250
6	2.3(1)	Depositing non-collectable waste in a receptacle	\$350
7	2.3(2)	Depositing waste in another receptacle without consent	\$350
8	2.4(1)	Exceeding weight capacity of a general waste receptacle	\$350
9	2.4(2) and (3)	Depositing unauthorised waste in a general waste receptacle	\$350
10	2.5(a)	Depositing unauthorised waste in a recycling waste receptacle	\$350
11	2.5(b), (c), (d) and (e)	Exceeding weight capacity of a recycling waste receptacle	\$250
12	2.6(a)	Depositing unauthorised waste in an organic waste receptacle	\$350
13	2.6(b), (c) and (d)	Exceeding weight capacity of an organic waste receptacle	\$350
14	2.7(3)	Failing to comply with a direction concerning placement or removal of a receptacle	\$250
15	2.8(1)(b)	Failing to keep a receptacle in the required location	\$250
16	2.8(1)(c)	Failing to place a receptacle for collection in a lawful position	\$250
17	2.8(1)(d)	Failing to provide a sufficient number of receptacles	\$250
18	2.8(1)(e)	Failing to notify of a lost, stolen, damaged or defective receptacle	\$50
19	2.10(a)	Damaging, destroying or interfering with a receptacle	\$400
20	2.10(b)	Removing a receptacle from premises	\$400
21	2.11(1), 2.11(1)(c) and 2.41(1)(1)	Failing to comply with a term or condition of verge waste collection	\$400
	2.11(1)(d)	Removing waste for commercial purposes	\$250
22 23	2.11(2) 2.11(3)	Disassembling or leaving in disarray waste deposited for collection	\$350 \$250

ltem No.	Clause No.	Description	Modified Penalty
24	3.1(a)	Failing to provide a sufficient number of receptacles	\$250
25	3.1(b)	Failing to keep a receptacle clean and in a good condition and repair	\$250
26	3.1(c)(i)	Failing to prevent fly breeding and vectors of disease in a receptacle	\$350
27	3.1(c)(ii)	Failing to prevent the emission of offensive odours from a receptacle	\$350
28	3.1(c)(iii)	Allowing a receptacle to cause a nuisance	\$350
29	3.1(d)	Failing to comply with a direction to clean, disinfect or deodorise receptacle	\$300
30	3.2(1)	Unauthorised removal of waste from premises	\$250
31	3.2(2)	Removing waste from a receptacle without approval	\$250
32	3.3	Unauthorised use of a receptacle in a public place	\$250
33	4.3(2)	Failing to comply with a sign or direction	\$500
34	4.3(4)	Failing to comply with a direction to leave	\$500
35	4.4(1)	Disposing waste without payment of fee or charge	\$500
36	4.5(1)	Depositing waste contrary to sign or direction	\$500
37	4.6(1)(a)	Removing waste without authority in a waste facility	\$250
38	4.6(1)(b)	Depositing toxic, poisonous or hazardous waste at a waste facility	\$500
39	4.6(1)(c)	Lighting a fire in a waste facility	\$300
40	4.6(1)(d)	Removing or interfering with any flora in a waste facility	\$300
41	4.6(1)(e)	Removing or interfering with any fauna without approval in a waste facility	\$300
42	4.6(1)(f)	Damaging, defacing or destroying any building, equipment, plant or property within a waste facility	\$500
43	4.6(2)	Acting in an abusive or threatening manner	\$300

Dated this	day of	2021
The Common Seal of the City of Kwinana was hereunto affixed in the presence of :	) ) )	

Carol Adams Mayor Wayne Jack Chief Executive Officer





**By Law** 

# Model as Gazetted





[1967]

# Government Gazette

OF

# WESTERN AUSTRALIA

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No. 52]

PERTH: WEDNESDAY, 17th JULY

[1963

Crown Law Department, Perth, 9th July, 1963.

THE undermentioned Model By-laws—Series "A" as amended from time to time prior to the 25th February, 1963, and prepared by direction of the Governor under the provisions of the Health Act, 1911, as amended, are reprinted pursuant to the Reprinting of Regulations Act, 1954, by the authority of the Minister for Justice.

> R. C. GREEN, Under Secretary for Law.

HEALTH ACT, 1911 (AS AMENDED).

### MODEL BY-LAWS-SERIES "A"

(Published in the Government Gazette on the 8th April, 1927, incorporating the amendments thereto published in the Government Gazette on the 20th October, 1933, 5th October, 1934, 1st February, 1935, 12th February, 1937, 2nd July, 1937, 15th October, 1937, 22nd April, 1938, 29th April, 1938, 3rd March, 1939, 29th September, 1939, 18th July, 1941, 30th April, 1943, 10th December, 1943, 26th January, 1945, 30th November, 1945, 20th December, 1946, 24th October, 1947, 23rd December, 1949, 10th February, 1950, 24th March, 1950, 29th December, 1950, 22nd June, 1951, 17th August, 1951, 2nd November, 1951, 16th May, 1952, 31st December, 1952, 6th February, 1953, 20th March, 1953, 21st August, 1953, 23rd July, 1954, 20th August, 1954, 9th February, 1955, 18th February, 1955, 3rd May, 1955, 18th May, 1955, 10th March, 1959, 12th December, 1962, 11th June, 1963 and 25th June, 1963 and reprinted pursuant to the Reprinting of Regulations Act, 1954.

Reprinted pursuant to the Reprinting of Regulations Act, 1954, by authority of the Minister dated 9th July, 1963.

#### MODEL BY-LAWS.

Series "A."

WHEREAS under the provisions of the Health Act, 1911-1919,<sup>1</sup> a local authority may make by-laws: Now, therefore, the being the local authority for the health district of do hereby make the following by-laws:—

#### Interpretation.

In these by-laws the terms specified here under shall bear the meaning defined, unless the context indicates otherwise: —

"Act" means the Health Act, 1911-1919.<sup>1</sup>

"Approved" shall mean approved by the Medical Officer of Health or by an inspector.

#### PART I.-GENERAL SANITARY PROVISIONS.

#### Earth Closets and Privies.

By-law 1 amended by G.G. 18/5/55, p. 1119.

1. No person shall construct or cause to be constructed any earth closet or privy which does not comply with the following conditions:—

- (a) The internal fittings shall be in accordance with the plan shown in Schedule "A" hereto but where any earth closet or privy is erected on the premises of any school, the width of the earth closet or privy shall not be less than two feet nine inches in lieu of three feet as shown in the plan in Schedule "A."
- (b) It shall not be within 20 feet of any house or tank, nor within 50 feet of any other water supply, nor within 50 feet of the milking shed or milk room of any dairy, and shall be so constructed that the pan may be withdrawn from the rear of the convenience.
- (c) The walls shall be of stone, brick, or other approved material.
- (d) There shall be at least two ventilating openings, of 50 square inches in area, one in each of two opposite walls, and situated six feet above the floor level.
- (e) The roof shall be of galvanised iron, or other impervious material.
- (f) The door shall be hung so that there is, when the door is closed, a clear space of at least three inches above and below it.
- (g) The floor shall be of approved impervious material, and shall have a uniform fall of one in 30 from back to front and its upper surface shall be not less than six inches above the level of the ground adjoining.
- (h) The under surface of the seat shall be  $15\frac{1}{2}$  inches above the floor.
- (i) A hinged aperture cover shall be provided to the seat.
- (j) A service door shall be provided in the rear wall of the convenience, through which the pan must be with-drawn.

<sup>1</sup> Now Health Act, 1911-1962.

1A. (1) The owner of a house shall provide a privy or privies By-law IA thereon to such number and of such construction as are required in accordance with the provisions of this by-law.

(2) Subject to sub-bylaw (4) of this by-law, every house shall be provided with at least one privy where it is necessary or likely to be necessary to provide for the requirements of not more than 15 persons, and additional privies in the proportion of one to every 15, or portion of 15, persons shall be provided where it is necessary or likely to be necessary to provide for the requirements of more than 15 persons but not more than 90 persons.

(3) In the case of a house where it is necessary or likely to be necessary to provide for the requirements of more than 90 persons, there shall be provided the number of privies required under sub-bylaw (2) of this by-law and additional privies in the proportion of one to every 20, or portion of 20, persons in excess of 90 persons.

(4) Where a house is one in which persons of both sexes reside or lodge, and the house is a boarding-house or a lodginghouse or is occupied by more than one tenant, separate privies for each sex shall be provided in such house.

(5) All entrances to privies shall be so screened as to ensure privacy and the entrance to a privy set aside for use by one sex shall be distant not less than 12 feet from the entrance to a privy set aside for use by the opposite sex.

1AA. A person who undertakes work in the district shall By-law IAA provide and maintain, for the use of the persons engaged on the added by work, privy and urinal accommodation in accordance with the  $p_{.283}$ following scale:-

Number of Workmen, Privies, Urinal Pans, Frequency of Removal. 1 to 5; 1; nil; once per week. 6 to 12; 1; nil; twice per week. 13 to 20; 1; 1; twice per week. 21 to 30; 2; 1; thrice per week.

1.

This by-law shall not apply to a factory, shop or warehouse which is within the meaning of the interpretation of factory, shop or warehouse in section four of the Factories and Shops Act, 1920-1951,<sup>1</sup> wherein privy and urinal accommodation is provided for the use of the persons employed therein.

1B. In relation to temporary earth closets and privies to be By-law 1B provided for the use of workmen employed on any works the fol-lowing provisions shall apply:— G.G. 10/2/50, pp. 244-5.

- (a) The internal fittings shall be in accordance with the dimensions in Schedule "A" to Part I in the said Model By-laws.
  - (b) An earth closet or privy shall not be within 20 feet of any house or tank nor within 50 feet of any milking shed or milk room of any dairy.
  - The walls and roof shall be of wood and galvanised iron or other material as may be approved by the local authority.
  - (d) The entrance shall be effectively screened to ensue privacy.
  - (e) The under surface of the seat shall be at least  $15\frac{1}{2}$  inches above the level of the ground.
  - (f) A hinged aperture cover shall be provided to the seat.
  - (g) A hinged riser shall be provided to the panstead so as to allow of the withdrawal of the pan from within the privy.

<sup>1</sup> Now Factories and Shops Act, 1920-1959.

added by G.G. 30/4/43, p. 432. Substituted by G.G. 12/12/62, pp. 3909-10.

- (h) The panstead shall be constructed as a separate unit and not incorporated in the walls.
- The panstead shall be constructed and maintained in 2 a flyproof condition.

#### Urinals.

- 2. No person shall construct or cause to be constructed a urinal which does not comply with the following conditions:
  - (a) The walls shall be composed of or faced with some impervious material, approved by an inspector.
  - (b) The floor shall be constructed of approved material, The hoor shall be constructed of approved material, finished so as to be impervious, and have a fall of not less than 1 in 30 to a drain constructed at one side of such floor; the drain to be composed of similar material; such drain shall discharge to a trapped gully, connected by a glazed earthenware pipe of sufficient size to a sewer or if there be no sewer then it shall be disposed of as directed by the local authority.
  - (c) The roof shall be of impervious material and so arranged that there is an opening on all sides between the top of the walls and the lower side of the roof of not less than six inches.
  - (d) A "U" shaped trough shall be provided, placed against one of the walls, and composed or faced with galvanised iron, not thinner than 20 gauge, or some other approved impervious material, discharging in an approved man-ner to a sewer or to a sanitary pan, of the pattern prescribed by by-law 7.
  - (e) The impervious surface of that side of the trough nearest to the wall shall be continued to a height of not less than two feet above the front edge of the trough; the front edge shall be not less than 24 inches, and not more than 26 inches above the floor level.
  - (f) The wall against which the trough is placed to be that wall which is adjacent to the lowest part of the floor.
  - (g) A water supply, and such fittings as may be required, for flushing purposes, shall be provided to the satisfaction of an inspector.

#### Maintenance of Sanitary Conveniences.

By-law 3 substituted by G.G. 12/12/62, p. 3910

3. (1) The owner of premises shall maintain all works and services, fixtures, fittings and mechanisms that form part of or are appurtenant to sanitary conveniences, bathroom, laundry, or cooking facilities on those premises in good condition and available for use.

(2) The occupier of premises shall maintain all sanitary con-veniences and all works, fixtures, fittings, pipes and drains on those premises in a clean condition.

#### [Revoked by G.G. 12/12/62, p. 3910.] 4.

By-law 4A added by G.G. 3/3/39, p. 361: amended by G.G. 26/1/45, p. 86: New by-law sub-stituted by G.G. 20/3/53, p. 514

4A.

The owner of every dwelling-house shall provide on the premises for the use of the occupants thereof-(1) a bathroom having a floor area of not less than 36 square feet and walls of not less than five feet six inches

measured horizontally which shall be equipped with a wash basin and a shower bath or plunge bath; and

(2) laundry facilities as follows:-

- (a) (i) At least one set of two washing troughs properly supported; and
  - (ii) at least one copper properly supported and enclosed with brickwork or metal;

which shall be installed in a building or room having a floor area of not less than 50 square feet and not being a room in which food is stored, prepared, served, or consumed; or

- (b) at least one washing machine and one wash trough or sink having a capacity of not less than eight gallons which shall be contained in a building or room having a floor area of not less than 42 square feet.
- (c) Where a washing machine is not provided with apparatus for heating water to be used therein, a hot water system shall be provided.
- (d) Where the hot water system is of the storage type, it shall have a capacity of not less than twice the capacity of the washing machine.
- (e) Where the hot water system is of the conthrough flow type, it shall deliver hot water to the washing machine at a rate of not less than one half gallon per minute.
- (f) All wash troughs and sinks shall be properly supported.

4AA. The floor of the building or room in which laundry <sup>By-law 4AA</sup> added by facilities are situated shall be graded 1 in 100 to a waste outlet G.G. 20/3/53, set in the floor and shall be constructed of-

p. 514.

- (a) concrete three inches thick rendered to a smooth surface, or
- (b) a layer of bituminous industrial compound not less than three-quarters of an inch thick laid on a base comprising-
  - (i) tongue and groove hardwood floorboards; or
  - (ii) concrete not less than one and a half inches thick laid in a solid foundation; or
  - (iii) aggregate base consolidated by covering with at least two inches of gravel firmly bedded down and sealed with road primer; or
- (c) material which is of similar strength and impermeable qualities.

4AB. (1) Where laundry facilities are provided in accordance By-law with paragraph (2). subparagraph (a), of by-law 4A and if they by G.G. are situated in a building adjacent to a kitchen or room where 20/3/53. food is stored or consumed they shall be separated therefrom by a p. 514. wall extending from the floor to the roof or the ceiling.

(2) Where an opening permitting communication between the laundry and kitchen or room where food is stored or consumed is provided the opening shall be not more than two feet eight inches wide, and it shall be provided with a door, which, when closed, shall completely fill the opening.

4AC. (1) Where laundry facilities are provided in accordance  $\begin{array}{c} By-law 4AC\\ added by\\ added by\\ G.G. 20/3/53,\\ are situated in a building adjacent to the kitchen, they shall be p. 514.\\ separated therefrom by a wall which shall be at least six feet \\ bigh \\ \end{array}$ high.

(2) Where an opening permitting communication between the kitchen and laundry is provided the opening shall not extend for more than half the width of the room and it shall be not less than two feet six inches wide and not more than four feet wide.

4AD. All buildings, apparatus and fittings provided in accord-ance with by-laws 4A, 4AA. 4AB and 4AC shall continue to be provided so long as the dwelling-house is occupied or available for p.515. occupation.

By-law 4AE added by G.G. 20/3/53, p. 515.

By-law 4AF added by

G.G. 12/12/62, p. 3910. 4AE. All apparatus and fittings provided in accordance with Part 1 of these by-laws shall be kept in good order and fit for use, and the owner thereof shall renew or repair any part that shall become defective.

4AF. Notwithstanding the requirements of by-laws 4A, 4AA, 4AB, 4AC, 4AD and 4AE of these by-laws, in a building comprising flats, laundry and bathroom facilities provided for each flat may, if the facilities mentioned in sub-bylaw (1) and in paragraphs (c), (d), (e) and (f) of sub-bylaw (2) of by-law 4A of these by-laws are provided, be contained in a single room having a floor area of not less than 78 square feet and and walls not less than five feet measured horizontally.

Provided that where a closet pan is one of the fittings in the room, such closet pan shall be installed within a closet provided with a door to ensure privacy, and the floor area of the closet shall not exceed 18 square feet.

4B. [Revoked by G.G. 12/12/62, p. 3910.]

added by G.G. 18/7/41, p. 1020.

By-law 4B

#### Public Latrines.

5. (a) No person shall foul any portion of a public sanitary convenience.

(b)  $N_0$  person shall stand upon any portion of any such convenience other than the floor.

(c) Every such convenience shall be provided with a sufficient amount of artificial light, and such light shall be maintained after sunset for such time as such convenience remains open to the public.
 (d) No person shall write upon or otherwise deface any portion

of the structure or fittings of any such convenience.

6. Every owner of a privy shall provide in connection therewith two pans, one lid and one rubber ring, and such pans shall conform to the following specifications:—

- (a) They shall be constructed of galvanised iron of not less than 22 gauge.
- (b) They shall be  $14\frac{1}{2}$  inches high, and the diameter shall be 13 and one-sixth inches.
- (c) There shall be an iron band around the top one inch by a quarter of an inch, welded at the joint, and secured thereto by four quarter-inch diameter rivets, placed through the band and pan at equal distances apart in the circumference thereof and so as to fit same neatly, and be level across the top.
- (d) The seams of the pan shall be folded, grooved, and sweated with solder.
- (e) There shall be two straps across the bottom, swaged and riveted thereto, and made of one and a quarter galvanised hoop iron of not less than 20 gauge.
- (f) Two handles of three-eighths of an inch round iron shall be properly riveted to the external opposite sides at five inches below the top, projecting not more than two inches from the sides thereof.
- (g) The lid to be used on removal of a pan from a privy shall be of approved design, and so contructed and fitted that when applied and fixed to a pan, no liquids can escape from the latter.
- (h) The pan shall be removed from each privy at least once in each week or at such times and with such frequency as an inspector may direct.

#### Prescribing the Method of Removing Used Pans and the Replacing of Clean Ones.

7. (a) Every person removing a pan from a privy shall at once cover the same with an approved tight-fitting lid. He shall then place in the panstead of the privy a clean pan of the pattern described in by-law 6, and such clean pan shall be placed directly under the aperture in the seat, in such a way that the handle of the pan is not in contact with the riser, and the panstead door shall then be closed.

(b) After the lid of a used pan has been placed in position no person shall remove such lid until after the pan has been transported to the site used for the disposal of nightsoil.

(c) On reception at the place of disposal, the contents of each pan shall be emptied and disposed of in the manner prescribed by paragraph (f).

(d) After the pan has been emptied, it and its lid must be thoroughly washed and scrubbed in clean water, and then the inside of such pan and both sides of the lid shall be thoroughly scrubbed in a disinfecting solution, a separate brush being used, and then wholly immersed in a solution of disinfectant having a germicidal value equal to a five per cent. solution of pure carbolic acid; or thoroughly cleansed in a steam-tight box or chamber with steam, to be applied to the pan and lid for not less than five minutes

(e) The interior surface of every pan and the underside of the lids shall, after being thoroughly cleansed, be properly coated with coal tar applied hot, and such coating shall be renewed whenever necessary, so as to properly protect the whole internal surface of the pan and the underside of the lid.

(f) The contents of such pans shall be disposed of by burial in a trench not exceeding two feet in depth, nor two feet in width, and shall without undue delay after being deposited be thoroughly covered with a layer of clean earth of at least six inches in depth.

7A. (1) The pan shall be removed from each privy at least By-law 7A

(2) If more than six and not more than 10 persons use such privy, the pans shall be removed at least twice each week.
 (3) If more than 10 and not more than 10 persons use such p. 432.

privy, the pan shall be removed at least three times each week.

(4) If more than 15 persons use such privy, the pan shall be removed daily.

(5) Notwithstanding the foregoing, the pan from any privy shall be removed at such times and with such frequency as an inspector may direct.

(6) The following persons shall be responsible for compliance with this by-law:

(a) If the removal of nightsoil is the subject of a contract, then the contractor and his servants.

(b) If the local authority undertakes such removal, then the local authority and its servants.

(c) If the local authority does not undertake or contract for such removal, then the householder.

#### Prevention of the Use of Nightsoil, Urine, etc., as Manure.

8. (a) No person shall use or keep for the purpose of use as manure any night soil or urine.

(b) No person at any sanitary depot shall plant vegetable matter for human consumption on any part of such depot in the soil in which there has been deposited any nightsoil, urine, or offensive matter within six weeks.

#### Drivers of Carts used in Sanitary Services Not to Loiter in Streets, etc.

No driver of any vehicle used in the transport of nightsoil, 9. urine, liquid wastes or offensive matter shall loiter in any street, right-of-way, lane or other public place.

#### Vehicles to be Cleansed.

10. All vehicles used in the carrying out of sanitary services specified in by-laws 12 and 16 shall be daily cleansed and shall be maintained in such a condition as not to be offensive.

#### Licensing of Persons to Remove Nightsoil.

11. (1) No person shall be employed by a contractor in the collection and removal of nightsoil, urine, refuse, or other offensive material, unless such person is licensed by the local authority.

- (2) Such license shall be issued upon the following conditions:—(a) The applicant shall produce satisfactory evidence of
  - good character. (b) The license shall be void if the licensee ceases to be in
  - (b) The license shall be void if the licensee ceases to be in the employ of the contractor.

#### Rubbish Receptacles to be Provided.

12. (a) The occupier of every premises shall provide a receptacle, or as many more such receptacles as may be required by an inspector, for holding refuse. Such receptacle shall be of metal not thinner than 24 gauge. Its capacity shall not be less than two and a half cubic feet, nor more than four cubic feet, and so constructed as to be water-tight. It shall be provided with two handles and have a tight-fitting lid with a flange overlapping the top of the bin.

(b) For the purpose of this by-law and by-laws 14 and 15 the term "refuse" does not include slops or liquid waste, and no person shall place any such slops or liquid waste in any such refuse receptacle.

#### Refuse to be Deposited in Receptacles

13. The occupier of every premises shall cause all household refuse to be deposited in such receptacle, and such receptacle shall be maintained in a thoroughly clean and efficient condition, and in a condition to satisfy the requirements of by-law 12, and he shall, when required by an inspector, thoroughly cleanse and disinfect every such receptacle.

#### Receptacles to be Kept Covered and Emptied Weekly

14. Every occupier shall cause such receptacle to be covered with its lid at all times, except when the lid is removed for the purpose of placing the refuse within the receptacle, and at such times the lid shall be immediately replaced. Every such receptacle shall be emotied once weekly, or so much more frequently as an inspector may direct.

#### Rubbish Removal Vehicles.

15. A vehicle used by the local authority or its contractor for the collection and transport of rubbish shall—

- (a) be provided with a compartment in which all rubbish shall be deposited for removal, and of which the interior is constructed from or surfaced with impermeable material; and
- (b) have a cover over the compartment at all times when the vehicle is engaged in the transport of rubbish.

#### Method of Removal of Rubbish.

15A. A person engaged in the removal of rubbish from premises  $l_{--}$ 

- (a) convey all rubbish from the receptacle of the occupier of the premises and deposit the rubbish in the portion of the collection vehicle intended to hold rubbish; and
- (b) replace the receptacle at the place where the person found it, with the lid in place.

By-law 15 and heading substituted by G.G. 12/12/62, p. 3910.

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By-law 15A and heading added by G.G. 12/12/62, p. 3910.

#### Rubbish Receptacle Not to be Placed in Street. 16. No person shall place a rubbish receptacle in or upon any street, right-of-way, thoroughfare, lane, or footpath.

#### Rubbish Not to be Deposited on Public Lands.

17. No person shall deposit any filth, dirt, ashes, rubbish, sludge, liquid refuse or offensive matter on or about a street, or Crown lands or at places under the control of the local authority, such upon such land as is specially set apart for the purpose of such deposit under the provisions of the Act.

Rubbish Only to be Removed from Cart at Prescribed Places.

18. No person shall remove any rubbish or refuse from a rubbish cart, except at such place or places as shall have been set apart for the purpose.

#### Method of Disposal of Rubbish.

(1) It shall be the duty of the local authority to ensure By-law 19 19 (a) distributed in such a manner that no layer of rubbish 12/12/62, is deeper than six feet. and that all household rubbish deposited at a site under its control is-

- is deeper than six feet; and
- (b) covered each day with a layer of earth at least nine inches deep.
- (2) A person who-
  - (a) sets fire to any rubbish at a site set aside for the deposit of rubbish, except where the rubbish is in a properly constructed incinerator; or
  - (b) removes any matter or thing whatsoever from a site set aside for the disposal of rubbish without the written permission of the local authority, or fails or neglects to observe any condition under which that permission was given: or
  - (c) deposits or disposes of any rubbish at a place other than a place set aside by the local authority for the purpose;

commits an offence.

#### Places of Deposit of Rubbish or Nightsoil to be Fenced.

20. Every place used for the deposit of faecal matter or refuse shall be securely fenced on all sides, and so as to effectively exclude cows, horses, and other stock from such place.

#### Liquid Refuse-Disposal of.

21. The term "liquid refuse" when used in these by-laws shall include bath, kitchen, scullery, laundry, and wash-house or other domestic wastes, also stable washings.

No person shall permit any liquid refuse to be discharged or deposited upon the surface of any street.

23. The occupier of any premises shall dispose of the liquid By-law 23 refuse produced upon the premises by one of the following G.G. 17/8/51, p.2251-2.

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- (1) By discharging it into a soak well, complying with the  $\frac{12}{12}$ p. 3911. following conditions:-
  - (a) A sketch plan showing the design, situation, and construction together with the connections with such soak well shall be submitted to and approved in writing by an inspector.
  - (b) It shall be at least four feet in diameter and five feet in depth. It shall be lined with bricks laid with open joints and be provided with an impervious cover, which shall have above it at least 12 inches of soil.

- (c) The house fittings shall be to the satisfaction of the inspector, and each such fitting shall be discharged over an open gully provided with a water-sealed trap.
- (d) From such trap, liquid wastes shall be conducted direct to the soak well by means of an earthenware drain, circular in shape and at least four inches in diameter and laid with a proper fall.
- (e) The soak well to be ventilated by means of a four-inch diameter galvanised iron pipe erected vertically, carried up to a height of not less than eight feet, or if the soak well is within 12 feet of the wall of the house, the longer pipe shall be carried up at least one foot above the eaves of each house.
- (f) Where there is a series of more than one soak well the earthenware drain from the house shall connect with only one of such wells, and the connection between the well into which the connection discharges and subsequent wells shall be by means of a syphon placed vertically with the curve uppermost, and the inlet and outlet pipes at a height of two feet from the bottom of the respective wells.
- (g) Whenever ordered by an inspector such well shall be emptied, cleansed, and disinfected in such manner and within such time as is specified in the requisition.
- (2) By discharging into an approved ventilated impervious receptacle fitted with a gas-tight cover, which shall comply with the following conditions:—
  - (a) The contents of such receptacle shall be removed at such times and with such frequency and in such manner as is directed by an inspector.
  - (b) The occupier shall not permit any such receptacle to overflow or become offensive.
  - (c) The receptacle shall be situated where directed by an inspector.

(2A) By discharging into a french drain, which shall comply with the following conditions:—

- (a) A sketch plan showing the design, situation and construction, together with the connections with such french drain shall be submitted to and approved in writing by an inspector.
- (b) It shall be constructed of agricultural drain pipes of not less than four-inch diameter laid in a straight line with open joints and completely surrounded with not less than nine inches of broken blue metal of not more than three-inch gauge and not less than two-inch gauge. The surface of the drain shall be covered with gravel or earth.
- (c) [Deleted G.G. 12/12/62, p. 3911.]
- (d) A grease intercepting trap of a design and dimensions approved by the inspector shall be installed at the premises as is considered necessary by the inspector, and shall be situated where directed by the inspector.
- (e) The dimensions of the trench shall be determined by the inspector, except that no trench shall be less than 30 feet long or two feet wide or two feet deep.

Para (2A) added by G.G. 17/8/51, p. 2252.

- (f) The french drain shall be ventilated by means of a glazed earthenware 90-degrees bend fitted with a metal grid and mosquito proof wire mesh, and so installed that the grid is clear of the ground surface.
- (g) No french drain shall be situated closer than 12 feet from any dwelling, nor closer than 20 feet from any window or door of any dwelling.
- (h) The french drain, and all fittings connected thereto shall at all times be maintained in good order and condition, and when required by an inspector any french drain shall be emptied, cleaned and disinfected in such manner and within such time as may be specified in the requisition.
- (2B) By discharging into a leach drain which complies Para (2B) added by with the following conditions:-
  - G.G12/12/62, (a) A sketch plan of the proposed leach drain showing details of construction, dimensions, levels and situation and connections to be made shall have been submitted to and approved by the local authority before construction is commenced.
    - pp. 3911-12. Amended by G.G. 11/6/63, p. 1689.
  - (b) The drain shall be not less than two feet wide, and two feet deep.
  - (c) It shall be at least thirty feet long when connected to a combined septic tank-liquid waste disposal system and not less than twenty feet long in other cases.
  - (d) It shall be constructed of good quality bricks laid with open joints, and having the two top courses set in cement mortar, or of precast cement segments complying with the standard for blocks, Class B, S.A.A. Int. 306. Housing specification (Interim Series).
  - (e) The bed of the drain shall have a fall of 1 in 200 away from the inlet pipe.
  - (f) A concrete slab shall be fitted into the bed beneath the inlet pipe to prevent scouring of the bed.
  - (g) Bridging pieces shall be placed between the walls of the drain at not more than six feet centres. The bridging pieces shall have aper-tures equal to at least fifteen per cent. of their surface area and be so positioned as to allow the free passage of liquids.
  - (h) If the walls of the drain are constructed of bricks, the bridging pieces shall extend to within three inches of the top of the drain.
  - (i) The drain shall be fitted with a cover constructed of concrete slabs measuring 2 ft. 9 in. x 2 ft. 2 in., and having rebated edges. The slabs shall be grouted and sealed with weak cement mortar if the final earth cover of the drain is less than 12 inches deep.
  - (j) It shall be ventilated by means of a 90-degrees bend fitted with a metal grid and gauze. The grid shall be clear of the ground, and the portion above ground shall be boxed in concrete.
- (3)[Deleted by G.G 12/12/62, p. 3912.]

23A (1) Notwithstanding the provisions of by-law 23 of Part By-law 23A 1 of these by-laws, where an owner of premises has installed a septic G.G. 12/12/62, tank on those premises and has connected all drains necessary for p. 3912. tank on those premises and has connected all drains necessary for the disposal of liquid wastes thereon, and the work has been done

pursuant to and in accordance with a permit issued under the Bacteriolytic Treatment of Sewage Regulations, 1958, the provisions of by-law 23 of this Part shall be deemed to have been complied with.

(2) The provision and repair, but not the daily maintenance and cleansing, of the apparatus for the disposal of liquid wastes as referred to in by-law 23 of this Part shall be the responsibility of the owner of the premises whereon the apparatus is provided or to be provided.

#### Transport of Offensive Material

24. (a) No person shall remove or transport any offensive matter between the hours of 8 a.m. and 10 p.m.

(b) No person shall remove any pigwash or offensive matter unless such pigwash or offensive matter be carried in watertight barrels or tanks securely covered to prevent the escape of any of the contents thereof, or the emission of any offensive odour therefrom.

(c) Every person using any tank or barrel or vehicle in the removal of any pigwash or offensive matter shall keep such tank, barrel or vehicle and every vehicle used for the carriage or removal of any such matter as aforesaid in a thoroughly clean condition, and in good repair.

(d) The provisions of this by-law shall not apply to persons engaged in the removal of nightsoil or refuse as provided by bylaws 7 and 15.

By-law 24A added by G.G. 16/5/52, p. 1250-1.

24A. No person shall use for the transport of any butchers' or slaughter-house wastes any vehicle used in the transport of food, drugs or any matter intended to be used for the packing or handling of food and drugs.

24B. No person shall collect, remove or engage in the transport of any butchers' or slaughter-house wastes unless—

- (1) the vehicle used for the purpose is a powered vehicle and shall have---
  - (a) (i) a compartment for holding wastes, the compartment to be comprised of a floor and four walls made of sheet metal being not less than three feet high from floor level; and
    - (ii) all joints in the compartment soldered, welded or brazed and made water tight; and
    - (iii) all loading doors, when loading doors are provided, fitted to the rear or left side of the vehicle only and the loading doors shall be tight fitting; and
    - (iv) the compartment completely covered with a tarpaulin which shall be carried over the walls and secured to the outside thereof at least one foot from the top; or
  - (b) a metal bin with a tight fitting lid in which any butchers' or slaughter-house wastes shall be placed;
  - (2) the vehicle and all bins, tarpaulins, bags and other accessories are thoroughly cleansed on each day on which they are used and maintained in good order at all times;
  - (3) all butchers' or slaughter-house wastes are loaded, transported or delivered so as not to cause a nuisance.

#### Prevention of the Use of Offal and Blood as Manure.

25. (a) No person shall transport, deposit, use or store offal or blood for the purpose of being used as manure unless it has been sterilised by steam and properly dried.

By-law 24B added by G.G. 16/5/52, p. 1250-1.

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(b) No person shall transport, deposit, use or store for use as manure any blood in such a way as to be offensive, or deposit or store such material within one hundred feet of any house or dairy.

#### Stables.

26. The occupier of any premises whereon a horse is kept shall By-law 26 amended by provide a stable which shall comply with the following conditions:-

- (a) It shall not be at any less distance than 20 feet of any dwellinghouse, nor less than 50 feet from the milkingshed or milk-room of any dairy.
- (b) It shall have walls to a number and height and thickness approved and such walls shall be constructed of concrete, brick, stone, wood or galvanised iron.
- (c) It shall have a roof to be constructed of some impervious material.
- (d) There shall be on all sides of the building between the wall and the roof a continuous clear space of at least p. 1836. six inches in height.
- (e) The upper surface of the fioor shall be raised at least three inches above the surface of the surrounding ground, and shall be constructed of granolithic cement, concrete, or some other approved impervious material; it shall have a fall of one in a hundred to a drain.
- (f) There shall be provided outside each such stable a receptacle for manure, such receptacle shall be con-structed of brick faced with cement or with other approved impervious material; it shall be provided with a tight-fitting cover, and shall be emptied at least once weekly.
- (g) All manure produced on the premises shall be collected daily and placed in the receptacle for manure.
- (h) The stable shall be maintained in a cleanly condition, and shall be cleansed and disinfected when so ordered by an inspector.

27. No stable shall be erected unless and until plans, specifications, and site of the proposed stable have been approved.

#### Keeping of Horses, Cows, Sheep and Goats.

28. The occupier of any premises shall not allow any horse, By-law 28 amended cow, sheep or goat to be loose in any paddock, yard or other place G.G. forming portion of such premises, and the owner of any yard, pad-12/12/22, dock or other place shall not allow any horse, cow, sheep or goat to p. 3912. be loose in any such yard, paddock or place unless and until due provision is made to prevent such horse, cow, sheep or goat from approaching to within 40 feet of any dwelling whatsoever and within 60 feet of any shop, factory, bakery or place where food is manufactured, stored or exposed for sale.

#### Keeping of Poultry or Pigeons.

29. (1) The occupier of any premises shall not keep any By-law 29 poultry or pigeons, except for the purpose of immediate sale, except G.G.under the following conditions:-

- (a) The occupier of any premises shall not keep any pigeons <sup>p. 3912</sup>. or poultry within 20 feet of any dwelling-house, and where pigeons are kept they shall be continually confined.
- (b) All enclosures or cages within which birds of any de-scription are kept shall be maintained at all times in a clean condition and shall at any time be cleaned, disinfected, or otherwise dealt with as an inspector may direct.

G.G. 22/6/51, p. 1836.

Para. (b) substituted by G.G. 22/6/51, p. 1836. Para. (c) substituted by G.G. 22/6/51,

amended by G.G. 12/12/62,

amended by G.G. 12/12/62,

(c) The occupier of any premises whereon any other animals are kept shall at all times maintain all enclosures or structures of any description wherein such animals are confined in a clean condition, and at any time when so directed by an inspector shall immediately cleanse and disinfect any such enclosure or structure.

Added by G.G. 12/12/62, p. 3912. (2) The provisions of this by-law shall remain in force until and including the 30th day of June, 1963, after which date this bylaw shall cease to be of any force or effect.

By-law 29A added by G.G. 12/12/62, p. 3912-3913.

29A. (1) On and after the 1st day of July, 1963, an occupier of premises shall not keep or permit to be kept poultry on any premises occupied by him within the area described in sub-bylaw (2) of this by-law except under and in compliance with the following conditions:—

- (a) The occupier is registered with the local authority as a keeper of poultry and the premises are also registered.
- (b) The occupier has paid to the local authority a registration fee of five shillings.
- (c) The occupier has provided properly constructed enclosures and facilities for the keeping of poultry and the poultry are kept therein at all times.
- (d) The poultry do not exceed 20 in number.
- (e) The occupier does not keep any poultry within 30 feet of any dwelling-house.
- (f) All enclosures within which poultry are kept are maintained in a clean condition.

(2) This by-law operates and has effect in the whole of the district of the local authority.

(3) The local authority may cancel or refuse the registration of any occupier in relation to any premises if the occupier is convicted in any court for an offence relating to the keeping of poultry.

By-law 29B added by G.G. 12/12/62, p. 3913. 29B. (1) On and after the 1st day of July, 1963, an occupier of premises shall not keep or permit to be kept pigeons on any premises occupied by him within the area described in sub-bylaw (2) of this by-law, except under and in compliance with the following conditions.

- (a) The occupier is registered with the local authority as a keeper of pigeons and the premises are also registered.
- (b) The occupier has paid to the local authority a registration fee of five shillings.
- (c) Pigeons are confined in a suitable cage not nearer than 30 feet to any dwelling-house, street or road, and not less than four feet from the side and rear boundaries of the lot, provided that registered homing pigeons may be freed for exercise.
- (d) All pigeon cages are provided with a concrete floor trowelled to a smooth finish and laid with a fall of 1 in 50 to the front, or with tongued and grooved flooring on a timber base, laid with a fall to the front.
- (e) All pigeon cages or lofts within which pigeons are kept are maintained at all times in a clean condition.
- (f) The maximum number of pigeons kept at the one time does not exceed twenty on a sub-divided residential lot, except that any person who in January of each year produces to the local authority satisfactory proof that he is currently affiliated with the Pigeon Racing Federation of W.A. (Inc.) or a registered fancier, may be permitted to keep up to a maximum of seventy-five (75) pigeons.

(2) This by-law operates and has effect in the whole of the district of the local authority.

(3) The local authority may cancel or refuse the registration of any occupier in relation to any premises if the occupier is con-victed in any court for an offence in relation to the keeping of pigeons.

#### Disposal of Carcases of Animals.

The owner or occupier of any premises whereon there is a 30.dead animal shall not dispose of the carcase of such animal on any premises, except at a recognised sanitary site, or on premises ap-proved by the local authority for that purpose, and it shall there be disposed of in the manner described for the disposal of rubbish under the provisions of by-law No. 19.

#### Foundations of Buildings to be Dry, Sound and Well Drained.

30A. (a) A person shall not erect any new building upon any By-law 30A ground which does not provide for the foundations of the building G.G. 21/8/53, p. 1574-5

(b) A person shall not commence the construction of the foundations of any new building until the site upon which the building is to be erected is approved by the local authority.

#### Drainage of Land Used for Building Purposes.

No person shall erect any dwelling or use as a dwelling-31. house any building existing upon land which is so situated as not to permit of being drained by gravitation into an existing drain or sewer unless

- (a) Such land has been covered with clean earth to such depth that every part of the surface of such land is at least one foot above the nearest existing sewer, and unless such land is effectively drained.
- (b) Ventilating openings are provided in each wall below the level of the floor joists; such ventilating openings to be in proportion of one air brick (nine inches long by six inches high) for each 10 feet in length of wall, and such ventilating openings shall not connect with the air cavity in any wall.
- (c) If required by the local authority, the surface of the land upon which the house is to be, or is erected, shall be covered with a layer of cement concrete or other specified material of such depth as may be directed.
- (d) The underside of any part of the lowest wooden floor of any such building shall be not less than six inches above the surface of the land.

#### Sites of New Buildings to be Thoroughly Drained.

31A. Every person who shall erect a new building shall cause the intended site of any building to be properly and thoroughly drained; and he shall cause any soakage or drainage from the adthe intended site of any building to be property defined in the ad-drained; and he shall cause any soakage or drainage from the ad-joining sites or buildings to be completely diverted from the site of such new building. G.G.8/4/27, p. 970.)

(This By-law

#### Buildings to be Provided with Spouting and Downpipes and with Drains.

(a) The owner of every dwelling-house shall cause such dwelling-house and the owner of any other building shall when so ordered by the local authority cause such other building to be provided with spouting and downpipes sufficient to receive without overflowing all rain water flowing into them.

(b) He shall cause such spouting to be fixed to the eaves of every roof of every building on his premises, so that all rainwater flowing from the roof shall be received by such. (c) He shall in connection with his premises provide and lay such proper drains, with such falls as shall be sufficient to carry off from such premises all storm or rain water, and he shall maintain all such spouting, downpipes, and drains in good order and efficient action.

#### Certain Space to be Allowed in Sleeping Rooms.

33. No sleeping room in any dwelling-house shall be occupied by such a number of inmates that for every inmate over the age of 10 years there is less than 500 cubic feet of air space, and for every inmate under the age of 10 years there is less than 300 cubic feet of air space, and the occupier of every such dwelling-house shall be responsible for any breach of this by-law.

#### Air Space to be Allowed in Work Rooms, Offices, etc.

34. (a) The occupier of every premises shall provide for every person employed upon such premises and in each room of such premises sufficient space for each individual. "Sufficient space" shall mean at least 500 cubic feet for each such person employed during the hours of daylight, and 600 cubic feet for each such person employed between sunset and the next succeeding sunrise.

(b) In calculating the total cubic space, deduction shall be made in respect of the space occupied with furniture, fittings, and projections of the walls into the room.

(c) In calculating the available cubic space for each person, each room shall be considered separately, and sufficient air space shall be allowed in each room for the maximum number of persons employed in such room at any one time.

(d) The provisions of this by-law shall not apply in the case of premises the cubic air space of which is provided for by Statute or by any other by-law.

#### Ventilation of Houses.

By-law 35 substituted by G.G. 12/2/62, p. 3913-3914. Amended by G.G. 25/6/63, p. 1841.

(This By-law was not numbered when published in G.G. 8/4/27, p. 970.

By-law 35A added by G.G. 9/2/55, p. 302-3. 35. (1) A person shall not erect, occupy or permit to be occupied any house or part thereof unless that house is provided with fixed open ventilators having not less than 24 square inches of uncontrolled ventilating area for each 100 square feet of floor area.

(2) The ventilators referred to in sub-bylaw (1) of this by-law shall be so installed as to provide outlet ventilation, and may be in the form of ceiling vents if the roof space is adequately ventilated.

#### Application of By-law may be made Retrospective.

35aA. The owner of any house erected prior to the coming into operation of these by-laws shall, when so directed by the local authority ventilate such house in such manner as may be required.

#### Repairs to Dwelling-houses.

35A. The owner or occupier of every dwelling-house shall maintain such dwelling-house and any laundries, bathrooms, privies or other structures used in connection therewith in sound condition and fit for use and in particular shall—

- (a) maintain all roofs, guttering and downpipes in sound weatherproof condition;
- (b) repair any foundations and walls, either external or internal, which are unsound by reason of fretting, cracking, dampness or other defect;
- (c) replace any missing, broken, decayed or ant-eaten timber in any verandah, roof, walls, steps, handrails, floors or their supports with material of sound merchantable quality;
- (d) make good any defective brick, stone, mortar or cement work;

- (e) repair or replace any flashings or ant stops which are missing or defective;
- (f) maintain all ventilators in good order and repair;
- (g) maintain all floors even in surface and free from cracks;
- (h) maintain all ceilings, internal wall finishes, skirtings, architraves and other fixtures and fittings complete and with smooth unbroken surfaces;
- (i) maintain all doors and windows in good working order and weatherproof condition;
- (j) retain all natural lighting free from any obstruction which would reduce the natural lighting below the ratio of one square foot of lighting to each 10 square feet of floor area;
- (k) maintain all pipes, fittings and fixtures connected with water supply, drainage or sewerage so that they comply in all respects with the provisions of the Metropolitan Water Supply, Sewerage and Drainage Act, 1909, and all regulations and by-laws made thereunder; and
- maintain all electric wiring and fittings in such state of repair and condition as shall comply in all respects with all of the requirements of the Fire Underwriters' Association of W.A.

#### Expectoration.

36. No person shall expectorate in any public place or in or upon any public vehicle excepting into vessels which are specially provided for the purpose of receiving expectoration.

#### Storage of Rags, etc.

37. Any person using or storing rags or other materials in marine stores, flock, bedding, or furniture manufactories shall keep or store the same so as not to be a nuisance, or injurious or dangerous to health, and shall whenever required so to do by an inspector, disinfect any such rags or other materials in such manner and at such place as is directed by an inspector.

#### Maintenance of Footways and Pavements.

38. The occupier of any premises shall maintain the footways or pavements immediately adjacent to his premises in a clean condition.

#### Maintenance of Public Vehicles.

39. The owner of any public vehicle shall maintain such vehicle at all times in a clean condition, and shall when required to do so by an inspector thoroughly cleanse and disinfect such vehicle in the manner prescribed by such inspector.

#### Water Tanks, Maintenance and Cleansing of.

40. (a) The occupier of any premises, the water supply of which is drawn or partly drawn from tanks, shall maintain the roof forming the catchment for such tanks, together with the spouting and down pipes appurtenant to such roof, in a clean condition, and shall at least once in each year, during the months of April or May, thoroughly clean any tank, the water from which is used for human consumption.

(b) He shall also, when ordered by an inspector, empty, cleanse, and disinfect any tank upon his premises, the water of which is used for human consumption.

(c) Every such tank shall be fitted with a tight-fitting cover.

#### Wells, Construction and Maintenance of.

41. The occupier of any premises shall not use the water of any well for human consumption, unless such well complies with the following conditions:—

- (a) It shall be at least 100 feet from any soak well, or any other probable source of pollution.
- (b) It shall be lined with impervious material to a depth of six feet below the surface of the ground, and such lining shall be carried up to a height of at least 12 inches above the surface of the ground adjacent to such well.
- (c) The well shall be covered with a tight-fitting cover, and such cover shall have no other opening than is essential for the insertion of a pump.
- (d) The surface of the ground immediately adjacent to such well shall be covered with impervious material for a distance of at least two feet around such well in all directions.

By-law 41A added by G.G. 23/7/54, p. 1293. 41A. A person shall not deposit on or under any land any sewage or offensive matter or any other thing whatsoever which may pollute or render unfit for human consumption any well or other underground source of water, the water of which is used or intended for human consumption, and which is situated within one hundred feet (100 feet) of the place where the sewage, offensive matter or other material is deposited.

#### Mosquito Eradication and Reduction.

42. The owner or occupier of any house or premises shall keep such house or premises free of stagnant water liable to breed mosquitoes. For the purpose of this by-law the presence of mosquito larvae in any collection of water wherever situated shall be sufficient evidence that such water is stagnant.

43. All fountains, pools, ponds, or excavations made for any purpose whatever, in public or private property, which may contain water, shall be kept stocked with mosquito-destroying fish, or shall be kept covered with a film of petroleum oil or other approved larvaecide. The onus of compliance with this by-law shall rest upon the owner or occupier. In the case of public property, the onus of compliance shall be upon the authority having control of such property.

44. The owner or occupier of any house or premises shall keep his house or premises free of refuse likely to become the breeding place of mosquitoes.

45. The owner or occupier of any house or premises whereon there is any tank, well, cistern, vat or barrel shall protect the same with a mosquito-proof cover, and all openings other than the delivery exit shall be screened with mosquito-proof netting to the satisfaction of the inspector.

46. The owner or occupier of any house shall cause all eaves, gutters and downpipes to be maintained in good repair and free of obstruction, to prevent the accumulation of water therein and to permit of the ready passage of water from the roof.

47. The occupier of any house or premises whereon water is kept in horse troughs, poultry drinking vessels, washing tubs and other receptacles shall frequently change such water and keep the vessels clean and free from vegetable matter and slime.

48. The occupier or owner when so required by the local authority shall cut down and remove any undergrowth or vegetation on his premises likely to harbour mosquitoes. 49. Any person cutting turfs or removing soil or other material from public or private lands shall forthwith fill in with clean sound material and make level the surrounding surface the excavation caused thereby, unless written permission to the contrary be ob-tained from the local authority.

50. The occupier of any vegetable garden shall cause all drains and channels therein to be kept clear and free from any obstruction likely to facilitate the breeding of mosquitoes.

51. The owner or occupier of any land upon which there is water likely to become a breeding place for mosquitoes shall, when required by the local authority, effectually drain such land, and for that purpose shall to the satisfaction of the local authority—

- (i) make such drains on the land as may be necessary for effectually draining it;
- (ii) fill up all irregularities in the surface of such land;
- (iii) adjust the surface thereof, and if necessary raise the level of the surface in such a manner---
  - (a) that the water on the land may flow into the drains without obstruction;
    - (b) that no water shall remain on any portion of the land, other than in the drains.

All drains made under the provisions of the preceding bylaw shall be kept by the occupier or owner in good order and free from obstruction.

53. It shall be lawful for the local authority or its officer to enter upon any house or premises and to execute any such works as are required by these by-laws.

54. Where any person is required by these by-laws or by an order issued under the provisions of these by-laws to execute any works, and such person fails or neglects to comply with such by-laws, or with such order issued thereunder, then the local authority may execute such work and may recover from such person the cost of executing such work, in addition to any penalty for which such person may be liable under these by-laws.

#### Destruction of Argentine Ants.

54A. (1) The local authority may, at any time and from time By-law 54A to time, give notice, either verbally or in writing to any owner or occupier of premises within the district of the intention of the local 23/12/49, authority to enter upon the premises, search for and destroy Argen- p. 3317. time Ants thereon.

(2) Every owner or occupier shall, within three days of his receipt of such notice or within such extended time as may be specified in the notice-

- (a) remove from ground level all accumulations of refuse, timber and other loose material which may, or which may reasonably be suspected to harbour, or cover Argentine Ants; and
- (b) cut clear or otherwise remove all vegetation and other loose material from the boundary fences of the premises.

(3) The local authority may, at all reasonable times and for the purpose of destroying Argentine Ants, enter upon any premises within the district and-

- (a) spray the whole or any part of the premises with suitable insecticide;
- (b) do such acts and things as may be reasonably necessary to destroy or to facilitate the destruction of Argentine Ants on the premises.

(4) For at least 48 hours immediately following the spraying of the premises by the local authority, the owner or occupier shall not—

- (a) heavily water any part of his premises;
- (b) turn over the soil or other matter on the premises;
  (c) do any act which would or would tend to render ineffective the spraying or other action taken to destroy Argentine Ants;
- (d) permit or suffer any person to do any of the acts or things in this by-law mentioned.

(5) Any person who commits a breach of any of the provisions of these by-laws shall be guilty of an offence and on conviction be liable to a penalty in accordance with section  $335^1$  of the Health Act, 1911-1948<sup>2</sup> and in addition be liable for all costs, charges and expenses incurred in destroying Argentine Ants upon his premises.

## Preventing the Harbourage of and Securing the Destruction of Rodents.

55. No owner or occupier shall place, throw, leave or suffer to remain on his premises any waste food, refuse, garbage, waste matter or thing which would have a tendency to encourage or attract rats to visit or frequent premises, or to form or afford harbourage or shelter to rats.

56. Whenever upon any premises any litter, hay, straw, packing material, manure, building material, produce, timber, bags, tins, old iron, paper, packing cases, or similar material, is kept or stored in such a way as to afford or form shelter or harbourage for rats, it shall be removed or so stacked, stored, arranged or protected as to no longer afford or form shelter or harbourage for rats.

57. No waste food, garbage, edible trade waste, horsefeed or cowfeed, food intended for birds or other animals, or similar material, shall be kept or allowed to remain on any premises unless it is contained in rat-proof receptacles or compartments which are kept effectively covered or closed against access by rats.

58. Every opening from or into any covered drain or sewer within the curtilage of any premises, and every opening from or into any pipe, covered conduit, or covered channel (whether or not used for drainage) which affords or is likely to afford access, shelter, or harbourage for rats, shall be so trapped or otherwise protected as to prevent effectively the ingress or egress of rats.

59. Every disused covered drain, disused covered sewer, disused pipe, disused covered conduit, or disused covered channel within the curtilage of any premises which affords or is likely to afford access, harbourage or shelter for rats shall, upon notice to that effect being given by the inspector to the owner or occupier of the premises, be taken up, repaired, blocked, or otherwise so dealt with in the manner specified in such notice, as to effectively prevent the access, harbourage, or shelter of rats therein.

60. Whenever in any building the floors, skirting, wainscots, walls, partitions, ceilings, or like internal fittings, or any of these, are so constructed or are in such a condition as to permit the access, shelter, or harbourage of rats in, under, or about such building, the said floors, skirtings, wainscots, walls, partitions, ceilings, or like internal fittings shall be so removed, refitted, reconstructed, altered or repaired as to prevent, as far as practicable, the access, shelter, or harbouring of rats in, under, or about such buildings.

<sup>2</sup> Now Health Act, 1911-1962.

<sup>&</sup>lt;sup>1</sup> i.e. s. 335 of the Act as reprinted pursuant to the Amendments Incorporation Act, 1938, and incorporating the amendments to and including No. 21 of 1944. The section has since been renumbered as s. 344 in the reprint of the Act contained in Vol. 3 of the Reprinted Acts (1950).

61. Every retaining wall, embankment, structure, improve-ment, or work of any kind or any formation, whether natural or artificial, within the curtilage of any premises which affords or provides or is likely to afford or provide the means of access, harbourage, or shelter for rats shall, in accordance with an inspec-tor's order, be removed or so reconstructed or repaired or altered as to prevent the access, harbourage, or shelter of rats.

62. Every hotel, restaurant, butcher's shop, small goods shop, baker's shop, grocer's shop, fruit shop, fish shop, oyster saloon, produce store, hide store, flour mill, stable, and slaughterhouse shall be so protected, altered, or refitted in accordance with an inspector's order as to effectively prevent rats from gaining access to or har-bouring in, under, or about the building or buildings thereof. All holes or openings in the external walls of such buildings which are of such a nature as to permit the entry of rats shall be blocked with cement or protected with stout wire netting or metal in such manner as to effectively prevent the entry of rats.

All supplies or collections of water to which rats may have access in or on such premises shall be so protected as to effectively prevent such access.

In relation to every hotel, restaurant, butcher's shop, small op, baker's shop, grocer's shop, fruit shop, fish shop, oyster produce store, hide store, flour mill, stable and slaughter-10/12/43, 63 goods shop, baker's shop, grocer's shop, fruit shop, fish shop, oyster saloon, produce store, hide store, flour mill, stable and slaughter-house, the occupier of the premises shall at all times, in addition to the other requirements of these by-laws, observe, perform and comply with the following provisions, namely:

- (a) He shall provide and have within the premises at least two rat traps of a kind or pattern approved by the local authority and as many more of such traps as may be directed from time to time by an inspector.
- (b) He shall bait every trap with fresh bait at least twice in each week, and, except when baiting or removing rats therefrom, shall at all times keep every such trap set effectively for trapping rats.
- (c) He shall inspect every such trap daily, and whenever a rat is found therein, shall kill the same immediately, forthwith dispose of the carcase in such manner as will not create a nuisance, and thereafter rebait with fresh bait and reset the trap.
- (d) He shall also adopt and use and maintain all such other reasonable means, including the following-
  - (i) blocking access ways;
  - (ii) destroying harbourage;
  - (iii) protecting foodstuffs;
  - (iv) poisoning and trapping; and
  - (v) the use of dogs, cats and other animals which kill rats:
  - in order to keep the said premises free from rats and to prevent and discourage the access to or harbourage
  - of rats in, on or about such premises.

In relation to private dwelling-houses, boarding-houses, By-law 64 houses and other premises used by persons as places of by G.G. by the occupier of the premises in the case 10/12/43. 64. lodging-houses and other premises used by persons as places of abode (other than hotels) the occupier of the premises in the case of a private dwelling-house, and the proprietor of the premises in the case of a boarding-house, or lodging-house, or other place of abode shall at all times observe, perform and comply with the following provisions, namely:

- p. 1138.
- (a) He shall provide and have within the premises at least one rat trap of a kind or pattern approved by the local authority.
- (b) Whenever there are any indications of the presence of rats in, on, or about the premises and whilst such indications continue he shall bait every trap with fresh

bait at least twice in each week, and except when rebaiting or removing rats therefrom, shall at all time keep every such trap set effectively for trapping rats.

- (c) Whilst traps are set in accordance with the requirements of paragraph (b) hereof, he shall inspect every trap daily, and, whenever a rat is found therein, shall kill the same immediately, forthwith dispose of the carcase in such manner as will not create a nuisance, and thereafter rebait with fresh bait and reset the trap.
- (d) He shall also adopt and use and maintain such other reasonable means for the capture and destruction or for the destruction of rats as an inspector, who inspects the premises, may from time to time direct.

65. All public and private docks and wharves, including all sheds and other buildings thereon, shall be so protected as to prevent rats from gaining entrance to such docks or wharves or sheds or buildings, at any state of the tide, from vessels moored or anchored alongside of such docks or wharves or from other sources, and all goods, products, wares and merchandise liable to attract or to become infested with or infected by rats on any dock or wharf shall be so kept or stored as to prevent rats from gaining access to or coming into contact therewith.

66. Every dock or wharf shall be provided with not less than two traps of a pattern approved by the local authority and as many more as may from time to time be required by an inspector. Every such trap shall be baited with fresh and suitable bait at least twice a week and shall be kept set. Every such trap shall be inspected at least once daily by the owner or occupier or his agent or servant, and all rats found therein shall be killed and their carcases shall be forthwith disposed of in such manner as an inspector may from time to time require and the trap or traps reset and rebaited by the said owner or occupier or his agent or servant.

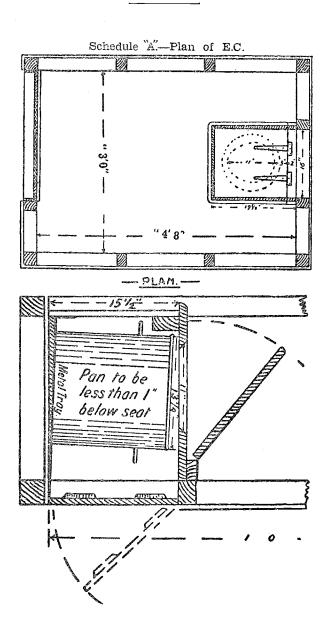
By-law 66A added by G.G. 10/12/43, p. 1138. 66A. The occupier of any building or premises (other than those buildings or premises which are expressly specified in by-laws 63, 64 and 66 hereof), in addition to complying with the requirements by the by-laws (other than by-laws 63, 64 and 66 aforesaid) for preventing the harbourage of rodents contained in this part of these by-laws, shall at all times observe, perform and comply with such directions as may from time to time be given to him by an inspector for the purposes of the capture and destruction or for the destruction of rats which may be present in on or about such building or premises.

67. The presence of rat holes, rat runs, fresh rat dung, or other evidence of rat infestation upon any premises, dock, wharf, land, or place shall be taken as evidence that these regulations have not been complied with, and shall be held to constitute a breach of these regulations.

68. It shall be the duty of every owner and occupier to comply with the foregoing by-laws at his own expense and to continue such compliance during the continuance of such by-laws.

## Penalties for Breaches of By-laws.

69. Where anything by this part of the by-law is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable for every such offence, besides any cost or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be committed or continued, and in addition to such penalty shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.



Schedule A amended by G.G. 2/11/51, p. 3024.

## PART II.--INFECTIOUS DISEASES.

## Inspection of Premises.

1. An inspector shall visit all premises in the district at least once in each period of six months, and so much more frequently as may be necessary, and immediately after every such inspection shall submit a report to the local authority on the condition of such premises, specifying any breach of the provisions of the Act, or the regulations or by-laws made thereunder.

## Cleansing and Disinfection of Premises.

2. The occupier of any premises shall cleanse and disinfect such premises or any part thereof at such times and in such manner as the inspector may direct.

#### Contacts Liable to Restrictions.

3. After it has been found that a person in any house is suffering from an infectious disease, any inmate of such house, or any person who enters or quits such house, shall be deemed to be a contact, and shall be liable to restrictions, and obey such instructions as the local authority or its medical officer may direct or issue, and may be removed to an isolated place provided for that purpose; and if so removed shall remain in such place for such period as the medical officer may direct.

## Premises may be declared "Isolated."

4. For the prevention of the spread of infectious diseases, the local authority may from time to time declare any house or premises to be infected, and no person shall quit or enter any house or premises which has been declared by the local authority to be infected, without the written consent of such authority.

## Disinfection of Personal Effects.

5. When required by the medical officer, any person shall attend at such place as the said officer shall indicate for the purpose of the disinfection of his body, clothing, and effects in such manner as may be directed by the medical officer.

## Occupier to Permit Disinfection.

6. The occupier of any premises whereon any case of infectious disease has occurred shall, when required by the inspector, permit such inspector to disinfect the premises or any part thereof and any articles therein.

## Premises upon which Infectious Disease Reported, to be Inspected.

7. Upon receipt of a notification of a case of infectious disease an inspector shall visit the premises whereon the case has occurred, and shall make inquiries as to the mode of contraction of infection, the means taken for preventing the spread of infection, and any other circumstances in connection with the occurrence of the case, and shall immediately after the removal of the patient, or if treated upon the premises, immediately after such patient is declared to be convalescent, disinfect such premises or such portion thereof, and also such articles therein as he deems necessary or as the medical officer may direct.

## Insanitary Buildings to be Destroyed.

8. The owner of any premises shall, when required by the local authority, destroy any insanitary house, building, or thing, or shall execute such amendments to such house, building, or thing as may be required by the local authority.

## Infected Animals to be Destroyed.

9. The occupier of any premises shall, on being so ordered by a local authority, immediately destroy any infected animal which may be in his possession or upon premises occupied by him.

#### Disposal of Body of Person Dead of an Infectious Disease.

10. The occupier of any premises whereon there lies the body of any person who has died of an infectious disease shall cause such body to be buried or disposed of in such method within such time and with such precautions as may be directed by the medical officer, provided that no such body shall be removed from the premises where death occurred except to a cemetery.

#### Medical Officer may Examine Persons.

11. The medical officer may enter any house and examine bacteriologically or otherwise any inmate of such house, or any person found thereon at the time of such visit, for the purpose of ascertaining whether such inmate or person is suffering from an infectious disease or is a medium for the transmission of an infectious disease, and such person shall submit to such examination and shall permit the medical officer to remove such specimens as he considers necessary to a proper examination.

## Certificates in Case of Diphtheria.

12. When under section  $241^{1}$  of the Act a medical certificate is given as applying to a case of diphtheria, the certificate must specify that a bacteriological examination has been made with a negative result.

## Certificate on Return of Children to School.

13. No parent shall send to school any child who has been suffering from an infectious disease or who has been in contact with any person who has been so suffering unless a certificate has been obtained from a medical practitioner and is presented to the head teacher of the school to which the child is sent, certifying that such child is free from infection. Any such certificate shall be approved and endorsed by the medical officer.

#### Special Pan Service.

14. (a) Whenever required by an inspector a special pan service shall be maintained by the local authority or the contractor, as the case may be, at any premises. Such service shall consist of a duplicate pan of the type described in by-law 6, Part I, and the exterior of such special pan shall be painted yellow or red; such pan shall be treated at the sanitary site separately from the other pans, and its contents before burial shall be thoroughly mixed with an equal quantity of a disinfecting solution equal in strength to five per cent. pure carbolic acid.

(b) When any pan is left at premises as abovementioned it shall contain sufficient disinfecting solution of the above strength to cover the bottom of such pan to a depth of at least one inch.

### Special Disinfection in Typhoid Cases.

15. The occupier of every premises whereon a case of typhoid fever exists shall disinfect or cause to be disinfected all discharges of the patient before such discharges are placed in the pan provided in accordance with the preceding by-law.

<sup>&</sup>lt;sup>1</sup> i.e. s. 241 of the reprint of the Act contained in the Appendix to the Sessional Volume of Statutes for the year 1931. See now s. 285 of the reprint of the Act contained in Vol. 3 of the Reprinted Acts (1950).

## Library Books.

16. (a) The person in charge of any library shall not lend a book to any person at a house wherein there is any case of infectious disease.

(b) Any person residing at a house where a case of infectious disease occurs and who has in his possession any book obtained from any lending library shall, before returning such book to any library, disinfect the said book.

## Penalties for Breaches of By-laws.

17. Where anything by this part of the by-law is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

#### By-law 1 substituted by G.G. 22/4/38, p. 570.

## PART III.—PRIVATE HOSPITALS.\*

1. For the purpose of these by-laws "Private hospitals" shall be divided into the following classes:—

"A." Hospitals which admit for treatment all medical, surgical and obstetrical cases other than those specified in Class "B": Provided that, where obstetrical cases are taken, these shall be nursed in a portion of the building specially set apart for such cases and otherwise complying with the regulations governing maternity homes.

"B." Hospitals in which the following cases are treated:— Scarlet fever, diphtheria, measles, mumps, whooping cough, typhus fever, epidemic poliomyelitis, smallpox, plague, and cholera.

"C." Hospitals in which convalescent patients and patients requiring medical supervision, but not requiring constant nursing attention, are admitted.

2. A keeper of a private hospital may be granted registration of a hospital under Class "A" and also under Class "B" provided always that that portion of the premises set apart for the treatment of cases under Class "B" shall comply with all the by-laws relating to that class of hospital, and that a separate staff is maintained. A distance of not less than 30 feet shall separate the buildings used for the treatment of cases specified in Class "A" and Class "B" respectively.

3. Every person who occupies or conducts any private hospital shall, within one week of the coming into operation of these by-laws, and thereafter during the first week in January in each year, make application for registration in the form set out in Schedule "A" hereto.

<sup>\*</sup> See also Private Hospitals Regulations: G.G. 9/2/45, pp. 172-5.

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4. The applicant shall cause notice of such application to be published in a newspaper, and the local authority shall not give consideration to any such application until one month has elapsed after the publication of such notice.

(a) Every person who, after the coming into operation of these by-laws, intends to open, occupy, or conduct any private hospital, shall, before opening, occupying or conducting any such private hospital, make application for registration thereof in the manner prescribed in by-law No. 3 hereof.

No application for registration shall be granted unless the By-law 6 premises in respect of which registration is sought comply with the following conditions:-

amended by G.G. 22/4/38, p. 570.

(a) Hospitals in Classes "A" and "C" shall be so situated that the building used as the hospital shall on all sides have between it and the boundary of the land used for the purposes of a hospital a clear space of not less than 15 feet.

Hospitals in Class "B" shall be so situated that the building used as the hospital shall on all sides have between it and the boundary of the land used for the purposes of a hospital a clear space of not less than 30 feet.

- (b) Every room to be occupied by one or more patients shall have at least 1,000 cubic feet of air space and 100 square feet of floor area and eight feet of lineal wall space for each patient, and if the floor be of wood, the bottom edges of the ground floor joists of every such room shall be at least nine inches above the ground, and the space under every such floor sufficiently ventilated.
- (c) Every such room shall be separately and independently and efficiently ventilated to the external air.
- (d) Every such room shall be provided with windows in the external walls having a ratio of one square foot of clear glass to ten square feet of floor area.
- (e) Every such room is constructed so as to be readily isolated.
- (f) Every wall of such room shall be properly protected immediately above the foundations by a durable damp course.
- (g) The inner surfaces of every wall and every ceiling shall be so constructed that they can without sustaining injury be frequently washed or disinfected.
- (h) The angles which are formed by one wall with any other wall and by any wall with the ceiling shall be rounded.
- (i) The external walls shall be weatherproofed, the roof watertight, and properly provided with gutters and downpipes.
- (j) The drainage of the premises shall be sufficient and satisfactory and in accordance with the by-laws of the local authority.
- (k) The water supply shall be abundant and wholesome.
- (1) Ablutionary appliances shall be provided of such number and so arranged as the medical officer may prescribe.
- (m) A laundry with all necessary appliances sufficient to cleanse and disinfect all bedding, body clothing, linen, napery, and other similar articles shall be provided.
- (n) At least three-fifths of the area of the site shall be unbuilt upon and open to the sky.

Upon the receipt by the local authority of an application for the registration of any premises as a private hospital, it shall direct inquiries to be made respecting the application and the

applicant and if, after such inquiry, and upon the receipt from the medical officer of a certificate in the form of Schedule "B" hereto it appears to the local authority that all the conditions and reservations of the preceding by-laws are satisfied, it may grant the application for registration and issue to the applicant a certificate of registration; subject, however, to any conditions it may think fit to impose with respect to the maximum number of patients that shall be lodged in such hopsital at any one time, the number of certificated nurses to be employed in such hospital, the class or classes of disease or cases to be admitted, and the period for which such registration is granted.

8. The certificate of registration granted in the name of the applicant as aforesaid shall be in the form set out in Schedule "C" hereto, and shall not be transferable except with the consent in writing of the local authority.

Every such registration shall operate only during the current calendar year, and after the 31st day of December, of that year the premises shall, unless re-registered, become unregistered.

9. The local authority may revoke or cancel any registration of a private hospital if the person conducting such hospital or anyone in the employ of such person shall commit any breach or infringement of or shall neglect or fail to observe any of the bylaws; or such registration may be suspended, revoked, or cancelled by the local authority upon the recommendation of its medical officer.

10. The inspector shall at least once in each period of three months inspect every such private hospital and report to the local authority.

11. Every person conducting or keeping a private hospital shall—

- (a) At all times give access to every part of such premises to the medical officer, inspector, or any person appointed by the local authority in that behalf, and afford any such officer all reasonable assistance that may for the purpose of inspection be required of him, and shall permit any such medical officer to see and examine any patient in consultation with the medical attendant.
- (b) Flush and disinfect all drains upon the premises at least once in every day and cause all such drains to be maintained in good order and efficient action.
- (c) Provide and at all times keep upon such premises, in efficient order, all materials and appliances necessary for the use of the inmates and staff, or that may be directed by the medical officer to be furnished.
- (d) At all times exercise a close personal supervision of the premises and the persons employed therein or thereon, and cause all orders or directions of the medical practitioner in charge of the treatment of any patient to be faithfully and diligently carried out.
- (e) The keeper of every such private hospital shall not be absent from the premises for more than one week at any time without the written consent of the medical officer.
- (f) Forthwith carry out all orders or directions that may be given from time to time by the inspector relating to the sanitary arrangements, the collection or disposal of excrementitious matters, refuse, and liquid or other wastes.

- (g) At all times keep all household linen, beds, bedding, furniture, cutlery, crockery, cooking and other utensils, and all other things used in the conduct or management of such hospital thoroughly clean and disinfected and when required by the medical officer shall disinfect any or all of the said things.
- (h) Not permit persons of different sexes to occupy the same room, except married couples or children under the age of 10 years.
- (i) Not permit more than one married couple to occupy the same room.
- (j) Cause all refuse or condemned linen or clothing to be burnt on the premises in such a manner as may be directed by an inspector.
- (k) Provide separate approved airtight receptacles into which all used surgical dressings, human tissues or fluids other than those already provided for in these by-laws shall be placed, and all such special refuse shall be burnt.

12. (a) The keeper of a hospital of Class "A" shall not permit any maternity or surgical cases to be treated in the same ward as any other class of case, but any maternity case or cases and any surgical case or cases respectively shall be treated in a separate ward and by a separate staff.

(b) Should any of the diseases specified to be treated in a Class "B" hospital arise in a Class "A" hospital, then the keeper of such hospital shall cause such case to be immediately removed from the hospital; or if the condition of the patient is such that this cannot be done, then no maternity case shall be admitted and treated in the building in which the infectious case is being treated.

(c) Should any case of puerperal fever be admitted to a Class "B" hospital when any other case is under treatment in such hospital, then such case of puerperal fever shall be treated in a separate ward and by a separate staff.

13. Every person conducting or keeping a private hospital shall enter in a book, hereinafter called the case book, particulars concerning all patients received into such hospital, and shall at all times permit the medical officer or inspector of the local authority to inspect such case book.

14. Every such person shall cause to be recorded in such case book the full name, age, sex, and address of every patient, state whether such patient is married or single; also a short history of the patient while in such hospital, giving in particular the date of admission, the nature of any disease manifest at the time of admission or afterwards, any operation performed, with the name of the operator or operators, and the result of such operation, and the date when the patient left the hospital or, in the event of death occurring, the date of such death.

15. Every such person shall cause to be recorded in such case book, in case of confinement, the date and a short history of such confinement, the result of such confinement, both at the time of delivery and during the subsequent stay in hospital, and the sex and condition of the infant.

16. Every such person shall cause to be recorded in such case book, in all cases in which a patient has been under the professional care of a medical practitioner, or under the charge of a nurse, the name and address of the medical practitioner or of the nurse.

17. (a) Every such person shall, whenever any infectious or contagious disease occurs in such hospital, immediately report the fact to the local authority.

(b) He shall cause any patient in such hospital discovered or suspected to be suffering from any infectious or contagious disease to be separated or isolated from all other patients in such hospital. (c) He shall carry out the requirements of the medical officer and execute all such cleansing and disinfecting as may be directed by him.

(d) No such person shall suffer or permit a greater number of patients to be in any hospital than the number mentioned in his certificate of registration.

By-law 18 substituted by G.G. 15/10/37, p. 1685; 22/4/38, p. 570. 18. Every person conducting a Class "A" or Class "B" private hospital shall at all times maintain the nursing staff at not less than the following standard, that is to say:—

- (a) Not less than one general trained nurse to every three patients or portion thereof.
- (b) Not more than one probationer or nursing assistant to each general trained nurse.
- (c) Provided that at all times there shall be on duty at least one trained nurse.

Provided that in Class "A" hospitals in the midwifery section there shall be a minimum staff as laid down for such institution, that is, one trained midwife to every four patients or portion thereof.

In class "C" hospitals there shall be not less than one trained nurse on the staff.

## Penalties for Breaches of By-laws.

19. Where anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding Twenty pounds for every breach of any such by-law, or to a penalty not exceeding Two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

#### Schedule "A."

To the Secretary Local Health Authority,

I hereby apply for registration of the following premises as a private hospital under the by-laws of the local authority:—

Exact situation
Dimensions of ground
Materials of building
Number of rooms for patients
Measurements of each room
Number of other rooms
Number of storeys
Method of drainage
Source of water supply
Classes of cases to be admitted
Full names of applicant
Occupatiuon
Address
Date Signature

### Schedule "B."

## Application to License Premises as a Private Hospital. CERTIFICATE OF MEDICAL OFFICER OF HEALTH

I....., Medical Officer of Health to the Local Health Authority, do hereby certify that I have inspected the premises situated on Town Lot.....and known as.... I further certify that such premises are in every way fit to be registered as a private hospital, and that due and proper provision has been made for the observance of the bylaws of the local

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Medical Officer of Health.

## Schedule "C."

This is to certify......has been granted registration in respect of those premises situated at .....as a private hospital for the treatment of a maximum number of patients of.....until the 31st day of December next ensuing, subject to the by-laws of the local authority now in force or hereafter to be made.

By order of the.....Local Authority,

Secretary.

## PART IV .--- DAIRIES AND MILK SHOPS.

#### Interpretation.

1. "Dairyman" means any person being the owner or having the care or control of any cow or goat from which the milk (or the cream, butter, or cheese therefrom) is sold or otherwise disposed of to any other person. "Vendor" means any person, other than a dairyman, who

"Vendor" means any person, other than a dairyman, who handles, sells, stores, or otherwise disposes of any milk (or the cream, butter, or cheese made therefrom on the premises), and includes any person keeping a milk shop or milk store.

"Stockyard" means any yard in which dairy cattle are kept, and includes all parts of the premises of a cow-keeper within 100 feet of any milk room or milking shed, whether fenced or not, to which cattle or other stock have access.

"Dairy Cattle" shall include cows and goats, whether actually in milk or not, and any bull or he-goat running with any herd of cows or goats.

2. (a) Every person who, at the coming into operation of these by-laws, is carrying on the business of a dairyman or vendor, and whose premises are not registered with the local authority, shall within one month make application to the local authority for license to carry on such trade, and for registration of the premises whereon such trade is carried on.

(b) Every person who, after the coming into operation of these by-laws, desires to commence the trade of a dairyman or vendor shall, prior to commencing such trade, make application to the local authority for a license to carry on such trade, and for the registration of the premises whereon such trade is carried on.

(c) Every such application shall be made to the local authority in the form of Schedule "A," and upon the granting of any such application, a license and registration shall be issued in the form of Schedule "B" hereto. 3. (a) During the first week in January of each year every person carrying on the trade of a dairyman or vendor shall apply for a license to carry on such trade and for registration of the premises whereon such trade is conducted, in the form of Schedule "A."

(b) Upon the granting of any such application a license and registration in the form of Schedule "B" shall be furnished by the local authority.

Every license and registration effected under this and the preceding by-law shall operate only during the current calendar year.

- 4. No person shall carry on the trade of a dairyman or vendor—
  (a) unless he is the holder of a subsisting license to carry on such trade issued by the local authority; or
  - (b) on any premises in respect of which he is for the time not registered by the local authority as hereinbefore provided.

Provided that the foregoing provisions of this by-law shall not apply during the first week in January in any year in respect of a person who was lawfully carrying on the trade at the end of the preceding year.

5. Every person making application as provided in by-laws 2 and 3 shall lodge a fee in accordance with the scale set out in Schedule "C" hereto, and upon the refusal of any such application shall be entitled to the return of such fee.

Provided that if the license and registration for any year shall commence on or after the first day of July of that year, only one half of the fee shall be paid by the applicant.

6. (a) Every dairyman or occupier of grazing ground upon which dairy cattle are depastured, and every person for the time being having the control or care of any such premises, shall afford the medical officer or any inspector all reasonable assistance that may, for the purpose of inspecting such premises, be required of him.

(b) He shall upon being directed in writing so to do by any medical officer, forthwith remove his dairy cattle from any portion of the grazing ground upon which they may be depasturing, or from any part of any premises occupied by him, if such grazing land or premises is likely to prejudiciously affect the milk or dairy cattle.

(c) He shall not, until permission in writing is given him by such medical officer, permit or suffer any of his dairy cattle to graze or be depastured upon such prohibited land, or re-occupy such prohibited premises.

(d) He shall, whenever required so to do and within a time to be specified by an inspector, muster all his dairy cattle and confine them in a stockyard to be named, or bail them in the milking shed, as may be directed by any such inspector as aforesaid, and he shall also otherwise assist, as may be required, in any inspection, examination, or test of the said cattle when so mustered or bailed.

7. (a) Every dairyman shall cause every stockyard and stable upon his premises or used by him to be properly drained.

(b) He shall provide sufficient stabling accommodation for the horses kept on the premises, and such stabling shall be disconnected from and be at least 50 feet distant from the milking shed, or the milk room, or any place where milk is stored.

(c) He shall not suffer or permit any animal other than dairy cattle to be at any time in his milking shed or in any place where milk is kept.

(d) He shall not suffer or permit any dung or manure, offensive liquid, or offensive or noxious matter of any kind to accumulate or remain upon his premises.

8. (a) No person shall erect or permit or suffer to be erected any fowlhouse or enclosure for fowls within 50 feet of any milking shed, milk room, or place where milk is stored or kept.

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(b) No dairyman or vendor shall permit any live poultry to be at large upon any part of the premises used in connection with his business, and shall, when so ordered by an inspector, confine such live poultry within approved enclosures.

9. (a) No person shall erect or permit or suffer to be erected any piggery or enclosure for swine within 200 feet of any milking shed, milk room, or place where milk is stored or kept.

Every dairyman or vendor shall provide and maintain sanitary conveniences as provided by by-law 1 of Part I. He shall not have any sanitary convenience within 50 feet of a milking shed, or milk room, or any place where milk is stored or kept.

## Feeding of Animals.

(a) No dairyman shall serve or permit or suffer to be 11. served to his cows or goats as food any musty, unsound, decayed, or unwholesome food, or any food which may injuriously affect the milk or health of such cows or goats, and if at any time an inspector has reasonable grounds for considering that any cattle food in or upon the premises is unsound, or unfit for use as food, he may require the dairyman to remove such food, and such dairyman shall thereupon remove such food from the premises.

(b) He shall not permit or suffer any dry or dusty food to be fed to any animal in the milking shed while milking is in progress.

11A. No person shall erect, or cause to be erected, or suffer By-law IIA to remain, any calf feeding bails within a distance of fifty feet G.G. 10/3/5 from a dairy, a milk room, or a milking shed, unless— p. 598.

added by G.G. 10/3/59, p. 598.

- (a) the floor of the calf feeding bails is, at least three inches above the level of the surrounding ground, constructed of concrete or cement, and graded with a suitable fall away from the bail head to an open concrete drain which may be connected to the drain from the milking shed:
- (b) the effiuent from the drain does not flow through the milking shed;
- (c) a sufficient supply of water is available to allow for the efficient cleaning of the calf feeding bails after each feeding;
- (d) all feeding receptacles are removable and are thoroughly cleaned after each feeding;
- (e) the calf feeding bails are used for feeding purposes only and no animals remain in the calf feeding bails after each feeding period.

#### Water Supply.

12. (a) Every dairyman shall keep in or in connection with every milking shed or stockyard in his occupation an abundant supply of wholesome water.

(b) He shall cause every such milking shed or stockyard to be provided with approved receptacles of sufficient capacity for watering his dairy cattle, and every such receptacle shall be maintained in good repair and kept clean, and constantly supplied with wholesome water.

(c) He shall cause any tank or other receptacle which may be provided for storing water to be emptied and cleansed from time to time, as often as may be necessary, to prevent the contamination of any water that may be stored therein.

(d) If the water used by him for dairy purposes is obtained from a well, spring, stream, or any other natural source, he shall prevent any such source of supply being contaminated on his premises.

(e) He shall not suffer nor permit any of his dairy cattle to have access to impure or contaminated water.

By-law 13 amended by G.G. 10/3/59, p. 598.

## Milking Shed.

13. (a) Every dairyman shall provide a proper milking shed in which his cows shall be milked, and such milking shed shall be roofed of approved material, so that the roof is weatherproof, and the lowest part of such roof shall be not less than seven feet in the clear above the floor, and such shed shall be efficiently ventilated to the satisfaction of the medical officer or inspector.

(b) He shall cause the floor of such milking shed to be constructed of good, durable, non-absorbent materials laid upon a sound, solid foundation, so as to be permanently watertight and evenly graded with proper slopes, which shall be in the direction opposite to the feeding trough, to impervious open drains or channels laid the whole length of the shed or structure, and of such width as to permit of being readily cleansed with a broom; and no part of the surface of such floor shall be less than three inches above the adjoining ground.

(c) He shall cause such open drains or channels to discharge to a trapped gully, situated outside the milking shed, or to a covered impervious receptacle of sufficient capacity to contain at least one day's flow of drainage, which receptacle shall not be less than 20 feet distant from such milking shed and from any milk room.

(d) He shall cause every wholly enclosed milking shed in his occupation to be sufficiently lighted by suitable openings in its walls or roof.

(e) He shall not permit any feed-mixing bin to be within such milking shed.

(f) He shall not erect or cause to be erected any calf pens or calfs sheds within a distance of 50 feet from a dairy or a milking shed.

## Milk Room.

14. Every dairyman and every vendor shall provide on his premises a detached room, which shall comply with the following conditions:—

(a) It shall be at least ten (10) feet from any milking shed and have a clear open space of ten (10) feet on all sides, except at dairies where milking machines are in use.

At dairies where milking machines are in use the milk room may be permitted under the same roof as the milking shed providing the walls of the milk room are constructed of brick, stone, or concrete. The internal surfaces of the walls and ceiling, or, if there is no ceiling, then the underside of the roof shall be covered with hard, smooth, and impervious material in such manner as to completely isolate the milk room from any dust or odours from the milking shed.

The entrance to the milk room shall not be from the milking shed but shall be in the outer wall.

An educt vent shaft shall be carried up vertically from the ceiling, or, if there is no ceiling, from the covering of the underside of the roof to a point two (2) feet above the highest level of the roof of the milking shed. Such educt vent shall be constructed of not less than 24-gauge galvanised iron and be not less than nine (9) inches in diameter, hooded at the bottom, and fitted with a cowl at the top.

- (b) It shall be at least six feet square in area, and eight feet in height measured from the top of the finished floor to the lowest part of the roof or ceiling.
- (c) The floor shall be paved with impervious material laid so that the lowest part of its surface is at least six inches above the adjacent ground. It shall have a fall of not less than 1 in 120 to an impervious channel, discharging over a trapped gully outside the building and

Sub-paragraph (f) added by G.G. 10/3/59. p. 598.

By-law 14 amended by G.G. 12/2/37, p. 237. properly connected to a drain, or to an impervious receptacle of ample dimensions situate at least 10 feet from the room and from the milking shed. The surface of such floor shall be finished smoothly and evenly,

- so as to afford no lodgment for liquids. (d) The room shall be sufficiently ventilated and lighted.
- (e) All exterior openings shall be fitted with fine fiy-proof screens, constructed of suitable material, and the door shall be hung so at to be self-closing.
- (f) The walls and roof shall be constructed of approved materials, and the external surfaces of the walls, if such walls are not constructed of stone, brick, or concrete, and the external surface, of the roof, if of metal shall be properly painted with an approved refrigerating paint, and shall be repainted with a similar material whenever necessary or whenever ordered by an inspector.
- (g) The internal wall surfaces, the ceiling, or, if there is no ceiling, then the underside of the roof shall be covered with hard, smooth, and impervious material, and finished so as to afford no lodgment for dirt.
- (h) The woodwork of the doors, the windows, and their frames shall be properly painted, and fitted so as to be fly-proof.
- (i) The shelves, benches, tables, racks, or other fittings of such room shall be made of smoothly dressed wood or other approved material, and so fitted that they may be readily removed for cleansing purposes.
- (j) The room shall be equipped with sufficient milk strainers of approved material and design, and with an approved cooler and refrigerator, which shall be properly connected with a cold water supply.
- (k) The dairyman or vendor shall at all times maintain such room and all its fittings and utensils in good order and repair, and scrupulously clean in every part, both inside and outside, and secure the removal and exclusion of flies from its interior.
- (1) He shall not suffer or permit such room to be used for any purpose other than the handling or housing of the milk or the storage of milk vessels.
- (m) He shall, whenever required to do so, pave the ground immediately surrounding the milk room with a layer of not less than three inches thick of approved material, and to a width of at least six feet.
- (n) He shall cause every vessel or utensil used by him for containing milk when not in actual use in the collecting or distribution of milk, or in the process of being cleansed, to be stored in such milk room.
- (0) He shall not allow sour milk to remain in the milk room.

## Precautions in Regard to Milking.

15. (a) Every dairyman or vendor shall protect the milk from infection or contamination during the process of milking.

(b) He shall immediately prior to the milking of any animal cause the udder and teats of such animal and the adjacent part of the animal's skin to be thoroughly cleansed, and the hands of the person milking such animal to be first thoroughly cleansed, for which purpose suitable appliances shall be provided by him in a convenient situation.

(c) He shall cause the milk drawn from any animal on his premises (except as hereinafter mentioned) to be forthwith taken to the milk room and there immediately strained and cooled. (d) He shall not mix with any milk intended to be used for human consumption the milk from any animal within 30 days before or five days after parturition, nor shall he mix with any milk intended for human consumption the first jets of milk drawn from any teat.

(e) He shall not allow any of his animals to be excited by hard driving, abuse, or harsh treatment.

### Cleanliness of Persons.

16. The occupier of a dairy and every person engaged in the production, handling, storage or transport of milk shall at all times maintain themselves and their clothing in a cleanly state.

Every occupier of premises on which a dairy is conducted shall cause such premises together with buildings, drains, fittings, apparatus, machinery, utensils, receptacles, vehicles, tools and appliances, to be kept at all times in good repair and in a cleanly condition.

## Care of Milk during Transport, Storage, etc.

17. (a) Every dairyman or vendor shall take all reasonable and proper precautions in and in connection with the housing, storage, carriage, transport, or distribution of milk to prevent the exposure of the milk to any infection or contamination, or to anything likely to prove injurious or deleterious to it.

(b) He shall not deposit nor keep any milk, or any milk vessel, implement or article used in his trade or in connection therewith—

- in any room or place where it or they would be liable to become contaminated by impure air, or by any offensive, noxious, or deleterious gas or substance; or
- in any room used as a kitchen, bedroom, or living room; or in any room or building or part of a building communicating directly by door, window, ventilation or otherwise with any room used as a bedroom, living room, or kitchen, or in which there may be any person suffering from any infectious or contagious disease, or which may have been used by any person suffering from any such disease, and may not have been properly disinfected; or in any room or building or part of a building in which there
- may be any drain inlet.

(c) He shall not house, store, or keep any vessels, utensils, receptacles, coolers, or any articles used by him to contain or treat milk, within 100 feet of an offensive trade establishment, except with the written consent of the local authority.

(d) He shall not keep or cause or suffer any milk to be placed in any vessel, receptacle, or utensil, or run over a cooler, or refrigerator, which is not thoroughly clean and properly tinned or enamelled.

(e) He shall cause all cans and other receptacles used by him in the carriage of milk to be furnished with close-fitting lids, and he shall not suffer or permit any rag, cloth, or other material to be used with any such lid.

(f) He shall cause all vessels, utensils, receptacles, coolers or any articles used by him to contain or treat or manipulate milk to be properly tinned or enamelled, and maintained at all times clean and in thorough order and repair.

(g) He shall not suffer nor permit milk, whilst in transport or distribution, to be unnecessarily exposed to the sun.

## Cleanliness of Vehicles, Utensils, etc.

18. (a) Every dairyman or vendor shall provide an approved apparatus for heating water for cleansing, steaming, scalding, or sterilising purposes and shall locate such apparatus in a position approved by an inspector.

(b) He shall not allow any such apparatus to be used for washing or boiling bed or body clothing, or for any purpose other than that specified in the preceding clause.

(c) He shall cause every vessel, receptacle, utensil, strainer, cooler, or any other article used by him for containing, treating, or manipulating milk to be thoroughly cleansed immediately after it shall have been used, and to be sterilised with steam or clean boiling water immediately before again being used.

(d) He shall cause all bottles and the stoppers of any such bottles used by him in his trade to be thoroughly cleansed and sterilised before re-use or refilling.

(e) He shall cause every wheeled vehicle used by him for the carriage or distribution of the milk to be thoroughly cleansed at least once a day.

(f) He shall cause any tank or other receptacle which may be provided for storing water to be emptied and cleansed from time to time as often as may be necessary to prevent the contamination of any water that may be stored therein; such cleansing shall not be less seldom than once a year, or oftener if so ordered by an inspector.

#### Milking Machines.

18A. (a) In these by-laws, where the words vessels or utensils, By-law 18A added by cr receptacles, or articles used to contain, or treat or manipulate G.G. 1/2/35, milk, are used, the terms shall include all movable parts of any p. 186. milking machine, including buckets, tubing, claws, cups, or any other movable parts of the apparatus.

(b) No rubber tubing or rubber connections shall be used in connection with the collecting or manipulation of milk, unless such tubing and connections are free from cracks or crevices, and are to the satisfaction of the inspector.

(c) At the conclusion of milking operations, all movable parts of the milking machine and connections shall be disconnected. thoroughly cleansed, and forthwith placed in the milk room until again required for active use.

The permanent lines of tubing shall be thoroughly cleansed at the conclusion of the milking operations, and all openings immediately protected by a fiy-proof cover which will admit air.

(d) Where permanent tubing is installed for delivery of milk to containers, the tubing shall be continuous in length from the milking shed to the milk room. No open conduits shall be used. All joints in the tubing shall be of such a pattern as to be easily disconnected for inspection purposes. When closed, the joints shall provide a smooth internal surface.

#### Cleanliness of Premises.

19. (a) Every dairyman shall cause the ceiling or underside of the roof and the interior surface of the walls of every milking of the roof and the interior surface of the walls of every milking shed in his occupation to be properly cleansed and limewashed at least four times in every year, that is to say, once during the first week of the months of January, April, July, and October, and at such other times as may be specified in an order in writing from the medical officer or inspector. Provided that this requirement shall not apply to any part of such ceiling, roof, or walls that may be properly painted or varnished or constructed of or covered with any material such as would render the limewashing unsuitable or inexpedient, and that may be otherwise properly cleansed inexpedient, and that may be otherwise properly cleansed.

(b) He shall cause the floor of every milking shed in his occupation to be thoroughly swept and cleansed and all dung and other offensive matters to be removed from such shed immediately after each milking and shall cause every part of such shed to be thoroughly cleansed as often as may be necessary to insure that such shed shall be at all times clean.

(c) He shall cause every stockyard and stable in his occupation to be kept clean, and shall every day collect and remove all dung and other offensive matters from every such stockyard and stable.

(d) He shall cause every drain, drain inlet, or drainage receptacle upon his premises to be thoroughly cleansed daily, and the contents of every such drainage receptacle to be removed from his premises.

(e) He shall, whenever required so to do by an inspector, disinfect his milking shed or any other building upon his premises, in the manner and with such materials and appliances as may be directed by the inspector.

(f) He shall cause the ceiling or the underside of the roof and the interior surface of the walls and the floor of every forage or feed store and feed-mixing room, and every feed trough or bin or receptacle used for mixing feed on his premises, to be kept clean.

## Removal of Manure, Etc.

20. No dairyman or vendor shall allow dung, manure, offensive or putrescible matter of any kind to accumulate or remain in, upon, or about any house, milkroom, milking shed, stable, stockyard, fowlhouse, piggery, or enclosure for fowls upon his premises, but shall cause the same to be removed daily.

## Disease among Dairy Stock.

21. (a) Every dairyman shall immediately report to the local authority and Commissioner the occurrence of any of the diseases in his dairy stock specified in Schedule "D" hereto.

(b) He shall, when directed by a medical officer or an inspector, cause every cow or any other animal suffering from an infectious disease, or in an infectious condition, or suffering from any disease which in his opinion may affect the wholesomeness of the milk, to be isolated in such a manner as is directed by such medical officer or inspector.

(c) Neither he nor any other person shall allow any diseased cow or other diseased animal to come in contact with or graze upon the same grazing ground or to be at large on any ground occupied or traversed by such cattle.

(d) He shall cause any diseased cattle to be destroyed forthwith upon receipt of an order in writing from the local authority to that effect, and he shall cause the carcase of any such cow or other animal to be disposed of in the manner specified in such order.

Provided that any inspector who is a qualified veterinary surgeon is empowered, in the case of a cow suffering from any disease of the udder, to himself order the destruction of the animal affected.

22. (a) Every dairyman shall, for the purpose of protecting milk against infection or contamination, at any time, and from time to time, permit the tuberculin test to be applied to any cow or other hovine animal in his possession or under his control by any person duly approved by the Commissioner to perform such test.

(b) He shall make no addition to his dairy herd of any animal or animals without the written permission of an officer specially appointed by the Commissioner, and such officer may examine such animal or animals and apply such tests as he deems necessary to ascertain the freedom from disease or otherwise of such animal or animals.

23. (a) Every dairyman or vendor shall take every precaution against the infection or contamination of the milk by any person or animal suffering from any infectious or contagious disease.

(b) He shall, whenever any sickness occurs in any houses or premises in his occupation, immediately report such occurrence to the local authority.

(c) He shall, whenever so required by the medical officer, forthwith remove from his premises any sick person that may be therein. He shall not permit any person suffering from any infectious or contagious disease, or recently in contact with or in attendance upon any other person so suffering, to milk any animal or handle any vessel used for containing milk, or take part in the preparation or distribution of any milk produced or brought upon his premises.

24. The medical officer may, by notice in writing to the dairyman or milk vendor, temporarily prohibit the sale of milk from any dairy where any animal is diseased or supposed to be diseased, or where any person is suffering or supposed to be suffering from an infectious disease, or where there are reasonable grounds for suspecting that the milk supply from such dairy is causing the spread of infectious disease, and any notice given under this by-law shall remain in operation until cancelled.

#### Penalties for Breaches of By-laws.

25. Where anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

Schedule	"A."	
(By-law	3.)	

(By-law 3.)							
Form of Application for License of Persons Carrying on the Trade of a Dairyman or Vendor of Milk and for the Registration of the Premises on which such Trade is Carried on.							
To the Secretary Local Health Authority.							
I of							
Situation of premises							
Area of premises							
Area of grazing land							
Water Supply—							
<ul> <li>(a) for the milking herd</li></ul>							
Number of dairy herd							
Number of milking cows							
Number of bulls							
Is milk disposed of by wholesale or retail?							
In what district or districts?							
Are dairy buildings constructed and arranged in accordance with the by-laws?							
(Signature) Full address							
Dated							

## Schedule "B." (By-law 3.)

## CERTIFICATE OF DAIRYMAN OR VENDOR OF MILK.

		 	 		is	lice	nsed	to	carr	y on	the	trade c situate	of a
19		 	 	· · · · · <b>,</b>	for	the	year	er	ided	the	31st	Decem	ber,
	Dated					day	of		•••••		····· <b>,</b>	19	

Fee paid, £.....

Secretary.

## Schedule "C." (By-law 4.)

FEES TO BE PAID FOR LICENSE AND REGISTRATION IN RESPECT OF THE TRADE OF A DAIRYMAN OR VENDOR OF MILK.

(a) In respect to the trade of a dairyman, any person keeping cows to the number of—

	£ S. a.
(1) Not more than 2 a fee of	026
(2) More than 2 but not more than 5	036
(3) More than 5, but not more than 8	046
(4) More than 8, but not more than $12$	060
(5) More than 12, but not more than 15	076
(6) More than 15, but not more than 20	0 10 0
(7) More than 20, but not more than 26	0 12 6
(8) More than 26, but not more than 35	0 15 0
(9) More than 35	1 0 0
(b) In respect to the trade of a vendor of milk	0 5 0
(c) If the applicant is already licensed and his premises are registered in another district	0 2 6
(d) If the applicant sells dairy produce other than milk	nil

## Schedule "D." (By-law 19.)

## DISEASES OF STOCK.

Tuberculosis. Actinomycosis. Glanders. Anthrax. Eruptions of udder. Foot and mouth disease. Puerperal sepsis. Pleuro pneumonia. Mammitis. Fever.

## PART V.-LODGING-HOUSES.

1. Every person applying to be registered as a keeper of a lodging-house shall make application in the form of Schedule "A" hereto, and upon the granting of such application he shall receive from the local authority a certificate in the form of Schedule "B."

Every such registration shall operate only during the current calendar year, and after the thirty-first day of December of that year the premises shall, unless re-registered, become unregistered.

2. Every such person shall with such application lodge a fee as prscribed by Schedule "C" hereto, and shall annually, in the first week of January, make application for the renewal of registration of his premises, and with such application shall pay a fee in accordance with the said Schedule.

Provided that if the registration for any year shall commence on or after the first day of July of that year only half fees shall be payable by the applicant.

3. No keeper of a lodging-house shall permit a greater number of persons to occupy any sleeping apartment in such house at any one time than will admit of each such person having at least 500 cubic feet of air space.

For the purpose of this clause two children under 10 years of age shall be counted as one person.

4. No house shall be registered as a lodging-house unless each room intended for use as a sleeping apartment for lodgers shall bear a distinguishing number, and the keeper of such house shall cause such distinguishing number to be conspicuously printed in two-inch figures on each side of the room door.

5. (a) The local authority shall issue to every keeper of a lodging-house a certificate in respect of each separate room, and such certificate shall specify the maximum number of lodgers which shall be permitted to occupy each such room respectively as a sleeping apartment at any one time.

(b) The local authority may from time to time vary the number of lodgers to be received into any such room, and a notice shall be served on the keeper of such lodging-house specifying such a varied number of lodgers, and such keeper shall not allow a greater number of lodgers into such room than is specified on such notice, after the time stated therein.

(c) The certificates and notices to be given under the provisions of this by-law shall be in the form of Schedules "D" and "E" respectively.

6. The keeper of every lodging-house shall at all times keep the certificate or notice mentioned in the last preceding by-law exhibited in a conspicuous place in the sleeping apartment in respect of which any such certificate or notice shall have been issued.

7. No keeper of a lodging-house shall permit any room to be used as a sleeping apartment for lodgers other than a room certified for that purpose.

8. No keeper of a lodging-house shall make any alterations to any such room except with the consent of the local authority.

9. No room shall be registered as a sleeping apartment for lodgers if it be situated in a basement or below the level of the ground, or if it be used as a kitchen, scullery, dining or general sitting room or unless such room is lit by windows placed in the external walls having a ratio of not less than 1 square foot of unobstructed glass to each 10 square feet of floor area.

10. No room shall be certified as a sleeping apartment for lodgers unless such room is sufficiently ventilated, and the keeper shall maintain all such means of ventilation as have been approved, in good order and efficient action. 11. No keeper of a lodging-house shall allow persons of different sexes to occupy together the same sleeping apartment, except in the case of children under the age of 10 years, or of married couples, in which latter case no other person above the age of 10 years, and not more than one married couple, shall be allowed to occupy the same sleeping apartment at any one time.

12. No keeper of a lodging-house shall cause or allow any bed in any room which may be used as a sleeping apartment by persons of the male sex above the age of 10 years to be occupied at any one time by more than one such person.

13. No keeper of a lodging-house shall cause or allow any lodger to occupy any bed in such house at any time within a period of eight hours after such bed shall have been vacated by the last preceding occupant thereof, unless such bed shall be provided with fresh bed linen.

14. No keeper of a lodging-house shall absent himself from such house, unless he leaves some reputable person in charge thereof.

15. The keeper of every lodging-house shall-

- (a) cause the floor of every room or passage and every stair in such house to be kept thoroughly clean, and to be at least once a week thoroughly washed;
- (b) cause the yard and out-premises to be swept daily, and to be kept at all times clean;
- (c) cause the seat and floor of every privy on his premises to be scrubbed and washed daily, and the walls to be limewashed at least once in each month;
- (d) cause every window, every fixture, or fitting of wood, stone or metal, and every painted surface in such house to be thoroughly cleansed at least once a week, or so much more frequently as may be directed by an inspector;
- (e) provide a sufficient number of lavatory appliances and clean towels, and a sufficient quantity of clean water and soap for ablutionary purposes, in the case of female lodgers supplied in their sleeping compartments, and in the case of male lodgers either supplied in their sleeping apartments, or in a convenient room set apart and fitted exclusively for that purpose; and he shall cause all such articles to be kept in good order and clean, and shall renew the supply of water and soap and clean towels as often as may be requisite;
- (f) disinfect such towels as may be required by an inspector;
- (g) cause all fæces, urine, or other refuse to be removed from every room once at least in every day before the hour of 10 in the forenoon, and every vessel, utensil, or other receptacle for such fæces, urine, or refuse shall be thoroughly cleansed at least once in every day;
- (h) cause all beds, bedsteads, blankets, rugs, covers, sheets, towels and house linen to be kept clean, free from vermin, and in a wholesome condition;
- (i) cause every sheet and all house linen to be washed at least once in every week;
- (j) furnish every sleeping apartment with a sufficient number of tollet utensils and bedsteads and sufficient bedding so that each bed shall be provided with a mattress, two sheets, a blanket or rug, and in winter time not less than one additional blanket or rug;
- (k) cause the doors and windows of every sleeping apartment to be opened and kept fully opened for at least 4 hours during each day;

- (1) cause the bed clothes of every bed to be removed therefrom as soon as conveniently may be after each bed shall have been vacated by any lodger, and such bed clothes and bed to be freely exposed to the air during two hours at least of each day;
- (m) cause any room, together with its contents, or any other portion of the premises to be cleansed and dis-infected whenever directed so to do by an inspector;
- (n) exhibit in a suitable and conspicuous position upon the premises copies of all by-laws received from the local authority, so that the contents may be clearly and distinctly legible;
- (0) permit any inspector or any police officer or constable to inspect any portion of the premises at any time and truthfully answer all inquiries made by such inspector, police officer, or constable;
- (p) cause any part of his premises or any fittings thereon to be painted at such times and in such manner as is directed by the medical officer.

16. The keeper of every lodging-house shall prevent all bedding, linen, blankets, and other similar articles which have been used by a person suffering from an infectious disease, from coming in con-tact with similar articles used by other inmates of the premises, and shall forthwith efficiently disinfect all such articles, and in the course of such disinfection shall obey any directions issued by the medical officer or an inspector.

The keeper of every lodging-house shall, so soon as it comes to his knowledge that any person on the premises is suffering from an infectious disease, effectively isolate such person, and he shall provide separate knives, forks, spoons, plates, and other articles used in the consumption of food for the use of such persons, and such articles shall immediately after use be efficiently disinfected.

The keeper of every lodging-house shall, immediately upon the vacating of any room which has been occupied by a person suffering from an infectious disease, effectively disinfect such room, and shall take such other measures in respect of such room or the contents thereof as an inspector may direct.

19. The keeper of every lodging-house shall provide and main-tain fire-extinguishing appliances of the number and pattern, and situated in such position as the local authority may direct.

20. The keeper of every lodging-house in which provision is By-law 20 made to accommodate persons above the ground floor shall provide, G.G. on each floor above the ground floor, at least one stairway leading 12/12/62, from such floor to the floor below, other than the main stairway so p. 3914. situated and constructed of fire-resisting material as may be directed by the local authority.

- 21. No premises shall be registered as a lodging-house unless-
  - (a) the external walls and roof thereof are weatherproof and water-tight;
  - (b) every wall including every partition wall, is provided with a damp-proof course;
  - (c) every part of the floor, if of wood, is at least 12 inches above the surface of the ground; or if of concrete, the upper surface shall be at least three inches above the surface of the ground;
  - (d) every internal wall is completed from floor to ceiling;
  - (e) every passage is at least four feet in width;
  - (f) every main stairway is at least four feet in width, the risers not greater than six and one-half inches in height, and the treads not less than 10 inches in width, and every such stairway shall be free from winders.

- (g) every stairflight is provided with handrails on both sides thereof, the handrail to be two feet eight inches above the nosing of the treads;
- (h) separate sanitary conveniences are provided for each sex, and so situated and screened as to insure sufficient privacy;
- (i) each such convenience, during the hours of darkness, is sufficiently lighted by artificial light;
- (j) the inner surfaces of all walls are so constructed that they can, without sustaining injury, be washed.

22. Every keeper of a lodging-house shall take such measures for the destruction of vermin as may be directed by an inspector.

## Penalties for Breaches of By-laws.

23. When anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct any thing to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any work directed to be executed and not so executed.

## Schedule "A." (By-law 1.)

## FORM OF APPLICATION FOR REGISTRATION OF A LODGING-HOUSE.

To the Secretary Local Health Authority.

I,...., hereby make application for the registration of the premises described hereunder as a lodginghouse, and the entry of my name as the keeper thereof:—

> Maximum number of lodgers to be accommodated.....

Particulars to be given respect of each room be used by lodgers as sleeping apartment.		Cubic Capacity, in feet.	No. of Boarders.
	a		

(Signature).....

(Address).....

Date....., 19......

20	11	1

	chedule "B." (By-law 1.)
FORM OF CERTIFICA	ATE OF REGISTRATION OF A
	GING-HOUSE. e premises situate atare
registered as a lodging-house	e, and the name ofis
entered as the keeper thereof	
under:-	of lodgers shall be accommodated as
Room No.	No. of Lodgers.
Dated	.19
	Secretary.
	chedule "C." (By-law 2.)
SCALE OF FEES TO B	E PAID ON REGISTRATION AND TER BY KEEPERS OF LODGING-
When the maximum number	s. d.
does not exceed 20	of lodgers to be accommodated
-	
	chedule "D."
Local	(By-law 5.) Health Authority.
Lodging-house situate at	
-	
	chedule "E." (By-law 5.)
	RIATION OF NUMBER OF LODGERS
TO BE ACCOMMOD.	ATED AT A LODGING-HOUSE.
Toof You are hereby given no	otice that in connection with the Lodg-
ing-house situate at keeper, the number of lodg	and of which you are the ers to be accommodated in the rooms on and after the
Number of Room.	Number of Lodgers.
<u> </u>	
Dated 19	

## PART VI.-BOARDING-HOUSES.

1. Every person applying to be registered as a keeper of a boarding-house shall make such application in the form of Schedule "A" hereto, and upon the granting of such application he shall receive from the local authority a certificate in the form of Schedule "B."

2. Every such registration shall operate only during the current calendar year, and after the 31st day of December of that year the premises shall, unless re-registered, become unregistered.

3. Every such person shall annually, in the first week of January, make application for the renewal of registration of his premises, and with every application made under this or the preceding by-law shall lodge a fee as prescribed by Schedule "C" hereto: Provided that if the registration for any year shall commence on or after the first day of July of that year only one-half of the prescribed fee shall be paid by the applicant.

4. No keeper of a boarding-house shall permit a greater number of persons to occupy any sleeping apartment in such house at any one time than will admit of each such person having at least five hundred cubic feet of air space.

For the purpose of this clause two children under 10 years of age shall be counted as one person.

5. No house shall be registered as a boarding-house unless each room intended for use as a sleeping apartment for boarders shall bear a distinguishing number and the keeper of such house shall cause such distinguishing number to be conspicuously printed in two-inch figures on each side of the room door.

6. The local authority may from time to time vary the number of boarders to be received into each separate room used as a sleeping apartment, and a notice shall be served on the keeper of such boarding-house specifying such varied number of boarders, and such keeper shall not allow a greater number of boarders into such room than is specified in such notice, after the time stated therein.

7. No keeper of a boarding-house shall permit any room to be used as a sleeping apartment for boarders other than a room certifled for that purpose.

8. No keeper of a boarding-house shall make any alterations to any such room except with the consent of the local authority.

9. No room shall be registered as a sleeping apartment for boarders if it be situated in a basement or below the level of the ground, or if it be used as a kitchen, dining or general sitting room, or unless such room is lit by windows having a ratio of not less than one square foot of glass to each 10 square feet of floor area.

10. No room shall be certified as a sleeping apartment for hoarders unless such room is sufficiently ventilated and the keeper shall maintain all such means of ventilation as have been approved in good order and efficient action.

11. No keeper of a boarding-house shall cause or allow any boarder to occupy any bed in such house after such bed shall have been vacated by the last preceding occupant thereof, unless such bed shall be provided with fresh bed linen.

12. No keeper of a boarding-house shall absent himself from such house unless he leave some reputable person in charge thereof.

- 13. The keeper of every boarding-house shall-
  - (a) cause the floor of every room or passage and every stair in such house to be kept throughly clean, and to be at least once a week throughly washed;

- (b) cause the yard and the out-premises to be swept daily, and to be kept at all times clean and free from filth;
- (c) cause the seat and floor of every privy on his premises to be scrubbed and washed daily, and the walls to be limewashed at least once in each month;
- (d) cause every window, every fixture, or fitting of wood, stone, or metal, and every painted surface in such house to be thoroughly cleansed at least once a week or so much more frequently as may be directed by an inspector;
- (e) provide a sufficient number of lavatory appliances and clean towels, and a sufficient quantity of clean water and soap for ablutionary purposes;
- (f) disinfect such towels as may be required by an inspector;
- (g) cause all fæces, urine, or other refuse to be removed from every room once at least in every day before the hour of ten in the forenoon, and every vessel, utensil, or other receptacle for such fæces, urine, or refuse shall be thoroughly cleansed at least once in every day;
- (h) cause all beds, bedsteads, blankets, rugs, covers, sheets, towels and house linen to be kept clean, free from vermin, and in a wholesome condition;
- (i) cause every sheet and all household linen to be washed at least once in every week;
- (j) furnish every sleeping apartment with a sufficient number of toilet utensils and bedsteads, and sufficient bedding so that each bed shall be provided with a mattress, two sheets, a blanket or rug, and in winter time not less than one additional blanket or rug;
- (k) cause the doors and windows of every sleeping apartment to be opened and kept fully open for at least four hours during each day;
- cause the bed clothes of every bed to be removed therefrom as soon as conveniently may be after each bed shall have been vacated by any boarder, and such bed clothes and bed to be freely exposed to the air during two hours at least of each day;
- (m) cause any room, together with its contents, or any other portion of the premises to be cleansed and disinfected whenever directed so to do by an inspector;
- (n) exhibit in a suitable and conspicuous position upon the premises copies of all by-laws received from the local authority, so that the contents may be clearly and distinctly legible;
- (o) cause any part of his premises or any fittings thereon to be painted at such times and in such manner as is directed by an inspector.

14. The keeper of every boarding-house shall prevent bedding, all linen, blankets, and other similar articles which have been used by a person suffering from an infectious disease from coming in contact with similar articles used by other inmates of the premises, and shall forthwith efficiently disinfect all such articles, and in so doing shall obey any directions given by the medical officer or by an inspector.

15. The keeper of every boarding-house shall, so soon as it comes to his knowledge that any person on the premises is suffering from an infectious disease, effectively isolate such person until removed to some hospital, and he shall provide separate knives, forks, spoons, plates and other articles used in the consumption of food for the use of such person, and such articles shall, immediately after use, be efficiently disinfected. 16. The keeper of every boarding-house shall, immediately upon the vacating of any room which has been occupied by a person suffering from an infectious disease, effectively disinfect such room, and shall take such other measures in respect of such room or the contents thereof as an inspector may direct.

17. The keeper of every boarding-house shall provide and maintain fire-extinguishing appliances of the number and pattern and situated in such position as the local authority may direct.

By-law 18 amended by G.G. 12/12/62, p. 3914. 18. The keeper of every boarding-house in which provision is made to accommodate persons above the ground floor shall provide on each floor above the ground floor at least one stairway leading from such floor to the floor immediately below other than the main stairway, so situated and constructed of fire-resisting material as may be directed by the local authority.

19. No premises shall be registered as a boarding-house unless—  $\ensuremath{\mathsf{--}}$ 

- (a) the external walls and roof thereof are weather-proof and water-tight;
- (b) every wall, including every partition wall, is provided with a damp-proof course;
- (c) every part of the floor, if of wood, is at least 12 inches above the surface of the ground; if of concrete, then the upper surface shall be not less than three inches above the ground;
- (d) every internal wall is complete from the floor to ceiling;
- (e) every passage is at least four feet in width;
- (f) every main stairway is at least four feet in width; the risers not greater than six and a half inches in height, and the treads not less than ten inches in width, and every such stairway shall be free from winders;
- (g) every stairway is provided with handrails on both sides thereof, the handrail to be two feet eight inches above the nosing of the treads;
- (h) separate sanitary conveniences are provided for each sex, and so situated and screened as to ensure sufficient privacy;
- (i) Each such convenience during the hours of darkness is sufficiently lighted by artificial light;
- (j) the inner surface of all walls is so constructed that they can, without sustaining injury, be washed.

20. Every keeper of a boarding-house shall take such measures for the destruction of vermin as may be directed by an inspector.

## Penalties for Breaches of By-laws.

21. Where anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-laws, or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

## Schedule "A." (By-law 1.)

# FORM OF APPLICATION FOR REGISTRATION OF A BOARDING-HOUSE.

To the Secretary Local Health Authority, ·····

I registration of the pre- house, and the entry of Situation of pr Materials of co Maximum num	emises of my emises onstrue	described here name as the s ction	eunder as a l keeper thereo:	boardin f:—	lg-
Particulars to be given in respect of each room to be used by lodgers as a sleeping apartment.	No. of Room.		Cubic Capacity, in feet.	No. o Boarde	f rs.
sleeping apartment.					-
Dated		ignature) (Address)			
FORM OF CERI	C	hedule "B." By-law 1.)			
This is to certify t are registered as a boa is entered as the keepe The maximum nuu under:	BOAR that th rding- r there	DING-HOUSE ne premises site house, and the eof.	uate at name of		
Room No.		Numbe	r of Boarders.		
Dated			Se	cretary	 '.
SCALE OF FEES T ANNUALLY THE HOUSES.	( 'O BE		REGISTRATI PERS OF BO	ARDIN	
When the maximum nu does not exceed 2		of lodgers to be	e accommodate	s. d 10	d. 0
When the maximum nu					

exceeds 20 .... .... .... .... ....

20 0

## PART VII. FOOD.

#### General

1. (a) The occupier of every premises where food is manufactured, prepared, packed, or kept for sale shall maintain such premises, together with all apparatus, instruments, fittings, utensils; and vehicles used in connection with the manufacture, preparation, keeping or transport of food at all times in a clean condition.

(b) Every occupier of such premises shall be responsible for the maintenance in a clean condition of all persons employed by him in the manufacture, preparation, or handling of food, together with the clothing of such persons.

2. The occupier of every such premises shall not conduct on such premises any offensive trade, except such as are specified hereunder:---

Fish curing establishment.

Fish shop;

and then only with the consent of the local authority.

3. The occupier of every such premises shall maintain such premises in such condition as to prevent the ingress or egress or harbourage of rats, and shall take all practicable measure for the destruction of rats and other vermin which may be on his premises.

4. The occupier of every such premises shall, when so ordered by the local authority, pave the floor or such portion thereof as may be directed, with impervious materials, in such manner as is specified in the order; and shall, when so ordered, further provide proper drainage, so that all liquids falling upon such floor shall be conducted to a drain inlet situated outside the building within which the floor is laid.

5. Every occupier of such premises shall, when so ordered by the local authority, line the walls of any such premises, or such portion thereof as may be specified, to such a height from the floor as may be directed.

6. The occupier of every such premises shall cause such premises to comply with the following conditions:---

- (a) Every room which is used in connection with the manufacture, preparation, or keeping of food shall be properly ceiled.
- (b) Every such room shall be provided with natural light in the ratio of one square foot of window area to every 10 square feet of floor area.
- (c) Every such room shall be efficiently ventilated by through ventilation.
- (d) Every such room shall be provided with effective subfloor ventilation, unless the floor be of concrete or similar impervious material.
- (e) All offensive material or trade refuse produced upon such premises shall be immediately placed in an impervious receptacle, provided with a tight-fitting cover, and the contents of such receptacle shall be removed at least once in each week, or with such greater frequency as may be directed by an inspector, and
- (f) Every such receptacle shall, after each emptying, be thoroughly cleansed.

7. Every occupier of any such premises shall cause all food which is ordinarily consumed in the condition in which it is sold to be protected from the contamination by flies or dust, by one of the following methods:—

(a) Cause all such foods to be kept in enclosures covered by glass or fine-mesh wire gauze.

(b) Cover all door and window openings, and other apertures on the premises with screens of fine-mesh wire gauze, and fit all doors so that they are self-closing.

Every such occupier shall maintain the fittings provided under this by-law at all times in good order and repair.

8. (1) The occupier of premises where food is manufactured, prepared, packed or kept for sale shall provide on the premises for the use of all persons engaged in work thereon-

> (a) lavatory basins in the proportion of one for each ten persons or part thereof which basins shall be provided with a supply of running water and properly trapped and connected to a liquid wastes disposal system; and

(b) a supply of soap and clean towels, but so that no towel may be used by more than one employee.

(2) Facilities provided as required by sub-bylaw (1) of this by-law shall be so situated as to be readily accessible to employees.

9. The occupier of any such premises shall not permit any By-law 9 closet or privy to be situated in any room where food is manu-  $\frac{\text{amended by}}{\text{G.G.}}$  factured, prepared, or kept; and any closet or privy and also any  $\frac{12}{12}/62$ , stable shall be so situated as to be completely cut off from any p. 3914. such room by cross ventilation.

10. The occupier of every such premises shall provide a receptacle in which any food withdrawn from sale shall be immediately placed, and any food, not within such receptacle shall be deemed to be exposed for sale.

11. No person shall use any place for or in connection with the sale, manufacture, preparation, storage, or packing of any food for sale, which is at any time used as a sleeping or living apartment, or which communicates directly with a sleeping apartment, or in which anything is kept, or any animal allowed to be, or in which any work is carried on which would be likely to contaminate such food or injuriously affect its wholesomeness or cleanliness.

11A. The owner or occupier of a place used for or in connection By-law 11A with the sale, manufacture, preparation, storage or packing of any G.G. food for sale shall not receive or place therein any article of clothing 31/12/52, which has been so received or placed for the purpose of being dry p. 2992. cleaned or laundered at that or any other place.

12. No person shall deposit any vegetable or other food By-law 12 intended for sale for human consumption upon the floor of any G.G. premises, and all such deposits shall be kept at least 18 inches 12/12/62, other food By-law 12 clear of such floor in such a way that there is a clear space between p. 3914. the floor and the underside of the staging or support upon which the deposits are kept.

No person shall use or permit to be used any cellar for the By-law 13 13. 13. No person shall use or permit to be used any cellar for the bounded by preparation of food, unless with the written consent of the local G.G. authority. 12/12/62,

14. No person who sells bread, meat, fish or milk, and no employee of any such person shall change or receive from a purchaser any bread, meat, fish or milk which has previously been delivered to such purchaser unless for the reason that such food is unwholesome, and whenever any food is so changed or received it shall be immediately destroyed or placed in a refuse receptacle.

15. No person shall enclose or carry or store wheat, oats, maize, potatoes, onions, fruit, or any other article of food whatsoever in any bag or sack or similar receptacle which has at any time contained or has been used for or the conveyance of bone dust or superphosphate, or any other manner or mixture of manures, unless such bags or sacks have first been thoroughly washed.

By-law 8 substituted by G.G. 12/12/62, p. 3914.

p. 3914.

By-law 15A added by G.G. 24/10/47, p. 1951.

By-law 15B added as 15A by G.G. 18/2/55, p. 342.

has a cork or absorbent lining or filling as a cap or seal for any food container used for the distribution, sale and exposure for sale, of food, if such lining or filling has been previously used for any purpose whatsoever. 15B. (1) A person shall not sell or permit to be sold any food

15A. No person shall use or permit to be used any article which

15B. (1) A person shall not sell or permit to be sold any food in or from a shop, store, or vehicle if the food is intended to be carried away from the shop, store or vehicle, unless the food is completely wrapped or packed in clean material or otherwise protected as far as practicable from contamination.

(2) Except as provided for in paragraph (3) of this by-law, where paper is used for wrapping or packing food in accordance with paragraph (1) of this by-law, only clean paper which shall have no writing or printing thereon excepting upon the surface of the paper which forms the outside of the package which contains the food. The paper shall not be impregnated or coloured with any substance which may contaminate food.

(3) Where the food to be wrapped or packed consists wholly of vegetables they may be wrapped or packed in clean newspaper obtained direct from the publisher thereof and not previously sold or used for any purposes.

16. No person shall use or permit to be used in connection with the conveyance or storage of any milk, beer, or other food, any vessel or pipe composed wholly or in part of lead or zinc, unless all internal surfaces are completely covered with a lining of tin, glass, or other covering sufficient to prevent any metallic contamination.

16A. [Revoked by G.G. 12/12/62, p. 3914.]

By-law 16A added by G.G. 20/10/33, p. 1600; amended by G.G. 29/12/50, p. 3007.

#### Unsuitable Premises.

17. The owner or occupier of premises used for the manufacture, preparation, or storage of any food for sale which by reason of their situation, construction, or disrepair are such as in the opinion of an inspector to render possible contamination of such food shall, on receipt of a notice from the local authority requiring him so to do, cease to use, or shall reconstruct or shall repair the premises as directed in and within the times specified in the notice.

18. The occupier of any premises on which food is manufactured, prepared, or kept shall, when required by an inspector, conspicuously display on his premises in such position or positions as may be selected by an inspector, a copy, as supplied by the local authority, of these by-laws or any portion thereof.

## Cleansing of Drinking Vessels.

19. The occupier of every public house, public bar, refreshment room, drinking booth, or other public place of refreshment where drinking vessels are used, shall provide to the satisfaction of an inspector a proper water supply and sufficient utensils for the proper cleansing of all such drinking vessels.

Every such occupier shall cause every drinking vessel, after use by any person, to be thoroughly cleansed in running water.

By-law 19A added by G.G. 24/3/50, p. 717. 19A. No person shall in or upon any premises whereon food is served for reward, use or permit to be used for the purpose of preparing or serving such food, any damaged vessels or utensils of whatsoever kind.

## Transport.

(a) Every person engaged in selling or carrying food shall By-law 20 20. cause all food in course of delivery or transport not otherwise packed to be protected as far as practicable from contamination. Provided that nothing but new clean white or brown paper shall be used as a wrapping for meat, fish, or bread. p. 1135.

(b) No such person shall permit any vehicle used in the transport or carriage of food to be used also for the transport of offensive material.

(c) Every such person shall cause all such vehicles when not in use for the carriage or transport of food, to be so placed as not to be liable to contamination.

(d) No person engaged in transporting or carrying food shall sit upon such food.

(e) Every person engaged in selling or carrying bread shall cause all bread in course of transport to be carried in weatherproof, covered vehicles, or containers constructed in such a manner as to thoroughly protect such bread from flies and dust.

(f) No person engaged in transporting or carrying food shall permit any dog to be upon any vehicle used for transporting or carrying food.

## Butchers' Small Goods Premises.

No person shall use, or suffer to be used, any room or place 21.for the boning, curing, canning, salting, mincing or other similar process of preparation of the meat or fat of animals for sale for human food, except it be provided with a floor of tiles, cement, mineral asphalt, or some other material impervious to water, having a smooth surface and graded and drained so that all liquids spilt on it may flow off it without impediment. If any such floor be constructed of tiles, the joints between the tiles shall be of material which is impervious to water. Such floors shall at all times be kept in good repair, smooth, and free from cracks and inequalities.

22. No person shall use or suffer to be used any such floor as referred to in the preceding paragraph, unless it be free from accumulations of dirt, fat, grease or debris of meat, and such floor shall be cleaned at least once daily at the close of work.

23. No person shall keep or suffer to remain any bones or waste matter of any kind for longer than eight hours in any room in which any process of preparation of meat or of fat for sale for human food is, or usually is, carried on.

No person shall use or suffer to be used any room or place By-law 24 for the boning, curing, canning, salting, mincing or other similar amended by G.G. process of preparation of meat or fat of animals for human food, 12/12/62, unless its internal walls are constructed of bricks, tiles, stone, p. 3914. cement, or other material impervious to water, which shall at all times be kept clean.

25. No person shall, in connection with the pickling of meat By-law 25 use any pump constructed wholly or partly of brass, but such person G.G.shall only use a pump made of nickel or stainless steel. 12/12/62,

26. The occupier of any such premises shall cause the brine or pickle to be removed as often as is necessary to prevent it from becoming offensive.

27. No person shall permit any dog to enter any premises used for the storage, sale or preparation of fresh meat.

28. The occupier of any premises, or stall, and the driver of any vehicle used for or in connection with the sale of fresh, frozen or chilled meat shall not permit any person other than an employee or an inspector to handle or touch any such meat.

p. 3914.

amended by G.Gs. 5/10/34, p. 1543; 30/11/45.

By-law 29 amended by G.G. 12/2/37, p. 237: New by-law substituted by G.G. 29/9/39, p. 1702; amended by G.G. 3/5/55, p. 782. 29. (a) Every vehicle used in the transport of meat (excepting butchers' delivery vehicles used for delivery of cut joints to house-holders and vehicles used by the producers for the conveyance of carcase meats to the market), shall conform with the following:—

Meat.

- (i) The vehicle shall be completely enclosed so as to protect the meat from the weather and from flies and dust.
- (ii) The vehicle shall be constructed of wood or metal, and all internal surfaces shall be finished to a smooth surface.
- (iii) The vehicle shall be properly ventilated.
- (iv) The vehicle shall be provided with rails and hooks secured to the upper portion thereof, and shall be of ample proportions so that meat hung on such hooks shall be clear of the floor.
- (v) No meat (except edible offal) shall be placed on the floor of the vehicle.
- (vi) Edible offal, when carried on the floor, shall be contained in impervious containers.
- (vii) The vehicle, edible offal containers, hooks, and rails shall at all times be kept in a thoroughly clean condition.
- (viii) (A) A door to the vehicle shall not be used as a loading ramp.
  - (B) A loading ramp or other device for facilitating loading shall not be placed at any time within the compartments in which meat is carried or form portion of the internal surface of the vehicle.

(b) No vehicle used for the transport of meat shall be used at any time for the transport of any offensive matter.

(c) No meat shall be carried on any railway, except in trucks provided for that purpose, or unless such meat is hung on hooks and is clear of the floor.

Para. (d) (f substituted livery by G.G. day's p. 782. to the of the

(d) Every person employed in the handling, transport or delivery of carcase meat shall wear at the commencement of each day's work a clean coat, the sleeves of which shall extend at least to the elbows, and a cap which shall cover the head and the back of the neck; and the coat and the cap shall be worn at all times whilst the person is so employed.

(e) (i) Butchers' delivery vehicles shall be completely enclosed to protect the meat from the weather, flies, and dust. The vehicle shall be constructed of wood or metal, and all internal portions finished to a smooth surface.

(ii) They shall be properly ventilated. The floor of such vehicles shall be constructed of or completely covered with a smooth impervious metal.

(f) Butchers' cutting carts shall be constructed in a similar manner as specified for butchers' delivery carts, but shall be of ample dimensions to permit all carcase meat to be hung on hooks affixed to the roof of such vehicle. All carcase meat shall be hung on such hooks, in such manner that the meat is clear of the floor. Carcase meat in this clause shall mean any quarter or more of any carcase.

(g) All carcase meat conveyed by producers to the market shall be completely covered with clean canvas or other wrappings, approved by the inspector, in such manner as thoroughly to protect such meat from flies and dust.

(h) In this by-law the word "producer" shall mean a person who delivers to the market carcases of animals reared or produced on his own farm or property,

Sub para. (viii) added by G.G. 3/5/55, p. 782.

## Milk-Sale and Delivery of.

30. No person shall allow his hands or any part of his body to come in contact with any milk for sale.

31. No person shall apply to his mouth any vessel or utensils which contains milk, or which comes into contact with any milk for sale.

32. No person shall keep, store, carry, or place or suffer to be kept, stored, carried, or placed any milk for sale or in course of delivery to any customer, so as to be exposed to flies or dust or so as to be accessible to any animal.

No person shall suffer the interior of any vessel used for containing or for measuring milk to be exposed to flies or dust.

34. No person shall keep, measure, carry, or deliver any milk for sale, or cause or suffer any such milk to be kept, measured, carried, or delivered in any vessel which is not clean.

35. No person shall use any vessel with rough or torn edges or surface for containing, measuring, or carrying any milk for sale or for delivery to any customer.

36 No person shall store, keep, or sell milk in any place in which is stored, kept, or sold any kerosene, vegetables, fish, meat (except meat in hermetically sealed tins), or any other substance by which milk is, or is liable to be, contaminated or adversely affected.

37. No person shall use or suffer or cause to be used, for closing or for helping to close, any churn, tin, or other vessel con-taining milk for sale, any rag, canvas, paper, wood, or other absorbent material.

No person shall use any vessel unless it is in such a state By-law 38 of repair as to be free from dents which may interfere with the thorough and easy cleansing of such vessel, or in which the tinning has become impaired or defective.

was erroneously numbered as 39 in G.G. 8/4/27, p. 984.

(a) A person who consigns or sells milk to a milk vendor By-law 39 substituted shall, prior to the milk being so consigned or so sold cause the cans or other receptacles in which the milk is conveyed to be closed by G.G. 20/8/54, securely by means of a leaden seal or a lock. p. 1438.

(b) A person other than an inspector or the consignee or his agent, who breaks or tampers with the seal or lock is guilty of an offence.

40. No person shall transfer any milk, condensed or concentrated milk or cream from one vessel to another vessel on any street, or any public place, except when transferred to the vessel of the producer for immediate delivery to the customer.

41. No person shall permit any vessel containing milk or cream for sale to remain in any public place, or in any such position where the contents of such can may be exposed to the heat of the sun.

42. Every person selling or delivering milk for sale shall cause all cans, bottles or other vessels used in the sale, disposal, or delivery of milk to be effectually cleansed and sterilised before such cans, bottles, or other vessels are again used.

43. No person shall permit any vessel which has been handled by any person suffering from any infectious disease to be used to hold or convey milk until such vessel has been thoroughly sterilised. and no person shall remove any can, bottle, or other vessel used for the holding or storage of milk to be removed from any premises at which a case of infectious disease has occurred, until the consent of an inspector has been given.

Providing for the Cleanliness and Freedom from Contamination of Ice-cream and Ices.

44. No person shall manufacture, store, or deposit for sale any ice-cream or ices, or suffer them to be so manufactured, stored, or deposited in any open shed or enclosed space.

45. No person shall manufacture, store, or deposit any icecream or ices for sale or suffer them to be manufactured for sale, stored, or deposited in any room or building—

- (a) unless such room or building is provided with tight close-jointed walls and floors;
- (b) unless the internal walls are covered with tiles, smooth iron, or smooth plaster, cement, or wood, painted or colour washed or frequently limewashed;
- (c) unless the floors are constructed of cement, concrete, tiles or well smoothed wood;
- (d) unless it is well lighted and ventilated;
- (e) unless all openings are efficiently protected by gauze screeens against the ingress of flies and the entry of dust.

46. No person shall manufacture, store, or deposit ice-cream or ices, or suffer or permit them to be manufactured, stored, or deposited in any dwelling room or in any room communicating directly with a privy or water closet, or stable, or within an apartment used for sleeping, or in any room having an opening communicating directly with any drain or sewer.

47. No person engaged in the manufacture or sale of icecream or of ices shall suffer his hands or any part of his person to come in contact with any ice-cream or ices.

48. No person shall manufacture, store, or deposit any icecream or ices in any vessel which is not clean, and every person engaged in the manufacture or sale of ice-cream or of ices shall at all times maintain all vessels and utensils used for containing or coming in contact with ice-cream or ices, in a condition of cleanliness.

49. No person shall sell any ice-cream or ices which, after having been once frozen, have run down or melted, and which have been again frozen.

By-law 50 amended by G.G. 12/12/62, p. 3914. 50. (a) Every person making or vending ice-cream or ices for sale shall before the first day in January of each year make application for registration in the form of Schedule "A" hereto, and upon the granting of such application by the local authority, a certificate in the form of Schedule "B" hereto shall be issued.

(b) No application shall be granted until the premises occupied by the applicant have been inspected, and found to comply with the provisions of these by-laws.

(c) Every person registered in accordance with this by-law shall notify the local authority of any intended occupation of other premises than those specified on the certificate of registration.

## Sale of Food by Itinerant Vendors.

By-law 51 substituted by G.G. 12/12/62, pp. 3914-3915. 51. (1) A person shall not engage in trade as an itinerant vendor of food unless he is the holder of a license from the local authority so to do.

(2) Every person desiring to engage in trade as an itinerant vendor of food shall, before so engaging, or if already so engaged then during the first week of January in each year, apply to the local authority in the form of Schedule "C" for a license to carry on such trade, and shall with his application deposit a fee of five pounds. (3) Upon the granting of an application under this by-law, a license shall be issued to the applicant in the form of Schedule "D." 

(4) Every license granted under this by-law shall operate only during the period ending on the 31st day of December next succeeding the date of issue and after the 31st day of December aforesaid shall cease to be of any force or effect.

52. Every person engaged in the trade of an itinerant vendor By-law 52 of food-

substituted by G.G. 12/12/62,

- (a) shall cause all food to be protected from contamination  $\frac{12}{p}$ . 3915. by flies and dust, and all meat, fish or other food that is subject to putrefaction to be protected by refrigeration to the satisfaction of an inspector;
- (b) shall not permit any other person to handle or touch any food on his vehicle;
- (c) shall maintain his clothing and his person at all times in a clean condition;
- (d) shall, whilst plying his trade, have his name legibly and conspicuously displayed on some part of his vehicle, barrow, bag or tray; and
- (e) shall, whilst plying his trade, carry with him his license and produce the same to any inspector on demand.

## Aerated Waters, Temperance Drinks, Cordials, and Syrups.

53. Every person who makes or offers for sale any aerated water, temperance drinks, cordials, and syrups, shall, on the coming into operation of this by-law, at once apply to the local authority in the form of Schedule "A" hereto for registration, and upon such application being granted shall receive a certificate in the form of Schedule "B."

54. (a) Every person who, subsequent to the coming into By-law 54 amended of a maker or vendor of aerated waters, temperance drinks, cordials, and syrups, 12/12/62, shall before commencing such trade apply for registration in the p. 3915.

(b) Every registration effected under this and the preceding by-law shall operate only during the period ending on the 31st day of December next succeeding the date of issue, and after the 31st day of December aforesaid every such registration shall cease to be in operation.

The occupier of any premises used for the manufacture of By-law 55 waters, temperance drinks, cordials, and syrups, shall comply G.G. 55. aerated waters, temperance drinks, cordials, and syrups, shall comply with the following conditions:-12/12/62, p. 3915.

- (a) The floors of such premises shall be of approved construction and materials, and shall have a sufficient fall to a trapped gully or other approved receptacle outside the building, and such floors shall be thoroughly washed down daily.
- (b) All yards adjoining, and sheds and outbuildings appurtenant to such buildings shall be kept clean and free from any rubbish, garbage, or offensive material.
- (c) All tanks (or other receptacles) in which water is stored, and which is intended to be used in the manufacture, shall be provided with an impervious tightly-fitting cover, which shall always be kept in position; such tanks or other receptacle shall be emptied and cleansed throughout at least once in every 12 months.
- (d) If filtering apparatus of any design is provided for filtering water before use, it must be cleaned and boiled at least once weekly.

amended by G.G. 12/12/62,

#### Cleansing Bottles.

- (e) Between each time of filling, bottles must be soaked in a trough of water, must be thoroughly cleansed out with a brush, must be well rinsed by being placed in a vertical position over a jet of water, and must be drained after rinsing and before filling.
- (f) If bottles are not filled within 24 hours after being cleansed, they must be kept mouth downwards until used.
- (g) The water in which water bottles are soaked before they are brush-cleansed must be changed at least once daily.
- (h) No lead pipe shall be used for conveying any part of the material, either gaseous or liquid, which enters into the composition of the cordials, unless it is lined with tin or other approved materials.
- (i) Syrups must be stored in well-made, impervious receptacles, with an impervious tight-fitting cover.
- (j) [Deleted by G.G. 12/12/62, p. 3915.]

#### Bake Houses.

56. Every person carrying on the trade of a baker shall, in addition to the foregoing general by-laws, comply with the following conditions:---

- (a) He shall not permit any dog or other animal to be within the bake house.
- (b) He shall not permit the bake house to be used for any other purpose than as a bake house.
- (c) He shall not permit any person to smoke or expectorate in the bake house.
- (d) He shall cause the floor of the bake house to be constructed of granolithic or other impervious material approved and laid in such manner as is approved by local authority.
- (e) He shall cause all flour intended to be used in connection with his trade to be so stored as to prevent it being contaminated and be protected from rats and vermin.

#### Markets.

57. The occupier of any market or portion of any market shall not deposit or permit to be deposited any vegetable or other foodstuffs upon the floor, but all such vegetables and other foodstuffs shall be deposited upon a wooden staging, the under surface of which shall be at least nine inches above the floor, the space between the floor and the staging being entirely open for inspection and cleansing.

#### Refrigerating Works-Cold Stores.

By-law 58 amended by G.G. 12/12/62, p. 3915. 58. (a) The owner, occupier, or manager of any refrigerating works, or cold stores, which are at any time used for the storage of food, shall maintain his premises in a clean condition throughout.

(b) [Deleted by G.G. 12/12/62, p. 3915.]

(c) He shall not permit any food to be stored on the floor of any chamber.

(d) He shall not receive any unsound meat or offal or offensive material on his premises to be stored, nor shall he permit any such unsound meat, offal or offensive material to remain in any chamber.

(e) He shall not permit the use of any straw upon the floor of any chamber.(f) He shall not permit any brine tub to be in any chamber.

(g) He shall keep upon the premises duplicate keys of every chamber, and shall on demand by an inspector, permit such inspector to have access to any chamber.

(h) He shall provide means of artificial light, so as to permit efficient inspection of the contents of any chamber.

#### Hotels, Boarding and Lodging Houses, Restaurants, and Eating Houses and Cooked Meat Shops.

59. Every keeper of any such premises shall cause the premises to be maintained at all times in a clean and sanitary condition.

60. The keeper of such premises shall provide a sufficient number of approved impervious receptacles with close fitting covers for the reception of food scraps and trade waste, and shall not permit or suffer such food scraps or trade waste to be placed elsewhere than in such receptacles. He shall cause such receptacles to be kept at all times in a clean and wholesome state.

61. The keeper shall cause the grease trap, where one is provided, to be kept at all times in a sanitary condition and shall cause the trap to be cleansed daily and all grease removed therefrom.

62. The keeper shall not suffer or permit pigwash to be removed from his premises between the hours of 9 a.m. and 8 p.m., and in cases where food waste is disposed of to contractors, the keeper shall be held responsible that duplicate receptacles are provided for interchange with the full receptacle removed so that those removed shall be replaced by a clean washed and disinfected set.

63. The keeper shall cause all sanitary conveniences upon or in connection with his premises to be kept at all times in a scrupulously clean condition, and shall provide a plentiful supply of approved deodorant therein.

64. The keeper shall provide sufficient means of ablution with clean towels and soap for the use of employees, and he shall be responsible that employees handling food wash their hands before so doing.

65. The keeper shall not permit or suffer to be occupied as a sleeping place any room which is in direct communication with any dining room, kitchen or other place used for the preparation or storage of foodstuffs.

66. [Revoked by G.G. 12/12/62, p. 3915.]

67. The keeper shall cause all foodstuffs to be stored in such a place and manner as to prevent contamination from flies, dust, and vermin.

68. The keeper shall not suffer to be used in the preparation of food any tinned milks, fruits, jam, or fish, which upon opening show any signs of decomposition, fermentation or alteration in appearance of contents, and no bad eggs or rancid butter shall be used in the preparation of foods.

69. Employees shall be always cleanly in their person and shall not smoke nor expectorate within any dining room or kitchen appurtenant thereto.

70. The keeper shall adopt such means as will ensure the destruction of rats and vermin upon his premises and as will prevent their harbourage therein, and shall keep baited and set rat-traps as directed by the inspector.

71. The keeper shall cause all means of drainage upon or in connection with his premises to be maintained at all times in good repair and efficient action.

72. The keeper shall cause all sink wastes to be trapped and to discharge over properly trapped gullies or a channel leading to a gully in the open air. No opening to a drain or drain inlet shall be within any kitchen or scullery.

#### Penalties for Breaches of By-laws.

73 Where anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this part of the said by-laws. And every person guilty of a breach of this part of the said by-laws shall be liable, for every offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be committed or continued and in addition to such penalty shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law or in the execution of any work directed to be executed and not so executed. executed and not so executed.

#### Schedule "A."

## MAKER OR VENDOR OF ICE CREAM, ICES, AERATED WATERS, TEMPERANCE DRINKS, CORDIALS AND SYRUPS.

Form of Application for Registration as..... Signature of Applicant Date Schedule "B." Local Health Authority. maker .....is hereby registered as a -- of..... vendor in respect of premises situate at.....

Dated.....

#### Schedule "C."

#### APPLICATION FOR LICENSE AS ITINERANT VENDOR OF FOOD.

Name (in full) of applicant				
Place of residence				
District in which applicant desires to				
Place where vehicle and trade utensils are stored				
Place where stocks of food for sale is	stored			
Dated	Signature of applicant.			
2000	Signature of approants			

#### Schedule "D." LICENSE AS ITINERANT VENDOR OF FOOD.

.... is hereby licensed at

an itinerant vendor of food within the Health District of

•••••• Secretary.

.....

Secretary.

Dated

#### PART VIII.—BARBERS' SHOPS AND HAIRDRESSING ESTABLISHMENTS.

amended by G.G.12/12/62,

- (a) There shall be kept at all times on the premises in p.3915. each room in which the business is carried on a vessel containing at least one gallon of disinfecting solution hereinafter called "disinfecting solution" equal in strength to a five per cent. solution of carbolic acid.
- (b) All razors, scissors, clippers and combs in general use shall be sterilised by immersion in the disinfecting solution before and after using or clippers may be so sterilised by being held in a flame.
- (c) Hair brushes in general use shall, after each use, be immersed in the disinfecting solution and afterwards rinsed in clean water.
- (d) Shaving brushes in common use shall, after each use, be first cleansed in very hot water and afterwards immersed in the disinfecting solution.
- (e) Rotary or machine brushes shall not be used.
- (f) An antiseptic soap powder shall be used to produce lather for shaving, boiling water shall be allowed to run on the lather brush, and then the soap powder sprinkled on it before application to the face.
- (g) Powder shall only be applied by a blower or absorbent cotton which shall be used for one person only.
- (h) Before passing from one customer to another the operator shall wash his hands, using disinfecting soap and a nail brush.
- (i) For the purpose of stopping the flow of blood, or for treatment of an abrasion, calcined alum shall be applied on a pad of cotton wool, which pad shall be destroyed immediately after use; an alum stick shall not be used.
- (j) Vaseline shall only be used from a squeeze tube.
- (k) No sponge shall be used.
- (1) Razor strops shall only be used for razors which have been disinfected since being used.
- (m) The haircutting wrapper shall be placed only around the shoulders of customers, and fastened with a safety pin or other device at the back, and clean towels or absorbent wool shall be used about the neck to prevent the hair from falling inside the clothing.
  - (n) The outer garment of each operator shall be of washable white material; the sleeves shall be comparatively short.
  - (o) Where the steaming towel is used, a clean one shall be used for each customer.
  - (p) At least once daily the floor shall be sprinkled and swept.
- (q) The premises, their fittings and equipment shall be maintained at all times in thoroughly clean condition.
- (r) All shelves, fittings, and tables on which instruments are placed shall be of glass, marble, slate, or other impervious material.
- (s) A fresh piece of paper or clean linen shall be placed on the back of the chair or on the rest for each customer.

(t) Hair clippings falling on the floor shall be immediately swept together, and placed in an impervious receptacle with a tightly fitting cover.

(u) There shall be provided in a convenient position for use by persons engaged in work on the premises at least one hand basin which shall be provided with an adequate supply of running water and be properly trapped and connected with a system for the disposal of liquid wastes.

- (v) In the case of any person obviously suffering from skin disease of the face or head, special instruments shall be employed, and these must be immediately immersed in the disinfecting solution for a period of not less than five minutes.
- (w) Two impervious receptacles provided with tight-fitting covers shall be provided; into the one all towels immediately after use shall be placed, together with other soiled linen; into the other shall be placed all hair clippings and other trade refuse.

2. No person shall spit upon the floor of any barber's shop or hairdressing establishment.

3. The medical officer or inspector may at all reasonable times enter and inspect any premises used for the purpose of the trade of a barber or hairdresser, and may inspect or remove for the purpose of examination any brush, comb, razor, clippers, or other instruments or appliance, or any towel or other thing therein which may be suspected, on reasonable grounds, of being contaminated with the infection of any contagious or infectious disease, provided that when any such article is so removed, a written receipt therefor shall be furnished to the occupier by the medical officer or inspector, and the article shall be returned by such officer within a period of three days.

4. Every person who enters a barber's shop or hairdressing establishment for the purpose of being attended to shall, if he be suffering from any infectious disease, or any eruption of the skin of the face, neck, or head, notify the operator before taking his place in the chair.

5. A printed copy of the foregoing shall be conspicuously displayed in every barber's shop and hairdressing establishment in the district.

#### Penalties for Breaches of By-laws.

6. Where anything by this part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this Part of the said by-laws. And every person guilty of a breach of this Part of the said by-laws shall be liable for every such offence, besides any costs or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

Sub pars. (U) substituted by G.G. 12/12/62, p. 3915. PART IX.-OFFENSIVE TRADES.

Section A.-General.

Section B.-Slaughter-houses.

- Section C .--- Piggeries.
- Section D.-Artificial Manure Depots.
- Section E.—Bone Mills.
- Section F.—Places for Storing, Drying, or Preserving Bones, Hides, Hoofs, or Skins.
- Section G.—Fat Melting, Fat Extracting, or Tallow Melting Establishments.

Section H.-Blood Drying.

- Section I.—Gut Scraping, Gut Spinning, and Preparation of Sausage Skins.
- Section J.-Fellmongeries.
- Section K .- Manure Works.
- Section L.—Wool Scouring Establishments.
- Section M.—Fish Curing Establishments.
- Section N.—Fish Shops.
- Section O.-Laundries, Cleaning Establishments, and Dye Works.
- Section P.-Marine Stores.
- Section Q.-Rag and Bone Merchants' Premises.
- Section R.—Chemical Works.
- Section S.—Flock Factories.
- Section T.-Knackeries.

Section U.—Poultry Processing Establishments.

Section **1** and U added by G.G. 12/12/62, p. 3915.

#### Section A.—General.

1. (a) Every person who shall apply to a local authority for its consent to establish an offensive trade shall furnish in the form of Schedule "A" hereto a true statement of the particulars therein required to be specified, and shall by advertisement in a newspaper give one month's notice of his application.

(b) Any person who makes a false statement in connection with any such application shall be guilty of a breach of these by-laws.

2. Before the consent of the local authority is given to the establishment of any offensive trade the medical officer shall furnish to the local authority a report in the form of Schedule "B" hereto upon the premises whereon it is proposed to establish such offensive trade.

3. Every person applying for the registration of premises whereon an offensive trade is carried on shall apply for such registration in the form of Schedule "C" hereto, and with such application he shall tender to the local authority a fee as prescribed in Schedule "D."

Provided that if the registration for any year shall commence on or after the 1st day of July in any year then the applicant shall be required to pay only one-half of the prescribed fee.

4. Upon the registration of any premises whereon an offensive trade is carried on the local authority shall supply to the person who has applied for such registration a certificate in the form of Schedule "E" hereto.

5. No person shall establish any offensive trade within any portion of the district defined within the boundaries prescribed in Schedule "F" hereto.

6. Every occupier of any premises upon which an offensive trade is carried on shall cause such premises, together with all drains, fittings, apparatus, machinery, utensils, receptacles, vehicles, tools and appliances to be at all times maintained in a clean condition, good repair, and efficient action. 7. Every such occupier shall provide upon such premises an ample supply of clean water, together with such fittings as may be required by an inspector for the purpose of making the water supply readily available for use.

8. Every such occupier shall provide a sufficient supply of ablutionary appliances for use by his employees, and which may also be used by an inspector.

By-law 9 substituted by G.G. 12/12/62, p.3915. 9. Every such occupier shall maintain, or cause to be maintained, in a clean condition the internal surface of every wall and the underside of every ceiling or roof, together with all fittings.

10. The occupier of every such premises shall provide, use, and maintain in efficient action appliances capable of effectually destroying or of rendering harmless all offensive effluvia, vapours, or gases arising in any process of his business, or from any material, residue, or other substance which may be kept or stored upon his premises.

11. Every such occupier shall provide impervious receptacles, provided with airtight coverings which shall be kept closed, of sufficient capacity to receive all offensive and decomposable material and trade refuse produced upon the premises, and all such offensive and decomposable material or trade refuse shall be immediately placed in such receptacles, and the contents thereof shall be removed from the premises at such time and with such frequency as an inspector may direct, but with no less frequency than once in each working day.

12. No such occupier shall, without the consent in writing of the local authority, at any time after the registration of his premises, make or permit any change or alterations whatever in the premises, and upon contemplating any such change or alterations shall give notice thereof to the local authority.

13. Every such occupier shall cause all materials received upon his premises for the purpose of his trade which are offensive, or capable of becoming offensive, to be so stored as to prevent the creation of a nuisance.

14. The occupier of every premises whereon any of the offensive trades specified hereunder are carried on shall cause the floor of his premises to be properly paved and drained with impervious materials; such floor shall have a smooth surface, and with a fall to a surface gutter in such a way that all liquids falling upon such floor shall be conducted by such gutter to a drain inlet situated outside the building wherein the floor is situated:—

Slaughter-houses.

Piggeries.

Bone mills.

Places for storing, drying, or preserving bones, hides, hoofs, or skins.

Fat melting, fat extracting or tallow melting establishments.

Blood drying.

Gut scraping, gut spinning, and preparation of sausage skins.

Wool-scouring establishments.

Laundries.

Cleaning establishments and dye works.

Places for boiling tripe, ox feet, and trotters, and extracting oil.

Soap and candle works.

15. Every occupier of any premises whereon any of the offensive trades specified hereunder are carried on shall cause all liquid refuse, before being discharged into any drain inlet from any part of his premises, to be cooled to a temperature not exceeding 80 deg. Fahrenheit, and to be further directed to such screening or purifying treatment as the local authority may from time to time direct:—

Slaughter-houses.

Bone mills.

- Fat melting, fat extracting, or tallow melting establishments.
- Gut scraping, gut spinning, and preparation of sausage skins.

Wool-scouring establishments.

Fish shops.

Laundries.

Cleaning establishments and dye works.

Places for boiling tripe, ox feet, and trotters, and extracting oil.

Soap and candle works.

16. Every such occupier of any premises whereon an offensive trade is carried on shall comply with such other conditions as may be imposed upon and notified to him from time to time by the local authority, including the paving and draining of his premises or any part thereof, whether included under the provisions of by-law 14 or otherwise.

17. Where in any by-law contained in this Part any duty is thrown upon the occupier of any offensive trade premises, the by-law shall be interpreted to include employees of any such occupier, and any such employee committing a breach of these by-laws shall be liable to the same penalties as if he were the occupier.

18. In addition to the foregoing by-laws, the occupier of any premises whereon any offensive trade is carried on shall comply with any other by-laws in this Part which apply to the particular trade carried on by him.

#### Penalties for Breaches of By-laws.

19. Where anything by this Part of the by-laws is directed to be done or forbidden to be done, or where authority is given to any officer to direct anything to be done or to forbid anything to be done, and such act so directed to be done remains undone or such act forbidden to be done is done, in every such case the person making default as to such direction and prohibition respectively shall be deemed guilty of a breach of this Part of the said by-laws. And every person guilty of a breach of this Part of the said by-laws shall be liable, for every such offence, besides any cost or expenses which may be incurred in the taking of proceedings against such person guilty of such offence, to a penalty not exceeding twenty pounds for every breach of any such by-law, or to a penalty not exceeding two pounds for each day during which such breach shall be liable to pay to the local authority any expense incurred by such authority in consequence of any breach or non-observance of any by-law, or in the execution of any work directed to be executed and not so executed.

## Schedule "A."

## APPLICATION FOR CONSENT TO ESTABLISH AN OFFENSIVE TRADE.

#### To the Local Health Authority,

.....

I,...., hereby make application for consent to the establishment of an offensive trade of the nature and upon the premises as set out hereunder. As required by the provisions of the Health Act, 1911, plans and specifications of the buildings proposed to be used or erected in connection with such trade are submitted herewith:—

Nature of offensive trade
Premises proposed to be used
Application advertised (state name of newspaper and date

of publication).....

Signature of applicant.....

Address.....

Dated.....

#### Schedule "B."

Application for Establishment of an Offensive Trade.

#### CERTIFICATE OF MEDICAL OFFICER OF HEALTH.

I,...., Medical Officer of Health to the local health authority, do hereby certify that I have inspected the premises situated...., and proposed to be utilised for..., an offensive trade, and I further certify that in my opinion such premises are in every way suitable for such trade, and that due and proper provision has been made for the observance of the provisions of the Act, and of the by-laws.

Medical Officer of Health.

#### Schedule "C."

#### APPLICATION FOR ESTABLISHMENT OF AN OFFENSIVE TRADE PREMISES.

I,...., hereby make application for the registration of the premises specified hereunder, for the purpose of the trade of for the year ended 31st December, 19, and deposit herewith the sum of same as registration fee in accordance with the by-laws:—

Situation of premises in respect of which registration is sought.....

Signature of Applicant.....

Address

Dated.....

Schedule "D." FEES TO BE PAID ON APPLICATION FOR REGISTRATION OF OFFENSIVE TRADE PREMISES. In respect of: £ s. d. Slaughter-houses .... .... Fellmongeries ···· ··· ··· .... Chemical works .... .... Cleaning establishments and dye works .... . . . . Soap and candle works .... .... Bone mills .... .... .... Manure works .... .... .... . . . . Wool scouring establishments .... .... Fish curing establishments .... .... .... Flock factories .... .... . . . . .... Any other trade not specified above .... ....

#### Schedule "E." CERTIFICATE OF REGISTRATION OF AN OFFENSIVE TRADE.

This registration expires on the 31st December next.

Secretary.

Dated.....

#### Section B.—Slaughter-houses.

1. Every occupier of a slaughter-house shall observe the following conditions:—

- (a) He shall not permit animals awaiting slaughter to be within sight of the killing pen during the period slaughtering is in progress.
- (b) He shall provide all animals awaiting slaughter with an ample supply of drinking water, at all time accessible to such animals.
- (c) He shall conduct the slaughtering of animals in a humane manner.
- (d) He shall cause all utensils and instruments used in the slaughtering or dressing of carcases to be at all times kept clean, and shall when so ordered by an inspector cause any such utensils or instruments to be sterilised by boiling.
- (e) He shall cause the killing pen to be hosed down after each killing.
- (f) He shall cause every dressed carcase to be hung so that every portion thereof is at least 18 inches above the floor.
- (g) He shall not permit any but clean water to be used in the dressing of carcases.
- (h) He shall cause all viscera to be left either attached to or in such proximity to the carcase, of which it formed a portion, as will sufficiently indicate the

relationship of the one to the other, or unless other means of identification are provided, to the satisfaction of an inspector.

(i) He shall cause none but clean white cloths to be used in wiping down any carcase.

2. Every such occupier shall cause sufficient means of ventilation to be provided in or in connection with the premises and shall keep such at all times in proper order and efficient action, and so that the ventilation shall be by direct communication with the external air.

3. Every such occupier shall cause the hides or skins, fat and offal of every animal slaughtered on the premises to be removed from the slaughter-house within 24 hours after the completion of the slaughtering of such animal.

4. No person shall erect any privy or urinal within 100 feet of any slaughter-house.

5. The occupier of any slaughter-house shall not permit any animal, the flesh of which is intended for human consumption, to be kept for a longer period than six hours on any portion of the premises which is within 100 feet of the killing pen, or any other portion of the premises used for the dressing or storage of carcases.

6. No such occupier shall permit any animal to be kept within 100 feet of the premises.

7. No such occupier shall slaughter or allow to be slaughtered on his premises any animal, nor shall any such occupier remove or permit to be removed from his premises the carcase of any slaughtered animal or part thereof, unless and until such animal or carcase, as the case may be, is previously inspected by an inspector.

8. Every such occupier shall comply with such special precautions in the slaughtering of any animal as an inspector, as the result of an *ante mortem* inspection, shall direct.

9. No such occupier shall slaughter any animals except between the hours of......a.m. and......p.m.

#### Section C.—Piggeries.

1. For the purpose of this section of these by-laws, the term "piggery" shall include any portion of the premises to which pigs have access.

2. No premises shall be registered as a piggery unless every portion of such piggery is at least 100 feet distant from any street or thoroughfare, and at least 200 feet distant from any dwellinghouse or dairy, or other premises wherein food is prepared for sale.

3. The occupier of every piggery shall provide either sties and enclosures or enclosures within which his pigs shall be kept, and such sties and enclosures, or such enclosures shall comply with the conditions hereinafter specified.

(a) Where sties and enclosures are provided, the floor of every sty shall be properly paved with impervious materials, and every such floor shall have sufficient fall to a surface gutter, which shall be constructed of similar materials, and shall be not less than 12 inches wide and three inches deep in the centre of its width, and shall extend the whole length of the sty, and have sufficient fall so that it shall discharge all liquids falling upon the floor or upon the gutter into an impervious sump of sufficient capacity to receive at least one day's drainage.

The floor area of every such sty shall be in the proportion of not less than 15 square feet to every pig over two months old that may be kept therein, and no pig-keeper shall keep a greater number of such pigs in any sty upon his premises than in the aforesaid proportion. The area of every enclosure appurtenant to a sty or group of sties shall be not less than three times the area of the sty or group of sties to which it is appurtenant.

(b) Where enclosures only are provided, then the fences of such enclosures shall be movable, and the fences shall be moved and re-erected so as to enclose a new site at such times as may be directed by an inspector.

4. (a) The occupier of any piggery shall not permit any slaughtering of animals on his premises, nor shall he receive on his premises any carcase or part of a carcase of a diseased animal and he shall not feed his pigs upon the flesh or offal of diseased animals.

(b) He shall not receive, or suffer or permit to be received on such premises putrid matter for any purpose.

(c) He shall cause all readily putrescible pig-feed that may be brought upon such premises to be immediately deposited in cooking vessels, which he shall cause to be maintained at such a temperature as to prevent their contents from putrefying, and shall not remove or permit or suffer such contents to be removed, except to the feeding troughs.

(d) He shall not receive, or suffer, or permit to be received on such premises any kitchen, slaughter-house, or butcher's wastes or other putrescible pig feed unless such materials are contained in galvanised iron receptacles fitted with airtight covers.

5. Every such occupier shall securely fence all his enclosures, and shall provide in each such enclosure sufficient shelter sheds to afford proper shelter for all the pigs that may at any one time be kept in any such enclosure.

6. Every such occupier shall provide a sufficient and constant supply of clean water, which shall be properly protected against pollution, and be always available for cleansing purposes.

- . (a) Every such occupier shall provide feeding troughs-
  - (i) Where sties and enclosure are provided under the provisions of by-law 3 (a), then in every sty, situated near to the drainage gutter, or in such a position as to be accessible to the pigs in two or more sties or enclosures;
  - (ii) where sties and enclosures are provided under provisions of by-law 3 (b), then in each such enclosure.

(b) He shall cause all feeding troughs, other than those provided in connection with movable enclosures, to be fixed upon a cement floor extending four feet in all directions from such trough, the whole to be so situated as to permit of being readily drained.

(c) He shall not permit his pigs to be fed otherwise than at the feeding troughs provided in accordance with this by-law.

(d) He shall cause all feeding troughs provided to be of a pattern which can be readily cleansed.

#### Section D.—Artificial Manure Depots.

1. "Artificial manure" shall mean any manure or fertiliser prepared by any artificial process.

2. The occupier of an artificial manure depot shall not permit any artificial manure to be kept or stored in such premises, except in a building the walls, floors, and ceilings, or undersides of the roof of which are constructed of durable and non-absorbent materials finished internally with a smooth surface.

3. Every such occupier shall cause every precaution to be taken to prevent at all times emission of dust or offensive or noxious effluvia from every building on his premises. 4. Every such occupier shall cause all artificial manures received at or despatched from his premises to be previously packed in such a manner as to prevent any nuisance arising therefrom during transit.

#### Section E.—Bone Mills.

1. "Bone manure" shall mean manure wholly or partially prepared from bone.

2. No occupier of a bone mill shall permit any bones to be dealt with upon his premises unless such process is wholly conducted within a building the walls, floors and ceilings, or roof whereof are constructed of durable and non-absorbent materials, finished internally with a smooth surface.

3. (a) Every such occupier shall cause all milling processes to be conducted in airtight casings, and the products of the milling to be conveyed to airtight receivers or sound bags through airtight shoots or conveyors.

(b) He shall cause every precaution to be taken to prevent at all times the emission of dust or offensive or noxious effluvia from every building on his premises.

4. (a) Every such occupier shall cause all bones and bone manure received or produced upon his premises to be stored in such a manner and in such a position as to prevent, as far as practicable, the emission of noxious or offensive effluvia therefrom.

(b) He shall cause all bones or bone manure received or despatched from such premises to be previously packed in such a manner as to prevent any nuisance arising therefrom during transit.

#### Section F.—Places for Storing, Drying, or Preserving Bones, Hides, Hoofs, or Skins.

1. Every occupier shall cause all materials which have been received upon the premises where his trade is carried on to be stored in such a manner and in such a situation as to prevent, as far as practicable, the emission of noxious, offensive, or injurious effluvia therefrom.

#### Section G.—Fat Melting, Fat Extracting, or Tallow Melting Establishments.

1. The occupier of any premises on which the trade of fat melting, fat extracting or tallow melting is carried on shall provide covers to the apparatus in which the melting or extracting is carried on; such covers shall be of iron, and be at all times kept in position on the apparatus except when the cover is removed for the purpose of emptying, filling, or cleansing the apparatus.

2. Every such occupier shall cause every wall within a radius of 10 feet of the melting or extracting apparatus to be covered with impervious material and all parts of the boiling or other apparatus shall be composed or covered with some approved impervious material.

#### Section H.—Blood Drying.

1. (a) Every occupier of premises used for blood drying shall cause all the blood which has been received upon the premises where his trade is carried on, and which is not required for immediate use, to be stored in such a manner and in such a situation as to prevent the emission of offensive or injurious effluvia therefrom.

(b) He shall cause all blood brought upon his premises to be brought in closed vessels or receptacles constructed of galvanised iron or other non-absorbent material.

(c) He shall also cause every process of his business to be carried on in a building paved with impervious material, and having walls covered to a height of at least six feet with hard, smooth, and impervious material.

#### Section I.—Gut Scraping, Gut Spinning and Preparation of Sausage Skins.

1. (a) Every gut scraper shall cause all undried guts, which have been received upon the premises where his trade is carried on, and which are not required for immediate use, to be placed in suitable vessels or receptacles, properly constructed of galvanised iron, or some other non-absorbent material, and furnished with closely fitting covers.

(b) He shall cause the several vessels or receptacles in which the guts have been placed to be covered, and to be kept covered until it becomes necessary to remove the contents for actual use.

(c) He shall also cause all undried guts to be treated immediately upon arrival at his premises with an approved deodorant solution.

2. Every gut scraper shall, at frequent intervals during every working day cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept and to be copiously sprinkled or washed with an approved deodorant solution.

3. Every gut scraper shall at the close of every working day cause every bench or table, every tub, vessel, or utensil, and every implement which has been in use during the day upon the premises where his trade is carried on, or which is in a foul or offensive condition, to be thoroughly cleansed with water containing an approved deodorant.

4. Every gut scraper shall, at the close of every working day, cause all filth or refuse which has been splashed upon any part of the internal wall surface of any building upon his premises where his trade is carried on, to be removed by scraping or by some other effectual means.

#### Section J.—Fellmongeries.

1. In the construction of this section of these by-laws, unless the context otherwise requires—

(a) "fellmonger" shall mean a person who buys or receives skins and prepares them for any subsequent use.

2. A fellmonger shall not cause or suffer any skin which by reason of decomposition has become useless for the purpose of leather dressing to be kept for a longer time than may be necessary in any part of the premises where his trade is carried on.

3. Every fellmonger shall cause the supply of water in every tank or other receptacle upon the premises where his trade is carried on, for the washing or soaking of any skins, to be removed as often as may be necessary to prevent the emission of offensive or injurious effluvia from the contents of the tank or other receptacle.

4. (a) Every fellmonger shall cause every tank or other receptacle used upon his premises where his trade is carried on, for the washing or soaking of any skin, and not being a liming pit, to be emptied at least once every day.

(b) He shall cause every part of the tank or other receptacle, when emptied, to be thoroughly cleansed, and shall cause all filth which has been removed therefrom to be forthwith conveyed from the premises in suitable vessels or receptacles furnished with closely fitting covers.

5. Every fellmonger shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on, to be forthwith deposited in approved vessels or receptacles, or in a properly constructed cart or carriage, which, when filled or loaded, shall be covered in such a manner as to prevent the emission of offensive or injurious effluvia from the contents thereof, and shall, with all reasonable despatch, be removed from the premises.

#### Section K.-Manure Works.

1. Every occupier of a manure works shall store the manure which may be received or manufactured or prepared upon the premises where his trade is carried on in such a manner and in such a situation as to prevent the emission of noxious or offensive effluvia therefrom, or so as to be a nuisance or injurious to health.

#### 2. [Revoked by G.G. 12/12/62, p. 3915.]

#### Section L.—Wool Scouring Establishments.

1. In this section of these by-laws the expression "wool scouring establishment" shall include a place where wool is received for the purpose of being cleansed.

2. The premises shall not be situated upon the catchment area of any water supply, nor in the neighbourhood of any freshwater river, stream water-course, lake, well, or reservoir, and must be at least 100 feet distant from any dwelling-house or place where food intended for human consumption is prepared or stored.

#### Section M.—Fish Curing Establishments.

1. (a) A fish curer shall not suffer or permit any decomposing fish to be kept on the premises where his trade is carried on for a longer period than is reasonably necessary.

(b) He shall cause all such decomposing fish to be deposited in galvanised iron or other impervious receptacles furnished with airtight covers, and kept securely covered until removed from the premises.

2. Every occupier of a fish curing establishment shall, when so ordered by an inspector, limewash such portion of the premises as he is directed so to do.

#### Section N.—Fish Shops.

1. The occupier of every fish shop shall cause the fireplace in any room in which the cooking of fish is carried on, to be so constructed that all the vapours and effluvia of such cooking shall be carried direct into a chimney fiue of sufficient sectional area; or shall carry out such cooking under a hood provided with ventilating pipe commencing at the uppermost extremity of such hood, and discharging direct into the open air, or into an existing chimney.

2. The occupier of every fish shop shall cause the chimney shaft or ventilating pipe from such room to be carried up at least 10 feet above the level of the roofs of the adjoining houses.

3. The occupier of a fish shop shall not permit any decomposing fish to be kept on any part of the premises where his trade is carried on.

4. The occupier of every fish shop shall provide a room wherein all cleaning of fish shall be carried out, and such room shall comply with the provisions of by-law 14, section "A" hereof.

#### Section O.—Laundries, Cleaning Establishments and Dyeworks.

1. Every occupier of a laundry, cleaning establishment, or dyeworks shall cause all the liquid wastes produced upon the premises where his trade is carried on to be collected and conducted by impervious channels or drains to a trapped drain inlet, or some other approved receptacle, or such liquid wastes shall be disposed of as the inspector may direct.

2. (a) Every such occupier shall cause every floor or pavement, and every wall of any building upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid which may be splashed or spilled, or may fall or be deposited thereon. 3. No occupier of a laundry nor any of his employees shall, in the damping or sprinkling of articles preparatory to the ironing thereof, sprinkle or damp the articles by discharging water from the mouth.

4. Every occupier of a laundry or cleaning establishment or dyeworks shall provide a reception room in which all articles brought to the premises for laundrying or cleaning or dyeing, shall be received, and the occupier shall not permit such reception room to be used for the storage, either temporarily or otherwise, of any food; nor shall he use or suffer or permit any person to use for sleeping purposes any of the workrooms of the premises.

5. Every such occupier shall provide on top of the impervious floor, and for a width of 3 feet in front of any washing troughs or washing machines, a wooden grating of such height as will prevent the employees from standing upon such floor.

6. Every occupier of a laundry or cleaning establishment or dyeworks shall cause such articles as may be directed by an inspector to be thoroughly disinfected to the satisfaction of that officer.

#### Section P.-Marine Stores.

1. The occupier of every marine store shall comply with the following conditions as regards those premises:—

- (a) The yards shall be enclosed with a close fence, at least eight feet in height; any gates required to give access to the yards shall also be eight feet in height.
- (b) The walls of the building used for the purpose of the trade shall be constructed of stone or brick, and the internal surfaces of all walls above the floor or pavement shall be smoothly rendered with good Portland cement mortar, or where approved by the local authority, of galvanised iron.

2. Sufficient provision for ventilation shall be made by suitable openings in the roof, or otherwise, and every room in the building shall be properly connected with one or more of the aforementioned openings.

#### Section Q.-Rag and Bone Merchants' Premises.

1. (a) Every rag and bone merchant shall cause all materials which have been received upon the premises where his trade is carried on to be stored in such a manner and in such a situation as to prevent the emission of noxious or offensive effluvia therefrom, or so as to be a nuisance or injurious to health.

(b) He shall cause all rags, second-hand clothes, textile fabrics, old bedding and other material of similar description or manufacture received upon his premises to be immediately disinfected with some effective disinfectant.

#### Section R.—Chemical Works.

- 1. The occupier of a chemical works shall-
  - (a) store all material awaiting treatment, all material in the course of preparation, and all prepared material awaiting distribution in such a way as not to be a nuisance;
  - (b) collect and dispose of all gases produced in the works in such a way as to render such gases inoffensive, as far as practicable, and so as to prevent a nuisance occurring from such gases.

#### Section S.-Flock Factories.

2. No person shall collect, deliver, or offer for sale, or sell rags from any refuse or garbage or from any receptacle or vehicle used for the storage or collection of refuse or garbage or from any

3. No person shall receive, store, or deliver rags for the manufacture of flock which are unclean or which have been collected from refuse or garbage or from any receptacle or vehicle

used for the storage or collection of refuse or garbage, or from any

which have been collected from any refuse or garbage or from any receptacle or vehicle used for the storage or collection of refuse

5. No person shall for the purpose of sale, profit, trade, business or calling, remake, renovate, tease, re-tease, fill, refill, or repair any bedding which has been used, or which is unclean,

offensive or vermin-infested, unless the material of which such bedding is made has been boiled for thirty minutes or otherwise

6. No person shall for the purpose of sale, profit, trade, business or calling, remake, renovate, tease, re-tease, fill, refill, or repair any upholstery which is unclean, offensive, or vermin infested,

unless the filling material of which such upholstery is made has been boiled for thirty minutes or otherwise effectively cleansed.

No person shall make flock from rags which are unclean or

trade, busi-

1. The occupier of a flock factory shall-

garbage tip, to be utilised for the manufacture of flock.

- (a) adopt effective means to immediately remove all dust escaping from the machinery and material, and such dust shall not be allowed to escape into the air;
- (b) adopt effective means of collecting all dust so removed and disposing of it in such a way that it shall neither be a nuisance nor escape into the air;
- (c) effectively cleanse and also sterilise all second-hand clothing and all other materials received on the premises other than cuttings from new material.

By-law 2 added as by-law 1 by G.G. 2/7/37, p. 1078.

By-law 3 added as by-law 2 by G.G. 2/7/37, p. 1078.

garbage tip.

effectively cleansed.

By-law 4 added as by-law 3 by G.G. 2/7/37, p. 1078.

By-law 5 added as by-law 4 by G.G. 2/7/37, p. 1078.

By-law 6 added as by-law 5 by G.G. 2/7/37, p. 1078.

By-law 7 added as by-law 6 by G.G. 2/7/37, p. 1078. 7. The occupier of a flock factory shall-

or garbage, or from any garbage tip.

- (a) adopt effective means to immediately remove all dust escaping from the machinery and material, and such dust shall not be allowed to escape into the air;
- (b) adopt effective means of collecting all dust so removed and disposing of it in such a way that it shall neither be a nuisance nor escape into the air;
- (c) effectively cleanse and boil for thirty (30) minutes all second-hand clothing and used materials to be used for the manufacture of flock.

#### Section T.-Knackeries.

For the purposes of this section of these by-laws the term 1. "knackery" shall include any premises or portion thereof on which equine stock is slaughtered or held for slaughter, but shall not include any reserve or portion thereof used for zoological purposes.

No premises shall be registered as a knackery unless every portion of such knackery is at least 100 feet distant from any street or thoroughfare and at least 200 feet distant from any dwelling house or dairy or other premises wherein food is prepared for sale.

3. Every occupier of a knackery shall cause sufficient means of ventilation to be provided in, or in connection with the premises, and shall keep such at all times in proper order and efficient action, so that the ventilation shall be by direct communication with the external air.

Section T. added by G.G. 20/12/46, pp. 1575-1576. 4. The occupier of a knackery shall provide a killing pen in which all slaughtering shall be conducted and such pen shall comply with the following conditions:—

- (a) The floor shall be constructed of concrete not less than nine inches in thickness trowelled to a smooth surface, with a fall to a surface gutter in such manner that all liquids falling on such floor shall be conducted by such gutter to a drain inlet situated outside the building. Suitable provision for the final disposal of such liquids shall be made to the satisfaction of the inspector.
- (b) It shall have a floor area of not less than 150 square feet.
- (c) The walls shall be not less than 10 feet in height constructed of brick or concrete, with the inner face rendered in cement and trowelled to a smooth surface.
- (d) The roof shall be of galvanised corrugated iron provided with guttering and down pipes and provision shall be made to carry storm water clear of the building.

5. Fly Proofing.—When required to do so by an inspector the occupier shall provide self-closing fly-proof doors and cover all external openings in the killing pen with fly-proof gauze wire.

6. No person shall use a vehicle for the transport of horseflesh unless such vehicle conforms with the following conditions:—

- (i) The vehicle shall be completely enclosed so as to protect the horseflesh from flies.
- (ii) The vehicle shall be constructed of wood or metal and all internal surfaces shall be finished to a smooth face.

7. No person shall use for the transport of food intended for human consumption any vehicle which is used for the transport of horseflesh.

8. The occupier of a knackery shall provide an incinerator, plans and specifications of which shall be submitted to and approved of by the Commissioner, in which all inedible offal and refuse shall be treated so as to render it innocuous, inoffensive and noninjurious to health.

9. Water Supply.—The occupier of a knackery shall provide a wholesome water supply to the satisfaction of the local authority.

10. The occupier of a knackery shall not slaughter any equine stock at any time on a Sunday or on any other day except between the hours of 8 a.m. and 5 p.m.

#### Section U.—Poultry Processing Establishments.

Section U added by G.G. 12/12/62, pp. 3916-3917.

1. The occupier of every poultry processing establishment shall cause all operations in connection with the killing, dressing, preparation, processing or packing of poultry for sale for human consumption to be carried out in an enclosed building which shall comply with the following conditions:—

- (a) Every portion of the building is adequate in size for the operations conducted therein.
- (b) The internal surfaces of all walls are finished with an impervious material to a height of not less than six feet.
- (c) All walls are not less than nine feet in height, measured from the floor to the ceiling (or to the top of the plate).
- (d) All floors are of cement, finished to an even surface with a fall of 1 in 20 to a surface gutter in such a way that all liquids falling upon the floor are conducted

by the gutter to a sedimentation trap and drain inlet situated outside the building wherein the floor is situated.

- (e) All floors are coved to the walls. The bottom plate of timber-framed walls rests upon a brick-on-edge or concrete plinth to facilitate coving.
- (f) All doors of packing rooms are self-closing.
- (g) In all ceiled rooms where condensation occurs a metal hood or canopy is provided over every vat or tub of hot water; the hood is at least equal in compass to the upper surface of the vat or tub; the underside of the hood is not more than six feet six inches above the floor level; the hood is connected to a metal flue not less than six inches in diameter which discharges in the open air. in the open air.
- (h) The upper surface of every bench, table, shelf, rack or counter used in processing poultry is constructed of smooth, impervious non-corrodible material.
- (i) The intensity of light on every working surface is not less than 30 foot candles at any time when the surface is in use, and artificial light in compliance with this standard is provided and used whenever the natural lighting is less than 30 foot candles in intensity.

2. The occupier shall provide for use by himself and all employees sanitary accommodation connected to—

(a) a deep sewerage system; or

(b) a system for the bacteriolytic treatment of sewage.

3. The occupier shall provide facilities for storing employees' outdoor clothing in a room that is separated from any room used for the processing of poultry by a wall or walls extending from floor to ceiling or to the top plate level.

4. Running water shall be provided for the washing of every poultry carcass, and adequate facilities, including hot water and sinks, shall be provided for the cleansing of apparatus, instruments, utensils, appliances, receptacles and containers.

5. The floors and walls of all rooms shall be thoroughly cleansed at the close of each day's work.

6. Every portion of such building shall be maintained free from flies and vermin, and cats and dogs shall be excluded.

Poultry for bleeding shall be suspended so that no part of any bird is closer to the floor than twelve inches.

The water in scald tanks shall be changed as often as necessary for the maintenance of reasonably clean conditions in the scald tanks and in no case shall be changed less than once daily.

9. No person shall place on the floor any dressed poultry or poultry in course of being dressed, or any edible offal.

(1) The packing of dressed poultry shall not be carried out in the same portion of the premises in which killing, scalding, plucking or eviscerating takes place except where such packing is done at a different time to those operations and only after the plant and premises have been thoroughly cleaned.

(2) In any case, the portion of the premises that is used for packing must be ceiled with material providing a smooth washable surface and must be fly-proof.

11. The occupier shall not permit the dry plucking of poultry.

12. The occupier shall not carry out on the premises any operations unconnected with poultry processing unless such operations are separated from every room used for poultry processing by an unbroken wall extending from floor to ceiling or top plate level.

## 17 Reports – Built Infrastructure

## 17.1 Adoption of Revised Developer Contribution Plan Report and Cost Apportionment Schedule - Development Contribution Area 1 (Common/Civil Infrastructure Items)

## SUMMARY:

The purpose of this report is for Council to affirm and endorse a revised Developer Contribution Plan Report (DCP Report) and Cost Apportionment Schedule (CAS) for Development Contribution Area 1 (DCA1). DCA1 comprises the areas of Bertram, Wellard, Parmelia (North East) and Orelia (East) under Schedule V of the City of Kwinana Local Planning Scheme No. 2 (LPS2).

The CAS is required to be reviewed annually under the planning framework, specifically clause 5.15.5.11 of LPS2, The DCP Report and resulting CAS is unchanged in terms of the items listed and areas that contribute to it, however following the annual review there is an additional \$330,605.78 required to be funded by the DCP.

The increase to the DCP costings is not due to any change to the scope of any specific infrastructure item, but is largely due to an increase in the land valuation and cost of works generally.

A full breakdown of items and cost estimates is provided in Attachment C – 2020/21 DCP Cost Review Report.

It is recommended that Council affirms and endorses the revised Developer Contribution Plan Report and Cost Apportionment Schedule for DCA1.

### **OFFICER RECOMMENDATION:**

That Council:

- affirms and adopts the revised Developer Contribution Plan Report (Attachment A) and Cost Apportionment Schedule (Attachment B) for Development Contribution Area 1, which comprises the areas of Bertram, Wellard, Parmelia (North East) and Orelia (East) under Schedule V of the City of Kwinana Local Planning Scheme No. 2; and
- 2. notifies all active developers of Councils decision on the revised DCP Report and CAS.

## BACKGROUND:

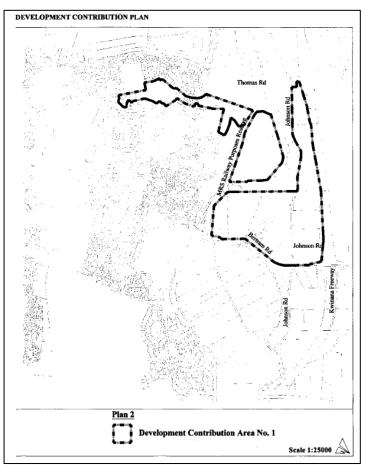
The City of Kwinana currently operates 15 Development Contribution Plans (DCPs) over 15 separate Development Contribution Areas (DCAs).

Original Development Contribution Plan 1 - 2004

Development Contribution Plan 1 (DCP1) was gazetted into Local Planning Scheme No. 2 (LPS2) on 24 December 2004 by way of Amendment No. 87. DCP1 coordinates the funding, to support urban development within the Bertram locality, of the following standard infrastructure items:

- 1. Sulphur Road bridge;
- 2. Nutrient stripping basin on the Peel Main Drain north of Bertram Road;
- 3. Upgrades to Mortimer / Bertram Road (between Kwinana Freeway and Challenger Ave);
- 4. Upgrades to Johnson Road (between Mortimer / Bertram Road and Thomas Road); and
- 5. Construction of two road linkages across the Parks and Recreation Reserves in the Bertram locality as per the Casuarina Structure Plan.

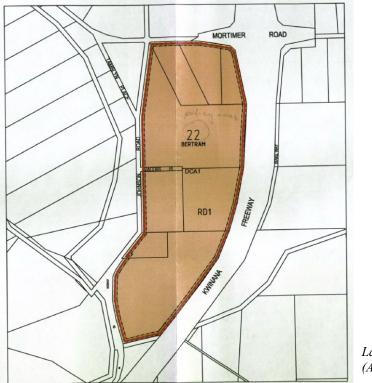
The original DCA1 area is shown as follows:



Original DCA 1 boundary

## <u>Amendment 91 – 2007</u>

DCP1 was amended on 22 June 2007 by way of Amendment No. 91 to LPS2. DCA1 was extended to include the Wellard West Local Structure Plan area (also referred to as 'Emerald Park'). The land added to DCA1 under Amendment 91 is shown as follows:



Land added to DCA1 (Amendment 91 Report)

In addition to the extended area, DCP1 was amended to include new infrastructure items:

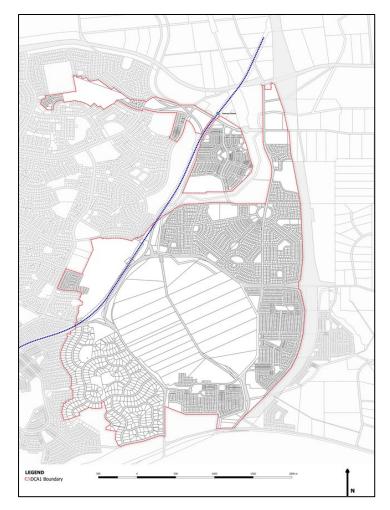
- 1. Upgrades to Johnson Road (between Bertram Road and Millar Road)
- 2. Undergrounding of powerlines:
  - a) On both sides of Johnson Road (between Bertram Road and Millar Road)
  - b) On the southern side of Mortimer Road (between Kwinana Freeway and Johnson Road)

## Amendment 132 - 2019

Amendment 132 amended the boundary of DCA1 to include the Bollard Bulrush area and adjacent areas within Wellard as well as a large undeveloped land parcel in Parmelia, modified existing infrastructure items and added new infrastructure items, and extended the operational timeframe from 5 years to 20 years.

The new infrastructure items added where:

- 1. Bertram Road Challenger Ave to Wellard Road
- 2. Wellard Road Bertram Road to Cavendish Boulevard
- 3. Wellard Road Cavendish Boulevard to Millar Road New road culvert and road crossing over the Peel Main Drain linking L661 and L670 Bertram Rd
- 4. New road culvert and road crossing over the Peel Main Drain linking L661 and L670 Bertram Rd



Land included in DCA1 via Amendment 132

## **DISCUSSION:**

## Local Planning Strategy

This report implements the following Strategic Directions of the City's draft Local Planning Strategy:

• To deliver an equitable distribution of accessible and integrated multi-functional public open spaces, community infrastructure and recreation facilities that supports healthy and socially connected communities.

This report is also fulfilling specific Strategic Actions 19 and 20, which require the City to:

- Pursue development contributions for community, public open space, social, road and other infrastructure items for improvement or provision as appropriate, in accordance with the City of Kwinana's Community Infrastructure Plan and approved local structure plans.
- Implement, and regularly review, the City of Kwinana's development contribution plans in accordance with State Planning Policy 3.6 Development Contributions for Infrastructure.

## Cost Contribution Review process

LPS2 sets out that:

The estimated infrastructure costs contained in the Infrastructure Cost Contribution Schedule will be reviewed at least annually to reflect changes in funding and revenue sources and indexed based on the Building Cost Index or other appropriate index as approved by an appropriately qualified independent person.

In order to satisfy the review requirement, the City has:

- Checked lot creation and development data that has occurred over the preceding year, including estimated development areas and estimated lots proposed via approved Local Structure Plans;
- Sought updated costings for land, DCP infrastructure items and landscaping from appropriately qualified independent persons;
- Updated the CAS and included costing updates and lot/land area information; and
- Reviewed the list of Priority Works in the DCP Report for currency and timeframe revision if necessary.

### Results of Review

During the period of review, 132 lots have been created and \$660,536.63 collected by DCP1. There has been one Structure Plan amendment lodged during the review period, but a decision has not been made on the structure plan nor have there been any subdivision approvals issued by the Western Australian Planning Commission that would provide the basis for changing the current development assumptions.

The City engaged Colliers International to independently review the indicative land values in respect to the market value for a typical landholding within the DCA's. Colliers International's advice and report is contained as Confidential Attachment D - Indicative Land Valuation Advice - Development Contribution Areas 1 - 7.

In deriving the Statutory Contribution for the subject Development Contribution Areas, Colliers International undertook a static development feasibility calculation over a notional five (5) hectare landholding utilising the Static Feasibility Model in accordance with State Planning Policy 3.6.

Colliers International also undertook a direct comparison of recent sales evidence of residential englobo landholdings that compare to the subject DCA, with adjustments made for various points of difference.

The value ranges identified by the direct comparison approach generally support the residual values derived by static feasibility analysis. In accordance with the land valuation review, the City will now apply a \$490,000/ha rate to the 2021 CAS. For comparison, the rate applied under the 2020 CAS was \$460,000/ha.

The City had the individual Infrastructure items independently reviewed by Turner & Townsend Pty Ltd, the results are contained as Attachment C – 2020/21 DCP Cost Review Report. The report analysed the previous engineering estimates and information provided and conducted a review using current rates, benchmark information together with recent actual costs for the purpose of calculating the current value of the DCP's.

As a result of land valuations and infrastructure costs being reviewed, the total variation between the 2020 CAS and the revised 2021 CAS for adoption is an additional \$330,605.78 as detailed below. Items with a cost change are indicated in bold:

Description	Ref	June 2020 Revised CAS Cost	2021 revised CAS cost	Comments on variance
Sulphur Road Bridge over railway	A	\$1,914,745.27	\$1,914,745.27	Complete – cost recovery required
				\$26,399.81 decrease
Stormwater Management Infrastructure (formally Nutrient Stripping Basin) on the Peel Main Drain north of Bertram Road	В	\$506,520.81	\$480,121.00	50% / 50% City and Developer funded. Escalation of \$30,000/ha in land valuation. Reduction in contracted costs for drainage construction. Contract awarded for lower value than estimated.
Upgrades to Bertram Road - Johnson Rd to Challenger Rd	с	\$1,719,000.18	\$1,719,000.00	Complete – cost recovery required
Upgrades to Mortimer Road - Johnson Rd to Freeway	С	\$619,944.87	\$619,945.00	Complete – cost recovery required
Johnson Road Upgrade - North of Peel Lateral Drain to Holden Close - eastern side	D	\$28,562.31	\$28,562.00	Complete – no further financial implications
Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - both sides	E	\$16,518.17	\$16,518.00	Complete – no further financial implications
Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - roundabouts (2)	E	\$165,018.05	\$165,018.00	Complete – no further financial implications

Dual Use Path on				
eastern side Johnson Road - North of Peel Lateral Drain to Holden Close	F	\$0	\$0	Complete – no further financial implications
Dual Use Path on eastern side Johnson Road - South of Peel Lateral Drain to Bertram Road	F	\$0	\$0	Complete – no further financial implications
Johnson Road, Upgrade - South Bertram Road to eastern edge Johnson Road culvert crossing over Peel Main Drain	G	\$2,817,123.56	\$2,817,123.00	100% developer funded item. Actual costs following construction by developer.
Johnson Road construction - South of Johnson Rd culvert crossing over west side Peel Main Drain to Millar Road - The DCP item is the difference between a Neighbourhood Connector A and an Access Street B	Н	\$233,835.00	\$233,835.00	Complete – cost contributions required/partially recovered
Construction of a Road linkage across the Parks and Recreation Reserves in Bertram - Price Parkway Road	I	\$392,695.00	\$392,695.00	Complete – no further financial implications

				<b>\$131,800.72 increase</b> 58.5118% City funded = \$7,744,319.00 Proportionate increase = \$77,119.22
Wellard Road - Bertram Road to	J \$13,103,681	\$13,103,681.28	8 \$13,235,482.00	41.4882% developer funded item
Cavendish Boulevard				= \$5,491,163.00
				Proportionate increase
				= \$54,681.50
			Cost increase due to annual escalation of land valuation, landscaping improvements and road construction.	
				\$71,396.28 increase
				72.2055% City funded
				= \$5,491,335.00
				Proportionate increase
				= \$52,979.59
Wellard Road - Cavendish Boulevard to Millar Road	J	\$7,328,776.72	\$7,400,173.00	25.7945% Developer funded = \$1,908,838.00 Proportionate Increase = \$ 18,416.69
				No significant change. Cost increase due to annual escalation of land valuation, landscaping improvements and road construction.

Bertram Road - Challenger Ave to Wellard Road	К	\$4,315,469.00	\$4,449,279.00	<ul> <li>\$133,810 increase</li> <li>59.931% City funded</li> <li>\$2,666,497.00</li> <li>Proportionate increase</li> <li>\$80,193.27</li> <li>40.0690% developer</li> <li>funded</li> <li>\$1,782,782.00</li> <li>Proportionate increase</li> <li>\$53,616.73</li> <li>No significant change.</li> <li>Cost increase due to</li> <li>annual escalation of</li> <li>land valuation,</li> <li>landscaping</li> <li>improvements and road</li> <li>construction.</li> </ul>
Johnson Road new culvert and road crossing over Peel Main Drain	L	\$1,407,592.00	\$1,407,592.00	100% developer funded item. Actual costs following construction by developer.
New road culvert and road crossing over the Peel Main Drain linking L661 and L670 Bertram Rd	М	\$669,000.00	\$689,000.00	\$20,000.00 increase No significant change. Cost increase due to annual escalation of all works
TOTALS		\$35,238,482.22	\$35,569,088.00	\$330,605.78

As a result of the review there is an additional \$330,605.78 required to be funded by the DCP, approximately 36% of which is developer funded with 64% funded by the City.

The increase to the DCP costings is not due to any change to the scope of any specific infrastructure item, but is largely due to an increase in the land valuation and cost of works generally.

A full breakdown of items and cost estimates is provided in Attachment C – 2020/21 DCP Cost Review Report.

## DCP Report

As part of this review, City Officers have also reformatted the DCP Report (Attachment A), in order to comply with the model template included in State Planning Policy 3.6 – Infrastructure Contributions, updated in April 2021.

The operation of the DCP, the infrastructure items to be delivered and the City's administration of the DCP remains unchanged, but the format and layout of the DCP Report is now aligned with the SPP template.

## LEGAL/POLICY IMPLICATIONS:

## Acts and Regulations

*Planning and Development Act 2005 Planning and Development (Local Planning Schemes) Regulations 2015* 

## **Schemes**

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

## **State Planning Policies**

State Planning Policy 3.6 - Infrastructure Contributions

## **Local Planning Policies**

Local Planning Policy 4: Administration of Development Contributions

The City's LPS2 requires, an annual review of the Cost Apportionment Schedule. Should this review not be undertaken, the City would not be fulfilling its obligations under the Scheme.

Clauses 5.15.5.11.6 and 5.15.5.12.3 of LPS2 afford landowners the right to object to a cost contribution or associated land valuation through a process of arbitration, within 28 days after being informed of the cost contribution or land valuation.

## FINANCIAL/BUDGET IMPLICATIONS:

It is important that the revised CAS be affirmed and adopted. This will ensure that the Developer Contributions continue to be costed and distributed in an equitable, timely and appropriate basis, and gives surety to the City, landowners and developers.

All infrastructure items revised costings and funding sources have been reflected in the City's Long Term Financial Plan.

## **ASSET MANAGEMENT IMPLICATIONS:**

The City will be financially responsible for maintaining roads, road landscaping, POS landscaping and footpaths within DCA1 once the area has been developed and maintained for the required period.

## **ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:**

There are no environmental or public health implications as a result of this report or its recommendations.

## STRATEGIC/SOCIAL IMPLICATIONS:

The adoption of the revised DCA1 CAS will ensure that the provision of infrastructure occurs on an equitable and appropriate basis for new development areas and is in line with community growth and subsequent need.

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

Plan	Outcome	Objective
Strategic Community Plan	Infrastructure and services that are affordable and contribute to health and wellbeing	Develop quality, affordable infrastructure and services designed to improve the health and wellbeing of the community

## COMMUNITY ENGAGEMENT:

Once adopted by Council, the revised DCP Report and CAS will be available on the City's website and associated informing documents (including land valuation, actual costings and estimates) can be made available upon request. The City will also advise effected developers of the outcomes from the Council meeting.

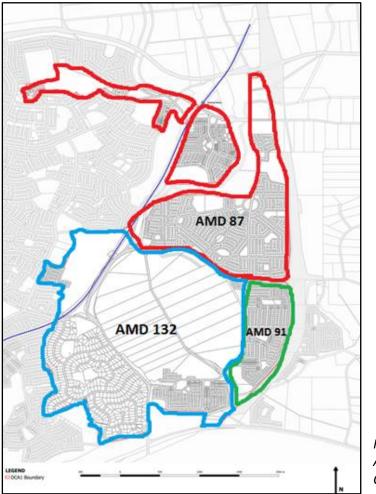
# 1.0 Development Contribution Plan 1 – Bertram / Wellard / Parmelia (North East) / Orelia (East)

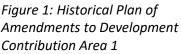
The development contribution area is shown on the Local Planning Scheme No. 2 (LPS2) scheme map as Development Contribution Area 1 (DCA1). The area is replicated in Appendix 1 for this document however, should there be any discrepancies between Appendix 1 and the area of DCA1 shown on the scheme map, the scheme map shall prevail.

## 1.1 History of Development Contribution Area 1

Council introduced DCA1 into LPS2 in 2004 via Scheme Amendment No. 87 (as shown on Figure 1 below) to ensure the coordinated provision of funding of infrastructure in future development areas in the Bertram locality. DCA1 was the first contribution scheme initiated by Council and focused on the new developments at Bertram and Belgravia Waters. It included contributions towards:

- 1. Construction of Sulphur Road Bridge;
- 2. Johnson Road upgrade;
- 3. Johnson Road Dual Use Paths;
- 4. Road linkage across the Parks and Recreation Reserve in Bertram;
- 5. Bertram Road/Mortimer Road upgrade; and
- 6. Nutrient Stripping Basin north of Bertram Road and associated water feature.





It must be noted that contributing landowners within DCA1 in the context of Amendment 87 were not required to contribute to administration costs.

LPS2 was amended further in 2007 (via Scheme Amendment No. 91) to include additional landholdings within DCA1. This included the Emerald Park Estate and adjoining landholdings and expanded contributions for certain landholdings towards the southern extensions of Johnson Road and Bertram Road, respectively. Additional infrastructure items introduced via Amendment 91 included the upgrade of Johnson Road south of Bertram Road and north of Millar Road (including the undergrounding of power lines along Johnson Road, south of Bertram Road and north of Millar Road, and along the southern side of Mortimer Road between Johnson Road and the Freeway, and dual use paths along the eastern side of Johnson Road).

Similar to Amendment 87, contributing landowners within DCA1 in the context of Amendment 91 were not required to contribute to administration costs.

The scheme was to operate for 5 years from the date of gazettal of that Amendment. There were a number of operational timeframe extensions since June 2012 to allow time for Amendment 132 to be gazetted.

State Planning Policy 3.6 - Infrastructure Contributions (SPP 3.6), was gazetted in November 2009 and accordingly now provides the strategic basis for the Developer Contribution Plan (DCP) over DCA1. The Western Australian Planning Commission (WAPC) Planning Bulletin 18 covered the earlier DCPs. The WAPC released for comment a revised Draft SPP 3.6 dated July 2016 and a further draft of SPP 3.6 for comment in July 2019.

The Minister for Planning, as advised by the WAPC in a letter dated 18 September 2016, directed the Council to re-advertise the amendment due to there being significant modifications required following public advertising and review by the WAPC.

The City originally initiated the advertising of Amendment 132 on 27 June 2012 (this is the date taken to be the effective date by City Officers (or when the Amendment was taken to be a seriously entertained document). Estimated contributions relating to land developed between 27 June 2012 and the gazettal of Amendment 132 (19 March 2019) were secured through legal agreements as provisional amounts and were finalised upon the cost apportionment schedule being approved. As the gazettal of Amendment 132 has occurred (19 March 2019), this DCP Report resets all costs and areas to this gazettal date considering all interim development that has occurred from 27 June 2012 until the gazettal date.

Development that occurred prior to 27 June 2012 is deemed to have had its contribution liability extinguished under the then prevailing DCA1 and Schedule V. Where there is no remaining developable land in the catchment for an infrastructure item, it will be taken that there is no cost outstanding for that item of infrastructure.

## 2.0 Purpose

The purpose of this development contribution plan report is to:

- a) Enable the application of development contributions for the development of new, and the upgrade of existing, infrastructure which is required as a result of increased demand generated in the development contribution area;
- b) Provide for the equitable sharing of the costs of infrastructure and administrative items between owners;
- c) Ensure that cost contributions are reasonably required as a result of the subdivision and development of land in the development contribution area; and
- d) Coordinate the timely provision of infrastructure.

Development within DCA1 and the identification of infrastructure items within the corresponding DCP are guided by the following plans and documents:

- WAPC Jandakot Structure Plan 2007
- Casuarina Structure Plan (adopted by Council in 1997)
- Bertram Structure Plan 2008
- Wellard West (Emerald Park Estate) Local Structure Plan 2014
- Lots 83, 85, 92, 67-170 and 1278 Wellard Road & Lots 1, 2 and 10 Johnson Road, Wellard (Providence Estate) Local Structure Plan 2012
- Lot 661 Bertram Road Local Structure Plan 2014
- Lots 670 and 1338 Bertram Road Local Structure Plan 2017
- Lots 503 and 504 Tamblyn Place & Lots 505, 507 and 900 Johnson Road, Wellard (Oakebella Estate) Local Structure Plan 2016
- Lots 500 and 501 Bertram Road, Wellard Local Structure Plan 2017
- Lot 502 Tamblyn Place, Wellard Local Structure Plan 2016
- State Planning Policy 3.6 Infrastructure Contributions, WAPC
- Liveable Neighbourhoods 2009, WAPC
- Development Control Policy 1.7: General Road Planning, WAPC
- Development Control Policy 2.3: Public Open Space in Residential Areas, WAPC

## 3.0 Period of the Plan

This plan will operate for 15 years from 19 March 2019 to 19 March 2034, in accordance with the City of Kwinana's LPS2.

## 4.0 Operation of Development Contribution Plan

This plan has been prepared in accordance with State Planning Policy 3.6 - Infrastructure Contributions and operates in accordance with the provisions of section 5.15.5 Development Contribution Areas of LPS2.

## **5.0 Application Requirements**

Where an application for subdivision, strata subdivision, development or an extension of land use is lodged, which relates to land to which this plan applies, the local government shall take the provisions of the plan into account in making a recommendation on or determining that application.

## 6.0 Items included in the plan

This section of the DCP report identifies the infrastructure items to be funded by development contributions collected from landowners and the City (as applicable) within DCA1.

Asset ID	Item
А	Sulphur Road Bridge
В	Stormwater Management Infrastructure
С	Bertram Road upgrade
D	Johnson Road upgrade – 1
E	Johnson Road upgrade – 2
F	Dual Use Path (eastern side Johnson Road)
G	Johnson Road upgrade – 3
Н	Johnson Road construction
1	Price Parkway Road
J	Wellard Road upgrade
К	Bertram Road upgrade
L	New culvert and road crossing over Peel Main Drain – 1
М	New culvert and road crossing over Peel Main Drain – 2

## 6.1 Bridge

## 6.1.1 Item A – Sulphur Road Bridge

Sulphur Road Bridge shall extend over the railway line immediately south of the Thomas Road Train Station.

## 6.2 Roads and Drainage

## 6.2.1 Item B – Stormwater Management Infrastructure

Stormwater Management Infrastructure, formally known as the Nutrient Stripping Basin, shall be constructed on the Peel Main Drain in accordance with the requirements of the Water Corporation to service flows north of Bertram Road.

This development contribution is focussed on appropriate treatments of storm water entering the Peel Main Drain in accordance with the requirements of the Water Corporation to service the flows north of Bertram Road.

The storm water infrastructure is to be constructed in conjunction with the subdivision of Lot 670 Bertram Road.

## 6.2.2 Item C – Bertram Road upgrade

Includes upgrades to Bertram and Mortimer Roads between Challenger Avenue and the Kwinana Freeway and Johnson Road/Bertram Road Intersection treatments and includes all associated infrastructure.

## 6.2.3 Item D – Johnson Road upgrade 1

Consists of Johnston Road north of the Peel Lateral Drain to Holden Close from a rural standard to urban standard (being a Neighbourhood Connector A or equivalent) including all associated infrastructure works.

## 6.2.4 Item E – Johnson Road upgrade 2

Consists of upgrades to Johnston Road, south of the Peel Lateral Drain to Bertram Road, from rural standard to an urban standard (being a Neighbourhood Connector A or equivalent) including the provision of two roundabouts and all other associated infrastructure works.

## 6.2.5 Item F – Dual use path (eastern side of Johnson Road)

Consists of the construction of a dual use path on the eastern side of Johnson Road from Holden Close to Bertram Road.

## 6.2.6 Item G – Johnson Road upgrade 3

Consists of upgrades to Johnston Road, south of Bertram Road, to the eastern edge of the Peel Main Drain Reserve to a Neighbourhood Connector A standard (or equivalent) including all associated infrastructure works.

The rationale for the Neighbourhood Connector A standard is that this higher standard road is required for traffic movement generated beyond the immediate abutting subdivisions and that this is a cost that should be distributed across a wider catchment.

Works will include earthworks, drainage, resurfacing, resealing, dual use path (eastern side), side kerbing, lighting, undergrounding of overhead power lines to both sides of Johnson Road including reinstatement of the verge, landscaping and roundabout(s) where required by the City.

## 6.2.7 Item H – Johnson Road construction

Consists of the construction of a new road from the west side of the Peel Main Drain Reserve south to Millar Road. Contributions will be sought for the difference between a Neighbourhood Connector A standard road (or a comparable standard as constructed) and an Access Street B in terms of the costs of acquiring the additional land and the associated infrastructure works costs.

The rationale for the Neighbourhood Connector A standard is that this higher standard road is required for traffic movement generated beyond the immediate abutting subdivisions and that this is a cost that should be distributed across a wider catchment.

## 6.2.8 Item I – Price Parkway Road

Construction of a road linkage across the Parks and Recreation Reserves in the Bertram locality reflected on the approved Casuarina Structure Plan, known as Price Parkway.

## 6.2.9 Item J – Wellard Road upgrade

Wellard Road, from Bertram Road to Millar Road, to be upgraded to an Integrator A standard, or equivalent, including all associated infrastructure works, based on traffic apportionment in accordance with the traffic modelling report prepared by Cardno dated 31 August 2018, allocated against the actual lot yield and estimated future lot yield for each traffic generation locality.

It is noted that Homestead Ridge has been identified as a locality within the traffic modelling, see Tables 1 and 2, to recognise the traffic generated on Wellard Road from this locality. However, that locality is outside of DCA1, thus the City will be responsible for a proportionate contribution towards Item J that is equal to the traffic generated by Homestead Ridge. Additionally, given that Stages 1 - 4 (Phase 1) of the Emerald Park Estate were created prior to the 'seriously entertained' date for Amendment 132 (and given that this Item was not previously included in the DCP), the City will also cover the proportional contribution costs for the Item in this regard.

Landowners within the catchment shown on the Figure 12 'Item J', as contained within this report, are required to contribute towards this item.

Development	Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated w Contribution Catchment Area
Bollard Bulrush 1	144	4.75%
Bollard Bulrush 2	70	2.31%
Bollard Bulrush 3	153	5.04%
Providence	486	16.02%
Emerald Park	63	2.08%
Emerald Park North	11	0.36%
Emerald Park South	5	0.16%
Parmelia LSP	20	0.66%
Homestead Ridge	281	9.26%
Lot 1, 2 and 10	9	0.30%
Oakabella Estate	2	0.07%
Lot 506	16	0.53%
Total from Developments	1260	41.54%
External	1773	58.46%
Total Wellard Road North	3033	100.00%

# Table 1 - Summary of Traffic on Wellard Road south of Bertram Road Associated with Contribution Catchment Area for combined 2031 AM and PM Peak Hour

Development	Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated w Contribution Catchment Area
Bollard Bulrush 1	61	2.52%
Bollard Bulrush 2	64	2.64%
Bollard Bulrush 3	145	5.98%
Providence	148	6.11%
Emerald Park	58	2.39%
Emerald Park North	11	0.45%
Emerald Park South	5	0.21%
Parmelia LSP	11	0.45%
Homestead Ridge	95	3.92%
Lot 1, 2 and 10	10	0.41%
Oakabella Estate	2	0.08%
Lot 506	15	0.62%
Total from Developments	625	25.79%
External	1798	74.21%
Total Wellard Road North	2423	100.00%

Table 2 - Summary of Traffic on Wellard Road Associated with Contribution Catchment Area for
combined 2031 AM and PM Peak Hour

## 6.2.10 Item K – Bertram Road upgrade

Includes upgrading Bertram Road, from Challenger Avenue to Wellard Road, to an Integrator A standard, or equivalent, including all associated infrastructure works based on the traffic volumes in accordance with the traffic modelling report prepared by Cardno dated 31 August 2018, allocated against the actual lot yield and estimated future lot yield for each traffic generation locality, see Table 3.

The inclusion of this infrastructure item arises from the development of urban land that is immediately adjacent to or in close geographic proximity to Bertram Road that will generate a proportional traffic volume that has been shown via traffic modeling to utilise this road.

# Table 3 - Summary of Traffic on Bertram Road West of Challenger Avenue Associated withContribution Catchment Area for Combined 2031 AM and PM Peak Hour

Development	Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated w Contribution Catchment Area
Bollard Bulrush 1	43	2.11%
Bollard Bulrush 2	107	5.26%
Bollard Bulrush 3	312	15.34%
Providence	34	1.67%
Emerald Park	175	8.60%

Emerald Park North	46	2.26%
Emerald Park South	8	0.39%
Parmelia LSP	0	0.00%
Homestead Ridge	68	3.34%
Lot 1, 2 and 10	0	0.00%
Oakabella Estate	12	0.59%
Lot 506	10	0.49%
Total from Developments	815	40.07%
External	1219	59.93%
Total Wellard Road North	2034	100.00%

#### 6.2.11 Item L – New culvert and road crossing over Peel Main Drain – 1

Includes the provision of a new culvert and road crossing over the Peel Main Drain Reserve connecting Items G and H, to a Neighbourhood Connector A standard, or equivalent, including all associated infrastructure works costs.

The construction of the culvert and road crossing will be to a suitable standard to accommodate, but not affect the flow of the drain and meet the traffic demands of a Neighbourhood Connector B standard road (or as constructed).

Unless otherwise constructed to support subdivision works, the provision of this infrastructure item will be in accordance with Priority and Timing of Infrastructure as noted below in this report.

The inclusion of this infrastructure item arises directly from the development of urban land that is immediately adjacent to or in close geographic proximity to the Johnson Road culvert that, by virtue of the number of landholdings surrounding the southern area of the Peel Main Drain and Johnson Road, would utilise the Peel Main Drain crossing.

#### 6.2.12 Item M – New culvert and road crossing over Peel Main Drain – 2

New road culvert road crossing over the Peel Main Drain linking Lot 661 and Lot 670 Bertram Road (the northern side of Bollard Bulrush Wetland) constructed to an Access Street C Standard

Cost contributions towards the full cost of the new culvert and road crossing over the Peel Main Drain linking Lots 661 and 670 Bertram Road, based on actual lot yield and estimated future lot yield.

The design and construction of the culvert and road crossing will be to a suitable standard to address the flow of the drain and meet the traffic demands of an Access Street C standard.

The exact location of this culvert and road crossing is to be determined via local structure planning of these lots and is to cross the Peel Main Drain to provide a road connection to allow for traffic movement east-west within urban development south of Bertram Road and north of the Bollard Bulrush Wetland and buffer.

The need for this infrastructure item arises directly from the development of urban land that is immediately adjacent to or in close geographic proximity to the culvert that, by virtue of the number of landholdings surrounding the northern area of the Peel Main Drain adjacent to Bertram Road, would utilise this crossing.

This item may be constructed in the initial stages of subdivision for Lot 661 and/or Lot 670, or if this is not the case, construction will be in accordance with the Priority and Timing of Infrastructure as noted below in this report.

#### 6.3 Administrative costs

Administrative costs included in the DCP area generally consist of:

- Land valuations and advice
- Engineering scope and estimates (preliminary)
- Administrative expenses
- Legal expenses
- Preparation of management tools

## 7.0 Estimated Costs

Details of the cost apportionment can be seen in the Cost Apportionment Schedule.

Refer to Appendix 15 – Schedule of Costs for a summary of costs for each infrastructure item.

#### 7.1 Bridge

#### 7.1.1 Item A – Sulphur Road Bridge

The cost contribution for DCA1 towards the Sulphur Road Bridge is \$1,914,745.27.

Landowners within the catchment shown in Appendix 2 – Sulphur Road Bridge are required to contribute to 100% of the cost of construction of this item.

The method of determining cost contributions for this item is based on actual lot yield and estimated future lot yield within the catchment.

This infrastructure item has already been constructed and as such, the development contribution represents a cost recovery exercise.

#### 7.2 Roads and Drainage

#### 7.2.1 Item B – Stormwater Management Infrastructure

The cost contribution for DCA1 towards Stormwater Management Infrastructure including land and infrastructure components is **\$480,121.00**.

Cost contributions in relation to the development of stormwater management infrastructure on the Peel Main Drain are to be made by landowners within the catchment shown in Appendix 3 –

Stormwater Management Infrastructure collection area. Contributions are to be based on actual lot yield and estimated future lot yield.

#### 7.2.2 Item C – Bertram Road upgrade

The cost contribution for DCA1 towards the Bertram Road and Johnson Road upgrades is **\$2,338,945.00.** 

Cost contributions in relation to the upgrade of Bertram/Mortimer Roads between Challenger Avenue and the Kwinana Freeway and Johnson/Bertram Intersection treatments are based on actual lot yield and estimated future lot yield. Landowners within the catchment shown in Appendix 4 – Bertram Road upgrade contribution area, below are required to contribute towards this item.

The Bertram Road upgrade (Johnson Road to Challenger Avenue) accounts for **\$1,719,000.00** of the total figure and includes road construction and path construction/upgrades. The Mortimer Road upgrade (Johnson Road to the Freeway) accounts for **\$619,945.00** of the total figure and includes landscaping/improvements, path construction/upgrades, underground power lines as well as road construction.

This infrastructure item has already been constructed and as such, the development contribution represents a cost recovery exercise.

#### 7.2.3 Item D – Johnson Road upgrade 1

Cost contributions towards the western side (100% share of costs for the road upgrade) are based on actual lot yield and estimated future lot yield and are payable by landowners west of Johnson Road within the catchment shown in Appendix 5 – Johnston Road upgrade 1 collection area.

This item (D1) has been provided through developer pre-funding and the associated catchment for net developable land has been developed. No further contributions are required.

Cost contributions towards the eastern side (100% share of costs) are based on frontage of landholding and are payable by landowners within the catchment shown in Appendix 5 – Johnston Road upgrade 1 collection area.

The cost contribution for DCA1 towards the Johnson Road upgrade (north of the Peel Lateral Drain to Holden Close) is **\$28,562.00.** 

This item (D2) has been provided through developer pre-funding and the associated catchment for net developable land has been developed.

#### 7.2.4 Item E – Johnson Road upgrade 2

Cost contributions towards the upgrade of Johnson Road (100% share of costs) are based on frontage of landholding. A landowner may, with the agreement of the City, discharge liability for a cost contribution through the provision of physical infrastructure directly in accordance with clause 5.15.5.14.1.

Cost contributions towards the construction of two roundabouts are based on actual lot yield and estimated future lot yield. Landowners within the catchment shown on Appendix 6 – Johnston Road upgrade 2 collection area are required to contribute 100% towards the cost of this item.

The cost contribution for DCA1 towards the Johnson Road upgrade (south of the Peel Lateral Drain to Holden Close) is **\$181,536.** This figure includes **\$16,518** for the road upgrade and **\$165,018** for the two (2) roundabouts.

This item has been provided through developer pre-funding and the associated catchment for net developable land has been developed.

#### 7.2.5 Item F – Dual Use Path (eastern side Johnson Road)

All landowners participating in the Casuarina Structure Plan, within the catchment as shown on Appendix 7 – Dual Use Path collection area are required to contribute 100% towards the cost of this item. Contributions are to be based on actual lot yield and estimated future lot yield.

There is no specific figure attributed to the cost contribution for this time. The assumption is made that under the operation of Amendment 87, the works were undertaken by the adjoining landowners at the time of their respective works.

This item has been provided through developer pre-funding and the associated catchment for net developable land has been developed. No further contributions are required.

#### 7.2.6 Item G – Johnson Road upgrade 3

Cost contributions towards the upgrading of Johnson Road south of Bertram Road to the east side of the Peel Main Drain Reserve are based on actual lot yield and estimated future lot yield.

Landowners within the catchment shown on Appendix 8 – Johnston Road upgrade 3 collection area are required to contribute 100% towards this item.

The cost contribution for DCA1 towards the Johnson Road upgrade (south of Bertram Road) is **\$2,817,123**. This figure includes landscaping/improvements as well as the road construction.

This infrastructure item has already been constructed by Cedar Woods Wellard Pty Ltd and Wellard Residential, as adjoining property owners, and as such, the development contribution represents a cost recovery exercise.

#### 7.2.7 Item H – Johnson Road construction

Cost contributions towards the upgrading of the portion of realigned Johnson Road, extending from the west side of the Peel Main Drain Reserve into the Providence Estate along Irasburg Parade and then directly south along Fairhaven Boulevard to Millar Road, are based on actual lot yield and future lot yield. Contributions will be sought for the difference between a Neighbourhood Connector A road (or a comparable standard as constructed) and an Access Street B in terms of the costs of acquiring the additional land and the associated infrastructure work costs.

Landowners within the catchment shown on Appendix 9 – Johnston Road construction collection area are required to contribute 100% towards the cost of this item.

The cost contribution for DCA1 towards the Johnson Road upgrade (west side of the Peel Main Drain Reserve to Millar Road) including land and road construction components is **\$233,835.** 

This infrastructure item has already been constructed and as such, the development contribution represents a cost recovery exercise.

#### 7.2.8 Item I – Price Parkway Road

Cost contributions shall be based on actual lot yield and estimated future lot yield.

Landowners within the catchment shown on Appendix 10 – Price Parkway collection area are required to contribute 100% towards the cost of this item.

The cost contribution for DCA1 towards the construction of a road linkage across the Parks and Recreation Reserves in Bertram is **\$392,695.00.** 

This item has been provided through developer pre-funding and the associated catchment for net developer land has been largely developed.

This infrastructure item has already been constructed and as such, the development contribution represents a cost recovery exercise.

#### 7.2.9 Item J – Wellard Road upgrade

Contributions will be sought for an Integrator A standard road (or equivalent) and the associated infrastructure works costs. The full cost of this item will be proportionally reduced based on the percentage of traffic from elsewhere in DCA1 and external to DCA1 using this road as calculated from traffic modelling.

Landowners within the catchment shown on Appendix 11 – Wellard Road upgrade collection area, are required to contribute towards this item.

The cost contribution for DCA1 towards the Wellard Road upgrade (from the Wellard Road roundabout in the north to Millar Road in the south) includes land valuation, landscaping & improvements and road construction and is estimated at **\$20,635,655**.

#### 7.2.10 Item K – Bertram Road upgrade

Contributions will be sought for an Integrator A standard road (or equivalent) and the associated infrastructure works costs. The full cost of this item will be proportionally reduced based on the percentage of traffic from elsewhere in DCA1 and external to DCA1 using this road as calculated

from traffic modelling. The provision of this infrastructure item will be in accordance with the Priority and Timing of Infrastructure as listed below in this report.

Landowners within the catchment shown on Appendix 12 – Bertram Road collection area, as contained within this Report, are required to contribute towards this item.

The cost contribution for DCA1 towards the Bertram Road upgrade (Challenger Avenue to Wellard Road) is **\$4,449,279.00.** The costs associated with this figure include land valuation, landscaping/improvements and road construction.

#### 7.2.11 Item L – New culvert and road crossing over Peel Main Drain – 1

Cost contribution towards the full cost of the new Johnson Road culvert and road crossing, based on actual lot yield and estimated future lot yield is **\$1,407,592**. The costs associated with this figure include landscaping/improvements and road construction.

Landowners within the catchment as shown on Appendix 13 – Culvert and road crossing over Peel Main Drain – 1 collection area are required to contribute towards this item.

#### 7.2.12 Item M – New culvert and road crossing over Peel Main Drain – 2

Cost contribution towards the full cost of the new culvert and road crossing over the Peel Main Drain linking Lots 661 and 670 Bertram Road, based on actual lot yield and estimated future lot yield, is **\$689,000.** The costs associated with this figure includes the culvert and road construction.

Landowners within the catchment as shown on Appendix 14 – Culvert and road crossing over Peel Main Drain – 2 collection area are required to contribute towards this item.

#### 7.3 Administrative costs

#### 7.3.1 Administrative costs

Administrative costs will be charged at a flat rate of **2%** of the total infrastructure costs for the DCP.

## 8.0 Method of calculating contribution

The methodology for the calculation of cost contribution liability has been revised from the previous net developable land area to current and estimated future lot yield.

Prior to Amendment 132, cost contribution liability was based on net developable land area. In this regard, where cost contribution liability has been cleared, net developable land has been utilised as the base for determining cost contribution liability rather than lots created. Net developable land area included subdivision roads and local POS and did not account for lot sizes or density.

For the sake of consistency, future lot yields will be used as a base for both traffic modelling and calculation of cost contribution liability. In terms of how this will affect lots created under the previous (land area basis) methodology, all lots created post Amendment 132 'effective date' (being 27 June 2012) will be liable for DCA1 cost contributions on the revised lot yield basis. Liability is extinguished for all lots created pre-Amendment 132 effective date. In order to determine current

liability for lots created post-Amendment 132 and for those yet to be developed, the City has been extensively reviewing and recording historical data, and confirming more recent lot data.

Given that each lot entails a different bundle of items, it is necessary to calculate the cost contribution for each lot where:

IC is the estimated or actual infrastructure cost for each DCA1 item including administration costs;
TY is the total actual lot yield/estimated lot yield contributing to each infrastructure item;
Y is the actual lot yield/estimated future lot yield for a particular lot; and
CCPL is the estimated cost contribution per lot for each item where CCPL = Y/TY x IC.

The amount of an owner's cost contribution is calculated at the time of liability arising under clause 5.15.5.13.2 as follows:

Owner's cost contribution = Sum of all CCPL that the lot must pay contributions towards.

Non-residential uses including commercial and light industrial; 1 hectare of Developable Area = 20 Equivalent Dwellings (ED) demand, i.e. 500m<sup>2</sup> equates to 1 lot.

# 9.0 Priority and timing of infrastructure delivery

Due to the fragmented land ownership of DCA1 it is difficult to accurately predict the delivery of infrastructure within the cell. Nonetheless, Table 4 below estimates the timing of development.

Priority	Infrastructure item	Anticipated	Comment
		timing	
1	Item B - Stormwater	0-3 years	The stormwater infrastructure is to be
	Management Infrastructure		constructed in conjunction with the
			subdivision of Lot 670 Bertram Road -
			will be constructed within POS area of
			Lot 670 Bertram Road subdivision.
2	Item J - Wellard Road upgrade	0-3 years	The exact timing of this development is
			dependent on Grant Funding
3	ltem K - Bertram Road	0-4 years	The timing of this development is
	upgrade		dependent on the construction of the
			Wellard Road upgrade and available
			funds within the DCP account.
4	Item M - New road culvert	0-5 years	Staging of this item is largely dependent
	road crossing over the Peel		on the development/subdivision of the
	Main Drain – 2		NE side of the Peel Drain (Lot 661
			Bertram Road) and tie-in with
			development of adjacent Lot 670
			Bertram Road.

Table 4: Estimated timing of infrastructure delivery

# **10.0 Payment of contributions**

## **10.1** Payment of contributions

The landowners' liability for cost contributions will arise in accordance with clause 5.15.5.13 of LPS2 and the City's Local Planning Policy 4: Administration of Development Contributions.

The Cost Apportionment Schedule will determine the cost of each infrastructure item as follows:

Total estimate/actual cost of infrastructure item **less** any payments made from developers in the DCA area **less** any interest earned for the DCA area where there are surplus funds and interest has been earned = <u>total liability of undeveloped lots payable</u>

The **total liability of undeveloped lots payable for each infrastructure item** will then be divided by the total estimated lot yield to calculate a per dwelling lot rate for the infrastructure item. **10.2 Pre-funded infrastructure works** 

LPS2 allows for development contributions to be paid for in the form of works in kind provided that the contribution is provided in accordance with the Priority of Works, at the standard set and the actual costs, as approved by the City of Kwinana. This provision allows the dedication of land, construction of capital works or other service in lieu of a monetary contribution for future urban development. Refer to the City's Local Planning Policy 4: Administration of Development Contributions for the procedures and required information.

It must be noted that all "works in kind" to be undertaken by the landowner/developer that relate to an infrastructure item within the DCP will only be accepted on the proviso that the City has approved the scope, cost estimate and detail of the works in accordance with Clause 5.15.5.14.1(c) of the Scheme prior to the works occurring and has entered into an Agreement with the relevant landowner/developer. Any reimbursement of DCP funds will occur in line with section 10.3.4 of this DCP Report.

## 10.3 Other Matters

#### 10.3.1 Grant Funding

Generally, any DCP infrastructure item does not attract grant funding. It is generally when the City is requesting infrastructure over and above the DCP required infrastructure that grants will be given. As part of the formulation of the liability of road infrastructure, developers are liable for costs based on the traffic they generate and only to an urban standard. All other liability falls with the City and the City is responsible for this share of the infrastructure works. Therefore, where the grant funds relate to works carried out over and above the developer contribution requirements, the developer will not benefit from this. The developer will not receive a reduction in liability. The City's contribution for constructing the road infrastructure over and above the urban standard will be reduced based on any grants received.

Such circumstances would be demonstrated via traffic modelling and the like, whereby existing and external users of a particular road may necessitate the need for a higher order road, but the need and nexus of proposed users within the respective DCA would justify the need for an urban standard, lower order road.

Where the City receives a grant for DCP infrastructure where the developer is liable to contribute to the works, the developer will receive a reduced liability for that DCP infrastructure item when the grant has been formally approved and the CAS has been adjusted accordingly.

#### 10.3.2 CPI for Infrastructure Constructed within DCA

As a result of the CAS being reviewed annually, there is no requirement to include CPI in any infrastructure items that have not been constructed. The cost of the infrastructure works is reviewed annually which would factor in any price increases of all future works and the amount required to be collected will be applied across the remaining lots to be developed.

For works already constructed, no CPI will be applied to any infrastructure works that a developer has carried out as an in-kind contribution, as the development company generally ceases to operate once development has occurred.

#### 10.3.3 Interest

#### Interest applied across the DCA infrastructure items

Interest earned as part of funds in the DCA area is to be applied across all of the infrastructure items based on a pro rata amount paid towards each infrastructure item. The interest applied will be the actual interest earned for that period for the DCA area.

# Interest applied to an infrastructure item where there are insufficient funds in the DCP fund to refund the developer who has carried out the works in kind

If there are insufficient funds in the DCP fund to refund the developer as a result of being approved credits for any works carried out, interest will only commence being calculated once the next Cost Apportionment Schedule review has been undertaken and approved by Council.

A Cost Apportionment Schedule is reviewed annually and therefore once both the City of Kwinana and the Developer agree on the credit provided and determine whether there are sufficient funds to refund the developer, will interest commence calculating. Interest will be calculated and credited to the developer using the Reserve Bank of Australia Cash Rate Target monthly average rate, which is the volume-weighted average interbank overnight interest rate on a per annum basis, and commence after Council has reviewed the Cost Apportionment Schedule for credits claimed after the previous Cost Apportionment Schedule approved by Council and the latest Cost Apportionment Schedule approved by Council.

Interest will be calculated monthly using the previous months released monthly average rate divided by 12 months and multiplied by the amount outstanding to the developer (the amount due to be refunded to the developer). The interest calculated will be included in the cost of the relevant infrastructure item and updated in the CAS annually for the remaining developers in the DCA area to contribute to. The developer that is due the refund will not receive the interest calculated until such time as there are sufficient funds in the DCA account.

#### 10.3.4 Reimbursement of DCP funds

Any reimbursement of DCP funds to the relevant landowner – in respect of agreements entered into between the City and the landowner for payment of cost contributions and the adjustment of final cost contributions thereof, or reimbursement to the landowner for approved DCP works undertaken – will only occur if sufficient funds are available within the relevant DCP account.

Once a DCP has been gazetted, the accompanying cost apportionment schedule adopted and all legal agreements for the particular DCP reconciled, then no further reimbursement(s) of DCP funds shall occur until all stages of the development are completed in instances where a particular development comprises several stages.

In addition, no interest earned on funds to be reimbursed shall apply to individual claims for reimbursement once the DCP has been finalised, the accompanying cost apportionment schedule adopted and all legal agreements for the particular DCP reconciled. Instead, all interest earned within the individual DCP account will serve to reduce the total cost contribution liability for the respective DCA as a whole.

#### 10.3.5 Claims on Actuals

The costing attributable to a particular DCP item is comprised of either an estimate (where works for the item have not commenced or claims on actuals have not been received, and are reviewed and updated annually by independent, professional technical experts) and/or an actual amount for the approved works that have been undertaken.

Prior to works proposed to be undertaken on any approved infrastructure item as per this DCP, all plans and cost estimates are firstly to be approved by the relevant City Officer(s). A Deed of Agreement or Exchange Letter may firstly be required to be entered into between the City and the landowner(s) for this purpose.

To assist in the timely preparation of the annual cost apportionment schedule review by the City, all claims on actuals for approved works undertaken for DCP items must be received by the City by end of December in any calendar year for inclusion as actuals against costings of the relevant DCP item.

Claims on actuals are required to be presented with the following information:

- A coversheet summary of the approved works undertaken for the relevant item;
- An itemised spreadsheet of claims relevant to the works undertaken detailing specific costs (GST exclusive) vis a vis works undertaken and the dates on which the works were undertaken; and
- Copies of the invoices relevant to the works undertaken.

It must be noted that the costing of actuals, if greater than the City's estimate for the particular item of infrastructure, will only be credited or reimbursed to the extent of the City's estimate as included in the CAS.

#### 10.3.6 Two Year Establishment Cost

A two-year establishment period is applicable to all landscaping works for DCP items, including landscaping to roads, POS areas and Living Streams in the context of Sub-drains.

Similar to claims on actuals, actuals attributable to the two-year establishment period are to be provided to the City annually by the end of December in any calendar year, in order to be included in the ensuing annual update of the CAS.

Further, and similarly to claims on actuals, actuals attributable to two-year establishment costs are to be presented with the following information:

- A coversheet summary of the two years' establishment costs incurred to date;
- An itemised spreadsheet of claims relevant to the two years' establishment detailing specific costs (GST exclusive), establishment works undertaken and the date on which the specific establishment work was undertaken; and
- Copies of the invoices relevant to the works undertaken.

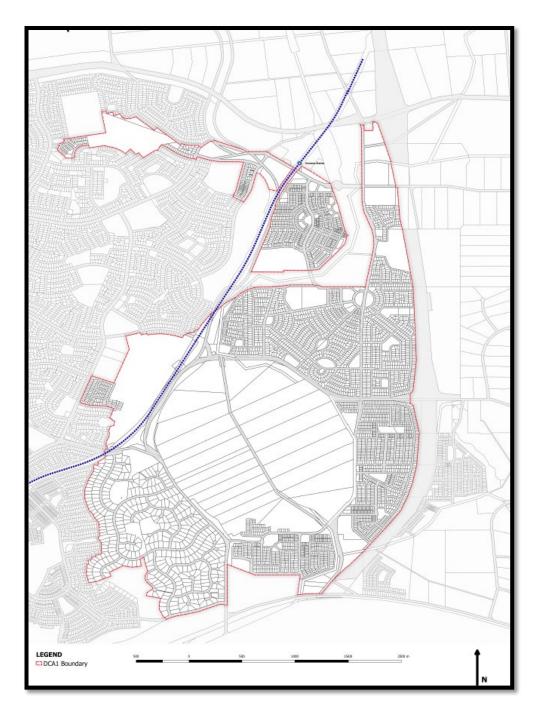
# 11.0 Review

The plan will be reviewed when considered appropriate, though not exceeding a period of five years duration, having regard to the rate of subsequent development in the catchment areas since the last review and the degree of development potential still existing.

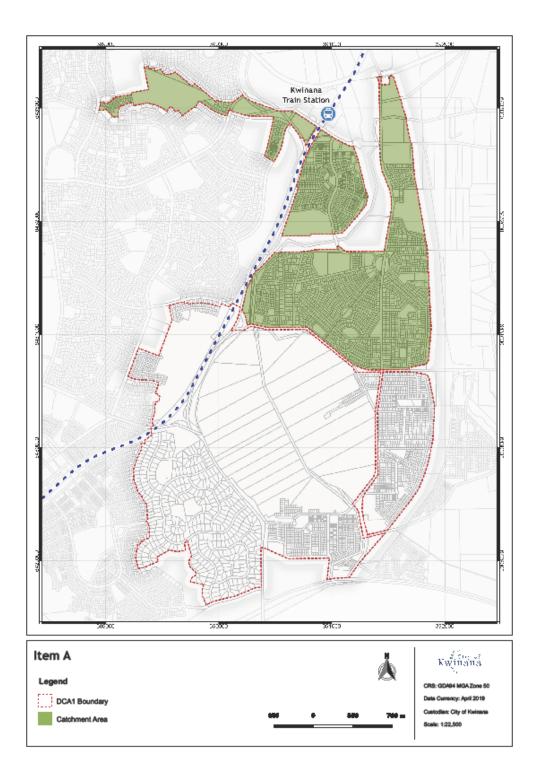
The estimated infrastructure costs contained in the Cost Apportionment Schedule will be reviewed at least annually to reflect changes in funding and revenue sources and indexed based on the Building Cost Index or other appropriate index as approved by an appropriately qualified independent person.

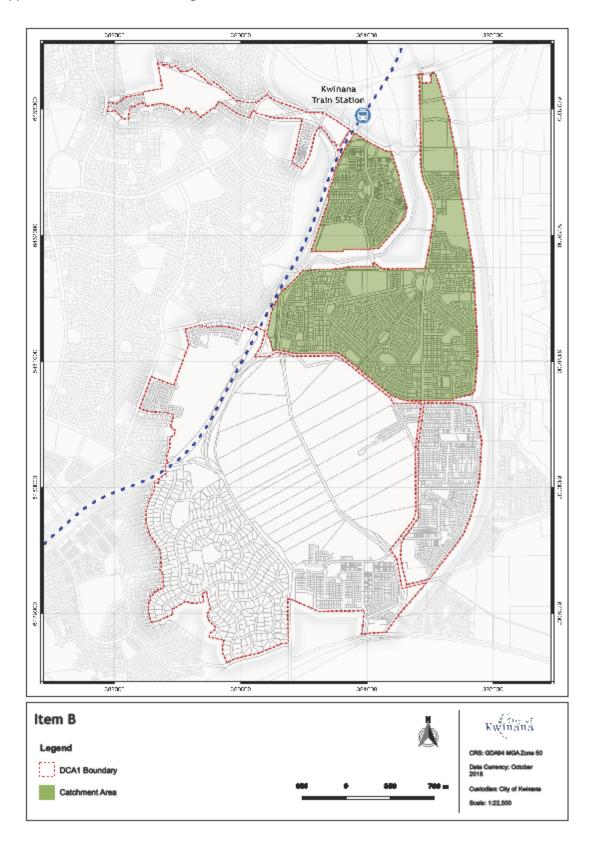
# Appendices

Appendix 1 – Development Contribution Area 1 – Wellard West, Bertram, Orelia and Parmelia

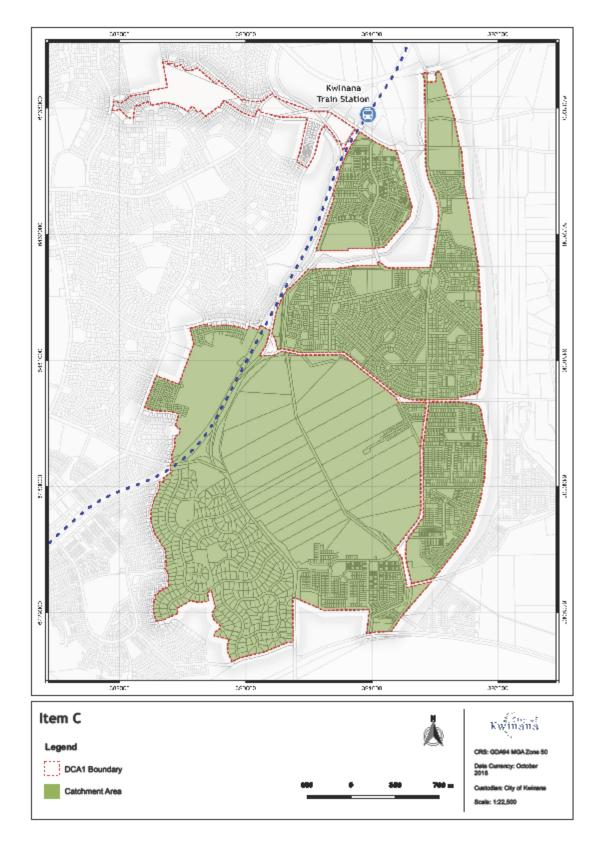




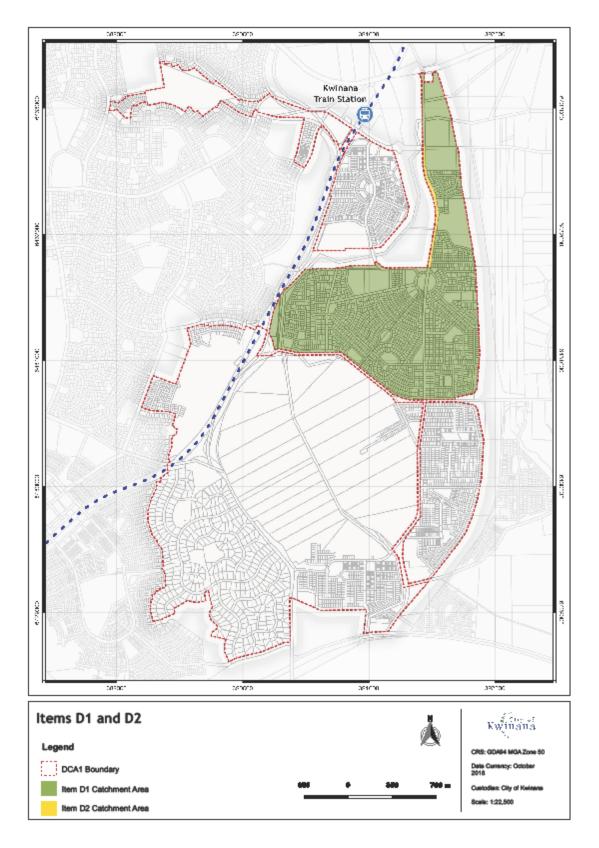




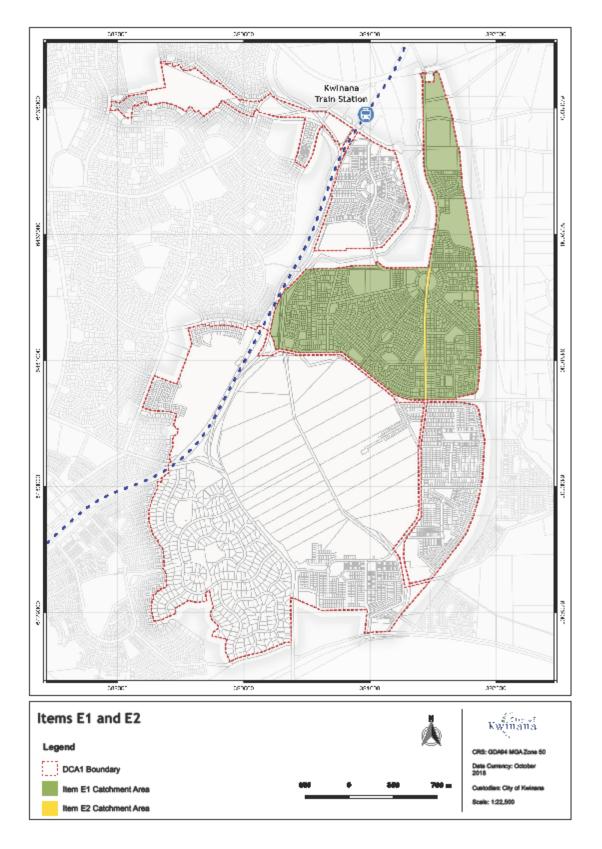




Appendix 4 – Bertram Road upgrade collection area

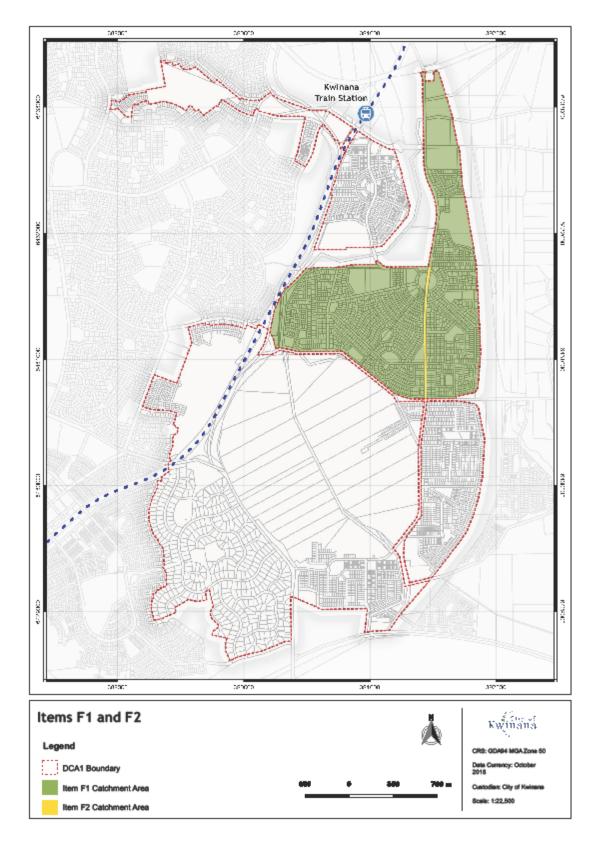


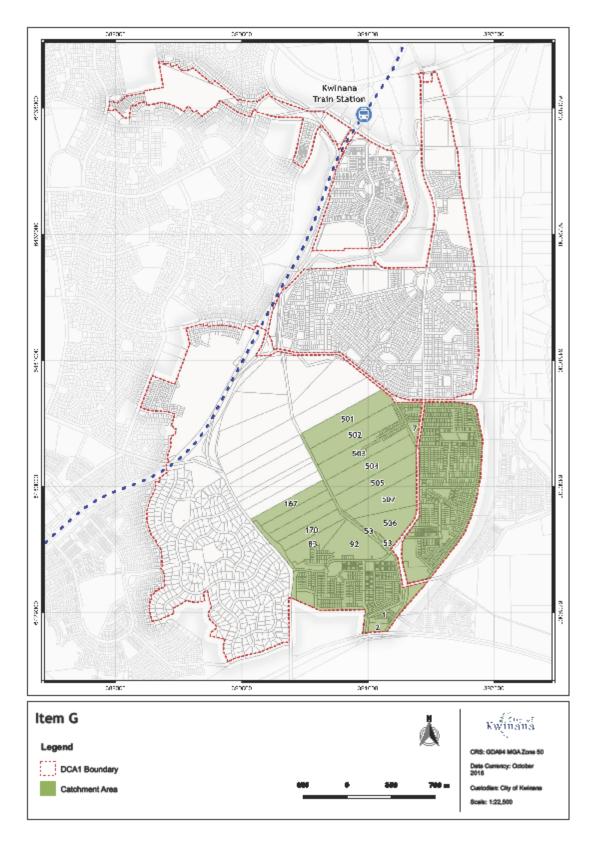
#### Appendix 5 – Johnston Road upgrade 1 collection area



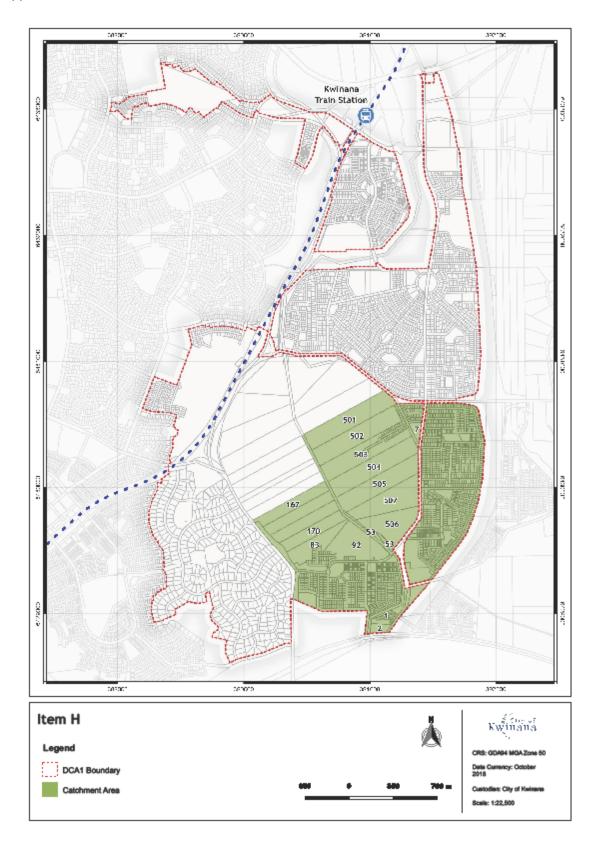
Appendix 6 – Johnston Road upgrade 2 collection area

#### Appendix 7 – Dual Use Path collection area



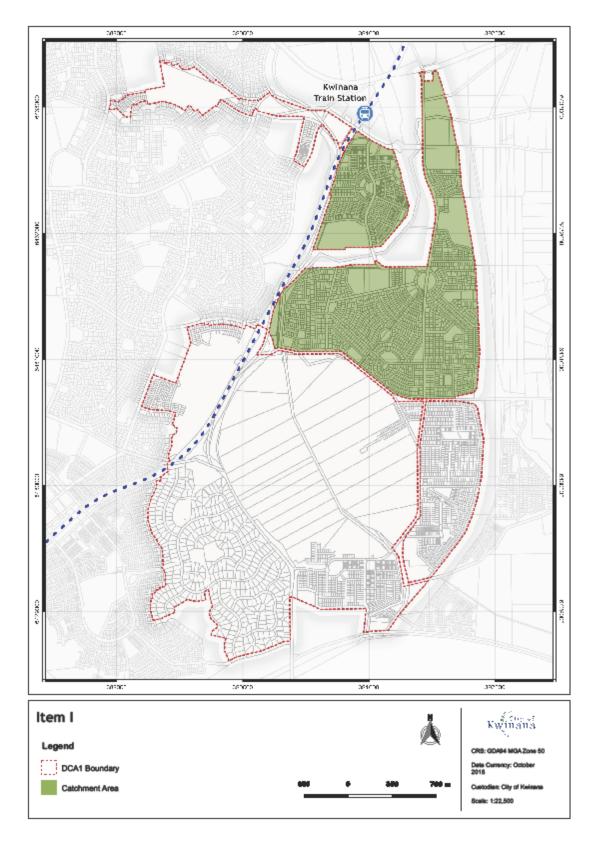


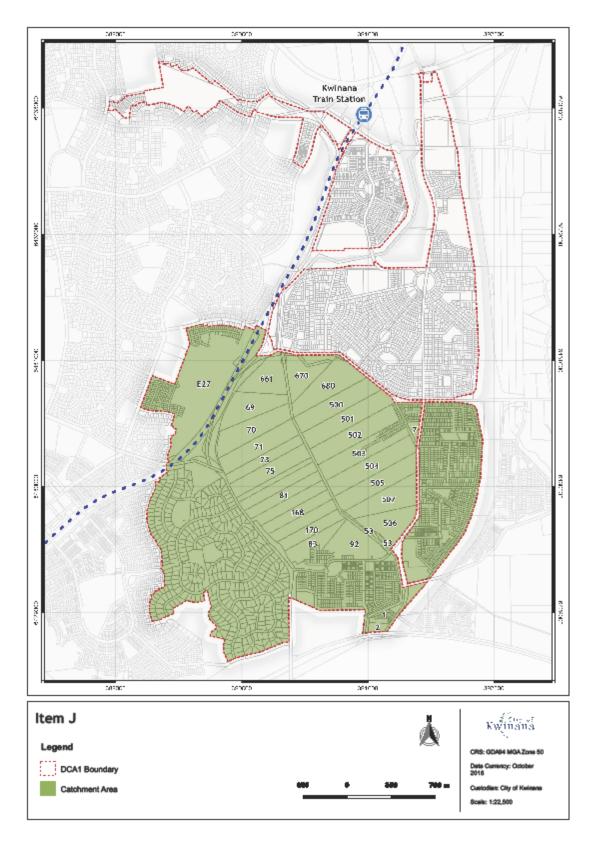
#### Appendix 8 – Johnston Road upgrade 3 collection area



#### Appendix 9 – Johnston Road construction collection area

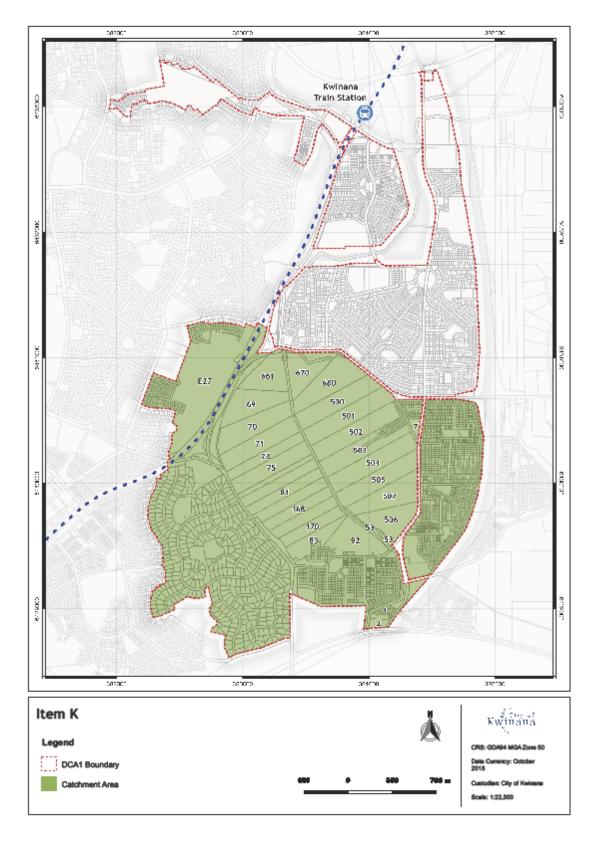
#### Appendix 10 – Price Parkway collection area

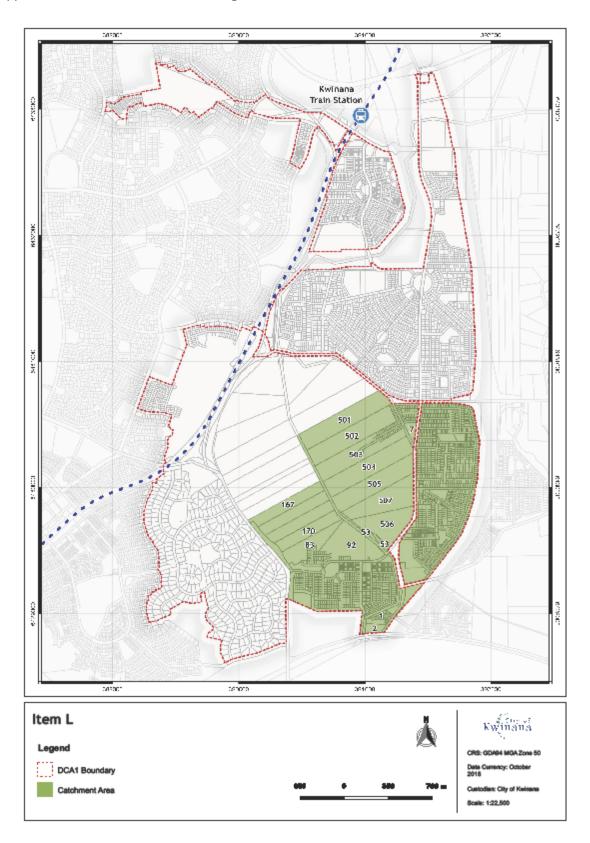




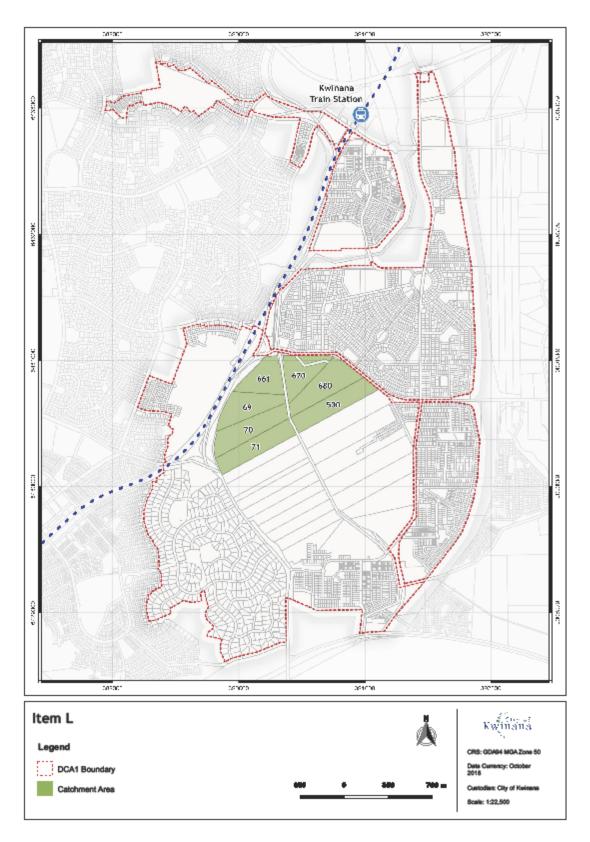
#### Appendix 11 – Wellard Road upgrade collection area

#### Appendix 12 – Bertram Road collection area





Appendix 13 – Culvert and road crossing over Peel Main Drain – 1 collection area



Appendix 14 – Culvert and road crossing over Peel Main Drain – 2 collection area

#### Appendix 15 – Schedule of Costs

Asset ID	Item	Cost
А	Sulphur Road Bridge	\$1,914,745
В	Stormwater Management Infrastructure (formally Nutrient Stripping Basin)	\$480,121
С	Bertram Road upgrade	\$2,338,945
D	Johnson Road upgrade – 1	\$28,562
E	Johnson Road upgrade – 2	\$181,536
F	Dual Use Path (eastern side Johnson Road)	Nil
G	Johnson Road upgrade – 3	\$2,817,123
Н	Johnson Road construction	\$233,835
I	Price Parkway Road	\$392,695
J	Wellard Road upgrade	\$20,635,655
К	Bertram Road upgrade	\$4,449,279
L	New culvert and road crossing over Peel Main Drain – 1	\$1,407,592
М	New culvert and road crossing over Peel Main Drain – 2	\$689,000

			35,569,088.00	9,873,967.00	16,174,521.00		10 4,9Z7,461.6	0 4,593,139.	35,569,088.00	ŀ	- 00.616	,050.00 27,872,	10,939.00 60,	1,090,721.00 80	3, 229,038.00 1	3,235,421.00				
2023/24	100% Developer	Not commenced	00.000,683					3	689,000.00		•			689,000.00			actual/estimate lot yield catchment M -Lots 500,670,680,661,69-71	z	Bertram Rd	New road culvert and road crossing over the Peel Main Drain linking 1661 and L670 Bertram Rd
2021/22		Not	7,400,173.00	0 1,908,838.00	5,491,335.00				7,400,173.00		5,602,320.00 -	- 5,602,			743,226.00	\$1,054,627.00	25.7945%	2	rard to Millar Road n/a	Wellard Road - Cavandish Boulevard to Millar Road
2021/22		Not commenced	13,235,482.00	0 5,491,163.00	7,744,319.00				13,235,482.00		9,959,680.00 -	- 9,959,			1,321,290.00	\$1,954,512.00	41.4882%	2	Cavandish n/a	Wellard Road - Bertram Road to Cavandish Boulevard
2022/23		Not commenced	4,449,279.00	0 1,782,782.00	2,666,497.00			-	4,449,279.00			- 4,202,			202,591.00	\$44,688.00	40.0690%	к	o Wellard Road n/a	Bertram Road - Challenger Ave to Wellard Road
Completed on 22 Nov 2016	100% Developer	Completed	1,407,592.00	2,184.00		0	1,405,408.00		1,407,592.00		,383,231.00	- 1,383,			24,361.00		100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	-	bad crossing over 2.3.1	Johnson Road new culvert and road crossing over Reel Main Drain
Completed on ???	100% Develo per	Completed	2,817,123.00				2,817,123.00		2,817,123.00			- 1,912,			904,513.00	0	100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	۵	ertram Road to ert crossing over n/a	Johnson Road, Upgrade - South Bertram Road to western edge Johnson Road culvert crossing over eastern side of Peel Main Drain
Completed on 23 Jan 2016	100% Developer	Completed	233,835.00			0	233,835.00		233,835.00		- 115,573.00	- 115,			15,068.00	103,194.00	100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	Ŧ	th of Johnson Rd sel Main Drain to difference n/a ector A and an leighbourhood s)	Johnson Road construction - South of Johnson Rd aulver ( cossing over west side Peel Main Drain to Millar Road - The DCP Item is the difference between a Neighbourhood Connector A and an Access Street B (WAPC Liveable Neighbourhoods)
						0											refer to G&H	Included in G and H	d power lines on h of Bertram Road th side of 2.3.2 1 Road and	Under grounding existing over thead power lines on both sides of Johnson Road south of Bert am Road and north of Millar Road and south side of Mortimer Road between Johnson Road and Freeway
				,							•					,	refer to G,H&L	Separated into G,H & L	of Bertram Road 2.3.1	Upgrade of Johnson Road south of Bertram Road and North of Milliar Road
Completed before 12 January 2008	100% Developer	Completed	392,695.00				392,695.00		392,695.00		- 595,695.00	- 392,					100% costs based on lot yield within catch ment B, D1, E, F, I (ref 1 -23 DCA87)	-	Price Parkway 2.2.7	Construction of a Road linkage across the Parks and Recreation Reserves in Bertram - Price Parkway Road
Completed	100% Developer	Completed															100% costs based on lot yield within catchment B, D1, E, F, I (ref 1 -23 DCA87)	71	hnson Road - tram Road	Dual Use Path on eastern side Johnson Road South of Peel Lateral Drain to Bertram Road
Completed	100% Developer	Completed									•						100% costs based on lot yield within catch ment B, D1, E, F, I (ref 1 -23 DCA87)		Iden Close 2.2.5	Dual Use Path on eastern side Johnson Road - North of Peel Lateral Drain to Holden Close
Completed before 26 May 2008	100% Developer	Completed	165,018.00				-0	0 165,018.00	165,018.00	,	165,018.00 -	- 165,					100% costs based on lot yield within catch ment B, D1, E, F, I (ref 1 -23 DCA87)	.2 E	f Peel Lateral Drain 2)	Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - roundabouts (2)
Completed before 26 May 2008. All lots have been cleared and no CPI applied	100% Developer	Completed	16,518.00				0	16,518.00	16,518.00		- 16,518.00	- 16,					100% costs based on frontage within catchment B, D1, E, F, I (ref 1 -23 DCA87)	E	f Peel Lateral Drain 2.2.4.1	Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - both sides
Completed on 1/1/2009	100% Developer	Completed	28,562.00				-0	28,562.00	28,562.00		- 28,562.00	- 28,					100% costs landowners based on frontage on catchment D2	.2 D	f Peel Lateral Drain 2.2.3.2	Johnson Road Upgrade - North of Peel Lateral Drain to Holden Close - eastern side
Completed	100% Developer	Completed															100% costs of lots on western side of Johnson north of Peel Lateral Drain based on lot yields within catch ment B, D1, E, F, I (ref 1 - 23 DCA87)	.1 D	f Peel Lateral Drain 2.2.3.1	Johnson Road Upgrade - North of Peel Lateral Drain to Holden Close - western side
d tCompleted on 9/1/2013	Developer (rural standard t	Completed	619,945.00				-0	619,945.00	619,945.00		508,834.00 -	60,050.00 508,	33,072.00 60,		17,989.00		actual/estimate lot yield catchment C -All DCA 1 (A87,91,132) except 32,33	b C	nnson Rd to 2.2.2b	Upgrades to Mortimer Road - Johnson Rd to Freeway
d tCompleted on 8/4/2013	Developer (rural standard	Completed	1,719,000.00	-			- 0	1,719,000.00	1, 719,000.00			- 1,671,	47,867.00	4			actual/estimate lot yield catchment C -All DCA 1 (A87,91,132) except 32,33	ac	ison Rd to 2.2.2a	Upgrades to Bertram Road - Johnson Rd to Challenger Rd
2020/21	Not applicable	Completed															Estimated lot yield within catchment 8, D1, E, F, I - (ref 1- 23 DCA87)	.2 B	ructure (formally 2.2.1.2	Stormwater Management Infrastructure (formally Nutrient Stripping Basin Feature)
\$73,190.10 Completed on 8/4/2013 Remaining \$457,833.19 is estimated to be undertaken in 2020/21	50% Developer	Partial works completed	480,121.00		272,370.00		78,400.00	0 129,351.00	480,121.00			,		401,721.00		78,400.00	Estimated lot yield within catchment B, D1, E, F, I - (ref 1 - 23 DCA87)		ructure (formally Peel Main Drain 2.2.1.1	Somwater Management Infrastructure (formally Nutrient Stripping Basin) on the Peel Main Drain north of Bertram Road
is 2010	100% but amount shown	Completed	1,914,745.00					0 1,914,745.00	1,914,745.00		1,914,745.00 -	- 1,914,					Estimated lot yield within catchment A	A	y 2.1	Sulphur Road Bridge over railway
Year Commence and amount for each financial year works will be carried out	Funding	Status	Total	f Estimate Cost of le future works by the Developer	Estimate Cost of future works by the City	e Grant Funded	Actual Costs ie incurred by the Developer	Actual Costs incurred by the City	25 Total	st Street Trees	rdion Cost	Und erground Power Lines was item 2.3.2 Construction	Paths Powe wasite	Drains	Landscaping/ Improvements	Land Valuation In	A132 Calculation	#Ref in Amd 87 & Item Ref A132 91	4 Re 9	Description

## Appendix 16 – DCP 1 Cost Apportionment Schedule

			Ameno	iment 87 & 91 Ci	osting						PAY	MENTS		Plus	
.1 L0	ocation	Property Owner	Lot Details	Original Lot size (hectares)	Area developed before 22 October 2003	Total land size (hectares) developed between	Area to be develope d from 27	Difference (should be nil)	% ORIGINAL LOT DEVELOPED	A132 Lot Liability	Date Paid	Amount	Total Liability before Admin Fee	Administration Fee A132	Total Liability
	_		Tota	1 271.73	37.40	22/10/03 and 166.77	June 67.56					Iment 87 Costing \$ 2,604,828.96	\$ 7,357,426.89 2,658,468.97		
+					Less 32 and 33 1-23 land 9-23 land	134.8754 97.7075	23.0369 4.6888	157.9123 102.3963			M OF BALANCE Check	55,456.01 55,456.01 0.00		Total Daumonte	Developers for Infras and Credits from A87
-					24-31 land check	21.721	35.5608	57.2818		INTEREST FOR Less City Contri		32,107.44 362,695.81	\$ 32,107.40 \$ 362,695.81 16,613,664.82	Total Interest Total City Cash o Amount to appl	ontribution to A132
							% remainin							Administration Costs	
			AMENDMENT 132				g lot to be develope	LOT YIELD IN TRAFFIC REPORT	LOT YIELD	Lot Liability	Date Paid	Amount	Total Liability		Total Liability
							d							2.00%	
														332,270.64	
-	EAST	DEPT OF HOUSING & WORKS - WINDSOR HIL	1 OPELIA VACANT A122						57	\$ 1,772.50		101,032.30	\$ 99,051.30		\$ 101,032.3
87 (	ORELIA (VACANT)	Lot E6 Durran	(57 lots created already - 2 y	4.5109					57	101,032.30	31/08/2019	\$ 101,032.30	\$ 99,051.30	1,981.00	\$ 101,032.3
4. 91		ARDP PTY LTD ARDP PTY LTD	Lot 1 Mortimer Road A132 Lot 21 Mortimer Road A132	4.1270			100.00%	67	53	\$ 3,178.11 \$ 3,174.62		168,439.97 209,524.77	\$ 165,137.23 \$ 205,416.45	3,302.74 \$ 4,108.33	168,439.9 \$ 209,524.7
		Lot 500 Mortimer Rd, Wellard Lot 901 Mortimer Rd, Wellard Lot 21 Mortimer		4.1270					66	\$ 209,524.78	21/10/2011 27/04/2012 20/08/2012	128,492.02 228,604.37 214,189.95	\$ 228,604.37 \$ 214,189.95		
5- 91											31/08/2019 31/08/2019	- 373,867.49 2,556.97	-5 373,867.49 \$ 2,556.97		
											INTEREST	9,548.95	\$ 9,548.95 <b>\$</b> -\$ 4,108.33	\$ 4,108.33	\$ 0.0
		ARDP PTY LTD Gross contribution pair	Part Lot 22 Mortimer Road A	2.5500			100.00%	50	50	\$ 3,160.76		158,037.76	\$ 154,938.98	\$ 3,098.78	\$ 158,037.7
6 - 91		L22 Insert Invoice number and developer and sta	20	2.5500					50	\$ 158,037.76	31/08/2019 31/08/2019	156,100.66 1,937.10	\$ 156,100.66 \$ 1,937.10		
		Credits for constructed or provided items Net contribution payable	e Part Lot 22 Mortimer Road A	132									\$ -\$ 3,098.78	\$ 3,098.78	-\$ 0.0
		CEDAR WOODS Gross contribution paid Stage 4 Phase 2	Part Lot 8 Johnson Road A13	11.2580			64.16%	223	223	\$ 3,295.79 \$ 56,028.46	08/11/2013	<ul> <li>1,636,553.87</li> <li>566,754.24</li> </ul>	\$ 720,550.56	\$ 14,411.01	\$ 734,961.5
		Stage 4F Phase 1 Stage 4F Phase 2							18	\$ 59,324.25 \$ 13,183.17	30/05/2014 23/06/2015	174,385.92 283,377.12	\$ 174,385.92 \$ 283,377.12		
7 - 91		Stage 4F Phase 3 Stage 4F Phase 4 Stage SA& 58							18 46	\$ 23,070.54 \$ 59,324.25 \$ 151,606.42	INTEREST 20/05/2019 31/08/2019	542,217.70 2,127,492.91	\$ 542,217.70 \$ 2,127,492.91		
		Stage 5C& 5D Stage 5E Stage 3D							40	\$ 131,831.67 \$ 59,324.25 \$ 9,887.38	31/08/2019	8,639.46	\$ 8,639.46 \$ - \$ -		
	PARK NORTH	Stage 7 Credits for constructed or provided items Net contribution navable	Part Lot 8 Johnson Road A13	2					52	\$ 171,381.17			\$ 2,371,515.44 -\$ 14,411.01	\$ 14,411.01	-\$ 0.0
9-		Gross contribution paid	Part Lot 65 Jacobs Place A13	0.9032			11.72%	17	17	\$ 3,295.76	31/08/2019	56,027.86 55.369.24	\$ 54,929.27 \$ 55,369.24	\$ 1,098.59	\$ 56,027.8
91		Stage 28 Stage 28 Credits for constructed or provided items							17	\$ 56,027.86	31/08/2019 31/08/2019	55,989.24 658.62	\$ 658.62		
		Net contribution payable WELLARD FAMILY PTY LTD Gross contribution pair	Part Lot 65 Jacobs Place A13 Lot 800 Ivory Way - Lot 155 J				10.15%	5	4	\$ 4,125.25		16,500.99	\$ 1,098.59 \$ 16,177.44	\$ 1,098.59 \$ 323.55	-\$ 0.0 \$ 16,500.9
0 - 91		Invoice 58265 Credits for constructed or provided items						5	4	\$ 16,500.99	13/12/2019	16,500.99	\$ 16,500.99 \$ -		
		Net contribution payable	Lot 800 Ivory Way - Lot 155 J Lot 155 Johnson Road A132	ohnson Road 1.6173			89.85%	37	37	\$ 3,229.89		119,506.05	\$ 323.55 \$ 117,162.79	\$ 323.55 \$ 2,343.26	\$ 0.0
<b>)</b> -		Gross contribution pair Lot 155 DP 143820 - Lot 9508 DP 402050- 0.8015ha		1.8000			100.00%	22	22		16/06/2014 03/07/2014	42,808.72 90,552.28	\$ 42,808.72		
91								15	15	5 46,446.40	31/08/2019 31/08/2019	90,552.28 - 15,288.41 1,433.46	-\$ 15,288.41		
		INTEREST UP UNTIL 30/6/2018 Credits for constructed or provided items Net contribution payable	Lot 155 Johnson Road A132								INTEREST		\$ - \$ - \$ 2,343.26	\$ 2,343.26	-\$ 0.0
		CEDAR WOODS	Part Lot 87 Johnson A132	10.8886			79.03%	144	144	\$ 3,295.76		474,589.78	\$ 465,284.10	\$ 9,305.68	\$ 474,589.7
1 - 91		Gross contribution pair stage 3C stage 6							15 129	\$ 49,436.44 \$ 425,153.35	31/08/2019 31/08/2019	469,010.94 5,578.84	\$ 469,010.94 \$ 5,578.84		
_		Credits for constructed or provided items Net contribution payable DEPT OF HOUSING	Part Lot 87 Johnson A132 LOT 9237 Parmelia Ave CASS	IA RISE				438	161	\$ 530.48		88,978.24	-\$ 9,305.68	\$ 9,305.68 \$ 1,744.62	\$ 0.0 \$ 88,978.2
P	PARMELIA	Stage 98 19237						277	8	\$ 4,243.84 \$ 84,734.40	17/07/2019 31/08/2019 31/08/2019	4,243.84 81,164.01 3,570.39	\$ 4,160.63 \$ 83,072.99	\$ 83.21 \$ 1,661.41	4,243.8 84,734.4
-		Net contribution pair CITY OF KWINANA	Homestead Ridge & Emerald	Park				615	615	\$ 2,702.77	31/08/2019	1,662,205.99	\$ 1,629,613.72	\$ 32,592.27	\$ 1,662,205.9
		Gross contribution paid Homestead Ridge City of Kwinana Contribution For Emerald Par	Stage 1-4 (Phase 1) for only	the new A132 inf	rastructure items			336	336 279	908,132 754,074	21/10/2011	16,340.64	\$ - \$ 16,340.64		
н	OMESTEA D RIDGE										27/04/2012 30/08/2012	18,723.65 5,787.31 25,434.05	\$ 18,723.65 \$ 5,787.31		
											07/11/2012 15/08/2019 15/08/2019	- 84,012.48 1,679,932.82	\$ 25,434.05 -\$ 84,012.48 \$ 1,679,932.82		
		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 83 Wellard Rd (now Lot 9	0 7.7347				104	67	\$ 5,883.70		394,207.73	\$ 32,592.27 \$ 386,479.74	\$ 32,592.27 \$ 7,727.99	\$ 0.0 \$ 394,207.7
		Gross contribution paie Stage 9A Insert Invoice number and developer and sta							19	\$ 90,166.82	05/02/2014	1.00	\$ 1.00		
3		Insert Invoice number and developer and sta Insert Invoice number and developer and sta	2e							s -	31/08/2019 31/08/2019	89,428.73 736.09	\$ 89,428.73		
		Insert Invoice number and developer and sta Invoice 57519 Stage 10 (Lot 9025) Providence Estate Stage 11	Invoice 62458						6 19	\$ 28,473.73 \$ 124,661.34	INTEREST 24/10/2019 9/10/2020	28,473.73 124,661.34			
		Providence Estate Stage 12 WELLARD RESIDENTIAL Gross contribution pair	Invoice 62457 Lot 85 Wellard Rd (now Lot 9	15.1096				218	23	\$ 150,905.83 \$ 4,722.88	9/10/2020	150,905.83 • 1,316,450.51		\$ 8,051.01	\$ 410,890.4
7		Stage 5 Stage 6A							38	\$ 179,469.41 \$ 28,337.28	23/09/2016 31/08/2019	165,468.22 1,409,847.23	\$ 165,468.22 -\$ 1,409,847.23		
		Stage 9A Invoice 57520 Stage 10 (lot 9026) Credits for constructed or provided items							19 24		31/08/2019 24/10/2019	185,420.60	\$ 185,420.60 \$ 113,349.10 \$ 1,727,341.00		
P	6	WELLARD RESIDENTIAL Gross contribution pair	Lot 1278 Wellard Rd	14.9276				177	179			394,191.92	\$ 394,191.92	\$ 16,558.27	\$ 844,471.5
2		Stage 1 Stage 2 Stage 3							53 29 34	\$ 250,039.17 \$ 136,813.89 \$ 160,402.49	31/08/2019 31/08/2019	398,158.99 - 3,967.07	\$ 398,158.99 -\$ 3,967.07 \$		
2		Stage 4 Stage 6B							34	\$ 160,402.49 \$ 122,660.73 \$ 14,153.16			s - s -		
		Stage 78 Credits for constructed or provided items Net contribution payable							3				\$ 450,280.00 -\$ 16,558.27	\$ 16,558.27	\$ 0.0
		WELLARD RESIDENTIAL Gross contribution paid Stage 2	Lot 92 Wellard Rd	11.9531				195 780	197 786	\$ 4,720.26 37,762	31/08/2019	929,891.68 922,259.51	\$ 911,658.51 \$ 929,891.68 \$ 922,259.51	\$ 18,233.17	\$ 929,891.6
8		Stage 4 Stage 5							10 13	47,203 61,363	31/08/2019	7,632.17	\$ 7,632.17 \$ -		
•		Stage 6A Stage 6B Stage 7A							56 15 51	264,335 70,804 240,733			s - s -		
		Stage 78 Credits for constructed or provided items Net contribution payable							44	207,692	453 lots as at 1	June 2019	\$ - \$ - \$ 18,233.17	\$ 18,233.17	\$ 0.0
0		Amanda Rogers Stage 1 Finalisation of CAS - not paid yet	Lot 10 Johnson Rd	0.6939				14	4	\$ 4,075.02	7/02/2019 31/08/2019	16,300.06 15,334.86 810.23	\$ 15,980.06	\$ 319.60	\$ 16,299.0
		Finalisation of CAS - not paid yet									31/08/2019	154.97			
		Anthony R Eddleston Stage 1 Finalisation of CAS - not paid yet	Lot 1 Johnson Rd	0.8872				21	17 17	\$ 4,549.66 64,521	7/02/2019 31/08/2019	77,344.18 100,138.46 23,198.96	\$ 75,829.18	\$ 1,516.58	\$ 77,345.
ļ		Finalisation of CAS - not paid yet Byblos Holdings Pty Ltd	Lot 670, 150 Bertram Rd					100	49	\$ 5,196.45	31/08/2019	404.68	\$ 249,633.34	\$ 4,992.67	\$ 254,626.
		Wellard Management The Wedge Stage 1 Wellard Management The Wedge Stage 2							17	\$ 88,339.65 \$ 175,256.90	24/07/2019 5/11/2020	79,369.11 175,256.90	5 249,033.34 S 0.06		5 254,6265 79,369.
		Credits for constructed or provided items Net contribution pair Dakebella - LWP Wellard Pty Ltd	Lots 503-505, 507 and 900 (w	nas L7)				415	160	\$ 2,321.35		371,416.53	\$ 249,633.28 \$ 364,131.50	\$ 4,992.67 \$ 7,285.03	\$ 175,256. \$ 371,416.
		Stage 3 Phase 2 Stage 1 Stage 2							7 33 39	\$ 16,249.47 \$ 77,023.07 \$ 91,027.27	17/07/2019 07/10/2016 11/10/2017	16,067.10 89,790.69 127,889.81			
	BOLLARD BULRUSH EAST OF	Stage 3 Rolonce moid							23	\$ 53,682.75 \$ -	15/03/2019 31/08/2019	53,055.10 49,002.51			
P	EEL MAIN	Invoice 58977 Stage 4 Stage 3 Stage 4B							16 11 12	\$ 37,344.52 \$ 25,674.36 \$ 28,008.39	11/02/2020 1/09/2020 23/09/2020	37,344.52 25,674.36 28,008.39			
		LWP Wellard Oakebella Stage 5 Net contribution pair Ascari Developments Pty Ltd	Lot 502, 14 Tamblyn Pl					6a	19	\$ 42,589.07 \$ 6,616.99	1/12/2020	42,589.07	\$ 155,693.92	\$ 3,113.88	\$ 158,807.
		Stage 1 Reconciliation of Amendment 132 August 201	9						8	\$ 45,367.06	26/06/2018 16/09/2019 16/09/2019	41,489.50 2,521.38 1,356.18		s .	
1		Reconciliation of Amendment 132 August 201 Tamblyn Estate 2A Credits for constructed or provided items	9 Invoice 63163						16	\$ 113,440.74	16/09/2019 14/01/2021	1,356.18 113,440.74			
1		Net contribution pair							Total Cash F Credits give	ayments Made		\$ 2,604,980.99	\$ 7,013,845.59 \$ 4,549,136.44	\$ 140,271.85	\$ 7,154,117.4 \$ 4,549,136.4
									Interest Ear Interest Ear	ned up to 30 June 2 ned up to 30 June 2	020	\$ 13,379.42 \$ 11,786.08 \$ 2,466.56	\$ 13,117.09 \$ 11,554.99	\$ 231.09	\$ 13,379.4 \$ 11,786.0
-				-						ned up to 31 March nt Paid - Actuals	2021	\$ 2,466.56 \$ 2,632,613.05	\$ 2,418.20 \$ 7,040,935.87	\$ 48.36 \$ 140,813.64	\$ 2,466.5 \$ 7,181,749.5

							_									
			1				_	Amount	Annied to	Remaining	Lots to be	Costings for	Amendment 132 Amendment 132	\$ 35,569,088.00 \$ 9,572,727.00	\$ 191,455.00	\$ 9,764,182.00
32 -		DEPT OF HOUSING & WORKS - WINDSOR HILL Gross contribution paid	1.ORELIA - VACANT A132	6.7513	-		52.68%	Anoan	32	\$	1,771.69	ouveroped for	-	\$ 55,582.00	\$ 1,112.00	\$ 56,694.00
A87	EAST ORELIA	Credits for constructed or provided items Net contribution payable	1.ORELIA - VACANT A132											\$ \$ 55,582.00	\$ 1,112.00	\$ 56,694.00
33 - A87	(VACANT)	DEPT OF HOUSING & WORKS Gross contribution paid	2.ORELIA - VACANT A132	2.2096			34.98%		33	\$	1,771.68			\$ 66,004.00 \$ -	\$ 1,320.00	\$ 67,324.00
A87		Credits for constructed or provided items Net contribution payable	2.ORELIA - VACANT A132											\$ . \$ 66,004.00	\$ 1,320.00	\$ 67,324.00
1 -		DEPT OF HOUSING & WORKS - Belgravia Cent Gross contribution paid	1202 A132	4.8887	-		47.52%		121	\$	3,662.71		131,088.12	\$ 434,498.00 \$ 131,088.12	\$ 8,690.00	\$ 443,188.00
A87	NORTH	Credits for constructed or provided items Net contribution payable	1202 A132											\$ 339,055.00 -\$ 35,645.12	\$ 8,690.00	\$ 26,955.12
2 - A87	BERTRAM	DEPT OF HOUSING & WORKS - Belgravia Cent Gross contribution paid	1216 A132	3.7596			61.82%		127	\$	3,662.72		83,033.10	\$ 456,045.00 \$ 83,033.10	\$ 9,121.00	\$ 465,166.00
A87		Net contribution payable	1216 A132 Lot 67 Johnson A132	2.2413			100.00%	_		,	3,662.70			\$ 373,011.90 \$ 35,909.00	\$ 9,121.00 \$ 718.00	\$ 382,132.90 \$ 36,627.00
5 - A87		Gross contribution paid						_	10	-	3,002.70			\$ -	3 710.00	3 30,027.00
		Net contribution payable BOMBARA	Lot 67 Johnson A132 Lot 4 Johnson A132	2.6018			100.00%		14	s	3,662.64			\$ 35,909.00 \$ 50,272.00	\$ 718.00 \$ 1,005.00	\$ 36,627.00 \$ 51,277.00
6 - A87		Gross contribution paid Credits for constructed or provided items								-	_			s -		
_	MIXED BUSINESS	Net contribution payable RIDLEY	Lot 4 Johnson A132 PT Lot 20 Holden A132	4.0899		1	100.00%		24	s	3,662.79			\$ 50,272.00 \$ 86,183.00	\$ 1,005.00 \$ 1,724.00	\$ 51,277.00 \$ 87,907.00
7 - A87		Gross contribution paid Credits for constructed or provided items												\$ - \$ -		
-		Net contribution payable MINISTRY FOR PLANNING	PT Lot 20 Holden A132 PT200 Holden A132	0.7668		1	100.00%		c					\$ 86,183.00 \$ -	\$ 1,724.00 \$ -	\$ 87,907.00 \$ -
8 - A87		Gross contribution paid Credits for constructed or provided items					_							<u>\$</u> - <mark>\$</mark> -		
		ROMANOS INVEST. HOLDINGS	PT200 Holden A132 Lot 54 Johnson A132	4.1645		1	100.00%		99	\$	3,736.76			\$ - \$ 362,685.00	\$ - \$ 7,254.00	\$ . \$ 369,939.00
9 - A87		Gross contribution paid Credits for constructed or provided items	lat Ed Johnron A123					_						\$ - \$ - \$ 362.685.00	6 7 364 00	\$ 369.939.00
12 -	CASUARINA	Net contribution payable YARRA SEED & GRAZING CO P/L Gross contribution paid	Lot 54 Johnson A132 Lot 1 Johnson A132	0.4069			5.28%		12	\$	4,104.17			\$ 362,685.00 \$ 48,284.00	\$ 7,254.00 \$ 966.00	\$ 369,939.00 \$ 49,250.00
A87	PLAN	Credits for constructed or provided items Net contribution payable	Lot 1 Johnson A132								_			5 5 5 48.284.00	\$ 966.00	\$ 49,250.00
20 -		KNICROSS Gross contribution paid	Ex Lot 9 Bertram A132	0.1174			1.06%		2	\$	3,714.50		•	\$ 7,283.00	\$ 146.00	\$ 7,429.00
20 - A87		Credits for constructed or provided items Net contribution payable	Ex Lot 9 Bertram A132											\$ . \$ 7,283.00	\$ 146.00	\$ 7,429.00
	PARMELIA	DEPT OF HOUSING Gross contribution paid	LOT 9237 Parmelia Ave CASSI	A RISE				277	277	\$	723.19		-	\$ 196,396.00 \$ .	\$ 3,928.00	\$ 200,324.00
	PANMEDA	Credits for constructed or provided items Net contribution payable												\$ \$ 196,396.00	\$ 3,928.00	\$ 200,324.00
97		WELLARD RESIDENTIAL Gross contribution paid	Lot 167 Wellard Rd (now Lot 9	1.8784				8	8	\$	6,710.88		-	\$ 52,634.00 \$ -	\$ 1,053.00	\$ 53,687.00
		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 168 Wellard Rd (now Lot 9	2.2270			_				6,711.76			\$ 52,634.00 \$ 138,183.00	\$ 1,053.00 \$ 2,764.00	\$ 53,687.00 \$ 140,947.00
96		Gross contribution paid	COT 168 Weilard RD (NOW LOC S	2.2270				4		>	6,/11./6			\$ -	\$ 2,764.00	\$ 140,347.00
		Net contribution payable WELLARD RESIDENTIAL	Lot 169 Wellard Rd (now Lot S	2.7604			_	25	25	4	6,712.40			\$ 138,183.00 \$ 164,520.00	\$ 2,764.00 \$ 3,290.00	\$ 140,947.00 \$ 167,810.00
		Gross contribution paid														
95		Credits for constructed or provided items					_							<u>\$</u>		
95		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 170 Wellard Rd (now Lot S	4.2696				32	32		6,712.28			\$	\$ 3,290.00 \$ 4,212.00	\$ 167,810.00 \$ 214,793.00
95 94		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL Gross contribution paid	Lot 170 Wellard Rd (now Lot S	4.2696			_	32	32		6,712.28		-	\$ 210,581.00 \$ - \$ -	\$ 4,212.00	\$ 214,793.00
95 94		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL Gross contribution paid Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 170 Wellard Rd (now Lot S Lot 83 Wellard Rd (now Lot 90	4.2696				32 104	32 37	\$	6,712.28			\$ \$ 164,520.00 \$ 210,581.00 \$ \$ 210,581.00 \$ \$ 210,581.00 \$ \$ 210,581.00 \$	\$ 3,290.00 \$ 4,212.00 \$ 4,212.00 \$ 4,210.00	\$ 167,810.00 \$ 214,793.00 \$ 214,793.00 \$ 248,354.00
95 94 93	ROVIDENCI	Credits for constructed or provided items Net conflictution payable WELLARD RESIDENTIAL Gross contribution paid Credits for constructed or provided items Net conflictution payable Gross contribution paid Credits for constructed or provided items Net conflictution payable Net conflictution payable						32 104	32 37	\$				\$ 210,581.00 \$ \$ 210,581.00 \$ 243,484.00 \$	\$ 4,212.00 \$ 4,212.00	\$ 214,793.00 \$ 214,793.00
95 94 93	ROVIDENC	Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL Gross contribution paid Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL						32 104 218	32 37 133	s s			-	\$ 210,581.00 \$ - \$ - \$ 210,581.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00
95 94 93 87	ROVIDENCI	Credits for constructed or provided items Net contribution psychole WELLAR RESIDENTIAL Credits for constructed or provided items WelLARD RESIDENTIAL Credits for constructed or provided WELLARD RESIDENTIAL Credits for construction paid WELLARD RESIDENTIAL WELLARD RESIDENTIAL Credits for constructed or constructed areas WELLARD RESOLUTIAL Credits for constructed or constructed areas	Lot 83 Wellard Rd (now Lot 90	7.7347				32 104 218		s s	6,712.27 6,644.35		· · · · · · · · · · · · · · · · · · ·	\$ 210,581.00 \$ \$ 210,581.00 \$ 243,484.00 \$ 243,484.00 \$ 866,371.00 \$ \$ 866,371.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 883,698.00 \$ 883,698.00
95 94 93 87 91	ROVIDENC	Credits for constructed or provided items Net conflictution payable WELLARD RESIDENTIAL Gross contribution paid Credits for constructed or provided items Net conflictution payable Gross contribution paid Credits for constructed or provided items Net conflictution payable Net conflictution payable	Lot 83 Wellard Rd (now Lot 90	7.7347				32 104 218 19		s s	6,712.27			\$ 210,581.00 \$ \$ \$ 210,581.00 \$ 243,484.00 \$ \$ 243,484.00 \$ \$ 243,484.00 \$ \$ \$ 243,484.00 \$	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 883,698.00
95 94 93 87 91	ROVIDENC	Credit for constructed or provided mess. Net CARLAR RECORD Conference on the Confer	Lot 83 Wellard Rd (now Lot 50 Lot 85 Wellard Rd (now Lot 50 Lot 85 Wellard Rd (now Lot 50 Lot 2 Johnson Rd	7.7347 15.1096 1.0321				32 104 218	133	\$ \$ \$	6,712.27 6,644.35 3,890.16		· · · · · · · · · · · · · · · · · · ·	\$ 210,581.00 \$ 220,581.00 \$ 243,484.00 \$ 243,484.00 \$ . \$ 243,484.00 \$ . \$ 243,484.00 \$ . \$ . \$ 243,484.00 \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ .	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 1,449.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 248,354.00 \$ 883,698.00 \$ 883,698.00 \$ 73,913.00
95 94 93 87 91 90	ROVIDENC	Credit for contracted or provided areas. Nextual Destination of the contractions payable WILLIAD DESTORMENT Genes for contractions payable Nextual Destinations and the contractions payable Credit for contractions payable MILLIAD DESTORMENT Credit for contractions or provided areas Credit for contractions or provided areas Credit for contractions of an opposide areas Nextual DESTORMENT Credit for contractions of an opposide areas Nextual Destorment Contractions of the contractions of an opposide Set A Athony Biobara	Lot 83 Wellard Rd (now Lot 90	7.7347				32 104 218 19 19		\$ \$ \$	6,712.27 6,644.35			\$ 210,581.00 \$ 210,581.00 \$ 210,581.00 \$ 243,484.00 \$ 243,484.00 \$ 243,484.00 \$ 243,484.00 \$ 243,484.00 \$ 266,371.00 \$ 72,464.00 \$ 72,464.	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 248,354.00 \$ 883,698.00 \$ 883,698.00 \$ 73,913.00
95 94 93 87 91 90	ROVIDENC	Crefit has exernenced a proposition association of a proposition association of a proposition of a propositi	Let 83 Wellard Rd (now Lot 90 Let 85 Wellard Rd (now Lot 90 Let 85 Wellard Rd (now Lot 90 Let 2 Johnson Rd Let 10 Johnson Rd	7.7347 15.1096 1.0321 0.6939				32 104 218 19 19	133	\$ \$ \$ \$	6,712.27 6,644.35 3,890.16 4,567.30			\$ 210,581.00 \$ 210,581.00 \$ 210,581.00 \$ 243,484.00 \$ 244,484.00 \$	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 1,449.00 \$ 896.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 83,698.00 \$ 83,698.00 \$ 73,913.00 \$ 73,913.00 \$ 73,913.00 \$ 45,673.00
95 94 93 87 91 90 89	ROVIDENCI	Credit for contracted or provided mess. Recardon Records and an annual control for an annual Credit for contracted or provided mess. Rec contribution payable Recard for contracted or provided mess. Recard for contracted or provided mess.	Lot 83 Wellard Rd (now Lot 50 Lot 85 Wellard Rd (now Lot 50 Lot 85 Wellard Rd (now Lot 50 Lot 2 Johnson Rd	7.7347 15.1096 1.0321				32 104 218 19 19 19 14 21	133	\$ \$ \$ \$	6,712.27 6,644.35 3,890.16			\$         210,581.00           \$         210,581.00           \$         210,581.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         244,774.00           \$         44,777.00           \$         44,3488.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 3,896.00 \$ 896.00 \$ 870.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 248,364.00 \$ 883,698.00 \$ 883,698.00 \$ 73,913.00 \$ 73,913.00 \$ 45,673.00 \$ 44,358.00
95 94 93 87 91 90 89	ROVIDENC	Credit to control to a provide asso- textual to strategy of a provide asso- textual to a provide assot- textual to a provide asso	Let 83 Wellard Rd (now Lot 90 Let 85 Wellard Rd (now Lot 90 Let 85 Wellard Rd (now Lot 90 Let 2 Johnson Rd Let 10 Johnson Rd	7.7347 15.1096 1.0321 0.6939				32 164 218 19 19 14 21 21 218	133	\$ \$ \$ \$ \$	6,712.27 6,644.35 3,890.16 4,567.30			\$         210,581.00           \$         210,581.00           \$         210,581.00           \$         243,484.00           \$         5           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         244,484.00           \$         72,484.00           \$         44,777.00           \$         43,488.00           \$         43,488.00           \$         43,488.00           \$         43,488.00           \$         5           \$         43,488.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 1,449.00 \$ 896.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$ 248,354.00 \$ 83,698.00 \$ 83,698.00 \$ 73,913.00 \$ 73,913.00 \$ 73,913.00 \$ 45,673.00
95 94 93 87 91 90 89 75, 81	ROVIDENC	Credit for control of a provided mess- terior and the second seco	Let B1 Wellard Rd (now Let 90 Let B1 Wellard Rd (now Let 90 Ed B3 Wellard Rd (now Let 90 Ed 12 Johnson Rd Let 10 Johnson Rd	7.7347 15.1096 1.0321 0.6939 0.8872				19 14 21	133 19 10 4	\$ \$ \$ \$ \$	6,712.27 6,644.35 3,890.16 4,567.30			\$         210,581.00           \$         -           \$         -           \$         210,581.00           \$         243,484.00           \$         -           \$         -           \$         864,371.00           \$         864,371.00           \$         72,464.00           \$         72,464.00           \$         72,464.00           \$         44,777.00           \$         44,777.00           \$         44,477.00           \$         44,388.00           \$         58,8197.00           \$         58,8197.00           \$         58,8197.00           \$         82,8197.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 1,449.00 \$ 1,449.00 \$ 896.00 \$ 896.00 \$ 870.00 \$ 1,680.00	\$ 214,793.00 \$ 214,793.00 \$ 244,154.00 \$ 244,154.00 \$ 883,698.00 \$ 883,698.00 \$ 73,913.00 \$ 73,913.00 \$ 45,673.00 \$ 45,673.00 \$ 44,358.00 \$ 95,667.00 \$ 95,667.00
95 94 93 87 91 90 89 89 75, 81- 84	ROVIDENC	Credit to control under a provided many Credit to control under a provided many Creation of the control under the control under Creation of the control under the control under Creation of the control under the control under the control under Creation of the control under the control under the control under Creation of the control under the control unde	Let B1 Wellard Rd (now Let 90 Let B1 Wellard Rd (now Let 90 Ed B3 Wellard Rd (now Let 90 Ed 12 Johnson Rd Let 10 Johnson Rd	7.7347 15.1096 1.0321 0.6939 0.8872				19 14 21	133 19 10 4	5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30			\$         210,581.00           \$         210,581.00           \$         210,581.00           \$         243,484.00           \$         5           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         243,484.00           \$         244,484.00           \$         72,484.00           \$         44,777.00           \$         43,488.00           \$         43,488.00           \$         43,488.00           \$         43,488.00           \$         5           \$         43,488.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,27.00 \$ 17,27.00 \$ 17,27.00 \$ 1,449.00 \$ 1,449.00 \$ 1,449.00 \$ 8,966.00 \$ 896.00 \$ 870.00	\$ 214,793.00 \$ 214,793.00 \$ 248,354.00 \$
95 94 93 87 91 90 89 89 75, 81, 84 85	ROVIDENCI	Credit for expension of a provided mass Calculation Exception of a provided mass Calculation Exception of the Calculation and Calculation Exception of the Calculation provided Calculation Exception of a provided mass Calculation and Calculation of a provided mass Calculation of a provided mass Calculat	Left E3 Wolfard Rd (now Let 50 Left E3 Wolfard Rd (now Let 50 Left E3 Wolfard Rd (now Let 50 Left E3 Johnson Rd Left E3 Johnson Rd Left E3 Johnson Rd Left E3 Johnson Rd	7.7347 15.1096 1.0321 0.6939 0.8872 18.3405				19 19 14 21 258	133 19 10 4 258	5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 11,089.50 2,308.79			5         21.0341.00           5	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,400.00 \$ 11,600.00 \$ 11,680.00 \$ 3,660.00 \$	5         214,793.00           5         214,793.00           244,334.00         248,334.00           5         248,334.00           5         348,344.00           5         348,344.00           5         348,344.00           5         348,344.00           5         348,344.00           5         348,344.00           5         348,354.00           5         44,354.00           5         344,354.00           5         344,354.00           5         344,354.00           5         344,354.00           5         344,354.00           6         512,436.53           5         541,245.53
95 94 93 87 91 90 89 89 89 75, 84 85	ROVIDENCI	Credit for expension of a provided mass. Control Networks and Control	Left E3 Wolfard Rd (now Let 50 Left E3 Wolfard Rd (now Let 50 Left E3 Wolfard Rd (now Let 50 Left E3 Johnson Rd Left E3 Johnson Rd Left E3 Johnson Rd Left E3 Johnson Rd	7.7347 15.1096 1.0321 0.6939 0.8872 18.3405				19 19 14 21 258	133 19 10 4 258	5 5 5 5 5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 11,089.50 2,308.79			5         210,941.00           5         5           5         3           1         210,941.00           5         243,4460.01           5         243,4460.01           5         243,4460.01           5         243,4460.01           5         243,4460.01           5         243,4460.01           5         340,4460.01           5         340,2460.01           5         440,770.00           5         440,770.00           5         343,870.00           5         344,970.00           5         344,970.00           5         343,870.00           5         344,970.00           5         344,970.00           5         344,970.00           5         344,970.00           5         344,970.00           5         340,911.00           5         340,911.00           5         340,911.00           6         340,911.00           7         340,911.00           8         440,911.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 895.00 \$ 895.00 \$ 870.00 \$ 11,680.00 \$ 11,680.00	\$ 214,793.00 214,793.00 \$ 244,354.00 \$ 244,354.00 \$ 883,698.00 \$ 883,698.00 \$ 73,913.00 \$ 73,913.00 \$ 44,358.00 \$ 44,358.00 \$ 5 95,667.00 \$ 5 9512,836.59
95 94 93 87 91 90 89 89 75, 81 84 85 80		Credit for caracterization of a provided mass. Credit for caracterization of a provided mass. Credit for caracterization of a provided mass. Credit for caracterization of a c	Left B1 Welter & Mr [more Left S0 Left B1 Welter & Mr [more Left S0 Left B1 Welter & Mr [more Left S0 Left B Johnson Md Left B Johnson Md Left B Johnson Md Left S08 Johnson Md	7.7347 15.1096 1.0321 0.6939 0.8872 18.3405 7.8464				19 19 14 21 258	133 19 10 4 258 120	5 5 5 5 5 5 5 5 5	6,712.27 6,544.35 3,890.16 4,557.30 11,089.50 2,308.79 3,657.65			S         712,0511,00           3         3           3         120,511,00           3         120,511,00           5         243,4440,00           5         243,4440,00           5         243,4440,00           5         243,4440,00           5         243,4440,00           5         243,4440,00           5         243,4440,00           5         243,4400,00           5         440,770,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         543,970,00           5         243,910,410           5         543,970,00           5         243,910,410           5         544,910,300           5         240,911,00           5         240,911,00           5         240,911,00           5         240,911,00     <	\$ 4,212.00 \$ 4,212.00 \$ 4,270.00 \$ 4,870.00 \$ 17,327.00 \$ 17,27.00 \$ 17,277.00 \$ 17,277.00 \$ 17,2870.00 \$ 17,489.00 \$ 17,489.00 \$ 17,489.00 \$ 17,489.00 \$ 18,660.00 \$ 11,680.00 \$ 11,680.00 \$ 18,660.00 \$ 10,000,00 \$ 10,000,000,000,00 \$ 10,000,000,000,000,000,000,000,000,000,	1         214,793.00           2         214,793.00           3         214,516.00           5         244,516.00           5         244,516.00           5         243,564.00           5         243,564.00           5         73,911.00           5         453,564.00           5         454,556.00           5         454,556.00           5         515,667.00           5         434,518.00           5         434,518.00           5         434,518.00           5         345,564.70           5         345,518.00
95 94 93 87 91 90 89 89 75, 81, 84 85 85	EULAS	Credit is capacitorial or propried asso- celled to capacitorial provided asso- ted to the capacitorial provided assot- ted to the capac	Left B1 Welter & Mr [more Left S0 Left B1 Welter & Mr [more Left S0 Left B1 Welter & Mr [more Left S0 Left B Johnson Md Left B Johnson Md Left B Johnson Md Left S08 Johnson Md	7.7347 15.1096 1.0321 0.6939 0.8872 18.3405 7.8464				19 19 14 21 258	133 19 10 4 258 120	5 5 5 5 5 5 5	6,712.27 6,544.35 3,890.16 4,557.30 11,089.50 2,308.79 3,657.65			5         212,0511.00           5         5           1         212,0511.00           2         212,454.00           5         242,444.00           5         242,444.00           5         242,444.00           5         242,444.00           5         242,444.00           5         442,740.00           5         442,740.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           5         442,770.00           6         442,740.00           7         5           6         442,740.00           7         442,740.00	\$ 4,212.00 \$ 4,212.00 \$ 4,870.00 \$ 4,870.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,480.00 \$ 3,886.00 \$ 880.00 \$ 880.00 \$ 880.00 \$ 11,680.00 \$ 11,680.00 \$ 88.606.00 \$ 88.606.00	5         214,793.00           5         214,793.00           5         214,793.00           5         244,594.00           5         244,594.00           5         244,594.00           5         244,594.00           5         244,594.00           5         244,594.00           5         73,913.00           5         445,594.00           5         445,596.00           5         445,586.00           5         448,158.00           5         448,158.00           5         448,158.00
95 94 93 87 91 90 89 75, 81- 88 85 80 73	BOLLARD BULBUSH KAST OF	Credit for expension of a provided mass. Credit for expension of a provided mass. Credit Control Con	Lef B1 Welter & Mc [now Let X and B1 Welter & Mc [now Let X B1 B1 Welter & Mc [now Let X B2 B1 Welter & Mc [now Let X B1 Welter & Mc [	7.3947 15.1096 0.6939 0.6939 0.8872 18.3405 7.8464 2.8469 3.39566				19 19 14 21 258	133 19 10 4 258 120 36	\$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 11,089.50 2,308.79 3,657.65 8,212.08 7,117.94			5 210,541.00 5 210,541.00 5 210,541.00 5 210,541.00 5 242,4440 5 242,4440 5 242,4440 5 242,4440 5 244,4400 5 244,44000 5 244,44000 5 244,44000 5 244,44000 5 244,	\$ 4,212.00 \$ 4,212.00 \$ 4,270.00 \$ 4,870.00 \$ 17,227.00 \$ 17,227.00 \$ 17,227.00 \$ 17,227.00 \$ 17,227.00 \$ 17,227.00 \$ 1,449.00 \$ 1,469.00 \$ 1,660.00 \$ 1,670.00 \$ 1,777.00 \$ 1,777.00	5 214/782-00 5 214/782-00 5 214/782-00 5 214/782-00 5 214/554-00 5 214/554-00 5 214/554-00 5 214/554-00 5 214/544-00 5 212/545-00 5 212/545-00 5 212/545-00 5 212/545-00 5 214/545-00 5
95 94 93 87 91 90 89 89 89 80 85 80 79	BOLLARD BULKING BULKINGH ELST OF	Credit is capacitorial or propried asso- celled to capacitorial provided asso- ted to the capacitorial provided assot- ted to the capac	Left E3 Welter & Rd (now Left SG Left E3 Welter & Rd (now Left SG Left E5 Welter & Rd (now Left SG Left E3 Welter & Rd (now Left SG Left E3 Welter & Rd Left E3 Johnson Rd	7,7347 15,1096 1,0321 0,6939 0,8872 18,3405 18,3405 2,8464				19 19 14 21 258	133 19 10 4 258 120 36	\$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 2,308.79 3,657.65 8,212.08			5         710,941,00           5         710,941,00           5         710,941,00           5         710,941,00           7         710,941,00           7         740,941,00           7         740,941,00           7         740,941,00           7         740,941,00           7         740,941,00           7         740,941,00           7         740,941,00           7         744,000	\$ 4,212.00 \$ 4,212.00 \$ 4,270.00 \$ 4,270.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 17,327.00 \$ 1,449.00 \$ 17,327.00 \$ 1,449.00 \$ 1,469.00 \$ 1,499.00 \$	5         214,793.00           5         214,793.00           5         214,1793.00           5         244,154.00           5         244,154.00           5         244,154.00           5         73,91.00           5         73,91.00           5         73,91.00           5         44,571.00           5         515,667.20           5         515,667.20           5         515,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20           5         255,667.20
95 94 93 97 91 90 89 75, 81 83 85 80 75 75	BOLLARD BULBUSH KAST OF	Credit for control of a provided many Control for control of a provided many Control for control of a provided many Control for control of a provided many WILLIAM SECIENTIA Control for control of the c	Let 13 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 12 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Let 16 Let 16 Let 16 Let 13 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 L	7.347 15.1096 0.6939 0.8872 0.8872 18.3405 2.8469 2.8469 3.9166 3.9166				19 19 14 21 258 258 258 258 258 258 258 258 258 258	133 19 10 10 10 4 4 4 255 255 255 255 255 255 255 255 2	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.33 3,890.16 4,567.30 7,308.79 3,657.65 8,212.08 7,117.94 6,391.02			5         210,941.00           5         210,941.00           5         310,941.00           6         310,941.00           7         310,941.00           3         86,971.00           3         86,971.00           3         86,971.00           5         7,944.00           5         7,944.00           5         7,944.00           5         7,944.00           5         7,944.00           5         7,944.00           5         7,944.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           5         4,0771.00           6	\$ 4,272.00 \$ 4,272.00 \$ 4,270.00 \$ 4,270.00 \$ 17,377.00 \$ 17,377.00 \$ 17,377.00 \$ 17,377.00 \$ 1,499.00 \$ 199.00 \$ 199.00 \$ 199.00 \$ 199.00 \$ 199.00 \$ 199.00 \$ 1,680.00 \$ 11,680.00 \$ 1,780.00 \$ 1,780.0	5 314,1782,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 345,146,00 5 345,
95 94 93 87 91 90 89 89 89 89 89 89 89 89 89 75, 84 85 80 79 72	BOLLARD BULBUSH KAST OF	Credit for control of a provided means (Credit for control of a provided means (Credit for control of the control of the control Credit for control of the control of th	Lef B1 Welter & Mc [now Let X and B1 Welter & Mc [now Let X B1 B1 Welter & Mc [now Let X B2 B1 Welter & Mc [now Let X B1 Welter & Mc [	7.3947 15.1096 0.6939 0.6939 0.8872 18.3405 7.8464 2.8469 3.39566				19 19 14 21 258	133 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 11,089.50 2,308.79 3,657.65 8,212.08 7,117.94			5         10.541.00           5         10.541.00           6         10.541.00           7         10.541.00           8         10.541.00           9         10.644.00           9         10.644.00           9         10.644.00           9         10.644.00           9         10.644.00           10         10.744.00	\$ 4,212,00 \$ 4,212,00 \$ 4,270,00 \$ 4,870,00 \$ 1,7427,00 \$ 1,7427,00 \$ 1,7427,00 \$ 1,7427,00 \$ 1,7427,00 \$ 1,7427,00 \$ 1,7440,00 \$ 1,440,00 \$ 1,460,00 \$ 1,660,00 \$ 3,5777,00 \$ 3,5777,00 \$ 3,7893,00 \$	5 314,1782,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 344,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 44,154,00 5 345,146,00 5 345,
95 94 93 87 91 90 89 89 89 85 80 75, 84 85 80 79 78	BOLLARD BULBUSH KAST OF	Credit for control of a provided many Control for control of a provided many Control for control of a provided many Control for control of a provided many WILLIAM SECIENTIA Control for control of the c	Let 13 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 12 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Let 16 Let 16 Let 16 Let 13 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 L	2.3367 15.1096 1.0321 0.6999 0.6999 18.3695 2.3696 2.3696 1.3495 2.3496 1.3495 2.3496 1.3495 2.3496 2.3496 2.3496 2.3496 2.3496 2.34977 2.34977 2.349777 2.349777777777777777777777777777777777777				19 19 14 21 258 258 258 258 258 258 258 258 258 258	133 19 10 10 10 4 4 4 255 255 255 255 255 255 255 255 2	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.35 3,890.16 4,567.30 2,306.79 3,657.65 8,212.08 7,117.94 6,391.02 6,391.02 6,391.19			5 210.541.00 5	5 4,212,00 4,212,00 5 4,212,00 5 4,272,00 5 17,272,00 5 17,272,00 5 17,272,00 5 13,249,00 5 14,492,00 5 14,492,00 5 14,492,00 5 14,492,00 5 14,00 5 14,00 5 14,00 5 14,00 5 15,272,00 5 14,00 5 15,272,00 5 14,00 5 15,272,00 5 5,272,00 5 5	5 214/782.00 5 214/782.00 7
95 94 93 87 91 90 89 89 89 89 89 89 89 75, 81 84 85 80 79 78 77 72	BOLLARD BULBUSH KAST OF	Credit for senarty under a provide many control of the provide many distribution and the provide many distribution of the provide many distribution of the distribution of the provide many distribution of the distribu	Let 13 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 15 Wellurd Ref (none Let 16 Let 12 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Jahnson Ref Let 13 Let 16 Let 16 Let 16 Let 13 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 Let 16 L	7.347 15.1096 0.6939 0.8872 0.8872 18.3405 2.8469 2.8469 3.9166 3.9166				19 19 14 21 258 258 258 258 258 258 258 258 258 258	133 19 10 10 10 4 4 4 255 255 255 255 255 255 255 255 2	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6,712.27 6,644.33 3,890.16 4,567.30 7,308.79 3,657.65 8,212.08 7,117.94 6,391.02			5 210.541.00 5	5         4.172.00           5         4.772.00           5         4.772.00           5         4.772.00           5         1.722.00           5         1.722.00           5         1.722.00           5         1.722.00           5         1.722.00           5         1.722.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.742.00           5         1.772.00           5         1.772.00           5         1.772.00           5         1.744.00           5         1.744.00	5 214/782.00 5 214/782.00 7
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Appendix 17 – Kwinana DCP Modelling Traffic Modelling Apportionment

# Kwinana DCP Modelling

Traffic Modelling Apportionment



Prepared for City of Kwinana

31 August 2018



Cardno'		Kwinana DCP Modelling Traffic Modelling Apportionment		
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www.cardno.com	Document Type	Report		
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	Date	31 August 2018		
	Revision Number	Rev G		
Author(s): Arun Mohan		s Wang Transport Planner		

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		Description of Revision	Prepared by:	Reviewed by:
A	18/8/2017	Draft for review	AM	AW
в	30/8/2017	Final	AM	AW / RC
С	14/9/2017	Final	AM	AW / RC
D	28/9/2017	Correction of lot yields and tables'	AM	AW
E	16/10/2017	Inclusion of peer review comments	AM	AW
F	7/11/2017	Minor changes to graphics	AM	AW
G	31/8/2018	Additional decimals in tables	AM	AW

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Kwinana DCP Modelling Traffic Modelling Apportionment

#### Summary

Cardno has been engaged by the City of Kwinana to prepare a report detailing the 2031 forecast traffic volumes for the following 3 transport infrastructure items included in the Bollard Bulrush Development Contribution Area (DCA):

- > Wellard Road;
- > Bertram Road; and
- > Sulphur Road Bridge;

The forecast demand for 2031 has been extracted from Cardno's SATURN model that covers the entire municipality of Kwinana. The model was developed utilising agreed and approved data from the City of Kwinana, Department of Planning and Main Roads WA (MRWA). The model has been calibrated and validated to industry standard and is considered to be a reasonable source of future traffic demand for the City.

Following the consultation with all stakeholders Revision B of this report, the development yield, access points, internal connectivity between BB1 and BB2 have been changed to reflect the feedback, which inturn impacts noticeably on the traffic assignment in the models. In addition, external traffic volumes have also been included in the apportionment tables.

The approximate proportion of development-generated traffic for each of the road analysed are summarised below:

- > Wellard Road (south of Bertram Road): 41.54%
- > Wellard Road (south of Cavendish Boulevard): 25.79%
- > Bertram Road (west of Challenger Avenue): 40.25%
- > Sulphur Road Bridge: 2.30%

2

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Kwinana DCP Modelling Traffic Modelling Apportionment

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Cardno has been engaged by the City of Kwinana to prepare a report detailing the 2031 forecast traffic demand volumes for the following 3 transport infrastructure items included in the Development Contribution Area (DCA):

- > Sulphur Road Bridge;
- > Wellard Road; and
- > Bertram Road.

Included in this report are the forecast proportional traffic demand volumes that have been determined for each of the infrastructure items for developments within the respective contribution catchment areas, as well as a summary of all data inputs and basis on which the traffic modelling has been undertaken.

The forecast demand for 2031 has been extracted from Cardno's SATURN model that covers the entire municipality of Kwinana. The model was developed utilising agreed and approved data from the City of Kwinana, Department of Planning and Main Roads WA (MRWA). The model has been calibrated and validated to industry standard and is considered to be a reasonable source of future traffic demand for the City.

The trip generation and distribution to/from utilised for this study for the development zones have been based on regression equations generated and included in the MRWA Regional Operations Model (ROM), which have been developed from Census and travel survey data.

The traffic volumes used as a basis for the apportionments for the road infrastructure items consist of a summation of AM peak and PM peak hour traffic volumes extracted from the model.

Technical information relating to model settings, free-flow speeds and road hierarchy can be found in Appendices A to D.

#### 1.1 Purpose of Report

The purpose of this report is to document the results from Select Link Analysis (SLA) undertaken for the 3 transport infrastructure items based on updated development yields provided by the City for the development areas within the DCA.



## 2 Modelling Inputs and Basis

The modelling allows for a total of 3,497 residential dwellings by 2031 as a result of the developments summarised in Table 2-1.

#### Table 2-1 2031 Dwelling Yields

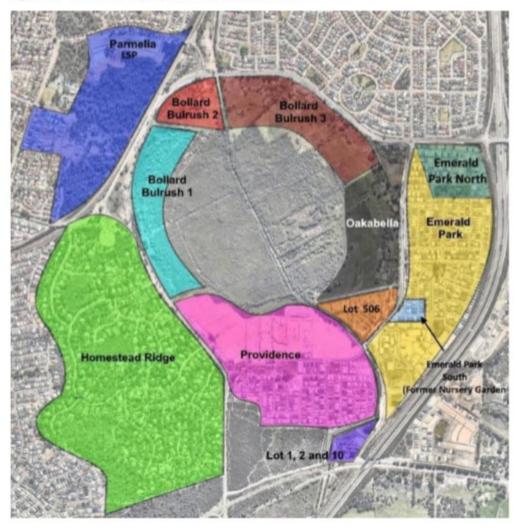
Development Area	Development Yields
Bollard Bulrush Area 1	171
Bollard Bulrush Area 2	198
Bollard Bulrush Area 3	445
Emerald Park Central	663
Emerald Park North	171
Emerald Park Garden Nursery Site	42
Providence	780
Parmelia LSP	438
Lots 1, 2 and 10	54
Oakabella Estate	415
Lot 508	120
TOTAL	3,497

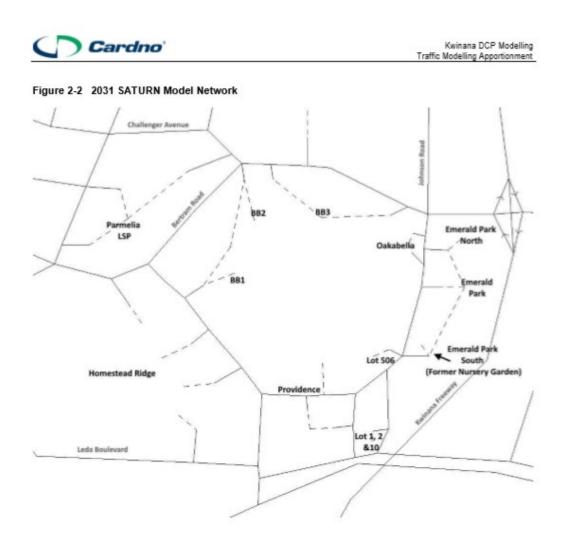
Additionally, the Homestead Ridge includes 336 dwellings within the study area.

The locations of the above developments are shown in Figure 2-1 while the SATURN model network is shown in Figure 2-2. Cardno'

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Figure 2-1 Location of Developments Included within DCP







## 3 Select Link Analysis

Select Link Analysis (SLA) is a function within the SATURN software which allows a traffic flow to be broken into proportions from each development/location, making it ideal for reasonably assessing developer contributions.

In order to determine the proportional use of each of the road infrastructure items, SLA's were undertaken for the SATURN 2031 AM and PM peak hour scenarios for each of the road infrastructure items.

#### 3.1 Wellard Road

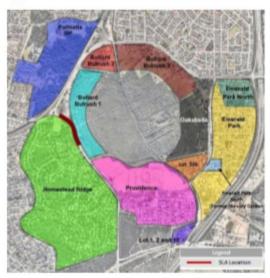
#### 3.1.1 Wellard Road, south of Bertram Road

The Wellard Road contribution catchment area and Select Link Analysis (SLA) location is outlined in red in Figure 3-1 and includes the following developments:

- > Bollard Bulrush 1;
- > Bollard Bulrush 2;
- > Bollard Bulrush 3;
- > Providence;
- > Emerald Park North;
- > Emerald Park;
- > Emerald Park South (Former Nursery Garden);
- > Parmelia LSP;
- > Lot 1, 2 and 10 Johnson Road;
- > Oakabella Estate;
- > Lot 506

In addition, the existing Homestead Ridge is also included within the contribution catchment for this item.

#### Figure 3-1 Wellard Road Contribution Catchment Area



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A summary of traffic on Wellard Road from the 2031 AM/PM peak hour models is provided in Table 3-1 below.

#### Table 3-1 Summary of 2031 Modelled Traffic on Wellard Road South of Bertram Road

	2031 AM Peak Hour		2031 PM Peak Hour		2031 AM + PM Peak Hour	
	Vehicles	Proportion	Vehicles	Proportion	Vehicles	Proportion
Traffic generated by developments within catchment area	662	41.79%	598	41.27%	1260	41.54%
Traffic not generated by developments within catchment area	922	58.21%	851	58.73%	1773	58.46%
Total	1584	100.00%	1449	100.00%	3033	100.00%

Table 3-2 and Table 3-3 summarise the SLA results for the traffic on Wellard Road North of Bollard Bulrush – 1 Access associated with the developments included in the contribution catchment area for the 2031AM peak hour and 2031 PM peak hour respectively. Table 3-4 summarises the combined 2031 AM and PM peak hour traffic volumes for the Wellard Road SLA.

#### Table 3-2 Summary of Traffic on Wellard Road south of Bertram Road Associated with Contribution Catchment Area for 2031 AM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	58	3.08%
Bollard Bulrush 2	40	2.53%
Bollard Bulrush 3	92	5.81%
Providence	223	14.08%
Emerald Park	61	3.85%
Emerald Park North	11	0.69%
Emerald Park South	5	0.32%
Parmelia LSP	13	0.82%
Homestead Ridge	134	8.46%
Lot 1, 2 and 10	7	0.44%
Oakabella Estate	2	0.13%
Lot 506	16	1.01%
Total Traffic from Developments	662	41.79%
External	922	58.21%
Total Wellard Road North	1584	100.00%

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Table 3-3 Summary of Traffic on Wellard Road south of Bertram Road Associated with Contribution Catchment Area for 2031 PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	86	5.94%
Bollard Bulrush 2	30	2.07%
Bollard Bulrush 3	61	4.21%
Providence	263	18.20%
Emerald Park	2	0.14%
Emerald Park North	0	0.00%
Emerald Park South	0	0.00%
Parmelia LSP	7	0.48%
Homestead Ridge	147	10.14%
Lot 1, 2 and 10	2	0.14%
Oakabella Estate	0	0.0%
Lot 506	0	0.0%
Total Traffic from Developments	598	41.27%
External	851	58.73%
Total Wellard Road North	1449	100.00%

#### Table 3-4 Summary of Traffic on Wellard Road south of Bertram Road Associated with Contribution Catchment Area for combined 2031 AM and PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	144	4.75%
Bollard Bulrush 2	70	2.31%
Bollard Bulrush 3	153	5.04%
Providence	486	18.02%
Emerald Park	63	2.08%
Emerald Park North	11	0.38%
Emerald Park South	5	0.18%
Parmelia LSP	20	0.68%
Homestead Ridge	281	9.26%
Lot 1, 2 and 10	9	0.30%
Oakabella Estate	2	0.07%
Lot 506	16	0.53%
Total Traffic from Developments	1260	41.54%
External	1773	58.46%
Total Wellard Road North	3033	100.00%

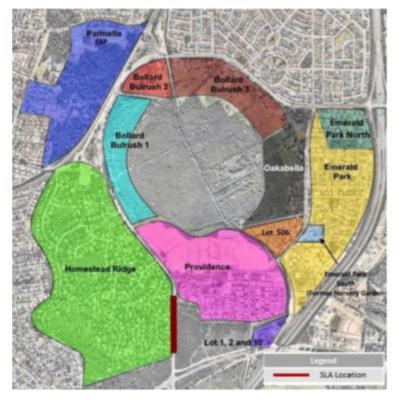


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3.1.2 Wellard Road South of Cavendish Boulevard

Figure 3-2 shows the SLA location in red of Wellard south of Cavendish Boulevard.

Figure 3-2 Wellard Road South of Cavendish Boulevard



A summary of traffic on Wellard Road from the 2031 AM/PM peak hour models is provided in Table 3-5 below.

Table 3-6 and Table 3-7 summarise the SLA results for the traffic on Wellard Road South of Cavendish associated with the developments included in the contribution catchment area for the 2031 AM peak hour and 2031 PM peak hour respectively. Table 3-8 summarises the combined 2031 AM and PM peak hour traffic volumes for the Wellard Road SLA.

Table 3-5	Summary of 2031 Modelled Traffic on Wellard Road South of Cavendish Boulevard
-----------	---

	2031 AM Peak Hour		2031 PM Peak Hour		2031 AM + PM Peak Hour	
	Vehicles	Proportion	Vehicles	Proportion	Vehicles	Proportion
Traffic generated by developments within catchment area	408	30.31%	217	20.15%	625	25.79%
Traffic not generated by developments within catchment area	938	69.69%	860	79.85%	1798	74.21%
Total	1346	100.00%	1077	100.00%	2423	100.00%



Table 3-6 Summary of Traffic on Wellard Road Associated with Contribution Catchment Area for 2031 AM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	30	2.23%
Bollard Bulrush 2	37	2.75%
Bollard Bulrush 3	86	6.39%
Providence	61	4.53%
Emerald Park	58	4.31%
Emerald Park North	11	0.82%
Emerald Park South	5	0.37%
Parmelia LSP	7	0.52%
Homestead Ridge	88	6.54%
Lot 1, 2 and 10	8	0.59%
Oakabella Estate	2	0.15%
Lot 506	15	1.11%
Total Traffic from Developments	408	30.31%
External	938	69.69%
Total Wellard Road North	1346	100.00%

# Table 3-7 Summary of Traffic on Wellard Road Associated with Contribution Catchment Area for 2031 PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	31	2.88%
Bollard Bulrush 2	27	2.51%
Bollard Bulrush 3	59	5.48%
Providence	87	8.08%
Emerald Park	0	0.00%
Emerald Park North	0	0.00%
Emerald Park South	0	0.00%
Parmelia LSP	4	0.37%
Homestead Ridge	7	0.65%
Lot 1, 2 and 10	2	0.19%
Oakabella Estate	0	0.00%
Lot 506	0	0.00%
Total Traffic from Developments	217	20.15%
External	860	79.85%
Total Wellard Road North	1077	100.00%

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Table 3-8 Summary of Traffic on Wellard Road Associated with Contribution Catchment Area for combined 2031 AM and PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	61	2.52%
Bollard Bulrush 2	64	2.64%
Bollard Bulrush 3	145	5.98%
Providence	148	6.11%
Emerald Park	58	2.39%
Emerald Park North	11	0.45%
Emerald Park South	5	0.21%
Parmelia LSP	11	0.45%
Homestead Ridge	95	3.92%
Lot 1, 2 and 10	10	0.41%
Oakabella Estate	2	0.08%
Lot 506	15	0.62%
Total Traffic from Developments	625	25.79%
External	1798	74.21%
Total Wellard Road North	2423	100.00%

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## 3.2 Bertram Road

## 3.2.1 Bertram Road – West of Challenger Avenue

The Bertram Road contribution catchment area and SLA location are outlined in red in Figure 3-3 and includes the following developments:

- > Bollard Bulrush 1;
- > Bollard Bulrush 2;
- > Bollard Bulrush 3;
- > Providence;
- > Emerald Park North;
- > Emerald Park;
- > Emerald Park South (Former Nursery Garden);
- > Parmelia LSP;
- > Lot 1, 2 and 10 Johnson Road;
- > Oakabella Estate;
- > Lot 506

In addition, the existing Homestead Ridge is also included within the contribution catchment for this item.

Figure 3-3 Bertram Road (West of Challenger Avenue) Contribution Catchment Area and SLA location



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Kwinana DCP Modelling Traffic Modelling Apportionment

A summary of traffic on Bertram Road West of Challenger Avenue from the 2031 AM/PM peak hour models is provided in Table 3-9 below.

Table 3-9	Summary of 2031 Modelled	Traffic on Bertram Road West of Challenger Avenue
-----------	--------------------------	---

	2031 AM Peak Hour		2031 PM Peak Hour		2031 AM + PM Peak Hou	
		Proportion		Proportion	Vehicles	Proportion
Traffic generated by developments within catchment area	392	39.88%	423	40.25%	815	40.07%
Traffic not generated by developments within catchment area	591	60.12%	628	59.75%	1219	59.93%
Total	983	100.00%	1051	100.00%	2034	100.009

Table 3-10 and Table 3-11 summarise the SLA results for the traffic on Bertram Road west of Challenger Avenue associated with the developments included in the contribution catchment area for the 2031 AM peak hour and 2031 PM peak hour respectively. Table 3-12 summarises the combined 2031 AM and PM peak hour traffic volumes for the Bertram Road SLA.

#### Table 3-10 Summary of Traffic on Bertram Road West of Challenger Avenue Associated with Contribution Catchment Area for 2031 AM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	22	2.24%
Bollard Bulrush 2	65	6.61%
Bollard Bulrush 3	149	15.18%
Providence	32	3.28%
Emerald Park	59	6.00%
Emerald Park North	14	1.42%
Emerald Park South	0	0.00%
Parmelia LSP	0	0.00%
Homestead Ridge	50	5.09%
Lot 1, 2 and 10	0	0.00%
Oakabella Estate	1	0.10%
Lot 506	0	0.00%
Total Traffic from Developments	392	39.88%
External	591	60.12%
Total Wellard Road North	983	100.00%



Table 3-11 Summary of Traffic on Bertram Road West of Challenger Avenue Access Associated with Contribution Catchment Area for 2031 PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	21	2.00%
Bollard Bulrush 2	42	4.00%
Bollard Bulrush 3	163	15.51%
Providence	2	0.19%
Emerald Park	116	11.04%
Emerald Park North	32	3.04%
Emerald Park South	8	0.78%
Parmelia LSP	0	0.00%
Homestead Ridge	18	1.71%
Lot 1, 2 and 10	0	0.00%
Oakabella Estate	11	1.05%
Lot 506	10	0.95%
Total Traffic from Developments	423	40.25%
External	628	59.75%
Total Wellard Road North	1051	100.00%

#### Table 3-12 Summary of Traffic on Bertram Road West of Challenger Avenue Associated with Contribution Catchment Area for Combined 2031 AM and PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	43	2.11%
Bollard Bulrush 2	107	5.28%
Bollard Bulrush 3	312	15.34%
Providence	34	1.67%
Emerald Park	175	8.60%
Emerald Park North	48	2.28%
Emerald Park South	8	0.39%
Parmelia LSP	0	0.00%
Homestead Ridge	68	3.34%
Lot 1, 2 and 10	0	0.00%
Oakabella Estate	12	0.59%
Lot 508	10	0.49%
Total Traffic from Developments	815	40.07%
External	1219	59.93%
Total Wellard Road North	2034	100.00%



## 3.3 Sulphur Road Bridge

The Sulphur Road Bridge SLA location is shown as a red circle in Figure 3-4 while the Sulphur Road Bridge related to the contribution catchment area is outlined below.

- > Bollard Bulrush 1;
- > Bollard Bulrush 2;
- > Bollard Bulrush 3;
- > Providence;
- > Emerald Park North;
- > Emerald Park;
- > Emerald Park South (Former Nursery Garden);
- > Parmelia LSP;
- > Lot 1, 2 and 10 Johnson Road;
- > Oakabella Estate;
- > Lot 506;
- > Homestead Ridge

#### Figure 3-4 Sulphur Road Bridge – SLA Location



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A summary of traffic on Sulphur Road Bridge from the 2031 AM/PM peak hour models is provided in Table 3-13 below. It can be seen that only a small proportion of trips from the developments within the DCP area are likely to utilise this route as more convenient east-west links exist for these developments.

Table 3-13 Summary of 2031 Modelled Traffic on Sulphur Road Bridge

able 5-15 Sullina	19 01 2031 1		s on Sulbun	Road Dridge				
	2031 A	M Peak Hour	2031 PI	M Peak Hour	2031 AM + PM Peak Hour			
	Vehicles	Proportion	Vehicles	Proportion	Vehicles	Proportion		
Traffic generated by developments within catchment area	8	2.56%	13	2.16%	21	2.30%		
Traffic not generated by developments within catchment area	305	97.44%	589	97.84%	894	97.70%		
Total	313	100.00%	602	100.00%	915	100.00%		

Table 3-14 and Table 3-15 summarise the SLA results for the traffic on Sulphur Road Bridge associated with the developments included in the contribution catchment area for the 2031 AM peak hour and 2031 PM peak hour respectively. Table 3-16 summarises the combined 2031 AM and PM peak hour traffic volumes for the Sulphur Road Bridge SLA. It is noted that the modelled traffic volumes on the Sulphur Road Bridge associated with the contribution catchment is considered negligible when compared to the overall traffic volumes.

Table 3-14 Summary of Traffic on Sulphur Road Bridge Associated with Contribution Catche	nent Area
for 2031 AM Peak Hour	

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area				
Bollard Bulrush 1	0	0.00%				
Bollard Bulrush 2	1	0.32%				
Bollard Bulrush 3	1	0.32%				
Providence	0	0.00%				
Emerald Park	4	1.28%				
Emerald Park North	1	0.32%				
Emerald Park South	0	0.00%				
Parmelia LSP	1	0.32%				
Homestead Ridge	0	0.00%				
Lot 1, 2 and 10	0	0.00%				
Oakabella Estate	0	0.00%				
Lot 506	0	0.00%				
Total Traffic from Developments	8	2.56%				
External	305	97.44%				
Total Wellard Road North	313	100.00%				



Table 3-15 Summary of Traffic on Sulphur Road Bridge Associated with Contribution Catchment Area for 2031 PM Peak Hour

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area				
Bollard Bulrush 1	9	1.50%				
Bollard Bulrush 2	0	0.00%				
Bollard Bulrush 3	0	0.00%				
Providence	0	0.00%				
Emerald Park	3	0.50%				
Emerald Park North	0	0.00%				
Emerald Park South	0	0.00%				
Parmelia LSP	1	0.17%				
Homestead Ridge	0	0.00%				
Lot 1, 2 and 10	0	0.00%				
Oakabella Estate	0	0.00%				
Lot 506	0	0.00%				
Total Traffic from Developments	13	2.16%				
External	589	97.84%				
Total Wellard Road North	602	100.00%				

#### Table 3-16 Summary of Traffic on Sulphur Road Bridge Associated with Contribution Catchment Area for Combined 2031 AM and PM Peak Hours

Development	# Vehicles Associated with Contribution Catchment Area	Proportional Traffic Associated with Contribution Catchment Area
Bollard Bulrush 1	9	0.98%
Bollard Bulrush 2	1	0.11%
Bollard Bulrush 3	1	0.11%
Providence	0	0.00%
Emerald Park	7	0.77%
Emerald Park North	1	0.11%
Emerald Park South	0	0.00%
Parmelia LSP	2	0.22%
Homestead Ridge	0	0.00%
Lot 1, 2 and 10	0	0.00%
Oakabella Estate	0	0.00%
Lot 506	0	0.00%
Total Traffic from Developments	21	2.30%
External	894	97.70%
Total Wellard Road North	915	100.00%



## 4 References

Akcelik, R, 2000. On the Validity of Some Traffic Engineering Folklore, December 6-8, 2000: 22<sup>nd</sup> Conference of Australian Institutes of Transport Research (CAITR 2000), Canberra, ACT

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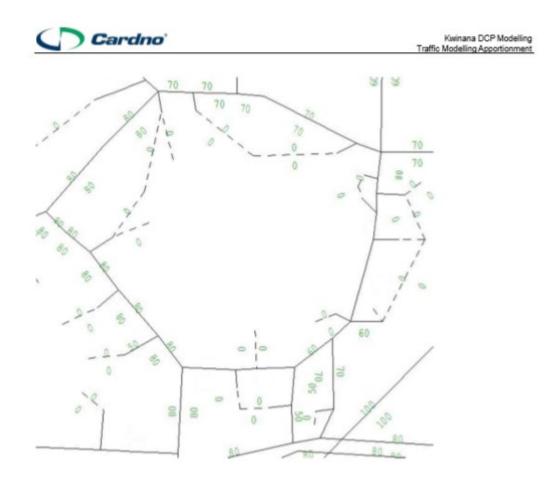
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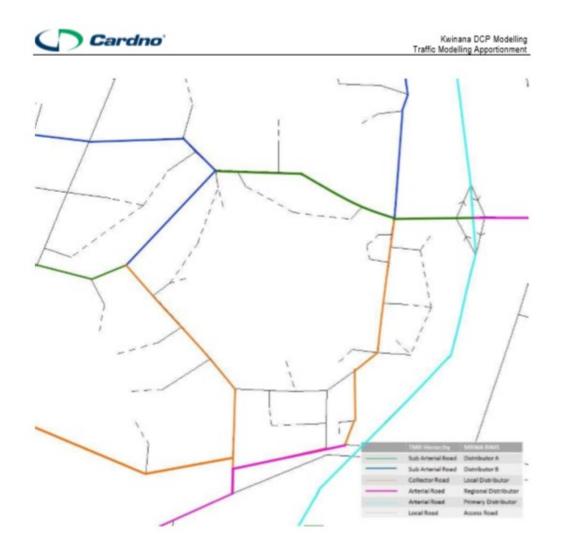




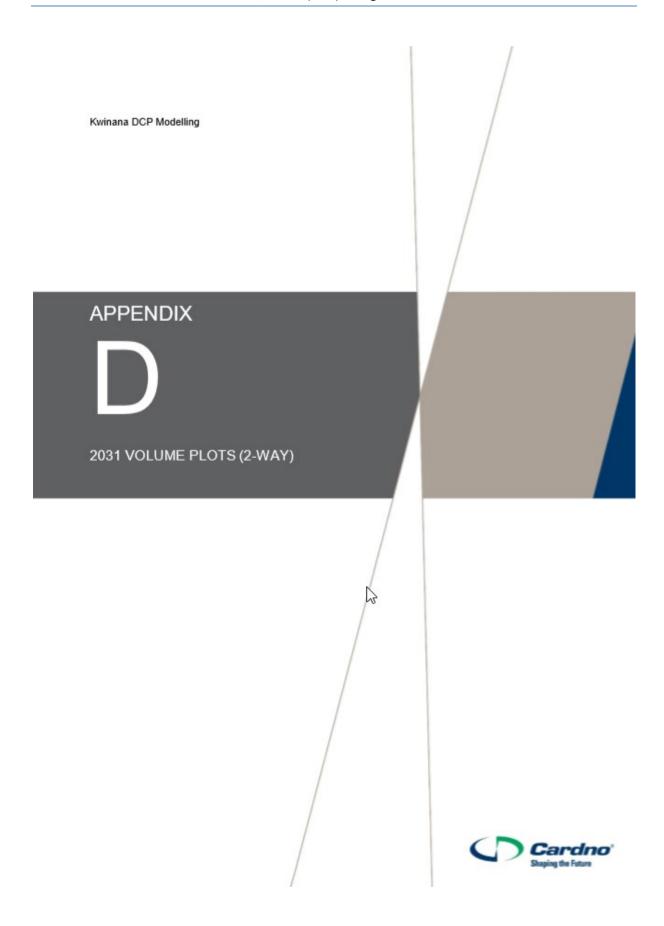
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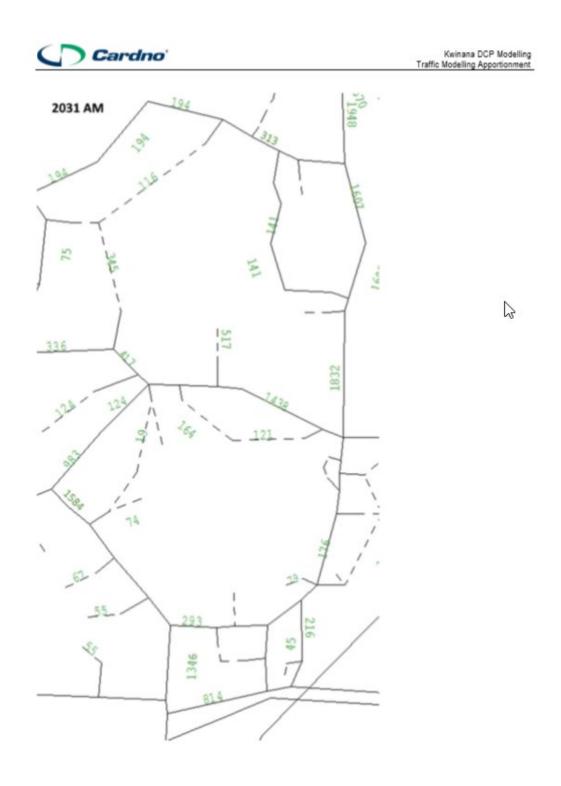




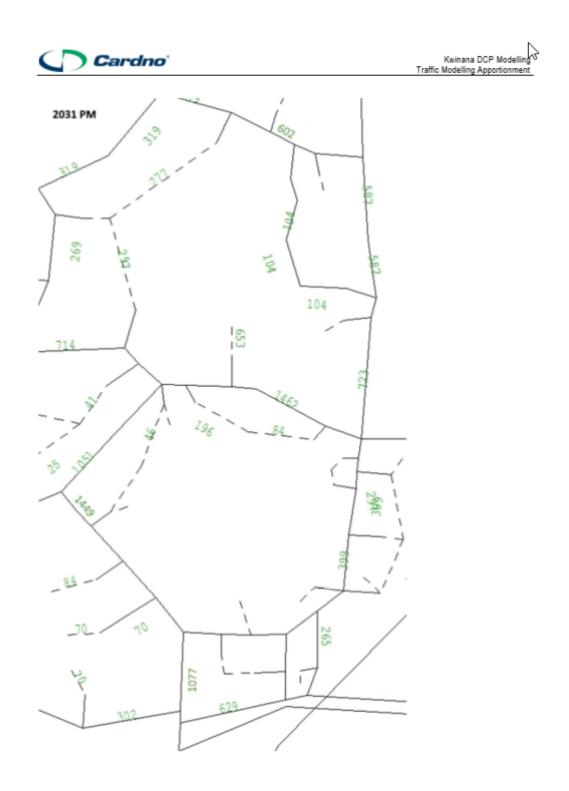








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## About Cardno

Cardno is a professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

## Contact

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Description	# Ref in Amd 87 & 91	ltem Ref A132	A132 Calculation	Land Valuation	Landscaping/ Improvements	Drains	Paths	Underground Power Lines was item 2.3.2	Road Construction	Actual Interest Cost	Street Trees	Total	Actual Costs incurred by the City	Actual Costs incurred by the Developer	Grant Funded	Estimate Cost of future works by the City	Estimate Cost of future works by the Developer	Total	Status
Sulphur Road Bridge over railway	2.1	A	Estimated lot yield within catchment A	-	-	-	-	-	1,914,745.00	-	-	1,914,745.00	1,914,745.00	-	-	-	-	1,914,745.00	Completed
Stormwater Management Infrastructure (formally Nutrient Stripping Basin) on the Peel Main Drain north of Bertram Road	2.2.1.1	в	Estimated lot yield within catchment B, D1, E, F, I - (ref 1 - 23 DCA87)	78,400.00	-	401,721.00	_	-	-	-	-	480,121.00	129,351.00	78,400.00	-	272,370.00	-	480,121.00	Partial works completed
Stormwater Management Infrastructure (formally Nutrient Stripping Basin Feature)	2.2.1.2	В	Estimated lot yield within catchment B, D1, E, F, I - (ref 1 - 23 DCA87)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Completed
Upgrades to Bertram Road - Johnson Rd to Challenge Rd	r 2.2.2a	С	actual/estimate lot yield catchment C -All DCA 1 (A87,91,132) except 32,33	-	-	-	47,867.00	-	1,671,133.00	-	-	1,719,000.00	1,719,000.00	-	-	-	-	1,719,000.00	Completed
Upgrades to Mortimer Road - Johnson Rd to Freeway	2.2.2b	с	actual/estimate lot yield catchment C -All DCA 1 (A87,91,132) except 32,33	-	17,989.00	-	33,072.00	60,050.00	508,834.00	-	-	619,945.00	619,945.00	-	-	-	-	619,945.00	Completed
Johnson Road Upgrade - North of Peel Lateral Drain to Holden Close - western side	2.2.3.1	D	100% costs of lots on western side of Johnson north of Peel Lateral Drain based on lot yields within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-	-		-	-	-	-		-	-	-	-	-	-	Completed
Johnson Road Upgrade - North of Peel Lateral Drain to Holden Close - eastern side	2.2.3.2	D	100% costs landowners based on frontage on catchment D2	-	-	-	-	-	28,562.00	-	-	28,562.00	28,562.00	-	-	-	-	28,562.00	Completed
Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - both sides	2.2.4.1	E	100% costs based on frontage within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-	-	-	-	16,518.00	-	-	16,518.00	16,518.00	-	-	-	-	16,518.00	Completed
Johnson Road Upgrade - South of Peel Lateral Drain to Bertram Road - roundabouts (2)	2.2.4.2	E	100% costs based on lot yield within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-	-		-	165,018.00	-	-	165,018.00	165,018.00	-	-	-	-	165,018.00	Completed
Dual Use Path on eastern side Johnson Road - North of Peel Lateral Drain to Holden Close	2.2.5	F	100% costs based on lot yield within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-			-	-	-	-		-	-	-		-		Completed
Dual Use Path on eastern side Johnson Road - South of Peel Lateral Drain to Bertram Road	2.2.6	F	100% costs based on lot yield within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Completed
Construction of a Road linkage across the Parks and Recreation Reserves in Bertram - Price Parkway Road	2.2.7	I	100% costs based on lot yield within catchment B, D1, E, F, I (ref 1 -23 DCA87)	-	-	-	-	-	392,695.00	-	-	392,695.00		392,695.00	-	-	-	392,695.00	Completed
Upgrade of Johnson Road south of Bertram Road and North of Millar Road	2.3.1	Separated into G,H & L	refer to G,H&L	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	
Undergrounding existing overhead power lines on both sides of Johnson Road south of Bertram Road and north of Millar Road and south side of Mortimer Road between Johnson Road and Freeway	2.3.2	Included in G and H	refer to G&H	-	-	-	-	-	-	-	-		-	0	-	-	-	-	
Johnson Road construction - South of Johnson Rd culvert crossing over west side Peel Main Drain to Millar Road - The DCP item is the difference between a Neighbourhood Connector A and an Access Street E (WAPC Liveable Neighbourhoods)		н	100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	103,194.00	15,068.00	-	-	-	115,573.00	-	-	233,835.00	-	233,835.00	-	-	-	233,835.00	Completed
Johnson Road, Upgrade - South Bertram Road to western edge Johnson Road culvert crossing over eastern side of Peel Main Drain	n/a	G	100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	0	904,513.00	-	-	-	1,912,610.00	-	-	2,817,123.00	-	2,817,123.00	-	-	-	2,817,123.00	Completed
Johnson Road new culvert and road crossing over Peel Main Drain	2.3.1	L	100% costs - actual/estimate lot yield within catchment G,H &L - 24-31 + new area up to lot 501 & 167	-	24,361.00	-	-	-	1,383,231.00	-	-	1,407,592.00	-	1,405,408.00	-		2,184.00	1,407,592.00	Completed
Bertram Road - Challenger Ave to Wellard Road	n/a	к	40.0690%	\$44,688.00	202,591.00	-	-	-	4,202,000.00	-	-	4,449,279.00	-	-	-	2,666,497.00	1,782,782.00	4,449,279.00	Not commenced
Wellard Road - Bertram Road to Cavandish Boulevard	d n/a	1	41.4882%	\$1,954,512.00	1,321,290.00	-	-	-	9,959,680.00	-	-	13,235,482.00	-	-	-	7,744,319.00	5,491,163.00	13,235,482.00	Not commenced
Wellard Road - Cavandish Boulevard to Millar Road	n/a	1	25.7945%	\$1,054,627.00	743,226.00	-	-	-	5,602,320.00	-	-	7,400,173.00	-	-	-	5,491,335.00	1,908,838.00	7,400,173.00	Not commenced
New road culvert and road crossing over the Peel Main Drain linking L661 and L670 Bertram Rd	n/a	М	actual/estimate lot yield catchment M -Lots 500,670,680,661,69-71	-	-	689,000.00	-	-	-	-	-	689,000.00	-	-	-	-	689,000.00	689,000.00	commenced
				3,235,421.00	3,229,038.00	1,090,721.00	80,939.00	60,050.00	27,872,919.00	-	-	35,569,088.00	4,593,139.00	4,927,461.00	-	16,174,521.00		35,569,088.00 Total Infrastructure	

	Amendment 87 & 91 Costing Original Los Area developed Total land size Area to (hectares) be Difference % ORIGINAL										PAY	MENTS	Total Liability before Admin Fee	Plus Administration	Total Liability
													Admin Fee	Fee A132	
Re	Ref Location Property Ow	Property Owner	Lot Details	Original Lot	Area developed before 22 October			Difference (should be		A132 Lot Liability	Date Paid	Amount			
	Locution	rioperty owner	Lot betalls	size (hectares)	2003	between	d from 27		DEVELOPED	Prior Europhicy	Duteruid	Anount			
						22/10/03 and	June 2012								
												dment 87 Costing			
	_		Tota	271.73	37.40	166.77	67.56					\$ 2,604,828.96	2,658,468.97		
					Less 32 and 33	156.60	58.60	215.1941	Differe	nce between GL & p	ayments in CAS	55,456.01			
					1-23 land	134.8754	23.0369	157.9123		SU	M OF BALANCE	55,456.01	\$ 19,666,937.00	Total Liability of	Developers for Infrastru
					9-23 land	97.7075	4.6888	102.3963			Check	0.00	\$ 2,658,468.97	Total Payments a	and Credits from A87&A
					24-31 land	21.721	35.5608	57.2818	INTEREST FOR I		DCA1 PRE A132 32,107.44		\$ 32,107.40	Total Interest	
					check	0.0000	-			Less City Contri	tributions for A87 362,695.81		\$ 362,695.81	1 Total City Cash Contribution	
													16,613,664.82	Amount to apply	to A132

			AMENDMENT 132		% remaini lot to t develo d	IN TRAFFIC	LOT YIELD	Lot Liability	Date Paid	Amount	Total Llability	Administration Costs 2.00% 332,270.64	Total Liability
	EAST	DEPT OF HOUSING & WORKS - WINDSOR HILL	1. ORELIA - VACANT A132				57	\$ 1,772.50		101.032.30	\$ 99,051.30	\$ 1,981.00	\$ 101,032.30
32 - A87	ORELIA (VACANT)	Lot E6 Durrant	(57 lots created already - 2 ye	4.5109			57	101,032.30	31/08/2019		\$ 99,051.30	1,981.00	\$ 101,032.30
24 - A91		ARDP PTY LTD	Lot 1 Mortimer Road A132				53			168,439.97	\$ 165,137.23		168,439.97
		ARDP PTY LTD Lot 500 Mortimer Rd, Wellard	Lot 21 Mortimer Road A132	4.1270 4.1270	100.0	0% 67	66		21/10/2011	209,524.77 128,492.02	\$ 205,416.45	\$ 4,108.33	\$ 209,524.78
25- A91		Lot 901 Mortimer Rd, Wellard Lot 21 Mortimer							27/04/2012 30/08/2012 31/08/2019 31/08/2019 INTEREST	228,604.37 214,189.95 - 373,867.49 2,556.97 9,548.95	\$ 228,604.37 \$ 214,189.95 -\$ 373,867.49 \$ 2,556.97 \$ 9,548.95		
											\$ -\$ 4,108.33	\$ 4,108.33	\$ 0.00
		ARDP PTY LTD	Part Lot 22 Mortimer Road A	2.5500	100.0	0% 50	50	\$ 3,160.76		158,037.76	\$ 154,938.98	\$ 3,098.78	\$ 158,037.76
26 - A91		Gross contribution paid L22 Insert Invoice number and developer and stage		2.5500			50	\$ 158,037.76	31/08/2019 31/08/2019	156,100.66 1,937.10	\$ 156,100.66 \$ 1,937.10		
A91		Insert Invoice number and developer and stage Insert Invoice number and developer and stage Credits for constructed or provided items	2						51/08/2019	1,937.10	\$ 1,937.10 \$ - \$ -		
			Part Lot 22 Mortimer Road A Part Lot 8 Johnson Road A132		64.1	5% 223	223	\$ 3,295.79		- 1,636,553.87	\$ 3,098.78 \$ 720,550.56		
		Gross contribution paid Stage 4 Phase 2					17	\$ 56,028.46	08/11/2013	566,754.24	\$ 566,754.24		
		Stage 4F Phase 1 Stage 4F Phase 2					18	\$ 13,183.17	23/06/2015	174,385.92 283,377.12	\$ 174,385.92 \$ 283,377.12		
27 - A91		Stage 4F Phase 3 Stage 4F Phase 4					7 18 46	\$ 23,070.54 \$ 59,324.25 \$ 151,606.42	20/05/2019	- 542,217.70	\$		
A91		Stage 5A& 5B Stage 5C& 5D Stage 5E					40	\$ 131,831.67 \$ 59,324.25	31/08/2019 31/08/2019	- 2,127,492.91 8,639.46	\$ 2,127,492.91 \$ 8,639.46		
	EMERALD PARK	Stage 3D Stage 7					3	\$ 9,887.38			\$ - \$ -		
	NORTH	Credits for constructed or provided items Net contribution payable	Part Lot 8 Johnson Road A132								\$ 2,371,515.44 -\$ 14,411.01	\$ 14,411.01	-\$ 0.00
		CEDAR WOODS Gross contribution paid	Part Lot 65 Jacobs Place A132	0.9032	11.7	2% 17		\$ 3,295.76		56,027.86	\$ 54,929.27	\$ 1,098.59	\$ 56,027.86
29 - A91		Stage 2B Stage 2B					17	\$ - \$ 56,027.86	31/08/2019 31/08/2019	55,369.24 658.62	\$ 55,369.24 \$ 658.62		
			Part Lot 65 Jacobs Place A132		10.1	~		¢ 4135.35		10 500 00	\$ 1,098.59		
30 -		WELLARD FAMILY PTY LTD Gross contribution paid Invoice 58265	Lot 800 Ivory Way - Lot 155 Jo	0.1827	10.1	570 5		\$ 4,125.25 \$ 16,500.99	13/12/2019	16,500.99 16,500.99	\$ 16,177.44 \$ 16,500.99	\$ 323.55	\$ 16,500.99
A91		Credits for constructed or provided items	Lot 800 Ivory Way - Lot 155 Jo	ohnson Road							\$ - -\$ 323.55	\$ 323.55	\$ 0.00
		GRADEWEST	Lot 155 Johnson Road A132	1.6173	89.8	5% 37	37	\$ 3,229.89		119,506.05	\$ 117,162.79	\$ 2,343.26	\$ 119,506.05
		Gross contribution paid Lot 155 DP 143820 -		1.8000	100.0	22		\$ 71,057.65	16/06/2014	42,808.72	\$ 42,808.72		
30 - A91		Lot 9508 DP 402050- 0.8015ha				15	5 15	\$ 48,448.40	03/07/2014 31/08/2019	90,552.28	\$ 90,552.28 -\$ 15,288.41		
		INTEREST UP UNTIL 30/6/2018 Credits for constructed or provided items							31/08/2019 INTEREST	1,433.46	\$ 1,433.46 \$ -		
			Lot 155 Johnson Road A132								-\$ 2,343.26	\$ 2,343.26	-\$ 0.00
		CEDAR WOODS Gross contribution paid	Part Lot 87 Johnson A132	10.8886	79.0	3% 144	144	\$ 3,295.76		474,589.78	\$ 465,284.10	\$ 9,305.68	\$ 474,589.78
31 - A91		stage 3C stage 6					15	\$ 49,436.44 \$ 425,153.35	31/08/2019 31/08/2019	469,010.94 5,578.84	\$ 469,010.94 \$ 5,578.84		
		Credits for constructed or provided items Net contribution payable	Part Lot 87 Johnson A132								\$ - -\$ 9,305.68		\$ 0.00
	PARMELIA	Stage 9B	LOT 9237 Parmelia Ave CASSI	A RISE		438		\$ 4,243.84	17/07/2019 31/08/2019	88,978.24 4,243.84 81,164.01	\$ 87,233.62 \$ 4,160.63 \$ 83,072.99	\$ 83.21	\$ 88,978.24 4,243.84 84,734.40
	PARMELIA	L9237 Net contribution paid					155	\$ 84,734.40	31/08/2019	3,570.39	\$ 83,072.99	\$ 1,661.41	84,734.40
			Homestead Ridge & Emerald	Park		615	615	\$ 2,702.77		1,662,205.99	\$ 1,629,613.72	\$ 32,592.27	\$ 1,662,205.99
		Homestead Ridge City of Kwinana Contribution For Emerald Park	Stage 1-4 (Phase 1) for only th	e new A132 infrastructure items		336		908,132 754,074	21/10/2011	16,340.64	\$ - \$ 16,340.64		
	HOMESTEA D RIDGE								27/04/2012 30/08/2012	18,723.65 5,787.31	\$ 18,723.65 \$ 5,787.31		
									07/11/2012 15/08/2019	25,434.05 - 84,012.48 1.679.932.82	\$ 25,434.05 -\$ 84,012.48		
		Credits for constructed or provided items Net contribution payable							15/08/2019	1,679,932.82	\$ 1,679,932.82 \$ - \$ 32,592.27		-\$ 0.00
			Lot 83 Wellard Rd (now Lot 9	7.7347		104	67	\$ 5,883.70		394,207.73	\$ 386,479.74		
		Stage 9A Insert Invoice number and developer and stage					19	\$ 90,166.82 \$	25/06/2015	1.00 1.00	\$ 1.00 \$ 1.00		
93		Insert Invoice number and developer and stage Insert Invoice number and developer and stage	e					\$ - \$ -	31/08/2019 31/08/2019	89,428.73 736.09	\$ 89,428.73 \$ 736.09		
		Insert Invoice number and developer and stage Invoice 57519 Stage 10 (Lot 9025) Providence Ectate Stage 11	e Invoice 62458				6	\$ - \$ 28,473.73 \$ 124,661.34	INTEREST 24/10/2019 9/10/2020	- 28,473.73 124,661.34	ə -		
		Providence Estate Stage 11 Providence Estate Stage 12 WELLARD RESIDENTIAL	Invoice 62458 Invoice 62457 Lot 85 Wellard Rd (now Lot 9	15.1096		218	23	\$ 150,905.83	9/10/2020	124,661.34 150,905.83 - 1,316,450.51	\$ 28,473.73 \$ 402,839.48	\$ 8,051.01	\$ 410,890.49
		Gross contribution paid Stage 5					38	\$ 179,469.41	23/09/2016	165,468.22	\$ 165,468.22		
87		Stage 6A Stage 9A					6 19		31/08/2019 31/08/2019	- 1,409,847.23 - 185,420.60	-\$ 1,409,847.23 -\$ 185,420.60		
		Invoice 57520 Stage 10 (lot 9026) Credits for constructed or provided items					24	\$ 113,349.10	24/10/2019	113,349.10	\$ 113,349.10 \$ 1,727,341.00		
	PROVIDENC	WELLARD RESIDENTIAL Gross contribution paid	Lot 1278 Wellard Rd	14.9276		177	179	\$ 4,717.72		394,191.92	\$ 827,913.65 \$ 394,191.92	\$ 16,558.27	\$ 844,471.92
		Gross contribution paid Stage 1 Stage 2				-	53	\$ 250,039.17 \$ 136,813.89	31/08/2019 31/08/2019	398,158.99 - 3,967.07	\$ 394,191.92 \$ 398,158.99 -\$ 3,967.07		
92		Stage 3 Stage 4					34 34	\$ 160,402.49 \$ 160,402.49			\$ - \$ -		
		Stage 6B Stage 7B					26 3	\$ 122,660.73 \$ 14,153.16			\$ - \$ -		-
		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 92 Wellard Rd	11.9531		195	197	\$ 4,720.26		929.891.68	\$ 450,280.00 -\$ 16,558.27 \$ 911,658.51		\$ 0.00 \$ 929.891.68
		Gross contribution paid Stage 2	LOC 32 Weilard Kd	11.9531		780		\$ 4,720.26	31/08/2019	929,891.68	\$ 911,658.51 \$ 929,891.68 \$ 922,259.51	⇒ 18,233.17	ə 929,891.68
		Stage 2 Stage 4 Stage 5					10 13	47,203	31/08/2019	7,632.17	\$ 922,239.51 \$ 7,632.17 \$ -		
88		Stage 6A Stage 6B					56 15	264,335 70,804			\$ - \$ -		
		Stage 7A Stage 7B					51 44	240,733 207,692			\$ - \$ -		
		Credits for constructed or provided items Net contribution payable							453 lots as at 1		\$ -\$ 18,233.17		\$ 0.00
~		Amanda Rogers Stage 1	Lot 10 Johnson Rd	0.6939		14	4	\$ 4,075.02	7/02/2019	16,300.06 15,334.86	\$ 15,980.06	\$ 319.60	\$ 16,299.66
90		Finalisation of CAS - not paid yet Finalisation of CAS - not paid yet							31/08/2019 31/08/2019	810.23 154.97			
		Anthony R Eddleston Stage 1	Lot 1 Johnson Rd	0.8872		21	1 <b>17</b>	\$ 4,549.66 64,521	7/02/2019	77,344.18 100.138.46	\$ 75,829.18	\$ 1,516.58	\$ 77,345.76
89		Finalisation of CAS - not paid yet Finalisation of CAS - not paid yet				-	1/	04,321	31/08/2019	- 23,198.96 404.68			
		Byblos Holdings Pty Ltd	Lot 670, 150 Bertram Rd			106				254,626.01		\$ 4,992.67	\$ 254,626.01
76		Wellard Management The Wedge Stage 1 Wellard Management The Wedge Stage 2					17	\$ 88,339.65 \$ 175,256.90	24/07/2019 5/11/2020	79,369.11 175,256.90	\$ 0.06		79,369.11
		Credits for constructed or provided items		. I —	1 1 -	1	. –						

		Stage 3 Phase 2							7	\$ 16,249.47	17/07/2019	16,067.10				
		Stage 1							33		07/10/2016	89,790.69				
		Stage 2							39		11/10/2017	127,889.81				
75, B	OLLARD	Stage 3							23	\$ 53,682.75	15/03/2019	53,055.10				
1- B	ULRUSH	Balance paid								\$ -	31/08/2019	- 49,002.51				
84 E	AST OF	Invoice 58977 Stage 4							16	\$ 37,344.52		37,344.52				
	EL MAIN								11			25,674.36				
	DRAIN	Stage 4B							12			28,008.39				
		LWP Wellard Oakebella Stage 5							19	\$ 42,589.07	1/12/2020	42,589.07				
		Net contribution paid														
		Ascari Developments Pty Ltd	Lot 502, 14 Tamblyn Pl					68	24	\$ 6,616.99		158,807.80	\$ 155,693.92	\$ 3,113.88	\$ 158,	807.80
		Stage 1							8	\$ 45,367.06	26/06/2018	41,489.50				
		Reconciliation of Amendment 132 August 2019									16/09/2019	2,521.38	\$ -	\$ -		-
BO		Reconciliation of Amendment 132 August 2019									16/09/2019	1,356.18				
		Tamblyn Estate 2A	Invoice 63163						16	\$ 113,440.74	14/01/2021	113,440.74				
		Credits for constructed or provided items														
		Net contribution paid														
									Total Cash P	ayments Made		\$ 2,604,980.99	\$ 7,013,845.59	\$ 140,271.85	\$ 7,154,	117.44
									Credits given				\$ 4,549,136.44		\$ 4,549,	136.44
		Interest Earned up to 30 June 2019							2019	\$ 13,379.42	\$ 13,117.09	\$ 262.33	\$ 13,	379.42		
		Interest Earned up to 30 June 2020							2020	\$ 11,786.08	\$ 11,554.99	\$ 231.09	\$ 11,	786.08		
									Interest Eam	ed up to 31 Marci	2021	\$ 2,466,56	\$ 2,418.20	\$ 48.36	\$ 2	466.56

249,633.28 \$ 4,992.67 \$ 364,131.50 \$ 7,285.03 \$

\$ 371,416.53 \$

2,321.35

175,256.90 371,416.53

Credits for constructed or provided items Net contribution paid Oakebella - LWP Wellard Pty Ltd Lots 503-505, 507 and 900 (was L7)

			AMENDMENT 132			% remaining lot to be develope d	LOT YIELD IN TRAFFIC REPORT	LOT YIELD	Lot Liability	Date Paid	Amount	Total Liability	Administration Costs 2.00%	Total Liability
							Amoun	t Applied to	Remaining Lots to b		Amendment 132	\$ 35,569,088.00 \$ 9,572,727,00	332,270.64 \$ 191,455.00	\$ 9.764.182.00
32 -		DEPT OF HOUSING & WORKS - WINDSOR HIL Gross contribution paid	1.ORELIA - VACANT A132	6.7513	-	52.68%	Anoun	32			-	\$ 55,582.00 \$ -		
A87	EAST	Credits for constructed or provided items Net contribution payable	1.ORELIA - VACANT A132									\$ - \$ 55,582.00		\$ 56,694.00
33 -	(VACANT)	DEPT OF HOUSING & WORKS Gross contribution paid	2.ORELIA - VACANT A132	2.2096	-	34.98%		38	\$ 1,771.68		-	\$ 66,004.00 \$ -	\$ 1,320.00	\$ 67,324.00
A87		Net contribution payable DEPT OF HOUSING & WORKS - Belgravia Cent	2.ORELIA - VACANT A132	4.8887		47.52%		121	\$ 3,662.71		131,088.12	\$ 66,004.00 \$ 434,498,00		\$ 67,324.00 \$ 443,188.00
1 - A87		Gross contribution pair Credits for constructed or provided items	1	4.0007		47.5270			\$ 5,002.71		191,000.11	\$ 131,088.12 \$ 339,055.00		• ••••,100.00
_	NORTH BERTRAM	Net contribution payable DEPT OF HOUSING & WORKS - Belgravia Cent	t 1216 A132	3.7596	-	61.82%		127	\$ 3,662.72		83,033.10	\$ 35,645.12 \$ 456,045.00	\$ 9,121.00	
2 - A87		Gross contribution paic Credits for constructed or provided items Net contribution payable										\$ 83,033.10 \$ - \$ 373,011.90		\$ 382,132.90
5 -		BOMBARA Gross contribution paid	Lot 67 Johnson A132	2.2413	-	100.00%		10	\$ 3,662.70		-	\$ 35,909.00 \$ -		
A87		Credits for constructed or provided items Net contribution payable	Lot 67 Johnson A132									\$ - \$ 35,909.00		
6 -		BOMBARA Gross contribution paid	Lot 4 Johnson A132	2.6018	-	100.00%		14	\$ 3,662.64		-	\$ 50,272.00 \$ -	\$ 1,005.00	\$ 51,277.00
A87	MIXED BUSINESS	Credits for constructed or provided items Net contribution payable RIDLEY	Lot 4 Johnson A132 PT Lot 20 Holden A132	4.0899		100.00%		24	\$ 3,662.79			\$ 50,272.00 \$ 86,183.00		
7 - A87		Gross contribution pair Credits for constructed or provided items	1	4.0029		100.00%		24	- 3,002.79			\$ - \$ -		
_		Net contribution payable MINISTRY FOR PLANNING	PT200 Holden A132	0.7668	-	100.00%		0			-	\$ 86,183.00 \$ -	\$ 1,724.00 \$ -	\$ 87,907.00 \$ -
8 - A87		Gross contribution pair Credits for constructed or provided items										\$ - \$ -		
9-		Net contribution payable ROMANOS INVEST. HOLDINGS Gross contribution paic	Lot 54 Johnson A132	4.1645	-	100.00%		99	\$ 3,736.76		-	\$ - \$ 362,685.00 \$ -	\$ - \$ 7,254.00	\$ - \$ 369,939.00
A87		Credits for constructed or provided items Net contribution payable										\$ - \$ 362,685.00	\$ 7,254.00	\$ 369,939.00
12 -	CASUARINA	YARRA SEED & GRAZING CO P/L Gross contribution paid	Lot 1 Johnson A132	0.4069		 5.28%		12	\$ 4,104.17		-	\$ 48,284.00 \$ -		
A87	PLAN	Credits for constructed or provided items Net contribution payable	Lot 1 Johnson A132									\$ - \$ 48,284.00		
20 - A87		KNICROSS Gross contribution paid	Ex Lot 9 Bertram A132	0.1174		1.06%		2	\$ 3,714.50		-	\$ 7,283.00 \$ -	\$ 146.00	\$ 7,429.00
A67		Credits for constructed or provided items Net contribution payable DEPT OF HOUSING	Ex Lot 9 Bertram A132 LOT 9237 Parmelia Ave CASSIA	RISE			277	277	\$ 723.19			\$ 7,283.00 \$ 196,396.00		\$ 7,429.00 \$ 200,324.00
	PARMELIA	Gross contribution paid Credits for constructed or provided items		(RIJE			211	2//	\$ 723.13			\$ - \$ -	\$ 3,528.00	5 200,324.00
		Net contribution payable WELLARD RESIDENTIAL	Lot 167 Wellard Rd (now Lot 9	1.8784			8	8	\$ 6,710.88		-	\$ 196,396.00 \$ 52,634.00		\$ 200,324.00 \$ 53,687.00
97		Gross contribution paid Credits for constructed or provided items										\$ - \$ -		
		Net contribution payable WELLARD RESIDENTIAL Gross contribution paic	Lot 168 Wellard Rd (now Lot 9	2.2270			21	21	\$ 6,711.76		-	\$ 52,634.00 \$ 138,183.00 \$		
96		Credits for constructed or provided items Net contribution payable										\$ - \$ 138,183.00	\$ 2,764.00	\$ 140,947.00
05		WELLARD RESIDENTIAL Gross contribution pair	Lot 169 Wellard Rd (now Lot 9	2.7604			25	25	\$ 6,712.40		-	\$ 164,520.00 \$ -		
95		Credits for constructed or provided items Net contribution payable										\$ - \$ 164,520.00		
94		WELLARD RESIDENTIAL Gross contribution paid	Lot 170 Wellard Rd (now Lot 9	4.2696			32	32	\$ 6,712.28		-	\$ 210,581.00 \$ -	\$ 4,212.00	\$ 214,793.00
		Credits for constructed or provided items Net contribution payable WELLARD RESIDENTIAL	Lot 83 Wellard Rd (now Lot 90	7.7347			104	37	\$ 6,712.27		-	\$ 210,581.00 \$ 243,484.00		
93	PROVIDENCE	Gross contribution paid Credits for constructed or provided items	5									\$ - \$ -		
_		Net contribution payable WELLARD RESIDENTIAL	Lot 85 Wellard Rd (now Lot 90	15.1096			218	133	\$ 6,644.35		-	\$ 243,484.00 \$ 866,371.00		
87		Gross contribution paic Credits for constructed or provided items Net contribution payable										\$ - \$ - \$ 866,371.00	\$ 17,327.00	\$ 883,698.00
		Seth Anthony Bombara Gross contribution pair	Lot 2 Johnson Rd	1.0321			19	19	\$ 3,890.16		-	\$ 72,464.00 \$		\$ 73,913.00
91		Credits for constructed or provided items Net contribution payable	2									\$ - \$ 72,464.00		
90		Amanda Rogers Gross contribution pair	Lot 10 Johnson Rd	0.6939			14	10	\$ 4,567.30		-	\$ 44,777.00 \$ -	\$ 896.00	\$ 45,673.00
		Credits for constructed or provided items Net contribution payable Anthony R Eddleston	2 Lot 1 Johnson Rd	0.8872			21		\$ 11,089.50			\$ - \$ 44,777.00 \$ 43,488.00		
89		Gross contribution paid Credits for constructed or provided items		5.0072		-	21	4				\$ -	- 870.00	- 44,550.00
75,		Net contribution payable Oakebella - LWP Wellard Pty Ltd	a Lots 503-505, 507 and 900 (wa	18.3405			258	258	\$ 2,308.79		82,830.41	\$ 43,488.00 \$ 583,987.00	\$ 11,680.00	\$ 44,358.00 \$ 595,667.00
81- 84		Gross contribution paid Credits for constructed or provided items										\$ 82,830.41 \$ -		6 543 656 56
		Net contribution payable Wellard Residential Pty Ltd Gross contribution paic	Lot 506 Johnson Rd	7.8464		1	120	120	\$ 3,657.65		-	\$ 501,156.59 \$ 430,312.00 \$ -		\$ 512,836.59 \$ 438,918.00
85		Credits for constructed or provided items Net contribution payable				L-						\$ - \$ 430,312.00	\$ 8,606.00	\$ 438,918.00
20		Ascari Developments Pty Ltd Gross contribution paid	Lot 502, 14 Tambiyn Pl	2.8469			60	36	\$ 8,212.08		-	\$ 289,838.00 \$ -		
	BOLLARD	Credits for constructed or provided items Net contribution payable					-		6 7/10/1			\$ \$ 289,838.00 \$ 439,637.00		
79	BULRUSH EAST OF	Bollard (WA) Pty Ltd Gross contribution paid Credits for constructed or provided items	Lot 501, 214 Bertram Rd	3.9166		-	63	63	\$ 7,117.94		-	\$ 439,637.00 \$ - \$ -	\$ 8,793.00	\$ 448,430.00
	PEEL MAIN DRAIN	Net contribution payable	Lot 500, 202 Bertram Rd	3.6101			63	63	\$ 6,391.02		-	\$ 439,637.00 \$ 394,739.00		
78		Gross contribution paid Credits for constructed or provided items	5									\$ - \$ -		
		Net contribution payable El Shaddai	Lot 680, 170 Bertram Rd	7.7000	-		145	145	\$ 6,391.19			\$ 394,739.00 \$ 908,551.00		
77		Gross contribution paic Credits for constructed or provided items Net contribution payable				1						\$ - \$ - \$ 908,551.00	\$ 18,171.00	\$ 926,722.00
		Wellard Management Gross contribution paid	Lot 670, 150 Bertram Rd	6.3028		-	<b>57</b> 437	57	\$ 6,391.60		-	\$ 357,177.00 \$		
76		Credits for constructed or provided items Net contribution payable	2									\$ 78,400.00 \$ 278,777.00	\$ 7,144.00	\$ 285,921.00
106		Accounting Management Services Pty Ltd Gross contribution pair	Lot 661 Bertram Rd - Oct 2015	7.4589			198	198	\$ 6,062.40		-	\$ 1,176,819.00 \$		\$ 1,200,355.00
	BOLLARD	Credits for constructed or provided items Net contribution payable		0.7744					¢			\$ 1,176,819.00 \$ 1,256,035,00		
98- 105	WEST	Guantai Investments Pty Ltd Gross contribution paid Credits for constructed or provided items	Lot 81, 79, 77, 75,73,71,70 &6	9.7710		-	171	171	\$ 8,088.57		-	\$ 1,356,025.00 \$ - \$ -	\$ 27,120.00	\$ 1,383,145.00
		Net contribution payable	2									\$ 1,356,025.00	\$ 27,120.00	\$ 1,383,145.00



24 May 2021



Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space City of Kwinana

making the difference



Simon Monaghan Director of Cost Management

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Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

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Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

Rev	Status	Originator	Approved	Date
0	Issued	Isabella Carter	Simon Monaghan	30 April 2021
1	Issued	Isabella Carter	Simon Monaghan	7 May 2021
2	Issued	Isabella Carter	Simon Monaghan	24 May 2021

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Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

## **1** Executive summary

Turner & Townsend (T&T) has been commissioned to complete a review of the City of Kwinana's Development Contribution Plan (DCPs). These cost reviews are used to determine the appropriate contributions required from developers to offset the cost of Roads, Open Drains, Road Landscaping and Public Open Space (POS). The results of this cost review will provide the relevant contributions required for the 2020 - 2021 Financial Year.

We have analysed our previous 2020 estimates and subsequent information provided by the City and conducted a review using current rates at 2Q21, benchmark information together with recent actual costs for the purpose of calculating the current value of the DCP's.

A summary of our findings is shown below:

DCP Item – Part A	Cost (AUD 2020)	Cost (AUD 2021)	Cost variance (AUD)
Part A - Roads	\$51,096,000	55,567,000	\$4,471,000

**Part A cost variance** - significant cost variance attributed to including the actual costs for Lyon Road and Millar Road, which are greater scope areas than reviewed in 2020.

DCP Item – Part B	Cost (AUD 2020)	Cost (AUD 2021)	Cost Variance (AUD)
Part B - Open Drains	\$10,654,198	\$6,097,119	(\$4,557,079)

**Part B cost variance** - significant cost reduction due to reducing the drain and pipe lengths, and excluding Sub P drain, as advised by City of Kwinana.

DCP Item – Part C1	Cost (AUD 2020)	Cost (AUD 2021)	Cost Variance (AUD)
C1 – Road Landscaping	\$3,161,274	\$5,586,846	\$2,425,572

**Part C1 cost variance** - significant cost increase due to including actual costs for Wellard Road, which is a greater scope area than reviewed in 2020.

DCP Item – Part C2	Cost (AUD 2020)	Cost (AUD 2021)	Cost Variance (AUD)
C2 – C6 – Public Open Spaces	\$50,908,384	\$41,387,913	(\$9,520,471)

**Part C2 – C6 cost variance** - significant cost reduction attributed to the revised areas advised by the City of Kwinana.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

The remainder of this report provides our detailed response to each deliverable section of the client brief. Appendices have been prepared detailing our findings and supporting analysis can be found within the report below.

## **1.1** WA construction market overview at 2Q21

We have calculated a 1.59% increase in accordance with the AIQS CCIF cost index rates published in December 2020. Following our 2Q21 review, we have increased the indices to 3.09%, which we believe is consistent with the current market trends in terms of labour, plant and material component price increases since the indices were published in 4Q2020.

# A summary of our key observations related to the 2021 construction market in WA is as below:

The Western Australian economy and construction market appears to have recovered following a period of uncertainty throughout 2020 and early 2021.

The impact of the Government's accelerated multisector stimulus drive will likely see tender prices increase due to the limited availability of skilled labour and materials in WA.

We have tracked various projects commencing procurement/starting onsite in parallel which will directly impact competitive tension in the market. We have already started to see significant cost increases in civil construction, steelwork, concrete and reinforcement due to the unavailability of skilled labour related to these trades.

This supply and demand impact will be exacerbated by a restriction in overseas skilled labour entering WA which will likely result in a lack of competition in labour rates and in turn will drive a price spike over the next quarter.

## 1.2 Covid19 Disclaimer

We have expressly not taken into account the impact of the Covid 19 pandemic (or any other matter coming to our attention after the date of this report) and accordingly have excluded from this report any implications in relation to programme, costs, supply shortages, performance of parties due to shortages of labour and the inability to travel due to global and national travel restrictions, etc. Turner & Townsend accepts no liability for any loss or damage which arises as a result of such matters or any reliance on this report which assumes such matters have been taken into account.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

## 1 Introduction

## 1.2 Background

The City of Kwinana has currently identified three key areas of cost for review within their DCPs. These three separate sections of Roads, Open Drains and Public Open Space each require costing and analysis to be undertaken to compare with previous estimates and provide a current market cost for the 2020/2021 Financial Year. The results of this cost review will provide the relevant information for the City of Kwinana to continue to develop their DCPs and provide a consistent benchmark for future reviews.

## 1.3 Scope

## Part A - Roads

- T&T shall provide costs for the items listed in Appendix A, the costs are to be based on current unit rates;
- T&T shall provide updated quantities based on drawings and details provided by the City of Kwinana;
- T&T shall include appropriate allowances for services infrastructure works to the services shown on Dial Before you Dig information provided by the City of Kwinana;
- T&T shall list all assumptions made to arrive at the above costs; and
- T&T shall include in the report justification for price variances in this year's review compared to previous cost estimates provided.

## Part B - Open Drains

- T&T shall provide unit rates for the items listed in Appendix B, the rates are to be based on current unit rates;
- T&T shall list all assumptions made in arriving at the above costs;
- T&T shall include in the report justification for price variance in rates from this year's review compared to the previous estimates provided; and
- T&T shall provide rates in Microsoft Excel format.

## Part C – Road Landscaping and Public Open Space

- T&T shall provide unit rates for the items listed in Appendix C1 (Road Landscaping) and C2 (POS), the rates are to be based on current unit rates;
- T&T shall list all assumptions made in arriving at the above costs;
- T&T shall create a Master Schedule of Rates to be linked within Microsoft Excel format; and
- T&T shall provide rates in Microsoft Excel format.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

# 2 Part A - Roads

### 2.1 Summary of findings

We have completed a detailed review of the Road works scope, associated engineering budgets and design information within the DCP for the City of Kwinana. Based on the engineering design information and subsequent client clarifications, a cost comparison has been conducted and appended within **Appendix A** for reference. We have now updated to the Wellard Road Dual Carriageway cost estimate based upon the City of Kwinana information received 20 April 2021.

A comparison of our findings against the estimates provided by the City of Kwinana's engineers is shown below:

Roads scope	Cost (AUD 2020)	Cost (AUD 2021)	Cost Variance (AUD)
Bertram Road	\$4,077,000	4,202,000	\$125,000
Wellard Road	\$15,482,000	15,562,000	\$80,000
Millar Road	\$772,000	205,000	(\$567,000)
Mortimer Road	\$5,026,000	5,179,000	\$153,000
Sunrise Blvd - 15.4m	\$1,195,000	1,228,000	\$33,000
Sunrise Blvd - 19.4m	\$1,355,000	1,397,000	\$42,000
Thomas Road	\$8,234,000	8,489,000	\$255,000
Anketell Road	\$8,713,000	8,982,000	\$269,000
Hammond Road	\$1,498,000	1,545,000	\$47,000
Hammond Road Extension	\$1,529,000	1,576,000	\$47,000
Lyon Road	\$442,000	4,344,000	\$3,902,000
Cordata Avenue (part chainage only)	\$2,104,000	2,169,000	\$65,000
Culvert and Crossing over Peel Main Drain	\$669,000	689,000	\$20,000
Total Cost (AUD)	\$51,096,000	55,567,000	\$4,471,000

For a breakdown of each project cost estimate, refer to the detailed estimates within Appendix A.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

# 2.2 Commentary of variance

We have noted that there are variances between the previous estimated unit rates and T&T current unit rates. Elements with significant changes are noted below:

#### Wellard Road: Variance \$80,000

• Cost increase due to inputting actual electric, light and power and preliminaries costs provided by City of Kwinana on 28 April 2021.

#### Millar Road: Variance (\$567,000)

- Cost reduction due to excluding actual costs for chainage 36.77 to 186 (\$98,245.20) and Chainage 186m to 470m (\$783,097.86) as these have already been upgraded.
- This cost estimate only includes for chainage 470m to 577m, which is yet to be upgraded.

#### Sunrise Boulevard 19.4m: Variance \$42,000

• We have included a pro-rata total cost for Sunrise Boulevard 19.4m, which was not included in our 2020 cost estimate, to present a more accurate cost variance.

#### Lyon Road: Variance \$3,902,00

 Our 2020 cost estimate only included partial chainage (442m) and has now been updated to full chainage (2903m) with actual costs for the entire road provided by City of Kwinana on 28 April 2021.

# 2.3 Cost methodology

To assess each road project's current cost and facilitate benchmarking in future reviews, we have measured and presented all estimates using a work breakdown structure in line with the standards for civil construction. Where possible we have measured detailed quantities from the scope of works shown on the drawings provided. Where the design is not yet at a sufficient level for measurement of detailed quantities, we have measured elemental quantities and made appropriate allowances for the expected scope of work based upon our previous experience with civil road construction.

Where appropriate we have applied rates for individual detailed quantities as measured. Otherwise we have applied composite rates to elemental quantities to determine the likely construction cost. Our composite road unit rates used are derived from our building and civil indices, together with our in-house costs data and pricing information, which is benchmarked against recent projects. Our cost estimates have been prepared using the design documentation and information provided by the City of Kwinana as detailed in the document register within **Appendix D**.

#### 2.3.1 Contractor's preliminaries

The main contractor's preliminaries costs include for the contractor's design, insurances, security bonds and the indirect costs that the contractor will incur in providing the site facilities, offices and compounds, as well as the contractor's project management and site supervision costs, signage and associated works. The preliminaries costs have been included within the estimated construction costs in the region of 20% using benchmarked percentages related to specific work scopes from similar projects at equivalent stages of design development.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

### 2.4 Assumptions

Due to the preliminary nature of the design documentation, a number of assumptions were made in preparing our estimates, including:

- Existing services shown on dial before you dig drawings to be protected or relocated unless otherwise noted;
- No services relocation costs where dial before you dig information was not received;
- All works to be conducted in regular hours;
- Earthworks quantities based on estimated allowances;
- No contamination or adverse ground conditions (i.e. rock, acid sulphate etc.);
- Indirect costs based on in-house benchmarks; and
- Procurement by competitive tender.
- This report does not include provision for the effects of Force Majeure events, particularly so with respect to direct and indirect impacts on the program of works, fluctuations of rates and prices from supply shortages of manufactured goods and the like, and performance of the parties in the contact from shortage of skilled labour.

### 2.5 Exclusions

The following costs have been excluded from our estimates:

- Land purchase costs.
- Abnormal site conditions including contaminated ground;
- Demolition of property such as existing housing;
- Works to utilities services not shown on drawings;
- Headworks costs and utilities upgrades;
- Works not shown on the drawings;
- Works outside the marked up extents;
- Escalation beyond May 2021.
- GST.

#### 2.6 Risks and opportunity

We note that the design is generally in a preliminary phase, providing a number of risks and opportunities. The following actions may have cost implications across the project portfolio:

- Developing design to a more mature level to reduce cost uncertainty;
- Quantifying bulk earthworks requirements; and
- Completing geotechnical investigation to identify and adverse ground conditions.

Further to the above we note that dial before you dig or service location information was not received for the following projects:

- Sunrise Boulevard
- Hammond Road

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

- Hammond Road Extension
- Cordata Avenue; and
- Peel Main Drain Culvert.

This presents a significant risk where service protection or relocation may be required. We suggest obtaining the above information, and more generally quantifying the requirements for existing services relocation costs across the project portfolio to reduce the risk.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

# 3 Part B - Open drains

## **3.1** Summary of findings

We have completed a detailed review of the Open Drains within the DCP for the City of Kwinana. Based on the previous engineering estimates for different sections of drains, a cost comparison of rates has been conducted and appended within **Appendix B** for reference.

The verification of rates has been completed based upon our in-house cost data and current rates from similar benchmarked projects. Escalation has been applied to provide current rates until May 2021, using indices provided by the Australian Institute of Quantity Surveyors at December 2020.

Note - DCA5 Wandi Drain was not included within the initial scope overview, however it has been provided within Microsoft Excel documentation provided by the City of Kwinana.

Open drains	Cost (AUD 2020)	Unit rate (AUD 2020)	Cost (AUD 2021)	Unit rate (AUD 2021)	Cost Variance (AUD)	Unit rate Variance (AUD)
DCA1 Bertram Road Drainage Basin	\$572,473	\$1,974	\$587,324	\$2,025	\$14,851	\$51
Peel Sub N drain upgrade in Wellard	\$2,293,504	\$20,625	\$311,277	\$18,865	(\$1,982,227)	(\$1,760)
Peel Sub N1 drain upgrade in Wellard	\$301,407	\$6,610	\$309,084	\$6,778	\$7,676	\$168
Peel Sub N2 drain upgrade in Wellard	\$235,309	\$6,610	\$235,309	\$6,610	\$0	\$0
Peel Sub P drain in Casuarina	\$1,299,377	\$20,625	\$0	\$0	(\$1,299,377)	(\$20,625 )
Peel Sub P1 drain in Casuarina	\$1,196,252	\$20,625	\$745,178	\$18,865	(\$451,074)	(\$1,760)

Our summary findings of this analysis exercise are highlighted below:

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

Total Costs (AUD)	\$	10,654,198	\$6,097,119		(\$4	,557,079)
Drain O cost to pipe	\$1,031,252	\$20,625	\$943,263	\$18,865	(\$87,989)	(\$1,760)
Drain P1A Cost to pipe	\$145,416	\$6,610	\$149,119	\$6,778	\$3,704	\$168
Piping of the Sub P1 drain in Casuarina	\$274,580	\$1,484	\$284,916	\$1,540	\$10,336	\$56
Piping of the Sub P drain in Casuarina	\$1,145,188	\$1,405	\$1,173,352	\$1,440	\$28,164	\$35
Peel Sub O drain in Casuarina	\$1,031,252	\$20,625	\$943,263	\$18,865	(\$87,989)	(\$1,760)
Peel Sub P1A drain in Casuarina	\$1,128,189	\$20,625	\$415,036	\$18,865	(\$713,154)	(\$1,760)

#### **3.2 Commentary of variance**

We have noted that there are variances between the previous estimated unit rates and T&T current unit rates. Elements with significant changes are noted below:

#### Peel Sub N Drain Upgrade in Wellard: Variance (\$1,982,227)

- Significant cost reduction due to reducing the drain length from 1112m to 165m as instructed by the City on 28 April 2021, as 947m of the drain has been upgraded.
- Tubestock (x3m2) has been excluded due to a double up in scope as requested by City of Swan on 7 May 2021.

### Peel Sub N2 Drain Upgrade in Wellard: Variance \$0

• City of Kwinana informed us that the drain is 100% complete and does not require a 2021 rate review, and so we have retained our 2020 rate to reflect a more accurate total variance.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

#### Peel Sub P Drain in Casuarina: Variance (\$1,299,377)

 Sub P open drain has been excluded as the drain is to be piped, as advised by City of Kwinana on May 18, 2021.

#### Peel Sub P1 Drain in Casuarina: Variance (\$451,074)

- Significant cost reduction due to reducing the drain length from 580m to 395m as instructed by the City on 28 April 2021. The remaining length of 185m has been costed as being piped.
- Tubestock (x3m2) has been excluded due to a double up in scope as requested by City of Swan on 7 May 2021.

#### Peel Sub P1A Drain in Casuarina: Variance (\$713,154)

- Significant cost reduction due to reducing the drain length from 547m to 220m as instructed by the City on 28 April 2021. Only 220m of the drain is located within the rezoned urban area, with the remaining length of 327m located outside of the urban area and so therefore will not be upgraded.
- Tubestock (x3m2) has been excluded due to a double up in scope as requested by City of Swan on 7 May 2021.

#### Peel Sub O Drain in Casuarina: Variance (\$87,989)

 Cost reduction as tubestock (x3m2) has been excluded due to a double up in scope as requested by City of Swan on 7 May 2021.

#### Drain O Cost to Pipe: Variance (\$87,989)

 Cost reduction as tubestock (x3m2) has been excluded due to a double up in scope as requested by City of Swan on 7 May 2021.

### 3.3 Cost methodology

The analysis of Open Drains involved the verification of the rates provided by the City of Kwinana in 2020. These rates for review included a number of different estimates from engineers in 2020. Through using our in-house cost data and benchmarking from similar projects a current unit rate could be established and applied across all the drain quantities that were provided.

We have analysed and escalated the rates up to May 2021 for the purpose of City of Kwinana's Development Contribution Plan. The escalation rate has been calculated based on current market conditions along with information provided by the Australian Institute of Quantity Surveyors.

Due to the minimal design certainty at this current time, a contingency of 10% has remained within the DCP total for drains. However it would be expected that as the design scope increases in its clarity the contingency will then decrease.

Our cost estimates have been prepared using the documentation and information provided by the City of Kwinana as detailed in the document register within **Appendix D**.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

# 3.4 Assumptions

- Unit rates and allowances are based upon in-house cost data benchmarks for similar projects within Western Australia. Specification narrative has been included in the assumptions column of each comparison sheet for clarity.
- Quantities provided are accurate as of May 2021, as directed by the City of Kwinana.
- Procurement of Contractor will be based on a traditional competitive tender process and lump sum contract.
- Both Living stream treatment types now include a cost for mulch and assumed quantities to be the same as fine grading.
- Escalation has been accounted for until May 2021.
- Contingency has remained at 10% for all Open Drain works.
- This report does not include provision for the effects of Force Majeure events, particularly so with respect to direct and indirect impacts on the program of works, fluctuations of rates and prices from supply shortages of manufactured goods and the like, and performance of the parties in the contact from shortage of skilled labour.

# 3.5 Exclusions

- Land purchase costs.
- Project Overhead (Indirect construction costs).
- Abnormal site conditions.
- Inflation beyond May 2021.
- GST.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

# 4 Part C – Road Landscaping and Public Open Space

## 4.1 Part C1 – Road landscaping summary of findings

We have completed a detailed review of the Road Landscaping building up costs within the DCP for the City of Kwinana. Based on the previous engineering estimates, a cost comparison of unit rates has been conducted and appended within **Appendix C1** for reference.

The verification of rates has been completed based upon our in-house cost data and current rates from similar benchmarked projects. Escalation has been applied to provide current rates until May 2021, using indices provided by the AIQS at December 2020 and factored for fluctuations since the publication to 2Q21.

Road Landscaping Items	Unit Rate (2020 AUD) \$/m2	Unit Rate (2021 AUD) \$/m2	Unit Rate Variance (AUD) \$/m2
Fine grading	\$1	\$1	\$0
Mulch- chunky pine bark	\$9	\$9	\$0
Mulch- inorganic	\$11	\$11	\$0
Tubestock (3/m2) incl Terracottem	\$11	\$11	\$0
Tubestock (6/m2) incl Terracottem	\$21	\$22	\$1
100L street tree evenly spaced @ 20m	\$352	\$363	\$11
Feature semi mature tree	\$3,522	\$3,631	\$109
Irrigation	\$7	\$7	\$0
Turf- village Green	\$9	\$9	\$0
Maintenance 2 years 50c / m2 / annum	\$1	\$1	\$0
Design fees and contingency	10%	10%	\$-

Below we have summarised our cost review of the landscaping items:

We have then used the above landscaping items to build up the composite unit rates for the landscaping types as summarised below:

Road Landscaping Items	Unit Rate (2020 AUD) \$/m2	Unit Rate (2021 AUD) \$/m2	Unit Rate Variance (AUD) \$/m2
Median Swales	\$24	\$25	\$1
Verges	\$33	\$34	\$1
Verges (Honeywood Estate)	\$33	\$34	\$1
Street Trees (Feature trees at roundabout)	\$352	\$363	\$11

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

Our final step of the analysis of the landscaping costs was to apply the composite unit rates to the different road assets to demonstrate the differential in capital costs and unit rates for ease of review:

Road Landscaping	Cost (AUD 2020)	Unit rate (AUD 2020)	Cost (AUD 2021)	Unit rate (AUD 2021)	Cost variance	Unit rate variance
Bertram Road Upgrade	\$196,517	\$38	\$202,591	\$39	\$6,074	\$1
Wellard Road Upgrade	\$225,749	\$37	\$2,064,516	\$59	\$1,838,767	\$22
Millar Road Upgrade	\$0	\$0	\$0	\$0	\$0	\$0
Mortimer Road Upgrade	\$170,101	\$40	\$175,359	\$41	\$5,258	\$1
Sunrise Boulevard - 15.4m Road	\$87,368	\$41	\$90,069	\$43	\$2,700	\$1
Sunrise Boulevard - 19.4m Road	\$120,317	\$40	\$124,035	\$41	\$3,719	\$1
Thomas Road Upgrade	\$775,930	\$35	\$799,913	\$36	\$23,983	\$1
Anketell Road Upgrade	\$517,860	\$37	\$533,867	\$38	\$16,007	\$1
Hammond Road Extension	\$619,359	\$37	\$638,502	\$38	\$19,144	\$1
Hammond Road Connector	\$448,073	\$38	\$461,923	\$39	\$13,850	\$1
Lyon, Honeywood and Peel Main	\$0	\$0	\$496,070	\$114	\$496,070	\$114
Total	\$3,161,274	\$342	\$5,586,846	\$487	\$2,425,572	\$145

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

### 4.2 Commentary of variance

We have noted that there are variances between the previous estimated unit rates and T&T current unit rates. Elements with significant changes are noted below:

#### Wellard Road Upgrade: Variance \$1,838,767

 Significant cost increase due to including actual landscaping costs provided by City of Kwinana on 28 April 2021. This scope has been transferred from the 2020 Part A Roads scope which has resulted in a significant increase in cost due to scope increase.

#### Lyon Road Upgrade: Variance \$420,960

Landscaping to Lyon Road was not in the 2020 cost review scope.

#### 4.3 Part C2 – C6 - Public Open Space summary of findings

We have completed a detailed review of the Public Open Spaces costs within the DCP for the City of Kwinana. Based on the previous engineering estimates, a cost comparison of unit rates has been conducted and appended within **Appendix C2** for reference.

The verification of rates has been completed based upon our in-house cost data and current rates from similar benchmarked projects. Escalation has been applied to provide current rates until May 2021, using indices provided by the AIQS at December 2020 and factored for fluctuations since the publication to 2Q21.

We have now updated Parts C2 – C6 with the revised quantities within each POS based upon the City of Kwinana information received 7 May 2021.

Public Open Spaces	Cost (AUD 2020)	Cost (AUD 2021)	Total cost variance			
DCA3 - Casuarina	\$23,877,142	\$19,183,739	(\$4,693,402)			
DCA4 – Anketell North	\$10,061,999	\$5,042,614	(\$5,019,385)			
DCA5 – Wandi North & South	\$4,707,658	\$4,841,481	\$133,824			
DCA6 - Mandogalup	\$12,261,585	\$12,320,079	\$58,493			
DCA2-7	Excluded from review as agreed with the City of Kwinana					
Total Cost (AUD)	\$50,908,384	\$41,387,913	(\$9,520,471)			

Below we have summarised our cost review of the Public Open Space items:

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

### 4.4 Commentary of variance

We have noted that there are variances between the previous estimated unit rates and T&T current unit rates. Elements with significant changes are noted below:

#### DCA3 - Casuarina: Variance (\$4,693,402)

• Overall area reduction of 42,632m2 resulting in a significant reduction in cost. This was instructed by the City on 28 April 2021.

#### DCA4 – Anketell North: Variance (\$5,019,385)

• Overall area reduction of 45,379m2 resulting in a significant reduction in cost. This was instructed by the City on 28 April 2021.

#### DCA5 - Wandi North: Variance \$133,824

Escalation of 2020 rates reflecting a cost increase.

#### DCA6 - Mandogalup: Variance \$58,493

- Minor cost increase as a result of an overall area increase of 3,481m3. This was instructed by the City on 28 April 2021.
- Cost decrease of POS 6 as it was previously costed as a neighbourhood park.

#### 4.5 Cost methodology

The analysis of Landscaping and Public Open Space involved the verification of rates previously estimated by T&T in 2020. The current rates provided were compared against our in-house cost data and benchmarking from similar projects within the Perth region.

Certain items within the estimate were large lump sum items, due to the limited scope provided it made benchmarking against similar items difficult. Assumptions on required item were made were possible and escalation applied. Direct contact with specialist suppliers would be required for a detailed rate build up.

To assist in future updates of the DCP, the Microsoft Excel file provided has both the previous and current rates linked to master sheet. This approach enables amendments to any rates or assumptions in the master sheets to be auto-populated for the entire program of works and update the DCP total instantaneously.

Our cost estimates have been prepared using the documentation and information provided by the City of Kwinana as detailed in the document register within **Appendix D**.

### 4.6 Assumptions

- Unit rates and allowances are based upon in-house cost data benchmarks for similar projects within Western Australia. Specification narrative has been included in the assumptions column of each comparison sheet for clarity.
- Quantities provided are accurate as of May 2021, as directed by the City of Kwinana.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

- Procurement of Contractor will be based on a traditional competitive tender process and lump sum contract.
- Construction works will be undertaken by a competent and experienced contractor.
- Site utilities connections are within a reasonable distance of the site.
- Assumed 2 years of maintenance for Local Park 0.3ha, same as other POS.
- No major services diversions are required.
- Assumed POS Restricted size areas different affect rates associated with work.

### 4.7 Exclusions

- Land purchase costs.
- Abnormal site conditions.
- Disposal of property such as housing/homesteads.
- Escalation beyond May 2021.
- Project Overhead (Indirect construction costs)
- GST.

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

**Appendix A – Roads** 





Roads - 2021 Cost Review

**City of Kwinana Developer Contribution Plan Annual Cost Review** 

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24 May 2021

# Summary

# Turner & Townsend

City of Kwinana Developer Contribution Plan Annual Cost Review Roads - 2021 Cost Review

Develop	Developer Contribution Plan Annual Cost Review						
Item	Description	Quantity	Unit	Rate	Total (AUD)		
1	Project						
2	Bertram Road	875	m	4,802	4,202,000		
3	Wellard Road	1,825	m	8,527	15,562,000		
4	Millar Road	107	m	1,916	205,000		
5	Mortimer Road	852	m	6,079	5,179,000		
6	Sunrise Boulevard - 15.4m	420	m	2,924	1,228,000		
7	Sunrise Boulevard - 19.4m	420	m	3,326	1,397,000		
8	Thomas Road	1,117	m	7,600	8,489,000		
9	Anketell Road	1,298	m	6,920	8,982,000		
10	Hammond Road	373	m	4,142	1,545,000		
11	Hammond Road Extension	505	m	3,121	1,576,000		
12	Lyon Road	2,903	m	1,496	4,344,000		
13	Cordata Avenue	409	m	5,303	2,169,000		
14	Peel Main Drain Culvert	52	m	13,250	689,000		
15	Total Road Cost Ex GST				55,567,000		



Roads - 2021 Cost Review

# City of Kwinana Developer Contribution Plan Annual Cost Review

making the **difference** 

24 May 2021

	Turner	& Townsend
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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Bertram Road - Elemental Summary				
2.1	Demolition, Clearing, and Earthworks	875	m	416	363,613
2.2	Drainage Works	875	m	451	394,870
2.3	Roadworks	875	m	1,402	1,227,173
2.4	Sewer Drainage	875	m	355	310,815
2.5	Water Supply				Excluded
2.6	Gas				Excluded
2.7	Electric Light and Power	875	m	492	430,843
2.8	Communications	875	m	152	133,363
2.9	Direct Costs	875	m	3,270	2,861,000
2.10	Preliminaries and Builders Margin	20	%		572,200
2.11	Traffic Management	5	%		143,050
2.12	Construction Costs	875	m	4,087	3,576,000
2.13	Allowance for Professional Fees	7.5	%		268,200
2.14	Contingency	10	%		357,600
	Total - Bertram Road				4,202,000

City of KwinanaRoDeveloper Contribution Plan Annual Cost Review				oads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Bertram Road				
	Demolition, Clearing, and Earthworks				
2.1.1	Clear existing paved areas	11,373	m2	15.79	179,620
2.1.2	Clear landscaped areas (light shrubs)	16,333	m2	0.85	13,807
2.1.3	Allowance to remove large trees	20	no	400.00	8,000
2.1.4	Allowance to relocate existing fences	1	item	20,000.00	20,000
2.1.5	Clear topsoil to 300mm	16,333	m2	3.07	50,177
2.1.6	Bulk fill to build up new road level	4,375	m3	21.03	92,009
	Total - Demolition, Clearing, and Earthworks				363,613
	Drainage Works				
2.2.1	Swale construction	4,742	m2	15.46	73,329
2.2.2	Allowance for stormwater drainage	852	m	377.40	321,541
	Total - Drainage Works				394,870
	Roadworks				
2.3.1	Subgrade preparation	16,637	m2	3.79	63,117
2.3.2	200 limestone subbase course	16,637	m2	17.88	297,403
2.3.3	150 limestone base course	16,637	m2	15.77	262,414
2.3.4	40 wearing course	14,791	m2	15.77	233,297
2.3.5	40 wearing course (red asphalt)	1,313	m2	20.62	27,072
2.3.6	Seal	16,103	m2	3.38	54,450
2.3.7	Linemarking and furniture	1,750	m	14.62	25,582
2.3.8	Street signs	7	no	1,041.22	7,289
2.3.9	Semi mountable kerb	1,750	m	38.12	66,715
2.3.10	Flush kerb	1,750	m	57.89	101,300
2.3.11	Verge treatment	6,588	m2	10.31	67,916
2.3.12	Tie road into existing	4	no	5,154.55	20,618
	Total - Roadworks				1,227,173
	Sewer Drainage				

City of K Develop	(winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Bertram Road				
2.4.1	Relocate pressure main from proposed carraigeway area	971	m	320.10	310,815
	Total - Sewer Drainage				310,815
	Electric Light and Power				
2.7.1	Street lighting to new roadway	18	no	11,283.95	203,111
2.7.2	Relocate existing overhead LV lines and light poles	285	m	799.06	227,732
	Total - Electric Light and Power				430,843
	Communications				
2.8.1	Relocate/protect existing underground communications cables	542	m	246.06	133,363
	Total - Communications				133,363
	Contingency				
2.14.1	Design contingency	5	%		178,800
2.14.2	Construction contingency	5	%		178,800
	Total - Contingency				357,600
	Total - Bertram Road				4,202,000

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City of Kwinana       Roads - 2021 Cost Review         Developer Contribution Plan Annual Cost Review       Roads - 2021 Cost Review					
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road - Elemental Summary				
3.1	Demolition, Clearing, and Earthworks	1,825	m	682	1,244,492
3.2	Drainage Works	1,825	m	589	1,074,468
3.3	Roadworks	1,825	m	2,321	4,236,538
3.4	Sewer Drainage	1,825	m	247	450,000
3.5	Water Supply	1,825	m	247	450,000
3.6	Gas	1,825	m	55	100,000
3.7	Electric Light and Power	1,825	m	1,342	2,450,000
3.8	Communications	1,825	m	740	1,350,000
3.9	Direct Costs	1,825	m	6,222	11,356,000
3.10	Preliminaries and Builders Margin	9	%		986,048
3.11	Traffic Management	9	%		1,041,346
3.12	Construction Costs	1,825	m	7,333	13,383,000
3.13	Allowance for Professional Fees	6	%		773,199
3.14	Contingency	11	%		1,405,817
	Total - Wellard Road				15,562,000

City of Kwinana

Roads -	2021	Cost	<b>Review</b>
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Developer Contribution Plan Annual Cost Review					
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road				
	Demolition, Clearing, and Earthworks				
3.1.1	Remove Footpath	3,185	m2	2.60	8,274
3.1.2	Remove island	1,122	m2	56.29	63,155
3.1.3	Remove kerb	1,290	lm	16.49	21,278
3.1.4	Remove juvenile tree (<3m height) from planting site	275	EA	113.40	31,185
3.1.5	Sign Removal	70	item	206.18	14,433
3.1.6	Clearing	9	hectare	1.80	500
3.1.7	Removal of existing Drainage Pit	33	Item	154.64	5,103
3.1.8	Remove existing Pipe	441	m	51.55	22,732
3.1.9	Remove existing headwall	5	No.	123.71	619
3.1.10	Remove existing limestone wall	250	m	51.55	12,886
3.1.11	Remove Fence	1,250	m	25.77	32,216
3.1.12	Remove existing bus stop	2	No.	515.46	1,031
3.1.13	Remove exercise equipment at POS based on Nele's Email	9	Item	309.27	2,783
3.1.14	Remove rubber soft fall at POS based on Nele's Email	199	m2	15.46	3,077
3.1.15	Remove concrete kerbing at POS based on Nele's Email	78	m	16.49	1,287
3.1.16	Cut to Fill over 1000m3	5,821	m3	8.45	49,209
3.1.17	Cut to spoil over 1000m3	8,732	m3	20.21	176,433
3.1.18	Imported fill - (compacted volume )	19,353	m3	22.68	438,922
3.1.19	Spread and compact fill	19,353	m3	6.19	119,706
3.1.20	Dispsal of Class 1 inert	1,459	m3	36.08	52,636
3.1.21	Disposal of clean concrete	1,150	m3	8.25	9,485
3.1.22	Disposal of clean fill - GW1	8,732	m3	5.15	45,008
3.1.23	Recylcing of clean brick	61	m3	13.75	842
3.1.24	Recylcing of limestone	5,406	m3	13.75	74,308
3.1.25	Recycling of bitumen/road base/limestone Mix	3,244	m3	15.12	49,043
3.1.26	Recycling of concrete - no steel - ie slab kerbing driveways	160	m3	20.62	3,299
3.1.27	Recycling of concrete with light mesh	204	m3	24.74	5,041

**City of Kwinana** 

Roads - 2021 Cost Review

Developer Contribution Plan Annual Cost Review					
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road				
	Total - Demolition, Clearing, and Earthworks				1,244,492
	Drainage Works				
3.2.1	Limestone pitching	1,000	m2	257.73	257,728
3.2.2	Headwalls to suit 525mm dia pipe	6	No	1,077.30	6,464
3.2.3	Supply and lay pipe; Dia 450 mm Class 2	740	m	188.37	139,395
3.2.4	Supply and lay pipe; Dia 600 mm Class 2	111	m	244.57	27,147
3.2.5	Supply and lay pipe; Dia 300 mm Class 4	1,641	m	140.55	230,650
3.2.6	Side entry pits complete Dia 1200 liner	59	No.	2,474.18	145,977
3.2.7	Grated gully pits complete Dia 1200 liner	55	No.	2,010.27	110,565
3.2.8	Junction Pits Complete Dia 1200 liner	16	No.	2,010.27	32,164
3.2.9	Cut & Cap existing pipe	4	No.	412.36	1,649
3.2.10	Connection to existing stormwater drainage complete	2	No.	360.82	722
3.2.11	Swale Construction	7,890	m2	15.46	122,008
	Total - Drainage Works				1,074,468
	Destaurates				
	Roadworks				
3.3.1	Profiling (60mm)	3,850	m2	3.30	12,701
3.3.2	Limestone; crushed 19mm delivered to depot	22,435	ton	18.14	407,060
3.3.3	Road base - delivered to depot	18,180	ton	20.52	372,970
3.3.4	Trim, box & preparation of subgrade	58,249	m2	3.09	180,150
3.3.5	Cart and place limestone from depot, compact & final grade	58,249	m2	3.51	204,170
3.3.6	Cart and place rock base from depot, compact & final grade	58,249	m2	3.51	204,170
3.3.7	Road surfacing; AC14mm - Bitumen Class 320, 75blow Marshall Mix	4,412	ton	144.79	638,801
3.3.8	Road surfacing; Red Laterite Asphalt 7mm DG with 1% Oxide - Bitumen Class 320	491	ton	197.33	96,895
3.3.9	Additional compliance testing as requested by Superintendent (minimum In-situ Air Voids and Compaction)	50	no	61.79	3,090
3.3.10	2 Coat 10mm/7mm Emulsion seal	59,679	m2	4.88	291,009
3.3.11	Nightworks uplift	10	item	3,494.46	34,945

Roads - 2	021 C	cost R	eview
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Developer Contribution Plan Annual Cost Review					
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road				
3.3.12					
3.3.13	230 x 175 Semi Mountable Kerb - 201m plus	5,989	m	17.53	104,960
3.3.14	300 x 150 Mountable Kerb 51-200m	88	m	17.01	1,497
3.3.15	300 x 150 Reinforced Flush Kerb 201m plus	5,982	m	51.03	305,262
3.3.16	Island Nose Ends	23	each	60.82	1,399
3.3.17	Transitions	20	each	17.53	351
3.3.18	Backfill behind kerb over 100m	6,070	m	5.67	34,417
3.3.19					
3.3.20	100mm thick IN SITU concrete footpath - TYPE 1	3,895	m2	38.66	150,577
3.3.21	Supply and lay 100mm thick crossover - Residential	72	m2	48.97	3,526
3.3.22	Supply and install IN SITU concrete pedestrian ramps as per drawing STD R04 Rev D - includes tactile	30	unit	989.67	29,690
3.3.23	Supply and install 'Lock joint' or similar approved product (Actual length laid)	1,461	per lin m	8.04	11,745
3.3.24	Cap cut and reinstate reticulation	10	per verge	185.56	1,856
3.3.25	Tactile Urban Stone Pavers 300 x 300 x 60mm (Supply and Install)	12	L/m	185.56	2,227
3.3.26	Brick paving supply and lay (for Medians)	2,860	m2	77.32	221,130
3.3.27	Brick paving supply and lay - Paths/ Crossovers		m2	62.60	
3.3.28	Brick paving supply and lay - Paths/ Crossovers; Limestone wall-2 Course	1,660	m	206.18	342,262
3.3.29	Brick paving supply and lay - Paths/ Crossovers; Limestone wall-up to 1.8m high	128	m	309.27	39,587
3.3.30	Brick paving supply and lay - Paths/ Crossovers; Pee gravel on swale area	7,890	m2	10.31	81,339
3.3.31					
3.3.32	Batter area		Note		Excluded
3.3.33	Area between Batters - Millar to Cavendish		Note		Excluded
3.3.34	Area between Batters - Cavendish to future (existing POS)		Note		Excluded
3.3.35	Main Sump perimeters - Tree planting every 10m		Note		Excluded
3.3.36	Main Sump - Planting		Note		Excluded
3.3.37	Silver Smith Sump perimeters - Tree planting every 10m		Note		Excluded
3.3.38	Silver Smith Sump - Planting		Note		Excluded

**City of Kwinana** 

Roads -	2021	Cost	Review
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Develope	er Contribution Plan Annual Cost Review				
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road				
3.3.39	Swale Area		Note		Excluded
3.3.40	Cavendish Roundabout		Note		Excluded
3.3.41	Wellard Roundabout		Note		Excluded
3.3.42					
3.3.43	Basic Bike Shelter/Rack + 1 Seating + 2 Bicycle rack		Note		Excluded
3.3.44	Concrete Pad for Bike Shelter/Rack		Note		Excluded
3.3.45	Relocation of existing seating		Note		Excluded
3.3.46	Interpretive signage for Tramway reserve		Note		Excluded
3.3.47	Install exercise equipment		Note		Excluded
3.3.48	Install rubber soft fall to bases		Note		Excluded
3.3.49					
3.3.50	Safety Barrier	2,200	m	103.09	226,800
3.3.51	Safety Barrier - End treatment - Type 1 - Opposing to traffic - (ET2000)	17	Item	3,092.73	52,576
3.3.52	Safety Barrier - End treatment - (Trailing)	10	Item	927.82	9,278
3.3.53	Cycling Fence - (Bike Safe)	750	m	226.80	170,100
	Total - Roadworks				4,236,538
	Sewer Drainage				
3.4.1	Water and Sewer	1	Item	450,000.00	450,000
	Total - Sewer Drainage				450,000
	Water Supply				
3.5.1	Water and Sewer	1	Item	450,000.00	450,000
	Total - Water Supply				450,000
	Gas				
3.6.1	Gas	1	Item	100,000.00	100,000
	Total - Gas			,	100,000
	Electric Light and Power				

City of K Develope	winana er Contribution Plan Annual Cost Review		K	oads - 2021 (	LOST KEVIEW
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Wellard Road				
3.7.1	M.R.W.A. Traffic signs	1	item	30,000	30,000
3.7.2	M.R.W.A. Line marking	1	item	170,000	170,00
3.7.3	Western Power - Undergrounding and re-location	1	km	1,650,000.0	1,650,00
3.7.4	Western Power - Streetlights	50	No.	12,000.00	600,00
	Total - Electric Light and Power				2,450,000
	Communications				
3.8.1	Communication (Telstra, NBN, NextGen)	1	Item		1,350,00
	Total - Communications				1,350,00
	Preliminaries and Builders Margin				
3.10.1	mobilisation/demobilisation	1	Item	25,000.00	25,00
3.10.2	Supervision and Set Out	36	Weeks	4,000.00	144,00
3.10.3	Allow for Dust Management Plan.	1	Item	1,000.00	1,00
3.10.4	Allow for water truck and all additional measures required for suppression of dust and sand nuisance during construction	36	Weeks	1,000.00	36,00
3.10.5	Noise management Plan	1	Item	1,500.00	1,50
3.10.6	Land acquisition	13,264	m2	57.00	756,04
3.10.7					
3.10.8	As constructed information to D-Spec requirements	1	Item	7,500.00	7,50
3.10.9	R spec	1	Item	15,000.00	15,00
3.10.10					
	Total - Preliminaries and Builders Margin				986,04
	Total - Wellard Road				15,562,00

City of Kwinana

Roads -	2021	Cost	Review
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Develop	er Contribution Plan Annual Cost Review				
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Millar Road - Elemental Summary				
4.1	CHAINAGE 36.77m - 186m				
4.2	Current Costs from City				
4.3	Capital - Apshalt/Roadworks	149	m	98,245.20	Excluded
4.4					
4.5	CHAINAGE 186m - 470m				
4.6	Civil Upgrade Works Current Costs from Developer				
4.7	Civil Contractor (pre-works investigations):	284	m	1,399.00	Excluded
4.8	Civil Contractor (civil upgrade works):	284	m	631,542.02	Excluded
4.9	Civil Engineer (engineering design and works supervision/ contract admin)	1	Item	23,355.00	Excluded
4.10	Power Consultant:	1	Item	5,480.00	Excluded
4.11	Western Power Quote:	1	Item	76,229.00	Excluded
4.12	City Supervision Fee @ 1.5%:	1.5	%	7,802.37	Excluded
4.13	Developer Project Management & Administration @ 5%:	5	%	37,290.37	Excluded
4.14					
4.15	CHAINAGE 470m - 577m				
4.16	Demolition, Clearing, and Earthworks	107	m	137	14,676
4.17	Drainage Works	107	m	110	11,750
4.18	Roadworks	107	m	810	86,628
4.19	Sewer Drainage				Excluded
4.20	Water Supply				Excluded
4.21	Gas				Excluded
4.22	Electric Light and Power				25,870
4.23	Communications				Excluded
4.24	Direct Costs				139,000
4.25	Preliminaries and Builders Margin	20	%		27,800
4.26	Traffic Management	5	%		6,950
4.27	Construction Costs				174,000
4.28	Allowance for Professional Fees	7.5	%		13,050
4.29	Contingency	10	%		17,400

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City of Kwinana Developer Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Total - Millar Road				205,000

City of Kwinana       Roads - 2021 Cost Review         Developer Contribution Plan Annual Cost Review       Roads - 2021 Cost Review					Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Millar Road				
	Demolition, Clearing, and Earthworks				
4.16.1	Clear existing paved areas	501	m2	15.79	7,913
4.16.2	Clear landscaped areas (light shrubs)	214	m2	0.85	181
4.16.3	Allowance to remove large trees		note		0
4.16.4	Allowance to relocate existing fences		note		0
4.16.5	Bulk fill to build up new road level	313	m3	21.03	6,583
	Total - Demolition, Clearing, and Earthworks				14,676
	Drainage Works				
4.17.1	Swale construction	107	m2	15.46	1,655
4.17.2	Allowance for stormwater drainage	107	m	94.35	10,095
	Total - Drainage Works				11,750
	Roadworks				
4.18.1	Subgrade preparation	501	m2	3.79	1,901
4.18.2	200 limestone subbase course	501	m2	17.88	8,956
4.18.3	150 limestone base course	866	m2	15.77	13,659
4.18.4	40 wearing course	809	m2	15.77	12,760
4.18.5	40 wearing course (red asphalt)	58	m2	20.62	1,196
4.18.6	Linemarking and furniture	107	m	14.62	1,564
4.18.7	Street signs	2	no	1,041.22	2,082
4.18.8	Semi mountable kerb	107	m	38.12	4,079
4.18.9	Flush kerb	107	m	57.89	6,194
4.18.10	Verge treatment	321	m2	10.31	3,309
4.18.11	Tie road into existing	6	no	5,154.55	30,927
	Total - Roadworks				86,628
	Electric Light and Power				
4.22.1	Street lighting to new roadway	11	no	2,351.83	25,870

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City of Kwinana       Roads - 2021 Cost Review         Developer Contribution Plan Annual Cost Review       Developer Contribution Plan Annual Cost Review					
Description	Quantity	Unit	Rate	Total (AUD)	
Millar Road					
Total - Electric Light and Power				25,870	
Contingency					
Design contingency	5	%		8,700	
Construction contingency	5	%		8,700	
Total - Contingency				17,400	
Total - Millar Road				205,000	
	Millar Road Total - Electric Light and Power Contingency Design contingency Construction contingency Total - Contingency	Millar Road       Image: Contingency contingency contingency construction conting	Millar RoadImage: Construction contingencyImage: Con	Millar RoadImage: Construction contingencyImage: Con	

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City of Kwinana Roads - 2021 Cost Review Roads - 2021 Cost Review					Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Mortimer Road - Elemental Summary				
5.1	Demolition, Clearing, and Earthworks	852	m	354	301,905
5.2	Drainage Works	852	m	415	353,396
5.3	Roadworks	852	m	1,381	1,176,767
5.4	Sewer Drainage				Excluded
5.5	Water Supply	852	m	336	286,419
5.6	Gas	852	m	389	331,329
5.7	Electric Light and Power	852	m	981	835,941
5.8	Communications	852	m	282	240,034
5.9	Direct Costs	852	m	4,138	3,526,000
5.10	Preliminaries and Builders Margin	20	%		705,200
5.11	Traffic Management	5	%		176,300
5.12	Construction Costs	852	m	5,174	4,408,000
5.13	Allowance for Professional Fees	7.5	%		330,600
5.14	Contingency	10	%		440,800
	Total - Mortimer Road				5,179,000

City of K Develop	winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Mortimer Road				
	Demolition, Clearing, and Earthworks				
5.1.1	Clear existing paved areas	8,511	m2	15.79	134,419
5.1.2	Clear landscaped areas (light shrubs)	8,511	m2	0.85	7,195
5.1.3	Allowance to remove large trees	50	no	400.00	20,000
5.1.4	Remove crash barrier and dispose offsite	150	m	30.93	4,639
5.1.5	Allowance to relocate existing fences	1	item	20,000.00	20,000
5.1.6	Clear topsoil to 300mm	8,511	m2	3.07	26,147
5.1.7	Bulk fill to build up new road level	4,256	m3	21.03	89,506
	Total - Demolition, Clearing, and Earthworks				301,905
	Drainage Works				
5.2.1	Swale construction	2,060	m2	15.46	31,855
5.2.2	Allowance for stormwater drainage	852	m	377.40	321,541
	Total - Drainage Works				353,396
	Roadworks				
5.3.1	Subgrade preparation	10,631	m2	3.79	40,331
5.3.2	200 limestone subbase course	10,631	m2	17.88	190,040
5.3.3	150 limestone base course	10,631	m2	15.77	167,682
5.3.4	40 wearing course	10,121	m2	15.77	159,638
5.3.5	Seal	10,121	m2	3.38	34,223
5.3.6	Linemarking and furniture	1,703	m	14.62	24,895
5.3.7	Street signs	7	no	1,041.22	7,289
5.3.8	Semi mountable kerb	1,703	m	38.12	64,924
5.3.9	Flush kerb	1,703	m	57.89	98,579
5.3.10	Concrete footpath	3,537	m2	93.30	329,993
5.3.11	Verge treatment	2,240	m2	10.31	23,092
5.3.12	Tie road into existing	7	no	5,154.55	36,082
	Total - Roadworks				1,176,767

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City of K Develope	winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Mortimer Road				
	Water Supply				
5.5.1	Relocate/protect water main	757	m	378.55	286,41
	Total - Water Supply				286,41
	Gas				
5.6.1	Relocate/protect existing gas line	714	m	463.91	331,32
	Total - Gas				331,32
	Electric Light and Power				
5.7.1	Street lighting to new roadway	18	no	11,283.95	203,11
5.7.2	Relocate existing overhead lines	792	m	799.06	632,83
	Total - Electric Light and Power				835,94
	Communications				
5.8.1	Relocate/protect existing underground communications cables	976	m	246.06	240,03
	Total - Communications				240,03
	Contingency				
5.14.1	Design contingency	5	%		220,40
5.14.2	Construction contingency	5	%		220,40
	Total - Contingency				440,80
	Total - Mortimer Road				5,179,00

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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Sunrise Boulevard - 15.4m - Elemental Summary				
6.1	Demolition, Clearing, and Earthworks	420	m	324	135,930
6.2	Drainage Works	420	m	359	150,581
6.3	Roadworks	420	m	801	336,212
6.4	Sewer Drainage				Excluded
6.5	Water Supply	420	m	62	25,935
6.6	Gas	420	m	62	25,935
6.7	Electric Light and Power	420	m	143	60,181
6.8	Communications	420	m	240	100,630
6.9	Direct Costs	420	m	1,990	836,000
6.10	Preliminaries and Builders Margin	20	%		167,200
6.11	Traffic Management	5	%		41,800
6.12	Construction Costs	420	m	2,488	1,045,000
6.13	Allowance for Professional Fees	7.5	%		78,375
6.14	Contingency	10	%		104,500
6.15					
6.16	Land Ownerships				
6.17	Lot 440	180	m	2,924	526,232
6.18	Lot 28	121	m	2,924	353,745
6.19	Lot 59	119	m	2,924	347,898
	Total - Sunrise Boulevard - 15.4m				1,228,000

City of Kwinana Roads Developer Contribution Plan Annual Cost Review					ls - 2021 Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)	
	Sunrise Boulevard - 15.4m					
	Demolition, Clearing, and Earthworks					
6.1.1	Clear existing paved areas	901	m2	15.79	14,230	
6.1.2	Clear landscaped areas (light shrubs)	5,230	m2	0.85	4,421	
6.1.3	Allowance to remove large trees	37	no	518.70	19,192	
6.1.4	Clear topsoil to 300mm	5,267	m2	3.07	16,181	
6.1.5	Bulk fill to build up new road level	3,500	m3	21.03	73,607	
6.1.6	Remove existing drainage structures	1	item	8,299.24	8,299	
	Total - Demolition, Clearing, and Earthworks				135,930	
	Drainage Works					
6.2.1	Allowance for stormwater drainage	399	m	377.40	150,581	
	Total - Drainage Works				150,581	
	Roadworks					
6.3.1	Subgrade preparation	2,879	m2	3.79	10,922	
6.3.2	200 limestone subbase course	2,879	m2	17.88	51,465	
6.3.3	150 limestone base course	2,879	m2	15.77	45,410	
6.3.4	40 wearing course	2,879	m2	15.77	45,410	
6.3.5	Seal	2,879	m2	3.38	9,735	
6.3.6	Linemarking and furniture	797	m	14.62	11,651	
6.3.7	Street signs	4	no	1,041.22	4,165	
6.3.8	Semi mountable kerb	797	m	38.12	30,384	
6.3.9	Concrete footpath	1,000	m2	93.30	93,297	
6.3.10	Verge treatment	1,776	m2	10.31	18,309	
6.3.11	Tie road into existing	3	no	5,154.55	15,464	
	Total - Roadworks				336,212	
	Water Supply					
6.5.1	Adjustment to water main as per engineers estimate	1	item	25,935.12	25,935	

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City of Kwinana Developer Contribution Plan Annual Cost Review		Roads - 2021 Cost Review			
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Sunrise Boulevard - 15.4m				
	Total - Water Supply				25,935
	Gas				
6.6.1	Adjustment to gas main as per engineers estimate	1	item	25,935.12	25,935
	Total - Gas				25,935
	Electric Light and Power				
6.7.1	Street lighting to new roadway	8	no	7,522.63	60,181
	Total - Electric Light and Power				60,181
	Communications				
6.8.1	Modifcations to NBN infrastructure as per engineers estimate	1	item	103,740.47	100,630
	Total - Communications				100,630
	Contingency				
6.14.1	Design contingency	5	%		52,250
6.14.2	Construction contingency	5	%		52,250
	Total - Contingency				104,500
	Total - Sunrise Boulevard - 15.4m				1,228,000

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City of Kwinana Road Developer Contribution Plan Annual Cost Review			ads - 2021 (	Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Sunrise Boulevard - 19.4m - Elemental Summary				
7.1	Demolition, Clearing, and Earthworks	420	m	392	164,440
7.2	Drainage Works	420	m	359	150,581
7.3	Roadworks	420	m	912	383,243
7.4	Sewer Drainage				Excluded
7.5	Water Supply	420	m	78	32,670
7.6	Gas	420	m	78	32,670
7.7	Electric Light and Power	420	m	143	60,181
7.8	Communications	420	m	302	126,764
7.9	Direct Costs	420	m	2,264	951,000
7.10	Preliminaries and Builders Margin	20	%		190,200
7.11	Traffic Management	5	%		47,550
7.12	Construction Costs	420	m	2,831	1,189,000
7.13	Allowance for Professional Fees	7.5	%		89,175
7.14	Contingency	10	%		118,900
7.15					
7.16	Land Ownerships				
7.17	Lot 440	180	m	3,326	598,746
7.18	Lot 28	121	m	3,326	402,491
7.19	Lot 59	119	m	3,326	395,838
	Total - Sunrise Boulevard - 19.4m				1,397,000

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City of K Develope	winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Sunrise Boulevard - 19.4m				
	Demolition, Clearing, and Earthworks				
7.1.1	Clear existing paved areas	1,165	m2	15.79	18,399
7.1.2	Clear landscaped areas (light shrubs)	6,558	m2	0.85	5,544
7.1.3	Allowance to remove large trees	37	no	518.70	19,192
7.1.4	Clear topsoil to 300mm	6,595	m2	3.07	20,261
7.1.5	Bulk fill to build up new road level	4,410	m3	21.03	92,745
7.1.6	Remove existing drainage structures	1	item	8,299.24	8,299
	Total - Demolition, Clearing, and Earthworks				164,440
	Drainage Works				
7.2.1	Allowance for stormwater drainage	399	m	377.40	150,581
	Total - Drainage Works				150,581
	Roadworks				
7.3.1	Subgrade preparation	3,626	m2	3.79	13,756
7.3.2	200 limestone subbase course	3,626	m2	17.88	64,818
7.3.3	150 limestone base course	3,626	m2	15.77	57,193
7.3.4	40 wearing course	3,626	m2	15.77	57,193
7.3.5	Seal	3,626	m2	3.38	12,261
7.3.6	Linemarking and furniture	797	m	14.62	11,651
7.3.7	Street signs	4	no	1,041.22	4,165
7.3.8	Semi mountable kerb	797	m	38.12	30,384
7.3.9	Concrete footpath	1,000	m2	93.30	93,297
7.3.10	Verge treatment	2,237	m2	10.31	23,061
7.3.11	Tie road into existing	3	no	5,154.55	15,464
	Total - Roadworks				383,243
	Water Supply				
7.5.1	Adjustment to water main as per engineers estimate	1	item	25,935.12	25,935
7.5.2	Extraover for 19.4m road	26	%		6,735

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City of K Develop	Winana er Contribution Plan Annual Cost Review		Ro	oads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Sunrise Boulevard - 19.4m				
	Total - Water Supply				32,670
	Gas				
7.6.1	Adjustment to gas main as per engineers estimate	1	item	25,935.12	25,935
7.6.2	Extraover for 19.4m road	26	%		6,735
	Total - Gas				32,670
	Electric Light and Power				
7.7.1	Street lighting to new roadway	8	no	7,522.63	60,181
	Total - Electric Light and Power				60,181
	Communications				
7.8.1	Modifcations to NBN infrastructure as per engineers estimate	1	item	103,740.47	100,630
7.8.2	Extraover for 19.4m road	26	%		26,134
	Total - Communications				126,764
	Contingency				
7.14.1	Design contingency	5	%		59,450
7.14.2	Construction contingency	5	%		59,450
	Total - Contingency				118,900
	Total - Sunrise Boulevard - 19.4m				1,397,00

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City of KwinanaRoads - 2021 Cost ReviewDeveloper Contribution Plan Annual Cost Review					
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Thomas Road - Elemental Summary				
8.1	Demolition, Clearing, and Earthworks	1,117	m	556	621,581
8.2	Drainage Works	1,117	m	475	530,600
8.3	Roadworks	1,117	m	1,951	2,178,732
8.4	Sewer Drainage				Excluded
8.5	Water Supply	1,117	m	283	315,953
8.6	Gas	1,117	m	471	526,589
8.7	Electric Light and Power	1,117	m	1,035	1,156,546
8.8	Communications	1,117	m	402	449,178
8.9	Direct Costs	1,117	m	5,175	5,780,000
8.10	Preliminaries and Builders Margin	20	%		1,156,000
8.11	Traffic Management	5	%		289,000
8.12	Construction Costs	1,117	m	6,468	7,225,000
8.13	Allowance for Professional Fees	7.5	%		541,875
8.14	Contingency	10	%		722,500
	Total - Thomas Road				8,489,000

-	City of Kwinana Roads - 2021 Cost Review Roads - 2021 Cost Review				
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Thomas Road				
	Demolition, Clearing, and Earthworks				
8.1.1	Clear existing paved areas	14,509	m2	15.79	229,148
8.1.2	Clear landscaped areas (light shrubs)	43,764	m2	0.85	36,996
8.1.3	Clear topsoil to 300mm	43,764	m2	3.07	134,448
8.1.4	Bulk fill to build up new road level	10,508	m3	21.03	220,989
	Total - Demolition, Clearing, and Earthworks				621,581
	Drainage Works				
8.2.1	Swale construction	7,052	m2	15.46	109,050
8.2.2	Allowance for stormwater drainage	1,117	m	377.40	421,551
	Total - Drainage Works				530,600
	Roadworks				
8.3.1	Subgrade preparation	22,249	m2	3.79	84,407
8.3.2	200 limestone subbase course	22,249	m2	17.88	397,723
8.3.3	150 limestone base course	22,249	m2	15.77	350,932
8.3.4	40 wearing course	14,319	m2	15.77	225,852
8.3.5	40 wearing course (red asphalt)	6,697	m2	20.62	138,080
8.3.6	Seal	21,016	m2	3.38	71,063
8.3.7	Linemarking and furniture	2,233	m	14.62	32,643
8.3.8	Street signs	9	no	1,041.22	9,371
8.3.9	Semi mountable kerb	2,233	m	38.12	85,129
8.3.10	Flush kerb	2,233	m	57.89	129,259
8.3.11	Concrete footpath	4,593	m2	93.30	428,515
8.3.12	Verge treatment	19,899	m2	10.31	205,141
8.3.13	Tie road into existing	4	no	5,154.55	20,618
	Total - Roadworks				2,178,732
	Water Supply				
8.5.1	Protect existing critical water pipeline	409	m	773.18	315,953

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-	City of Kwinana Roads - 2021 Cost Review Roads - 2021 Cost Review				
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Thomas Road				
	Total - Water Supply				315,95
	Gas				
8.6.1	Relocate / protect existing high pressure gas pipeline	409	m	1,288.64	526,58
	Total - Gas				526,58
	Electric Light and Power				
8.7.1	Street lighting to new roadway	23	no	11,283.95	259,53
8.7.2	Relocate existing overhead power lines	918	m	799.06	733,53
8.7.3	Relocate/protect existing underground power cables	205	m	799.06	163,47
	Total - Electric Light and Power				1,156,54
	Communications				
8.8.1	Relocate/protect existing underground communications cables	1,217	m	369.09	449,17
	Total - Communications				449,17
	Contingency				
8.14.1	Design contingency	5	%		361,25
8.14.2	Construction contingency	5	%		361,25
	Total - Contingency				722,50
	Total - Thomas Road				8,489,00

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City of KwinanaRoads - 2021 Cost RevDeveloper Contribution Plan Annual Cost ReviewCost Review			Cost Review		
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Anketell Road - Elemental Summary				
9.1	Demolition, Clearing, and Earthworks	1,298	m	351	455,145
9.2	Drainage Works	1,298	m	479	621,501
9.3	Roadworks	1,298	m	1,429	1,854,353
9.4	Sewer Drainage				Excluded
9.5	Water Supply	1,298	m	316	410,053
9.6	Gas	1,298	m	1,115	1,446,998
9.7	Electric Light and Power	1,298	m	684	887,494
9.8	Communications	1,298	m	338	439,213
9.9	Direct Costs	1,298	m	4,711	6,115,000
9.10	Preliminaries and Builders Margin	20	%		1,223,000
9.11	Traffic Management	5	%		305,750
9.12	Construction Costs	1,298	m	5,889	7,644,000
9.13	Allowance for Professional Fees	7.5	%		573,300
9.14	Contingency	10	%		764,400
	Total - Anketell Road				8,982,000

-	City of Kwinana Roads - 2021 Cost Revi Developer Contribution Plan Annual Cost Review			Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Anketell Road				
	Demolition, Clearing, and Earthworks				
9.1.1	Clear existing paved areas	14,261	m2	15.79	225,232
9.1.2	Clear landscaped areas (light shrubs)	17,562	m2	0.85	14,846
9.1.3	Clear topsoil to 300mm	17,562	m2	3.07	53,952
9.1.4	Bulk fill to build up new road level	7,661	m3	21.03	161,115
	Total - Demolition, Clearing, and Earthworks				455,145
	Drainage Works				
9.2.1	Swale construction	6,513	m2	15.46	100,715
9.2.2	Allowance for stormwater drainage	1,298	m	377.40	489,859
9.2.3	Swale basin	282	m3	109.67	30,927
	Total - Drainage Works				621,501
	Roadworks				
9.3.1	Subgrade preparation	15,322	m2	3.79	58,128
9.3.2	200 limestone subbase course	15,322	m2	17.88	273,896
9.3.3	150 limestone base course	15,322	m2	15.77	241,673
9.3.4	40 wearing course	14,543	m2	15.77	229,386
9.3.5	Seal	14,543	m2	3.38	49,175
9.3.6	Linemarking and furniture	2,595	m	14.62	37,934
9.3.7	Street signs	11	no	1,041.22	11,453
9.3.8	Semi mountable kerb	2,595	m	38.12	98,929
9.3.9	Flush kerb	2,595	m	57.89	150,213
9.3.10	Concrete footpath	6,500	m2	93.30	606,433
9.3.11	Verge treatment	6,422	m2	10.31	66,205
9.3.12	Tie road into existing	6	no	5,154.55	30,927
	Total - Roadworks				1,854,353
	Water Supply				
9.5.1	Relocate / protect existing water pipeline	1,083	m	378.55	410,053

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-	ity of Kwinana Roads - 2021 Cost Review veveloper Contribution Plan Annual Cost Review			Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Anketell Road				
	Total - Water Supply				410,053
	Gas				
9.6.1	Relocate / protect existing high pressure gas pipeline	1,123	m	1,288.64	1,446,998
	Total - Gas				1,446,998
	Electric Light and Power				
9.7.1	Street lighting to new roadway	33	no	7,522.63	248,247
9.7.2	Relocate existing overhead power lines	190	m	799.06	151,821
9.7.3	Relocate/protect existing underground power cables	610	m	799.06	487,426
	Total - Electric Light and Power				887,494
	Communications				
9.8.1	Relocate/protect existing underground communications cables	1,785	m	246.06	439,213
	Total - Communications				439,213
	Contingency				
9.14.1	Design contingency	5	%		382,200
9.14.2	Construction contingency	5	%		382,200
	Total - Contingency				764,400
	Total - Anketell Road				8,982,000

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City of Kwinana       Roads - 2021 Cost Review         Developer Contribution Plan Annual Cost Review       Roads - 2021 Cost Review			Cost Review		
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road - Elemental Summary				
10.1	Demolition, Clearing, and Earthworks	373	m	668	249,267
10.2	Drainage Works	373	m	507	189,098
10.3	Roadworks	373	m	1,519	566,447
10.4	Sewer Drainage				Excluded
10.5	Water Supply				Excluded
10.6	Gas				Excluded
10.7	Electric Light and Power	373	m	242	90,272
10.8	Communications				Excluded
10.9	Direct Costs	373	m	2,938	1,096,000
10.10	Preliminaries and Builders Margin	20	%		219,200
10.11	Traffic Management				Excluded
10.12	Construction Costs	373	m	3,525	1,315,000
10.13	Allowance for Professional Fees	7.5	%		98,625
10.14	Contingency	10	%		131,500
	Total - Hammond Road				1,545,000

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City of Kwinana       Roads - 2021 Cost Review         Developer Contribution Plan Annual Cost Review       Roads - 2021 Cost Review			Cost Review		
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road				
	Demolition, Clearing, and Earthworks				
10.1.1	Clear landscaped areas (light shrubs)	14,152	m2	0.85	11,963
10.1.2	Bulk excavation to new road area	11,275	m3	15.46	174,353
10.1.3	Clear topsoil to 300mm	14,152	m2	3.07	43,477
10.1.4	Bulk fill to build up new road level	926	m3	21.03	19,474
	Total - Demolition, Clearing, and Earthworks				249,267
	Drainage Works				
10.2.1	Swale construction	1,792	m2	15.46	27,711
10.2.2	Allowance for stormwater drainage	373	m	377.40	140,769
10.2.3	Swale basin	330	m3	62.48	20,618
	Total - Drainage Works				189,098
	Roadworks				
10.3.1	Subgrade preparation	4,630	m2	3.79	17,565
10.3.2	200 limestone subbase course	4,630	m2	17.88	82,766
10.3.3	150 limestone base course	4,630	m2	15.77	73,029
10.3.4	40 wearing course	4,626	m2	15.77	72,966
10.3.5	Seal	4,626	m2	3.38	15,642
10.3.6	Linemarking and furniture	745	m	14.62	10,891
10.3.7	Street signs	3	no	1,041.22	3,124
10.3.8	Semi mountable kerb	745	m	38.12	28,402
10.3.9	Flush kerb	745	m	57.89	43,125
10.3.10	Concrete footpath	838	m2	93.30	78,183
10.3.11	Form batters to verge	3,173	m2	15.46	49,066
10.3.12	Verge treatment	6,894	m2	10.31	71,071
10.3.13	Tie road into existing	4	no	5,154.55	20,618
	Total - Roadworks				566,447
	Electric Light and Power				

City of Ku Develope		Ro	ads - 2021 (	Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road				
10.7.1	Street lighting to new roadway	8	no	11,283.95	90,272
	Total - Electric Light and Power				90,272
	Contingency				
10.14.1	Design contingency	5	%		65,750
10.14.2	Construction contingency	5	%		65,750
	Total - Contingency				131,500
	Total - Hammond Road				1,545,000

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City of KwinanaRoads - 2021 Cost ReviewDeveloper Contribution Plan Annual Cost ReviewCost Review			Cost Review		
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road Extension - Elemental Summary				
11.1	Demolition, Clearing, and Earthworks	505	m	202	102,101
11.2	Drainage Works	505	m	436	220,290
11.3	Roadworks	505	m	1,329	670,956
11.4	Sewer Drainage				Excluded
11.5	Water Supply				Excluded
11.6	Gas				Excluded
11.7	Electric Light and Power	505	m	246	124,123
11.8	Communications				Excluded
11.9	Direct Costs	505	m	2,214	1,118,000
11.10	Preliminaries and Builders Margin	20	%		223,600
11.11	Traffic Management				Excluded
11.12	Construction Costs	505	m	2,657	1,342,000
11.13	Allowance for Professional Fees	7.5	%		100,650
11.14	Contingency	10	%		134,200
	Total - Hammond Road Extension				1,576,000

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-	City of Kwinana Roads - 2021 Cost Revie Developer Contribution Plan Annual Cost Review			Cost Review	
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road Extension				
	Demolition, Clearing, and Earthworks				
11.1.1	Clear landscaped areas (light shrubs)	12,306	m2	0.85	10,403
11.1.2	Bulk excavation to new road area	1,354	m3	15.46	20,938
11.1.3	Clear topsoil to 300mm	12,306	m2	3.07	37,805
11.1.4	Bulk fill to build up new road level	1,567	m3	21.03	32,955
	Total - Demolition, Clearing, and Earthworks				102,101
	Drainage Works				
11.2.1	Swale construction	1,921	m2	15.46	29,706
11.2.2	Allowance for stormwater drainage	505	m	377.40	190,585
	Total - Drainage Works				220,290
	Roadworks				
11.3.1	Subgrade preparation	6,267	m2	3.79	23,775
11.3.2	200 limestone subbase course	6,267	m2	17.88	112,029
11.3.3	150 limestone base course	6,267	m2	15.77	98,849
11.3.4	40 wearing course	6,257	m2	15.77	98,691
11.3.5	Seal	6,257	m2	3.38	21,157
11.3.6	Linemarking and furniture	1,009	m	14.62	14,750
11.3.7	Street signs	5	no	1,041.22	5,206
11.3.8	Semi mountable kerb	1,009	m	38.12	38,466
11.3.9	Flush kerb	1,009	m	57.89	58,407
11.3.10	Concrete footpath	1,140	m2	93.30	106,359
11.3.11	Form batters to verge	3,378	m2	15.46	52,236
11.3.12	Verge treatment	2,980	m2	10.31	30,721
11.3.13	Tie road into existing	2	no	5,154.55	10,309
	Total - Roadworks				670,956
	Electric Light and Power				
11.7.1	Street lighting to new roadway	11	no	11,283.95	124,123

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City of K Develope	winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Hammond Road Extension				
	Total - Electric Light and Power				124,123
	Contingency				
11.14.1	Design contingency	5	%		67,100
11.14.2	Construction contingency	5	%		67,100
	Total - Contingency				134,200
	Total - Hammond Road Extension				1,576,000

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City of KwinanaRoads - 202Developer Contribution Plan Annual Cost Review				oads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Lyon Road - Elemental Summary				
12.1	Provided by City of Kwinana on 28/04/2021				
12.2					
12.3	SATTERLEYS ACTUAL COSTS				
12.4	Road construction:				
12.5	North - Honeywood. (2016 RJV actuals - Satterleys section)	1	Item	2,524,275.1 9	2,524,275
12.6	North - Honeywood. (2016 RJV actuals - variations - Satterleys section)	1	Item	206,070.23	206,070
12.7	North - Honeywood. (2016 RJV actuals - Galati section)	1	Item	221,984.50	221,985
12.8	South - Honeywood Rise. (2016 RJV actuals - Satterley section)	1	Item	746,656.83	746,657
12.9	South - Honeywood Rise. (Stage 4 actuals - Satterley section)	1	Item	188,832.22	188,832
12.10					
12.11	CHAINAGE 2540m - 2740m				
12.12	Engineering Design	1	Item	8,902.63	8,903
12.13	Road Construction	1	Item	112,970.58	112,971
12.14	Road Construction VOs		Note		Excluded
12.15	Survey	1	Item	1,800.00	1,800
12.16	Lighting Design	1	Item	3,047.25	3,047
12.17	Lighting Construction	1	Item	21,189.48	21,189
12.18	Linemarking	1	Item	2,803.50	2,804
12.19	Supervision Fee	1	Item	1,381.09	1,381
12.20					
12.21	CHAINAGE 2740m - 2903m				
12.22	Engineering Design	1	Item	6,920.00	6,920
12.23	Road Construction	1	Item	228,299.86	228,300
12.24	Road Construction VOs	1	Item	38,268.99	38,269
12.25	Survey	1	Item	3,400.00	3,400
12.26	Lighting Design	1	Item	5,862.66	5,863
12.27	Lighting Construction	1	Item	11,607.00	11,607
12.28	Linemarking	1	Item	4,732.46	4,732
12.29	Supervision Fee	1	Item	3,998.53	3,999

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City of Kwinana Developer Contribution Plan Annual Cost Review		Roads - 2021	Cost Review
Total - Lyon Road			4,344,000

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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Cordata Avenue - Elemental Summary				
13.1	Demolition, Clearing, and Earthworks	409	m	416	170,170
13.2	Drainage Works	409	m	266	108,785
13.3	Roadworks	409	m	1,267	518,105
13.4	Sewer Drainage				Excluded
13.5	Water Supply				Excluded
13.6	Gas				Excluded
13.7	Electric Light and Power	409	m	1,811	740,802
13.8	Communications				Excluded
13.9	Direct Costs	409	m	3,760	1,538,000
13.10	Preliminaries and Builders Margin	20	%		307,600
13.11	Traffic Management				Excluded
13.12	Construction Costs	409	m	4,513	1,846,000
13.13	Allowance for Professional Fees	7.5	%		138,450
13.14	Contingency	10	%		184,600
	Total - Cordata Avenue				2,169,000

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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Cordata Avenue				
	Demolition, Clearing, and Earthworks				
13.1.1	Clear landscaped areas (light shrubs)	10,305	m2	0.85	8,711
13.1.2	Clear topsoil to 300mm	10,305	m2	3.07	31,658
13.1.3	Bulk fill to build up new road level	6,172	m3	21.03	129,801
	Total - Demolition, Clearing, and Earthworks				170,170
	Drainage Works				
13.2.1	Swale construction	2,044	m2	15.46	31,608
13.2.2	Allowance for stormwater drainage	409	m	188.70	77,177
	Total - Drainage Works				108,785
	Roadworks				
13.3.1	Subgrade preparation	4,218	m2	3.79	16,002
13.3.2	200 limestone subbase course	4,218	m2	17.88	75,401
13.3.3	150 limestone base course	4,218	m2	15.77	66,530
13.3.4	40 wearing course	3,915	m2	15.77	61,751
13.3.5	Seal	3,915	m2	3.38	13,238
13.3.6	Linemarking and furniture	818	m	14.62	11,958
13.3.7	Street signs	4	no	1,041.22	4,165
13.3.8	Flush kerb	818	m	57.89	47,350
13.3.9	Concrete footpath	2,045	m2	93.30	190,793
13.3.10	Verge treatment	1,999	m2	10.31	20,608
13.3.11	Tie road into existing	2	no	5,154.55	10,309
	Total - Roadworks				518,105
	Electric Light and Power				
13.7.1	Street lighting to new roadway	9	no	11,283.95	101,556
13.7.2	Relocate existing overhead power lines	190	m	799.06	151,821
13.7.3	Relocate/protect existing underground power cables	610	m	799.06	487,426

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Description				
Description	Quantity	Unit	Rate	Total (AUD)
Cordata Avenue				
Total - Electric Light and Power				740,802
Contingency				
Design contingency	5	%		92,300
Construction contingency	5	%		92,300
Total - Contingency				184,600
Total - Cordata Avenue				2,169,000
	Total - Electric Light and Power Contingency Design contingency Construction contingency Total - Contingency	Total - Electric Light and Power         Contingency         Design contingency       5         Construction contingency       5         Total - Contingency       5	Total - Electric Light and PowerImage: ContingencyImage: Solution co	Total - Electric Light and PowerImage: Second s

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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Peel Main Drain Culvert - Elemental Summary				
14.1	Demolition, Clearing, and Earthworks	52	m	730	37,944
14.2	Drainage Works	52	m	7,253	377,164
14.3	Roadworks	52	m	1,118	58,144
14.4	Sewer Drainage				Excluded
14.5	Water Supply				Excluded
14.6	Gas				Excluded
14.7	Electric Light and Power	52	m	289	15,045
14.8	Communications				Excluded
14.9	Direct Costs	52	m	9,404	489,000
14.10	Preliminaries and Builders Margin	20	%		97,800
14.11	Traffic Management				Excluded
14.12	Construction Costs	52	m	11,288	587,000
14.13	Allowance for Professional Fees	7.5	%		44,025
14.14	Contingency	10	%		58,700
	Total - Peel Main Drain Culvert				689,000

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City of Kv Develope	vinana r Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Peel Main Drain Culvert				
	Demolition, Clearing, and Earthworks				
14.1.1	Clear landscaped areas	1	item	3,092.73	3,093
14.1.2	Clear topsoil to 300mm	408	m2	3.07	1,254
14.1.3	Bulk excavation and disposal	613	m3	15.46	9,474
14.1.4	Bulk fill to form new levels	1,049	m3	21.03	22,061
14.1.5	Allowance to modify existing fences	1	item	2,061.82	2,062
	Total - Demolition, Clearing, and Earthworks				37,944
	Drainage Works				
14.2.1	Allowance for stormwater drainage	21	m	377.40	7,925
14.2.2	Dewatering and temporary bypass pumping	1	item	25,258	25,258
14.2.3	Crushed limsestone base	408		15.77	6,441
14.2.4	300 concrete slab complete including thickenings	268	m2	206.18	55,309
14.2.5	300 mortarised stone pitching	288	m2	181.22	52,195
14.2.6	Precast concrete box culvert	48	m	4,150.44	199,221
14.2.7	Headwall	21	m2	628.86	13,206
14.2.8	Wingwall	28	m2	628.86	17,608
	Total - Drainage Works				377,164
	Roadworks				
14.3.1	Subgrade preparation	441	m2	3.79	1,673
14.3.2	200 limestone subbase course	441	m2	17.88	7,883
14.3.3	150 limestone base course	441	m2	15.77	6,956
14.3.4	40 wearing course	202	m2	15.77	3,186
14.3.5	Seal	202	m2	3.38	683
14.3.6	Linemarking and furniture	41	m	14.62	599
14.3.7	Street signs	2	no	1,041.22	2,082
14.3.8	Semi mountable kerb	41	m	38.12	1,563
14.3.9	Concrete footpath	102	m2	93.30	9,516
14.3.10	Verge treatment	191	m2	10.31	1,969

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City of K Develope	winana er Contribution Plan Annual Cost Review		Ro	ads - 2021 (	Cost Review
Item	Description	Quantity	Unit	Rate	Total (AUD)
	Peel Main Drain Culvert				
14.3.11	Tie road into existing	2	no	5,154.55	10,309
14.3.12	Road barrier	43	m	275.12	11,723
	Total - Roadworks				58,144
	Electric Light and Power				
14.7.1	Street lighting to new roadway	2	no	7,522.63	15,045
	Total - Electric Light and Power				15,045
	Contingency				
14.14.1	Design contingency	5	%		29,350
14.14.2	Construction contingency	5	%		29,350
	Total - Contingency				58,700
	Total - Peel Main Drain Culvert				689,000

### City of Kwinana

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

**Appendix B – Open Drains** 

### Section B - Open Drains 2021 Cost Review

### Summary

Drains	Cost (AUD 2020)	Unit rate (AUD 2020)	Cost (AUD 2021)	Unit Rate (AUD 2021	Cost variance	Unit rate variance
DCA1 Bertram Road Drainage Basin	\$572,473	\$1,974	\$587,324	\$2,025	\$14,851	\$51
Peel Sub N drain upgrade in Wellard	\$2,293,504	\$20,625	\$311,277	\$18,865	(\$1,982,227)	(\$1,760)
Peel Sub N1 drain upgrade in Wellard	\$301,407	\$6,610	\$309,084	\$6,778	\$7,676	\$168
Peel Sub N2 drain upgrade in Wellard	\$235,309	\$6,610	\$235,309	\$6,610	\$0	\$0
Peel Sub P drain in Casuarina	\$1,299,377	\$20,625	\$0	\$0	(\$1,299,377)	(\$20,625)
Peel Sub P1 drain in Casuarina	\$1,196,252	\$20,625	\$745,178	\$18,865	(\$451,074)	(\$1,760)
Peel Sub P1A drain in Casuarina	\$1,128,189	\$20,625	\$415,036	\$18,865	(\$713,154)	(\$1,760)
Peel Sub O drain in Casuarina	\$1,031,252	\$20,625	\$943,263	\$18,865	(\$87,989)	(\$1,760)
Piping of the Sub P drain in Casuarina	\$1,145,188	\$1,405	\$1,173,352	\$1,440	\$28,164	\$35
Piping of the Sub P1 drain in Casuarina	\$274,580	\$1,484	\$284,916	\$1,540	\$10,336	\$56
Drain P1A Cost to pipe	\$145,416	\$6,610	\$149,119	\$6,778	\$3,704	\$168
Drain O cost to pipe	\$1,031,252	\$20,625	\$943,263	\$18,865	(\$87,989)	(\$1,760)
Total	\$10,654,198	\$148,443	\$6,097,119	\$119,497	(\$4,557,079)	(\$28,946)





#### City of Kwinana

#### City of Kwinana

### DCP Open Drains - T&T Rates Schedule 2020

DCP Open Drains - T&T Rates Schedule 2021

City o	of Kwina	ina 2020 Rate	s	T&T 2021 Rates									
City of Kwinana				City of Kwinana				Variance o	on Rate Cost				
Items	Unit	Rate	Assumptions & Comments	Items	Unit	Rate	Assumptions & Comments	(\$2021	vs \$2020)				
Peel Sub drain - Wellard and Casuarina													
Earthworks and Site Preparation				Earthworks and Site Preparation									
bulk earthworks (cut to spoil, compact and final grade)	m3	\$ 36.88		bulk earthworks (cut to spoil, compact and final grade)	m3	\$ 38.02		\$	1.14				
fine grading	m2	\$ 1.39		fine grading	m2	\$ 1.43		\$	0.04				
rock pitching	m2	\$ 120.76		rock pitching	m2	\$ 124.49		\$	3.73				
landscaping/ planting (140mm x 3/m2)	m2	\$ 18.60		landscaping/ planting (140mm x 3/m2)	m2	\$ 19.17		\$	0.57				
		¢ 10.57					Rate excluded as advised by City of Kwinana on 4 May						
tubestock x 3/m2	m2	\$ 10.57		tubestock x 3/m2	m2	Excluded	2021.	\$	(10.57)				
advanced tree planting (no.)	m2	\$ 352.20		advanced tree planting (no.)	m2	\$ 363.09		\$	10.89				
Mulch - (Inorganic)	m2	\$ 11.07		Mulch - (Inorganic)	m2	\$ 11.41		\$	0.34				
Maintenance cost per annum				Maintenance cost per annum									
\$1.50 per m <sup>2</sup> x 8m wide x 10lm per annum	Item	\$ 120.76		\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum	Item	\$ 124.49		\$	3.73				
\$1.50 per m2 x 20m wide x 10lm per annum	Item	\$ 301.89		\$1.50 per m2 x 20m wide x 10lm per annum 20m	Item	\$ 311.22		\$	9.33				



Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for DCA1 Bertram Road Drainage Basin



Code	Description	Qty	Unit	Unit Rate \$2020	Total Cost \$2020	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions
	RELIMINARIES stablishment									
3	Mobilisation / Demobilisation	1		\$3,018.90	\$3,018.90	\$3,112.21	\$3,112.21	\$93.31		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
4	Project Board (Provisional) Insurances	1		\$3,018.90 \$2,826.49	\$3,018.90 \$2,826.49	\$3,112.21 \$2,913.85	\$3,112.21 \$2,913.85	\$93.31 \$87.36		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021 Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
	uthorities and Fees									
7	Construction Industry Training Fund Levy (0.2% of Contract Sum)	1	item	\$745.84	\$745.84	\$768.90	\$768.90	\$23.05	\$23.05	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
8	Liaison and Coordination of Service Bodies for Service Installation	1	item	\$1,811.34	\$1,811.34	\$1,867.33	\$1,867.33	\$55.99		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
9 10 <b>T</b> e	Building License for Walls and Structures	1	item	\$1,509.45	\$1,509.45	\$1,556.11	\$1,556.11	\$46.66	\$46.66	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
11	Scheduled Testing	1	item	\$2,012.60	\$2,012.60	\$2,074.81	\$2,074.81	\$62.21	\$62.21	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
12 St 13	As Constructed Details	1	item	\$2,515.75	\$2,515.75	\$2,593.51	\$2,593.51	\$77.76	\$77.76	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
14 15	Survey / Supervision/Project Management Survey	1		\$0.00 \$10,000.00	\$0.00 \$10,000.00	\$0.00 \$10,000.00	\$0.00 \$10,000.00	\$0.00 \$0.00		Omitted. Rate provided by City of Kwinana is fair and reasonable.
16 17	Project Management - Design	1	item	\$10,000.00 \$30,000.00	\$10,000.00 \$30,000.00	\$10,000.00	\$10,000.00 \$30,000.00	\$0.00 \$0.00	\$0.00	Rate provided by City of Kwinana is fair and reasonable.
18	Project Management/Construction Supervision - Construction Detailed Design	1		\$30,000.00	\$30,000.00		\$30,000.00	\$0.00		Rate provided by City of Kwinana is fair and reasonable. Rate provided by City of Kwinana is fair and reasonable.
19 <b>C</b>	Construction Water Construction water from nearby hydrant/standpipe	1	item	\$1,509.45	\$1,509.45	\$1,556.11	\$1,556.11	\$46.66	\$46.66	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
21 <b>0</b> 22	H&S Occupational Health and Safety Management	1	item	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
23	Safety Management Plan	1		\$805.04	\$805.04	\$829.92	\$829.92	\$24.88		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021 Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
24 <b>O</b>	Final Clean up	1	item	\$2,012.60	\$2,012.60	\$2,074.81	\$2,074.81	\$62.21	\$62.21	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
26 27	Other Items Necessary for Completion of the Works Subtotal Preliminaries	1	item	\$2,012.60	\$2,012.60 <b>\$104,805.26</b>	\$2,074.81	\$2,074.81 <b>\$105,571.97</b>	\$62.21	\$62.21 <b>\$766.71</b>	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
28 5	ITEWORKS				+		+/		<i></i>	
30	earing Clearing, Grubbing and Dispose Off Site	1	item	\$5,031.50	\$5,031.50	\$5,187.02	\$5,187.02	\$155.52	\$155.52	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
31 D 32	emolition Remove and dispose existing Pipe to Peel Main Drain	1	item	\$1,006.30	\$1,006.30	\$1,037.40	\$0.00 \$1,037.40	\$31.10	\$31.10	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
33 To		1		+1,000.00	+1/000100		+ 1/007.110	÷91.19		
34	Strip and Stockpile Topsoil and respread in adjoining POS	2200	m2	\$1.90	\$4,180.00	\$1.96	\$4,309.20	\$0.06	\$129.20	Rate obtained from in-house data based on excavating to remove soil average 150mm deep and spread and level on site
35 <b>E</b> a 36	Proof rolling of fill areas	2200	m2	\$1.01	\$2,213.86	\$1.04	\$2,282.29	\$0.03	\$68.43	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
37	Import and Compact Fill sand	1200		\$25.16	\$30,189.00	\$25.94	\$31,122.11	\$0.78	\$933.11	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
38 39	Import and compact clay liner	300 900	m3 m3	\$35.22 \$25.16	\$10,566.15 \$22,641.75	\$36.31 \$25.94	\$10,892.74 \$23,341.59	\$1.09 \$0.78		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021 Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
40	Import and Compact Fill sand for extra required in existing basin Final Trim and Shaping	2200		\$25.16	\$3,058.00	\$25.94	\$3,152.52	\$0.04	\$94.52	Rate obtained from in-house data
41 42	Subtotal Earthworks				\$78,886.56		\$81,324.87		\$2,438.31	
	ENCING AND BUNDS emoval and disposal of existing fences									
45	Remove and Dispose Existing Chainmesh on exiting basin	255	m	\$15.00	\$3,825.00	\$15.46	\$3,943.23	\$0.46	\$118.23	Rate obtained from in-house data, based on assumption of bin requirement and
	upply and install complete fences	200		+20100	+0,020.00		<i>40,0</i> .0120	+0110	+	disposal
47 48	1800 chainmesh fence with barb wire Double Gate in Chainmesh Fence	210		\$55.00 \$1,160.00	\$11,550.00 \$1,160.00	\$56.70 \$1,195.85	\$11,907.00 \$1,195.85	\$1.70 \$35.85		Rate obtained from in-house data Rate obtained from in-house data
49	Subtotal Fencing		110.	\$1,100.00	\$16,535.00	<i><i><i>q</i><b>1</b>,155.05</i></i>	\$17,046.08	455.65	\$511.08	
50 51 <b>S</b>	FORMWATER DRAINAGE									
52 <b>Pi</b>	pework/Excavate/Supply/Lay/Backfill			+150.00	+1 500 00		±1.620.00	+4.64	+120.00	
53 54	150 PVC SWP 525 Dia Class 2	30 260		\$150.00 \$350.00	\$4,500.00 \$91,000.00	\$154.64 \$360.82	\$4,639.09 \$93,812.73	\$4.64 \$10.82		Rate obtained from in-house data from similar project scope Rate obtained from in-house data from similar project scope
55 <b>S</b>	ubsoil drainage 150 PVC Subsoil Drain	135	m	\$140.00	\$18,900.00	\$144.33	\$19,484.18	\$4.33	\$584.18	Rate obtained from in-house data from similar project scope
57	Subsoil Flushing Point On Line	2		\$1,200.00	\$2,400.00		\$2,474.18	\$37.09		Rate obtained from in-house data from similar project scope
58 <b>D</b>	Junction Pits - Standard installed on existing line	1	No.	\$3,018.90	\$3,018.90	\$3,112.21	\$3,112.21	\$93.31	\$93.31	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
60 61 <b>R</b>	Grated Pits outlet pits evegetation	1	No.	\$3,018.90	\$3,018.90	\$3,112.21	\$3,112.21	\$93.31	\$93.31	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
62	Supply of shrubs	2200	Item	\$2.00	\$4,400.00	\$2.06	\$4,536.00	\$0.06	\$136.00	Rate provided is fair and reasonable based on small shrubs, escalated City of Kwinana
63	Planting of shrubs	2200		\$2.00	\$4,400.00	\$2.06	\$4,536.00		\$136.00	rate to 2021 Rate provided is fair and reasonable based on small shrubs, escalated City of Kwinana
										rate to 2021
64	Supply of sedges	8800	Item	\$2.08	\$18,304.00	\$2.14	\$18,869.76	\$0.06	\$565.76	Rate obtained from in-house data
65	Planting of sedges	8800	Item	\$2.08	\$18,304.00	\$2.14	\$18,869.76	\$0.06	\$565.76	Rate obtained from in-house data
66 <b>0</b>	Spillway complete	1	No.	\$8,050.40	\$8,050.40	\$8,299.23	\$8,299.23	\$248.83	¢748 93	Rate provided is reasonable for minor spillway, escalation applied to rate for 2021
68	Spillway complete Type B outlet to Peel Main Drain	1	No.	\$8,050.40	\$8,050.40	\$8,299.23	\$8,299.23	\$248.83	\$248.83	Requires detailed scope, escalation has been applied to 2021 based on City of Kwinana
69	Rock Pitching	40		\$120.00	\$4,800.00	\$123.71	\$4,948.36	\$3.71	\$148.36	rate
70	Permeable Rock Inlet Dissipator	1	Item	\$10,063.00	\$10,063.00	\$10,374.04	\$10,374.04	\$311.04	\$311.04	Requires detailed scope, escalation has been applied to 2021 based on City of Kwinana rate
	and filter	1000		¢10.11	600 E47 40	#10.67	¢34 375 35	#0 FC	#777 07	
72 73	Placing 200 mm Pea Gravel bedding for Sand Filter Floor Supplying and placing filter sand	1300 390	m2 m3	\$18.11 \$95.60	\$23,547.42 \$37,283.42	\$18.67 \$98.55	\$24,275.25 \$38,435.81	\$0.56 \$2.95	\$727.83	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021 Rate provided suitable for specialty sand filling and placement, escalated City of
										Kwinana rate to 2021 Requires detailed scope, escalation has been applied to 2021 based on City of Kwinana
74	mix supplied NUA with filter sand	1300	m2	\$30.19	\$39,245.70	\$31.12	\$40,458.75	\$0.93		rate Requires detailed scope, assolution has been applied to 2021 based on City of Kwinana
75	NUA cartage costs from Capel	1	Item	\$3,220.16	\$3,220.16	\$3,319.69	\$3,319.69	\$99.53	\$99.53	Requires detailed scope, escalation has been applied to 2021 based on City of Kwinana rate
76 77	Subtotal Stormwater drainage				\$297,575.43		\$306,773.21		\$9,197.79	
78 79	Contineancy		%	15.00	\$74,670.34	15.00	\$76,607.42		\$1,937.08	
80	Contingency		70	15.00	ə/4,0/0.34	15.00	<b>₽/0,007.42</b>		\$1,937.08	
81 To	otal cost for construction of DCA1 Bertram Road Drainage Basin				\$572,473		\$587,324		\$14,851	Total
82										
83 To	otal cost per m of DCA1 Bertram Road Drainage Basin	290	m		\$1,974		\$2,025		\$51	per m

#### Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for Peel Sub N drain in Wellard

Code	Description	Qty	Unit	Unit Rate \$2020	Total Cost \$2020	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions
1	Construction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20	\$38.02	\$5,322.79	\$1.14	1	Rate obtained from in-house data
4	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	1	Rate provided is fair and reasonable for 150mm thick, escalated City of Kwinana rate
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57		Rate obtained from in-house data
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate excluded as advised by City of Kwinana on 4 May 2021.
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from in-house data for 100L trees
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from in-house data
10	Contingency 10%		%	10.00	\$1,575.34	10.00	\$1,406.09		(\$169.24)	Remains at 10% due to design of scope
11	total cost per 10 lineal meters				\$17,328.70		\$15,467.03		(\$1,861.66)	
12										
13	Construction cost per 10 m sections 1000 - 1500mm deep									
14	Earthworks and Site Preparation									
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	\$38.02	\$9,124.78	\$1.14	\$273.58	Rate obtained from in-house data
16	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
17	rock pitching	20	m2	\$120.76	\$2,415.12	\$124.49	\$2,489.77	\$3.73	\$74.65	Rate provided is fair and reasonable for 150mm thick, escalated City of Kwinana rate
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from in-house data
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from in-house data for 100L trees
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from in-house data
22	10% Contingency		%	10.00	\$2,064.89	10.00	\$1,910.78		(\$154.11)	Remains at 10% due to design of scope
23	total cost per 10 meters				\$22,713.81		\$21,018.60		(\$1,695.21)	
24										
25	Maintenance cost per annum									
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum	1	Item	\$301.89	\$301.89	\$311.22	\$311.22	\$9.33	\$9.33	
27										
28	Subtotal				\$20,625.03		\$18,865.26		(\$1,759.77)	
29										
30	Total cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$18,865		(\$1,760)	Total for 10m section
31										
32	Total cost for Peel Sub-Drain N – 185m x 20m wide; Living Stream	165	m		\$2,293,504		\$311,277		(\$1,982,227)	Total for 165m section



#### Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for Peel Sub Drain N1 in Wellard

Code	Description	Qty	Unit	Unit Rate \$2020	Total Cost \$2020	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	
1	Construction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	56	m3	\$36.88	\$2,065.28	\$38.02	\$2,129.12	\$1.14	\$63.84	Rate obtained from in
4	fine grading	80	m2	\$1.39	\$111.20	\$1.43	\$114.64	\$0.04	\$3.44	Rate provided is fair a
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	\$37.32	Rate provided is fair a
6	landscaping/ planting (140mm x 3/m2)	80	m2	\$18.60	\$1,488.00	\$19.17	\$1,533.99	\$0.57	\$45.99	Rate obtained from in
7	tubestock x 3/m2	3	m2	\$10.57	\$31.71	Excluded	Excluded	(\$10.57)	(\$31.71)	Rate excluded as advi
8	advanced tree planting (no.)		No	\$352.20	\$0.00	\$363.09	\$0.00	\$10.89	\$0.00	Rate obtained from in
9	Mulch - (Inorganic)	80	m2	\$11.07	\$885.60	\$11.41	\$912.97	\$0.34	\$27.37	Rate obtained from in
10	Contingency 10%		%	10.00	\$578.94	10.00	\$593.56		\$14.63	Added contingency un
11	total cost per 10 lineal meters				\$6,368.29		\$6,529.16		\$160.88	
12										
13	Maintenance Cost per annum									
14	\$1.50 per m2 x 8m wide x 10lm per annum	1	Item	\$120.76	\$120.76	\$124.49	\$124.49	\$3.73	\$3.73	Updated City of Kwina
15	Subtotal				\$6,489.05		\$6,653.66		\$164.61	
16										
17	Total cost for construction of a 8m wide x 10m length Living Stream	10	m		\$6,610		\$6,778		\$168	Total for 10m section
18										
19	Total Cost for Peel Sub-Drain N1 – 456m x 8m wide; Living Stream	456	m		\$301,407		\$309,084		\$7,676	Total for 456m sect



Turner & Townsend

#### 24-May-21

#### **Comments & Assumptions**

in-house data

- r and reasonable, escalated City of Kwinana rate to 2021
- r and reasonable, escalated City of Kwinana rate to 2021
- in-house data
- dvised by City of Kwinana on 4 May 2021.
- in-house data
- in-house data
- under direction from City of Kwinana

inana rate to correct formula based on 8m wide not 20m wide

tion

ction

### Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for Peel Sub-Drain N2 in Wellard

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions		
1 <b>Cons</b>	struction cost per 10 m sections <1000mm deep											
2	Earthworks and Site Preparation											
3	bulk earthworks (cut to spoil, compact and final grade)	56	m3	\$36.88	\$2,065.28	\$36.88	\$2,065.28	\$0.00	\$0.00	No rate review required for 2021, as advised by City of Kwinana on 28 April 2021.		
4	fine grading	80	m2	\$1.39	\$111.20	\$1.39	\$111.20	\$0.00	\$0.00			
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$120.76	\$1,207.56	\$0.00	\$0.00			
6	landscaping/ planting (140mm x 3/m2)	80	m2	\$18.60	\$1,488.00	\$18.60	\$1,488.00	\$0.00	\$0.00			
7	tubestock x 3/m2	3	m2	\$10.57	\$31.71	\$10.57	\$31.71	\$0.00	\$0.00			
8	advanced tree planting (no.)		No	\$352.20	\$0.00	\$352.20	\$0.00	\$0.00	\$0.00			
9	Mulch - (Inorganic)	80	m2	\$11.07	\$885.60	\$11.07	\$885.60	\$0.00	\$0.00			
10	Contingency 10%		%	10.00	\$578.94	10.00	\$578.94		\$0.00			
11	total cost per 10 lineal meters				\$6,368.29		\$6,368.29		\$0.00			
12												
13 Main	ntenance Cost per annum											
14	\$1.50 per m2 x 8m wide x 10lm per annum	1	Item	\$120.76	\$120.76	\$120.76	\$120.76	\$0.00	\$0.00			
15	Subtotal				\$6,489.05		\$6,489.05		\$0.00			
16												
17 Tota	l cost for construction of a 8m wide x 10m length Living Stream	10	m		\$6,610		\$6,610		\$0	Total for 10m section		
18												
19 Tota Stre	l cost for Peel Sub-Drain N2 -  356m and 111m x 8m wide; Living am	356	m		\$235,309		\$235,309		\$0	Total for 356m section		



Turner & Townsend

#### Section B - Open Drains Rate 2021 Cost Review

#### Rate Comparison - \$/m for Peel Sub-Drain P in Casuarina

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions
1	Construction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20	Excluded	Excluded	(\$36.88)		Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
4	fine grading	200	m2	\$1.39	\$278.00	Excluded	Excluded	(\$1.39)	(\$278.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
5	rock pitching	10	m2	\$120.76	\$1,207.56	Excluded	Excluded	(\$120.76)	(\$1,207.56)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	Excluded	Excluded	(\$18.60)	(\$3,720.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	Excluded	Excluded	(\$352.20)		Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	Excluded	Excluded	(\$11.07)		Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
10	Contingency 10%		%	10.00	\$1,575.34	Excluded	Excluded	(\$10.00)	(\$1,575.34)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
11	total cost per 10 lineal meters				\$17,328.70		\$0.00		(\$17,328.70)	
12										
13	Construction cost per 10 m sections 1000 - 1500mm deep									
14	Earthworks and Site Preparation									
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	Excluded	Excluded	(\$36.88)	(\$8,851.20)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
16	fine grading	200	m2	\$1.39	\$278.00	Excluded	Excluded	(\$1.39)	(\$278.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
17	rock pitching	20	m2	\$120.76	\$2,415.12	Excluded	Excluded	(\$120.76)	(\$2,415.12)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	Excluded	Excluded	(\$18.60)	(\$3,720.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)		Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	Excluded	Excluded	(\$352.20)	(\$1,056.60)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	Excluded	Excluded	(\$11.07)	(\$2,214.00)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
22	10% Contingency		%	10.00	\$2,064.89	Excluded	Excluded	(\$10.00)	(\$2,064.89)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
23	total cost per 10 meters				\$22,713.81		\$0.00		(\$22,713.81)	
24										
25	Maintenance cost per annum									
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum	1	Item	\$301.89	\$301.89	Excluded	Excluded	(\$301.89)	(\$301.89)	Excluded as drain is to be piped, as directed by City of Kwinana on 18/05/21.
27	Subtotal				\$20,625.03		\$0.00		(\$20,625.03)	
28										
29	Total cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$0		(\$20,625)	Total for 10m section
30										
31	Total Cost for Peel Sub-Drain P – 630m x 20m wide; Living Stream	630	m		\$1,299,377		\$0		(\$1,299,377)	Total for 630m section

Kwinana Turner & Townsend

#### Rate Comparison - \$/m for Peel Sub-Drain P1 in Casuarina

Code	e Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	
1	Construction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20	\$38.02	\$5,322.79	\$1.14	\$159.59	Rate obtained from i
4	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	\$37.32	Rate provided is fair
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate excluded as ad
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from i
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from i
10	Contingency 10%		%	10.00	\$1,575.34	10.00	\$1,406.09		(\$169.24)	Remains at 10% due
11	total cost per 10 lineal meters				\$17,328.70		\$15,467.03		(\$1,861.66)	
12										
13	Construction cost per 10 m sections 1000 - 1500mm deep									
14	Earthworks and Site Preparation									
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	\$38.02	\$9,124.78	\$1.14	\$273.58	Rate obtained from
16	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair
17	rock pitching	20	m2	\$120.76	\$2,415.12	\$124.49	\$2,489.77	\$3.73	\$74.65	Rate provided is fair
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from i
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate excluded as ad
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from i
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from i
22	10% Contingency		%	10.00	\$2,064.89	10.00	\$1,910.78		(\$154.11)	Remains at 10% due
23	total cost per 10 meters				\$22,713.81		\$21,018.60		(\$1,695.21)	
24										
25	Maintenance cost per annum									
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum	1	Item	\$301.89	\$301.89	\$311.22	\$311.22		\$9.33	
27	Subtotal				\$20,625.03		\$18,865.26		(\$1,759.77)	
28										
29	Total cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$18,865		(\$1,760)	Total for 10m sect
30										
31	Total cost for Peel Sub-Drain P1 – 395m x 20m; Living Stream	395	m		\$1,196,252		\$745,178		(\$451,074)	Total for 395m see



Turner & Townsend

### 24-May-21

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om in-house data

- fair and reasonable, escalated City of Kwinana rate to 2021 fair and reasonable for 150mm thick, escalated City of Kwinana rate
- om in-house data
- advised by City of Kwinana on 4 May 2021.
- om in-house data for 100L trees
- om in-house data
- due to design of scope

om in-house data

- fair and reasonable, escalated City of Kwinana rate to 2021 fair and reasonable for 150mm thick, escalated City of Kwinana rate
- om in-house data
- advised by City of Kwinana on 4 May 2021.
- om in-house data for 100L trees
- om in-house data
- due to design of scope

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section

#### Rate Comparison - \$/m for Peel Sub-Drain P1A in Casuarina

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance
1 Cons	struction cost per 10 m sections <1000mm deep								
2	Earthworks and Site Preparation								
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20	\$38.02	\$5,322.79	\$1.14	\$159.59 Rate obtained from in-hou
4	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59 Rate provided is fair and re
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	\$37.32 Rate provided is fair and re
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98 Rate obtained from in-hous
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00) Rate excluded as advised b
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66 Rate obtained from in-hous
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43 Rate obtained from in-hous
10	Contingency 10%		%	10.00	\$1,575.34	10.00	\$1,406.09		(\$169.24) Remains at 10% due to de
11	total cost per 10 lineal meters				\$17,328.70		\$15,467.03		(\$1,861.66)
12									
13 Cons	struction cost per 10 m sections 1000 - 1500mm deep								
14	Earthworks and Site Preparation								
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	\$38.02	\$9,124.78	\$1.14	\$273.58 Rate obtained from in-hous
16	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59 Rate provided is fair and re
17	rock pitching	20	m2	\$120.76	\$2,415.12	\$124.49	\$2,489.77	\$3.73	\$74.65 Rate provided is fair and re
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98 Rate obtained from in-hous
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00) Rate excluded as advised b
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66 Rate obtained from in-hou
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43 Rate obtained from in-hous
22	10% Contingency		%	10.00	\$2,064.89	10.00	\$1,910.78		(\$154.11) Remains at 10% due to de
23	total cost per 10 meters				\$22,713.81		\$21,018.60		(\$1,695.21)
24									
25 Main	tenance cost per annum								
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum 10m	1	Item	\$301.89	\$301.89	\$311.22	\$311.22		\$9.33
27	Subtotal				\$20,625.03		\$18,865.26		(\$1,759.77)
28									
	l cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$18,865		(\$1,760) Total for 10m section
30									
31 Tota	l Cost for Peel Sub-Drain P1A – 220m x 20m; Living Stream	220	m		\$1,128,189		\$415,036		(\$713,154) Total for 220m section





24-May-21
Comments & Assumptions
n in-house data
air and reasonable, escalated City of Kwinana rate to 2021
air and reasonable for 150mm thick, escalated City of Kwinana rate n in-house data
advised by City of Kwinana on 4 May 2021.
n in-house data for 100L trees
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n in-house data
air and reasonable, escalated City of Kwinana rate to 2021
air and reasonable for 150mm thick, escalated City of Kwinana rate
n in-house data
advised by City of Kwinana on 4 May 2021.
n in-house data for 100L trees
n in-house data
lue to design of scope
ection
section

#### Rate Comparison - \$/m for Peel Sub-Drain O in Casuarina

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	
1 Cons	truction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20	\$38.02	\$5,322.79	\$1.14	\$159.59	Rate obtained from in-l
4	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair an
5	rock pitching	10	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	\$37.32	Rate provided is fair an
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from in-
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)		Rate excluded as advise
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from in-l
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from in-
10	Contingency 10%		%	10.00	\$1,575.34	10.00	\$1,406.09		(\$169.24)	Remains at 10% due to
11	total cost per 10 lineal meters				\$17,328.70		\$15,467.03		(\$1,861.66)	
12										
13 Cons	truction cost per 10 m sections 1000 - 1500mm deep									
14	Earthworks and Site Preparation									
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	\$38.02	\$9,124.78	\$1.14	\$273.58	Rate obtained from in-
16	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair an
17	rock pitching	20	m2	\$120.76	\$2,415.12	\$124.49	\$2,489.77	\$3.73	\$74.65	Rate provided is fair an
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from in-l
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate excluded as advise
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from in-
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	1	Rate obtained from in-
22	10% Contingency		%	10.00	\$2,064.89	10.00	\$1,910.78		(\$154.11)	Remains at 10% due to
23	total cost per 10 meters				\$22,713.81		\$21,018.60		(\$1,695.21)	
24										
25 Main	tenance cost per annum									
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum	1	Item	\$301.89	\$301.89	\$311.22	\$311.22	\$9.33	\$9.33	
27										
28	Subtota				\$20,625.03		\$18,865.26		(\$1,759.77)	
29										
30 Tota	cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$18,865.26		(\$1,759.77)	Total for 10m section
31										
32 Tota	Cost for Peel Sub-Drain O – 500m x 20m wide; Living Stream	500	m		\$1,031,252		\$943,262.95		(\$87,988.75)	Total for 500m section



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### 24-May-21

#### **Comments & Assumptions**

in-house data

- r and reasonable, escalated City of Kwinana rate to 2021
- and reasonable for 150mm thick, escalated City of Kwinana rate
- in-house data
- vised by City of Kwinana on 4 May 2021.
- in-house data for 100L trees
- in-house data
- e to design of scope

#### in-house data

- and reasonable, escalated City of Kwinana rate to 2021 and reasonable for 150mm thick, escalated City of Kwinana rate in-house data
- vised by City of Kwinana on 4 May 2021.
- in-house data for 100L trees
- in-house data
- e to design of scope

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#### Rate Comparison - \$/m for Piping Sub P Drain in Casuarina

Code	Description	Qty	Unit	Unit Rate \$2020	Total Cost \$2020	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	
1 P	iping of the Sub P drain in Casuarina									
2	Preliminaries Item	1	no	\$142,327.80	\$ 142,327.80	\$146,727.02	\$146,727.02	\$4,399.22	\$4,399.22	Allowance of 20%
3	Remove Existing Headwall at Thomas Road incl traffic management	1	no	\$15,094.50	\$15,094.50	\$15,561.06	\$15,561.06	\$466.56	\$466.56 F	Rate will allow for large
4	Clean out existing open drain	810	m	\$50.32	\$40,755.15	\$51.87	\$42,014.85	\$1.56	\$1,259.70 F	air and reasonable wit
5	Dispose of material/vegetation	1	item	\$12,075.60	\$12,075.60	\$12,448.85	\$12,448.85	\$373.25	\$373.25 F	air and reasonable wit
6	Grade Invert	910	m	\$5.03	\$4,578.67	\$5.19	\$4,720.19	\$0.16	\$141.52 F	air and reasonable, es
7	Supply and Install 900 Dia Class 3 RC RRJ pipe	646	m	\$497.11	\$321,134.48	\$512.48	\$331,060.46	\$15.37	\$9,925.97	
8	Supply and Install 1500 Dia Class 3 RC RRJ pipe	169	m	\$1,695.62	\$286,559.02	\$1,748.03	\$295,416.30	\$52.41	\$8,857.28	
9	Backfill with clean sand and compact for 900 Dia pipe	1390	m3	\$25.16	\$34,968.93	\$25.94	\$36,049.78	\$0.78	\$1,080.86 F	air and reasonable, es
10	Backfill with clean sand and compact for 1500 Dia pipe	665	m3	\$25.16	\$16,729.74	\$25.94	\$17,246.84	\$0.78	\$517.10 F	air and reasonable , es
11	Construct manhole structure to connect culverts under Thomas Roa	1	item	\$15,094.50	\$15,094.50	\$15,561.06	\$15,561.06	\$466.56	\$466.56 F	air and reasonable for
12	Supply and install manhole to suit 900dia pipe	2	no	\$5,031.50	\$10,063.00	\$5,187.02	\$10,374.04	\$155.52	\$311.04 F	air and reasonable, es
13	Supply and Install manhole to suit 1500dia pipe	1	no	\$5,031.50	\$5,031.50	\$5,187.02	\$5,187.02	\$155.52	\$155.52 F	air and reasonable, es
14	Supply and install splay bend to 1500 dia pipe	1	no	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10 F	air and reasonable, es
15	Supply and install headwall to suit 1500 dia pipe	1	no	\$2,750.00	\$2,750.00	\$2,835.00	\$2,835.00	\$85.00	\$85.00 1	in house rate
16	225 dia pipe	1	item	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10 F	air and reasonable, es
17	375 dia pipe	1	item	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10 F	air and reasonable, es
18	450 dia pipe	1	item	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10 F	air and reasonable, es
19	Engineering and Surveying	1	item	\$60,000.00	\$60,000.00	\$60,000.00	\$60,000.00	\$0.00	\$0.00 1	n house rate (7.5%)
20	Contingency	1	item	\$174,000.00	\$174,000.00	\$174,000.00	\$174,000.00	\$0.00	\$0.00 1	in house rate (10%)
21										
22	Subtotal				\$1,145,188.08		\$1,173,352.07		\$28,164.00	
23										
24										
	otal cost per m of Piping Sub P Drain in Casuarina				\$1,405		\$1,440		\$35 1	Fotal cost per m
26 27 T	otal cost for construction of Piping Sub P Drain in Casuarina	815	m		\$1,145,188		\$1,173,352		\$28,164	Fotal Overall Constru





#### **Comments & Assumptions**

rge headwall removal without knowing level of contamination, escalation rate applied without knowing level of contamination, escalation rate applied escalation rate applied

escalation rate applied , escalation rate applied for substantial works, escalation rate applied escalation rate applied

truction Cost

### Section B - Open Drains Rate 2021 Cost Review

#### Rate Comparison - \$/m for Piping Sub P1 Drain in Casuarina

Code	Description	Qty	Unit	Unit Rate \$2020	Total Cost \$2020	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions
1										
2 <b>F</b>	roposed Piping of Portions of Peel Sub P1 Drain, Casuarina									
3	Preliminaries	1	item	\$38,915.00	\$38,915.00	\$40,117.83	\$40,117.83	\$1,202.83	\$1,202.83	Allowance of 20%
4	Remove existing pipe culvert	1	no	\$1,006.30	\$1,006.30	\$1,037.40	\$1,037.40	\$31.10	\$31.10	Fair and reasonable, escalation rate applied
5	Clean out existing open drain	185	m	\$50.32	\$9,308.28	\$51.87	\$9,595.99	\$1.56	\$287.71	Fair and reasonable without knowing level of contamination, escalation rate applied
6	Dispose of material/vegetation	1	item	\$3,018.90	\$3,018.90	\$3,112.21	\$3,112.21	\$93.31	\$93.31	Fair and reasonable without knowing level of contamination, escalation rate applied
7	Grade Invert	185	m	\$5.03	\$930.83	\$5.19	\$959.60	\$0.16	\$28.77	Fair and reasonable, escalation rate applied
8	Supply and Install 1200 Dia Class 3 RC RRJ pipe	185	m	\$840.00	\$155,400.00	\$865.96	\$160,203.27	\$25.96	\$4,803.27	In house rate
9	Backfill with clean sand and compact for 1200 Dia pipe	890	m3	\$25.16	\$22,390.18	\$25.94	\$23,082.23	\$0.78	\$692.06	Fair and reasonable, escalation rate applied
10	Supply and install headwall to suit 1200 dia pipe	1	no	\$2,750.00	\$2,750.00	\$2,835.00	\$2,835.00	\$85.00	\$85.00	In house rate
11	Engineering and surveying	7.5	%		\$17,511.75		\$18,070.77		\$559.02	In house rate (7.5%)
12	Contingency	10	%		\$23,349.00		\$25,901.43		\$2,552.43	In house rate (10%)
13	Subtotal	I			\$274,580.23		\$284,915.73		\$10,335.50	
14										
15 Total cost per m of Piping Sub P1 Drain in Casuarina			\$1,484		\$1,540		\$56	Total cost per m		
16										
17 T	17 Total cost for construction of Piping Sub P1 Drain in Casuarina       185       m				\$274,580		\$10,336 Total Overall Construction Cost			





### Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for DCA5 P1A drain

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	
1 Con	struction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	\$56.00	m3	\$36.88	\$2,065.28	\$38.02	\$2,129.12	\$1.14	\$63.84	Rate obtained from in
4	fine grading	\$80.00	m2	\$1.39	\$111.20	\$1.43	\$114.64	\$0.04	\$3.44	Rate provided is fair a
5	rock pitching	\$10.00	m2	\$120.76	\$1,207.56	\$124.49	\$1,244.88	\$3.73	\$37.32	Rate provided is fair a
6	landscaping/ planting (140mm x 3/m2)	\$80.00	m2	\$18.60	\$1,488.00	\$19.17	\$1,533.99	\$0.57	\$45.99	Rate obtained from in
7	tubestock x 3/m2	\$3.00	m2	\$10.57	\$31.71	Excluded	Excluded	(\$10.57)	(\$31.71)	Rate excluded as advi
8	advanced tree planting (no.)		each	\$352.20	\$.00	\$363.09	\$.00	\$10.89	\$0.00	Rate obtained from in
9	Mulch - (Inorganic)	\$80.00	m2	\$11.07	\$885.60	\$11.41	\$912.97	\$0.34	\$27.37	Rate obtained from in
10	Contingency 10%		%	\$10.00	\$578.94	10.00	\$593.56		\$14.63	Added contingency un
11	total cost per 10 meters				\$6,368.29		\$6,529.16		\$160.88	
11										
12 Mair	ntenance Cost per annum									
13	\$1.50 per m2 x 8m wide x 10lm per annum	\$1.00	Item	\$120.76	\$120.76	\$124.49	\$124.49	\$3.73	\$3.73	Updated City of Kwina
14										
15	Subtotal				\$6,489.05		\$6,778.15		\$289.10	
16										
17 Tota	al cost for construction of a 8m wide x 10m length Living Stream	10	m		\$6,610		\$6,778		\$168	Total for 10m section
18										
19 Tota	al Cost for P1A drain 220m x 8m wide; Living Stream	220	m		\$145,416		\$149,119		\$3,704	Total for 220m sect



## 24-May-21

### **Comments & Assumptions**

in-house data

- ir and reasonable, escalated City of Kwinana rate to 2021
- ir and reasonable, escalated City of Kwinana rate to 2021
- in-house data
- advised by City of Kwinana on 4 May 2021.
- in-house data
- in-house data
- y under direction from City of Kwinana

vinana rate to correct formula based on 8m wide not 20m wide

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## Section B - Open Drains Rate 2021 Cost Review

Rate Comparison - \$/m for DCA5 Drain O

Code	Description	Qty	Unit	Unit Rate \$2020 Dec	Total Cost \$2020 Dec	Unit Rate \$2021	Total Cost \$2021	Unit Rate Variance	Total Cost Variance	Comments & Assumptions
1 Cons	truction cost per 10 m sections <1000mm deep									
2	Earthworks and Site Preparation									
3	bulk earthworks (cut to spoil, compact and final grade)	140	m3	\$36.88	\$5,163.20		\$5,322.79	\$1.14		Rate obtained from in-house data
4	fine grading	200	m2	\$1.39	\$278.00		\$286.59	\$0.04		Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
5	rock pitching	10	m2	\$120.76	\$1,207.56		\$1,244.88	\$3.73		Rate provided is fair and reasonable for 150mm thick, escalated City of Kwinana rate
6	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00		\$3,834.98	\$0.57	-	Rate obtained from in-house data
7	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00		Excluded	(\$10.57)	<u>, , , , , , , , , , , , , , , , , , , </u>	Rate excluded as advised by City of Kwinana on 4 May 2021.
8	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60		\$1,089.26	\$10.89		Rate obtained from in-house data for 100L trees
9	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	· · · · · ·	\$2,282.43	\$0.34		Rate obtained from in-house data
10	Contingency 10%		%	10.00	\$1,575.34		\$1,406.09		(\$169.24)	Remains at 10% due to design of scope
11	total cost per 10 lineal meters				\$17,328.70		\$15,467.03		(\$1,861.66)	
12										
13 <b>Cons</b>	truction cost per 10 m sections 1000 - 1500mm deep									
14	Earthworks and Site Preparation									
15	bulk earthworks (cut to spoil, compact and final grade)	240	m3	\$36.88	\$8,851.20	\$38.02	\$9,124.78	\$1.14	•	Rate obtained from in-house data
16	fine grading	200	m2	\$1.39	\$278.00	\$1.43	\$286.59	\$0.04	\$8.59	Rate provided is fair and reasonable, escalated City of Kwinana rate to 2021
17	rock pitching	20	m2	\$120.76	\$2,415.12	\$124.49	\$2,489.77	\$3.73	\$74.65	Rate provided is fair and reasonable for 150mm thick, escalated City of Kwinana rate
18	landscaping/ planting (140mm x 3/m2)	200	m2	\$18.60	\$3,720.00	\$19.17	\$3,834.98	\$0.57	\$114.98	Rate obtained from in-house data
19	tubestock x 3/m2	200	m2	\$10.57	\$2,114.00	Excluded	Excluded	(\$10.57)	(\$2,114.00)	Rate excluded as advised by City of Kwinana on 4 May 2021.
20	advanced tree planting (no.)	3	m2	\$352.20	\$1,056.60	\$363.09	\$1,089.26	\$10.89	\$32.66	Rate obtained from in-house data
21	Mulch - (Inorganic)	200	m2	\$11.07	\$2,214.00	\$11.41	\$2,282.43	\$0.34	\$68.43	Rate obtained from in-house data for 100L trees
22	10% Contingency		%	10.00	\$2,064.89	10.00	\$1,910.78		(\$154.11)	Remains at 10% due to design of scope
23	total cost per 10 meters				\$22,713.81		\$21,018.60		(\$1,695.21)	
24										
25 Main	tenance cost per annum									
26	\$1.50 per m <sup>2</sup> x 20m wide x 10lm per annum 20m	1	Item	\$301.89	\$301.89	\$311.22	\$311.22	\$9.33	\$9.33	
27										
28	Subtotal				\$20,625.03		\$18,865.26		(\$1,759.77)	
29										
30 Tota	l cost for construction of a 20m wide x 10m length Living Stream	10	m		\$20,625		\$18,865		(\$1,760)	Total for 10m section
31										
32 Tota	l Cost for Drain 0 500m x 8m wide; Living Stream	500	m		\$1,031,252		\$943,263		(\$87,989)	Total for 500m section



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Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

Appendix C1 – Road Landscaping

# Section C1 - Road Landscaping Rate 2021 Cost Review

# Summary

Road Landscaping	Cost (AUD 2020)	Unit rate (AUD 2020)	Cost (AUD 2021)	Unit rate (AUD 2021)	Cost variance	Unit rate variance
Bertram Road Upgrade	\$196,517	\$38	\$202,591	\$39	\$6,074	\$1
Wellard Road Upgrade	\$225,749	\$37	\$2,064,516	\$59	\$1,838,767	\$22
Millar Road Upgrade	\$0	\$0	\$0	\$0	\$0	\$0
Mortimer Road Upgrade	\$170,101	\$40	\$175,359	\$41	\$5,258	\$1
Sunrise Boulevard - 15.4m Road	\$87,368	\$41	\$90,069	\$43	\$2,700	\$1
Sunrise Boulevard - 19.4m Road	\$120,317	\$40	\$124,035	\$41	\$3,719	\$1
Thomas Road Upgrade	\$775,930	\$35	\$799,913	\$36	\$23,983	\$1
Anketell Road Upgrade	\$517,860	\$37	\$533,867	\$38	\$16,007	\$1
Hammond Road Extension	\$619,359	\$37	\$638,502	\$38	\$19,144	\$1
Hammond Road Connector	\$448,073	\$38	\$461,923	\$39	\$13,850	\$1
Lyon Road Upgrade	\$0	\$0	\$496,070	\$114	\$496,070	\$114
Total	\$3,161,274	\$342	\$5,586,846	\$487	\$2,425,572	\$145



DCP Public Open Space - T&T Rates Schedule 2020

#### City of Kwinana

DCP Landscape and Public Open Space - T&T Rates Schedule 2021

			T&T 2020 Rates			T&T 2021 Rates			
City of Kwinana Items	Unit	Rate	Assumptions & Comments	City of Kwinana Items	Unit	Rate	Assumptions & Comments	Variance o (\$2021 v	on Rate Cost vs \$2020)
	ome	Kate			ome	Kate	Astumptons & comments		
Earthworks				Earthworks					
Cut to fill	m3	\$	.75 Rate obtained from in-house data	Cut to fill	m3	\$ 10.05 Rate obtained from in-	house data	\$	0.30
Clearing scrub & trees	m2	\$	.00 Rate fair and reasonable based on heavy tree/ light scrub , escalated City of Kwinana rate to 2020	Clearing scrub & trees	m2		le based on heavy tree/ light scrub , escalated City of Kwinana	\$	0.09
Strip topsoil and respread	m2	\$	.90 Rate obtained from in-house data based on 150mm topsoil	Strip topsoil and respread	m2	\$ 1.96 Rate obtained from in-	house data based on 150mm topsoil	\$	0.00
Garden Beds - Landscaping				Garden Beds - Landscaping					
Preparation of planting area	m2	\$ 2	52 fair and reasonable	Preparation of planting area	m2	\$ 2.59 fair and reasonable		\$	0.08
Import topsoil and spread (150mm thick)	m2	\$ 14	10 Rate obtained from in-house data	Import topsoil and spread (150mm thick)	m2	\$ 14.54 Rate obtained from in-	house data	\$	0.44
Soil conditioner	m2	<u></u> \$4	23 rate appears fair and reasonable	Soil conditioner	m2	\$ 4.36 rate appears fair and r	easonable	\$	0.13
Supply and lay standard mulch by hand	m2	\$ 7	83 Rate obtained from in-house data	Supply and lay standard mulch by hand	m2	\$ 8.07 Rate obtained from in-	house data	\$	0.24
Supply and lay high grade mulch by hand	m2	\$ 12	00 Rate obtained from in-house data	Supply and lay high grade mulch by hand	m2	\$ 12.37 Rate obtained from in-	house data	\$	0.3
Supply and install plants	m2	\$ 28	43 Rate escalated to 2020 due to limited scope provided	Supply and install plants	m2	\$ 29.31 Rate escalated to 2021	due to limited scope provided	\$	0.88
Fine grading	m2	\$ 1	39 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Fine grading	m2	\$ 1.43 Rate fair and reasonab	le, escalated City of Kwinana rate to 2021	\$	0.04
Mulch - Inorganic	m2	\$ 11	07 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Mulch - Inorganic	m2	\$ 11.41 Rate fair and reasonab	le, escalated City of Kwinana rate to 2021	\$	0.34
Mulch - Chunky Pine Bark	m2	\$ 5	00 Rate obtained from in-house data	Mulch - Chunky Pine Bark	m2	\$ 9.28 Rate obtained from in-		\$	0.28
Tubestock (3/m2) incl Terracottem	m2	\$ 10	57 Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2020	Tubestock (3/m2) incl Terracottem	m2	\$ 10.89 Rate fair and reasonab	le for high quality trees, escalated City of Kwinana rate to 2021	\$	0.33
Tubestock (6/m2) incl Terracottem	m2	\$ 21	13 Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2020	Tubestock (6/m2) incl Terracottem	m2	\$ 21.79 Rate fair and reasonab	le for high quality trees, escalated City of Kwinana rate to 2021	\$	0.6
100L street tree evenly spaced @ 20m	m2	\$ 352	20 Rate fair and reasonable, escalated City of Kwinana rate to 2020	100L street tree evenly spaced @ 20m	No	\$ 363.09 Rate fair and reasonab	le, escalated City of Kwinana rate to 2021	\$	10.89
Feature semi mature tree	item	\$ 3,522	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Feature semi mature tree	item	\$ 3,630.89 Rate fair and reasonab	le, escalated City of Kwinana rate to 2021	\$	108.80
irrigation	m2	\$ 6	52 Rate obtained from in-house data	irrigation	m2	\$ 6.72 Rate obtained from in-	house data	\$	0.20
turf- village Green	m2	ė s	70 Rate obtained from in-house data	turf- village Green	m2	\$ 8,97 Rate obtained from in-	house data	\$	0.2
Miscellaneous allowance (kerb edging, feature retaining walls)	m2	7 7	03     Rate fair and reasonable, escalated City of Kwinana rate to 2020	Miscellaneous allowance (kerb edging, feature retaining walls)	m2		le, escalated City of Kwinana rate to 2021	\$	0.16
Water Supply & Reticulation				Water Supply & Reticulation					
Irrigation	m2	\$ F	52 Rate obtained from in-house data	Irrigation	m2	\$ 6.72 Rate obtained from in-	house data	s	0.20
								7	
Bore (shallow) - superficial	item	\$ 65,409	Rate escalated to 2020 due to limited scope provided	Bore (shallow- superficial	item	\$ 67,430.77 Rate escalated to 2021	due to limited scope provided	\$	2,021.73
Bore (Artesian) Iron Bacteria Filtration Unit			94         Rate escalated to 2020 due to limited scope provided           43         Rate escalated to 2020 due to limited scope provided	Bore (Artesian) Iron Bacteria Filtration Unit		\$ 155,609.48 Rate escalated to 2021 \$ 82,991.72 Rate escalated to 2021		\$ \$	4,665.54
		, 23,000						4	_, 10012.
Turfing				Turfing					
Prep of turfing area (weed removal & general leveling)	m2	\$	.80 Rate obtained from in-house data	Prep of turfing area (weed removal & general leveling)	m2	\$ 2.89 Rate obtained from in-	house data	\$	0.09
Import topsoil and spread (150mm thick)	m2	\$ 1	10 Rate obtained from in-house data	Import topsoil and spread (150mm thick)	m2	\$ 14.54 Rate obtained from in-	house data	\$	0.44
Soil conditioner	m2	\$	.23 Rate obtained from in-house data	Soil conditioner	m2	\$ 4.36 Rate obtained from in-	house data	\$	0.13
Supply and lay turf (roll on)	m2	\$	.69 Rate obtained from in-house data	Supply and lay turf (roll on)	m2	\$ 6.90 Rate obtained from in-	house data	\$	0.2

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DCP Public Open Space - T&T Rates Schedule 2020

#### City of Kwinana

DCP Landscape and Public Open Space - T&T Rates Schedule 2021

			&T 2020 Rates				T&T 2021 Rates	
								Variance on Rate Cost
City of Kwinana (tems	Unit	Rate	Assumptions & Comments	City of Kwinana Items	Unit	Rate	Assumptions & Comments	(\$2021 vs \$2020)
Fertilising	m2	\$ 0.	0 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Fertilising	m2	\$ 0.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.0
		<i>.</i>						
Soil Wetting Agent Weed spraying	m2 m2		5       Rate fair and reasonable, escalated City of Kwinana rate to 2020         0       Rate obtained from in-house data	Soil Wetting Agent Weed spraying	m2 m2		Rate fair and reasonable, escalated City of Kwinana rate to 2021           Rate obtained from in-house data	\$ 0.01 \$ 0.03
Hardworks				Hardworks				
Active piece of equipment	item	\$ 28,176.	0 City of Kwinana Rate escalated to 2020 due to minimal scope	Active piece of equipment	item	\$ 29,047.	0 City of Kwinana Rate escalated to 2021 due to minimal scope	\$ 870.90
Hardcourt	item	\$ 65,409.	4 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Hardcourt	item	\$ 67,430.	77 Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 2,021.73
Cricket practice nets (2 pitches and net)	item	\$ 59,884.	4 Rate obtained from in-house data based on two cricket nets	Cricket practice nets (2 pitches and net)	item	\$ 61,735.	2 Rate obtained from in-house data based on two cricket nets	\$ 1,850.98
Cricket pitch	item	\$ 20,000.	0 Rate obtained from in-house data	Cricket pitch	item	\$ 20,000.	00 Rate obtained from in-house data	\$ -
ighting - training level	item	\$ 301 887	7 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Lighting - training level	item	\$ 311 218	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 9,331.08
	licent	<i>ç</i> 302,007.			licem	<i> </i>		\$ 5,551100
Lighting - general	item			Lighting - general	item			\$ -
Paths	m2	\$ 44	7 Rate obtained from in-house data	Paths	m2	\$ 45.	13 Rate obtained from in-house data	\$ 1.36
rauis	1112	<del>, 44</del> .		raus	1112	ş 43.		ş 1.50
Fencing (bollard, post & rail, ringlock)	m	\$ 47.	0 Rate obtained from in-house data	Fencing (bollard, post & rail, ringlock)	m	\$ 48.	45 Rate obtained from in-house data	\$ 1.45
Bollard - Flexipole	item	¢ 70.	4 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Bollard - Flexipole	item	¢ 72	2 Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 2.18
	licent	<del>,</del> ,,,,			licent	<i>ų 12</i> .		φ 2.10
Fence - Timber Post & Rail	m	\$ 96.	0 Rate obtained from in-house data	Fence - Timber Post & Rail	m	\$ 98.	7 Rate obtained from in-house data	\$ 2.97
Fence - Steel Post & Rail	m	¢ 01.	0 Rate obtained from in-house data	Fence - Steel Post & Rail	m	\$ 93.	81 Rate obtained from in-house data	\$ 2.81
		φ				<i>Ş</i> 55.	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to	φ 2.01
Fence - Reserve	m	\$ 45.	8 Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2020	Fence - Reserve	m	\$ 46.	2021	\$ 1.40
Fence - Rural	m	¢ 15	8 Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2020	Fence - Rural	m	\$ 46.	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2021	\$ 1.40
		φ 13.				<i>\ </i>		÷ 110
Fence - Chainlink Galvanised (2.4m)	m	\$ 71.	0 Rate obtained from in-house data	Fence - Chainlink Galvanised (2.4m)	m	\$ 73.	19 Rate obtained from in-house data	\$ 2.19
Fence - Chainlink PVC Coated (2.4m)	m	\$ 100	3 Rate fair and reasonable for standard PVC Coated fence, escalated City of Kwinana rate to 2020	Fence - Chainlink PVC Coated (2.4m)	m	\$ 103.	Rate fair and reasonable for standard PVC Coated fence, escalated City of Kwinana rate to 2021	\$ 3.11
			•					
Fence - Steel Balustrade	m	\$ 465.	0 Rate obtained from in-house data	Fence - Steel Balustrade	m	\$ 479.	87 Rate obtained from in-house data	\$ 14.37
Fence - Pool Fencing	m	Ś 120.	6 Rate fair and reasonable for standard pool fencing, escalated City of Kwinana rate to 2020	Fence - Pool Fencing	m	\$ 124.	Rate fair and reasonable for standard pool fencing, escalated City of Kwinana rate to 2021	\$ 3.73
Gate - Boom General	item	\$ 1,610.	7 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Gate - Boom General	item	\$ 1,659.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 49.77
Gate - Reserve	item	\$ 1.106.	2 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Gate - Reserve	item	\$ 1.141.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 34.21
Gate - Heavy Duty	item	\$ 2,650.	0 Rate obtained from in-house data	Gate - Heavy Duty	item	\$ 2,731.	01 Rate obtained from in-house data	\$ 81.91
Toilets - large (Local Sporting Ground Without Pavilion)	item	\$ 191,195.	5 Rate fair and reasonable, based on 50m2 standalone structure, escalated City of Kwinana rate to 2020	Toilets - large	item	\$ 197,105.	Rate fair and reasonable, based on 50m2 standalone structure, escalated City of Kwinana rate to 2021	\$ 5,909.68
							Rate fair and reasonable, based on 25m2 standalone structure, escalated City of	
Toilets - small	item		3 Rate fair and reasonable, based on 25m2 standalone structure, escalated City of Kwinana rate to 2020	Toilets - small			72 Kwinana rate to 2021	\$ 2,488.29
Car parking	m2	\$ 130.	2 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Car parking	m2	\$ 134.	36 Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 4.04
Landscape Furniture				Landscape Furniture				
Picnic table	item	\$	0 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Picnic table	item	\$ 6,016.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 180.40
Shelter	item	\$ 17,308.	4 Rate fair and reasonable15m2 steel framed structure, escalated City of Kwinana rate to 2020	Shelter	item	\$ 17,843.	Rate fair and reasonable15m2 steel framed structure, escalated City of Kwinana rate to 2021	\$ 534.98
Play equipment (combination with softfall & shade) - Large unit	item	\$ 90,566.	6 Rate escalated to 2020 due to limited scope provided	Play equipment (combination with softfall & shade) - Large unit	item	\$ 93,365.	59 Rate escalated to 2021 due to limited scope provided	\$ 2,799.32
lay equipment (combination with softfall & shade) - Small unit	item	\$ 30.188	9 Rate escalated to 2020 due to limited scope provided	Play equipment (combination with softfall & shade) - Small unit	item	\$ 31,121.	00 Rate escalated to 2021 due to limited scope provided	\$ 933.11

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### DCP Public Open Space - T&T Rates Schedule 2020

#### City of Kwinana

DCP Landscape and Public Open Space - T&T Rates Schedule 2021

		т	&T 2020 Rates				T&T 2021 Rates		
City of Kwinana Items	Unit	Rate	Assumptions & Comments	City of Kwinana Items	Unit	Rate	Assumptions & Comments		ance on Rate Cost 2021 vs \$2020)
		é 4.007.	5 Rate fair and reasonable, escalated City of Kwinana rate to 2020				Pata friend assessable, see lated City of Kuisses and to 2001		
Decking & footbridges	m2	\$ 1,207.5	S Rate fair and reasonable, escalated City of Kwinana rate to 2020	Decking & footbridges	m2	\$ 1,244.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$	37.32
Seats (Bench)	item	\$ 3,018.8	8 Rate escalated to 2020 due to limited scope provided	Seats (Bench)	No.	\$ 3,112.	19 Rate escalated to 2021 due to limited scope provided	\$	93.31
Bin & dog litter bag dispenser	item	\$ 1,203.5	7 Rate obtained from in-house data	Bin & dog litter bag dispenser	No.	\$ 1,240.	77 Rate obtained from in-house data	\$	37.20
Bike stand	item	\$ 1,822.4	9 Rate obtained from in-house data based on 1900mm long bike stand	Bike stand	item	\$ 1,878.	Rate obtained from in-house data based on 1900mm long bike stand	\$	56.33
Drinking fountain	item	\$ 4,358.3	1 Rate obtained from in-house data	Drinking fountain	item	\$ 4,492.	Rate obtained from in-house data	\$	134.71
BBQ - Small	No	\$ 10,062.9	3 Rate fair and reasonable, escalated City of Kwinana rate to 2020	BBQ - Small	No	\$ 10,373.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$	311.04
BBQ - Large	No	\$ 15,094.3	9 Rate fair and reasonable, escalated City of Kwinana rate to 2020	BBQ - Large	No	\$ 15,560.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$	466.55
Signage (allowance)	item	\$ 2,012.5	9 Rate escalated to 2020 due to limited scope provided	Signage (allowance)	item	\$ 2,074.	Rate escalated to 2021 due to limited scope provided	\$	62.21
Maintenance				Maintenance					
Turf and gardens (per annum)	m2	\$ 2.5	2 Rate fair and reasonable, escalated City of Kwinana rate to 2020	Turf and gardens (per annum)	m2	\$ 2.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$	0.08
Conservation / parkland cleared (per annum)	m2		Rate fair and reasonable, escalated City of Kwinana rate to 2020	Conservation / parkland cleared (per annum)	m2		52 Rate fair and reasonable, escalated City of Kwinana rate to 2021	ć	0.02
	1112	φ 0.3			1112	پ U.			0.02
Landscape furniture				Landscape furniture					
Hardworks				Hardworks					
maintenance 2 years 50c / m2 / annum	item	\$ 1.0	Rate fair and reasonable, escalated City of Kwinana rate to 2020	maintenance 2 years 50c / m2 / annum	item	\$ 1.	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$	0.03

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### City of Kwinana DCP Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Bertram Road

			т	&T 2020 Rate Check	Items		T&T 2021 Rate Check						
Betram Road, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)		Variance on Total Unit Cost (\$2021 vs \$2020)		
Median Swales	0	\$24	\$0	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		0	\$25		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	0.00		
Verges	5190	\$33		Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	Verges		5190	\$34	\$174,007	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	5,217.14		
Verges Street Trees	0 28	\$33 \$352		Rate build-up of below items including fine grading, mulch and winter planted tubestock	Verges Street Trees		0 28	\$34 \$363	\$( \$10,166	Rate build-up of below items including fine grading, mulch and winter planted tubestock	0.00		
Sueet nees Sub-Total		\$35Z	\$9,802 \$178,652		Street frees	Sub-Tota		\$303	\$10,100 \$184,174		5,521.96 0.00		
			\$0						\$(		0.00		
Total Footprint Cost	5218		\$178,652			Total Footprint Cost	t 5218		\$184,174	4	5,521.96		
Contingency	10%				Contingency		10%		\$18,417.36		552.20		
Total Total Project Cost		\$38	\$17,865 \$196,517			l ota l ota		\$38.83	\$18,417 \$202,591		552.20 6,074.16		



## City of Kwinana DCP Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Wellard Road

			٦	&T 2020 Rate Check	Items					
Wellard Road, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments			Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
Median Swales	1650	\$24	\$39,642	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Preliminaries			\$299,50	As per Wilde and Woollard Pre-tender Cost Estimate preceived from City of Kwinana on 4 May 2021.	
Verges	4420	\$33	\$143,748	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	Site Preparation			\$46,00	As per Wilde and Woollard Pre-tender Cost Estimate preceived from City of Kwinana on 4 May 2021.	
Verges	0	\$33	\$0	Rate build-up of below items including fine grading, mulch and winter planted tubestock	Hardworks			\$8,48	As per Wilde and Woollard Pre-tender Cost Estimate 5 received from City of Kwinana on 4 May 2021. As per Wilde and Woollard Pre-tender Cost Estimate	
Street Trees	62	\$352	\$21,837		Landscape Works			\$1,278,56	As per Wilde and Woollard Pre-tender Cost Estimate 6 received from City of Kwinana on 4 May 2021. As per Wilde and Woollard Pre-tender Cost Estimate	
Sub-Tota	6132		\$205,226		Reticulation Works Sub-Tota	35132		\$153,00 <b>\$1,785,55</b>	) received from City of Kwinana on 4 May 2021. 1	1,580,324.80
Total Footprint Cos	6132		\$205,226		Total Footprint Cos	t 35132		\$1,785,55	1	1,580,324.80
		<u> </u>	. ,	5% design contingency and 5% construction contingency as per	-	- 33132			As per Wilde and Woollard Pre-tender Cost Estimate	1,300,324.00
Contingency	10%			previous estimate	Contingency			\$206,00	received from City of Kwinana on 4 May 2021.	185,477.38
					Other works by the City				As per Wilde and Woollard Pre-tender Cost Estimate ) received from City of Kwinana on 4 May 2021.	50,000.00
Tota			\$20,523		Professional Consultation Fees Tota			\$278,96		22,965.00 258,442.38
I otal Project Cos		\$36.81	\$225,749		lota		\$58.76	\$2,064,51	6	1,838,767.18



Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Millar Road

			т	T 2020 Rate Check					T&T 2021 Rate Check	
Millar Road Upgrade	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
				Median Swales: rate build-up consisting of below items including						
					Landscape Architect - Design and Contract				As per schedule of current costs provided y City of Kwinana on	13,250.00
Median Swales		\$24			Admin:	1	\$13,250	\$13,250	28/04/2021.	
				Rate build-up of below items including fine grading, mulch and					As per schedule of current costs provided y City of Kwinana on	47,782.25
Verges		\$33	\$0	winter planted tubestock, maintenance	Landscape Contractor - installation:	1	\$47,782	\$47,782	28/04/2021.	17,702.25
				Rate build-up of below items including fine grading, mulch and	Landscape Contractor - 2 year				As per schedule of current costs provided y City of Kwinana on	13,403.39
Verges		\$33	\$0	winter planted tubestock	maintenance	1	\$13,403	\$13,403	28/04/2021.	15,405.59
					Developer Project Management &				As per schedule of current costs provided y City of Kwinana on	3,721.78
Street Trees		\$352	\$0		Administration @ 5%:	1	\$3,722		28/04/2021.	5,721.78
Sub-To	al		\$0		Sub-Tota	1		\$78,15	7	78,157.42
								\$0		0.00
								\$0		0.00
Total Footprint Co	st		\$0		Total Footprint Cos	t		\$78,157	·	78,157.42
		•		•		•	· · · · · ·			
				5% design contingency and 5% construction contingency as per						
Contingency	10%		\$0.00	previous estimate	11					
To	al		\$0		Tota			\$0		0.00
I otal Project Co	st		\$0		Iota	1		\$78,157		78,157.42



### City of Kwinana DCP Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Mortimer Road

			T&T 2020 Rate Check				T&T 2021 Rate Check						
Mortimer Road, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost Assumptions & Comments (\$2020)		Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)			
Median Swales	1100	\$24	Median Swales: rate build-up consisting of below ite Fine Grading, Mulch (inorganic), Tubestock (3/m2 in \$26,428 Terracottem), maintenance)	icl	Median Swales	1100	\$25	\$27,24	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	816.86			
Verges	3130	\$33	Rate build-up of below items including fine grading, \$101,794 winter planted tubestock, maintenance Rate build-up of below items including fine grading,		Verges	3130	\$34	\$104,94	Rate build-up of below items including fine grading, mulch and winter I planted tubestock, maintenance Rate build-up of below items including fine grading, mulch and winter	3,146.37			
Verges	0	\$33	\$0 winter planted tubestock		Verges	0	\$34	÷.	planted tubestock	0.00			
Street Trees Sub-Total	75 4305	\$352	\$26,415 \$154,637		Street Trees Sub-To	75 tal 4305	\$363	\$27,232 <b>\$159,41</b>		816.47 4,779.70			
			\$0 \$0					\$( \$(		0.00			
Total Footprint Cost	4305		\$154,637		Total Footprint Co	ost 4305		\$159,417	7	4,779.70			
Contingency	10%		5% design contingency and 5% construction conting \$15,463.73 previous estimate		Contingency	10%		\$15.941.70	5% design contingency and 5% construction contingency as per previous estimate	477.97			
Total	-	\$39.51	\$15,464			tal	\$40.73	\$15,942 \$175,355	2	477.97 5,257.67			

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### Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Sunrise Boulevard

			T	&T 2020 Rate Check				T&T 2021 Rate Check					
Sunrise Boulevard, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items A		Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)		Variance on Total Unit Cost (\$2021 vs \$2020)		
Median Swales	0	\$24	\$0	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		0	\$25	0	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	0.00		
Verges	2074	\$33	\$67,451		Verges		2074	\$34	\$69,536 p	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	2,084.85		
Verges Street Trees	0	\$33 \$352		Rate build-up of below items including fine grading, mulch and winter planted tubestock	Verges Street Trees		0	\$34 \$363		Rate build-up of below items including fine grading, mulch and winter planted tubestock	0.00 370.13		
Sub-Tota		\$352	\$79,420	3	Succifices	Sub-Total	, <u>,</u>	\$303	\$81,881		2,454.98		
Total Footprint Cosi	2108		\$0 \$0 <b>\$79,426</b>			Total Footprint Cost	t 2108		\$0 \$0 <b>\$81,881</b>		2.454.00		
	2108		\$75,420				2100		\$01,001		2,454.98		
Contingency	10%		1 1		Contingency		10%		\$8,188.08	5% design contingency and 5% construction contingency as per previous estimate	245.50		
Total		\$41.45	\$7,943 \$87,368			Tota	1	\$42.73	\$8,188 \$90,069		245.50 2,700.48		
			\$0		Lot 440 (180m)		180	012.110		Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.	2,700.48		
			\$0		Lot 28 (121m)		121		\$25,948	Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.			
			\$0		Lot 59 (119m)		119			Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.			



### Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Sunrise Boulevard

			т	&T 2020 Rate Check			T&T 2021 Rate Check							
Sunrise Boulevard, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		ltems	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)		Variance on Total Unit Cost (\$2021 vs \$2020)			
Median Swales	0	\$24	\$0	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		0	\$25	\$0	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	0.00			
Verges	2995	\$33	\$97,404		Verges		2995	\$34	\$100,415	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	3,010.66			
Verges Street Trees	0 34	\$33 \$352		Rate build-up of below items including fine grading, mulch and winter planted tubestock	Verges Street Trees		0 34	\$34 \$363	\$0 \$12,345	Rate build-up of below items including fine grading, mulch and winter planted tubestock	0.00 370.13			
Sub-Total	3029	φ302	\$109,379			Sub-Tota	• ·	\$303	\$112,760		3,380.80			
Tatal Factoriat Cont	3029		\$0			Total Factorint Cast	t 3029		\$0 \$0		0.00			
Total Footprint Cost	3029	<u> </u>	\$109,379			Total Footprint Cost	t <u>3029</u>		\$112,760		3,380.80			
Contingency	10%			5% design contingency and 5% construction contingency as per previous estimate	Contingency		10%		\$11,275.95		338.08			
Total		\$39.72	\$10,938 \$120,317			Tota Tota		\$40.95	\$11,276 \$124,035		338.08 3,718.88			
			\$0		Lot 440 (180m)		180		\$53,158	Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.	53,158.06			
			\$0		Lot 28 (121m)		121		\$35,734	Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.	35,/34.03			
			\$0		Lot 59 (119m)		119		\$35,143	Cost breakdown for each land holding as requested by City of Kwinana on April 28, 2021.	35,143.39			



## City of Kwinana DCP Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Lyon Road

			T8	T 2020 Rate Check			T&T 2021 Rate Check							
Lyon Road - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)				
Median Swales		\$24			North - Honeywood. POS 10 Lyon Road (2011 cost)		\$14	\$60,053		60,053.09				
Verges		\$33	\$0	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	North - Honeywood. Lyon road (Sept 2012)		\$71			310,349.09				
Verges		\$33			North - Honeywood. Lyon road re-veg (2013 cost)		\$2	\$10,474		10,474.17				
Street Trees		\$352	\$0		North - Honeywood. Lyon road buffer (2016 cost) South - Honeywood Rise. Conservation		\$9	\$40,084		40,084.03				
					park (2016 cost) South - Honeywood Rise. Wandi South		\$5	\$21,924		21,924.31				
Sub-Tota	1 0		\$0		Buffer (Stage 2 - July 2017) Sub-Tota	4351	\$12	\$53,186 <b>\$496,070</b>		53,185.73 <b>496,070.42</b>				
			\$0		045-1044	4001		\$0		498,070.42				
			\$0					\$0		0.00				
Total Footprint Cos	t O		\$0		Total Footprint Cost	t 4351		\$496,070		496,070.42				
Contingency	10%			5% design contingency and 5% construction contingency as per previous estimate	Contingency				5% design contingency and 5% construction contingency as per previous estimate. Note: not included in the current costs.	0.00				
Tota I otal Project Cos		\$0.00	\$0 \$0		Tota		\$114.00	\$0 \$496,070		0.00 496,070.42				



#### Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Thomas Road

			та	T 2020 Rate Check			T&T 2021 Rate Check						
Thomas Road, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
Median Swales	6140	\$24		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		6140	\$25	\$152 07	Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	4,559.56		
Verges	15800	\$33	\$513,850	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	Verges		15800	\$34		Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	15,882.64		
Verges	0	\$33	\$0		Verges		0	\$34	÷.	Rate build-up of below items including fine grading, mulch and winter planted tubestock	0.00		
Street Trees Sub-Total	125 22065	\$352	\$44,025 \$705,391		Street Trees	Sub-Tota	125 I 22065	\$363	\$45,386 <b>\$727,19</b>		1,360.78 21,802.98		
			\$0 \$0						\$(	2	0.00		
Total Footprint Cost	22065		\$705,391			Total Footprint Cos	t 22065		\$727,194	۱ <u>ــــــــــــــــــــــــــــــــــــ</u>	21,802.98		
Contingency	10%			5% design contingency and 5% construction contingency as per previous estimate	Contingency		10%		\$72,719.36	5% design contingency and 5% construction contingency as per previous sestimate	2,180.30		
Total Total Project Cost		\$35.17	\$70,539 \$775,930			Tota		\$36.25	\$72,719 \$799,913		2,180.30 23,983.28		



## Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Anketell Road

			Т8	aT 2020 Rate Check				T&T 2021 Rate Check						
Anketell Road, Wellard - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)			
Median Swales	1970	\$24		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		1970	\$25		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	1,462.92			
Verges	10100	\$33	. ,	Rate build-up of below items including fine grading, mulch and	Verges		10100	\$34	, .	Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	10,152.82			
Verges	1740	\$33	\$56,589		Verges		1740	\$34	1 /	Rate build-up of below items including fine grading, mulch and winter planted tubestock	1,749.10			
Street Trees Sub-Total	109 13919	\$352	\$38,390 \$470,782		Street Trees	Sub-Tota	109 I 13919	\$363	\$39,577 \$485,334		1,186.60 14,551.45			
Takal Factoriat Ocat	40040		\$0				40040		\$0		0.00			
Total Footprint Cost	13919		\$470,782			Total Footprint Cost	t 13919		\$485,334		14,551.45			
Contingency	10%		\$47,078.22		Contingency		10%		\$48,533.36		1,455.14			
Total		\$37.21	\$47,078 \$517,860			Tota		\$38.36	\$48,533 \$533,867		1,455.14 16,006.59			



#### Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Hammond Road

			T&T 2020 R	Rate Check			T&T 2021 Rate Check						
Hammond Road Extension - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments			Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
	4005.4		Fine Gra	Swales: rate build-up consisting of below items including ading, Mulch (inorganic), Tubestock (3/m2 incl			4005.4	005		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem),	1,414.95		
Median Swales	1905.4	\$24	Rate buil	ild-up of below items including fine grading, mulch and	Median Swales		1905.4	\$25	. ,	maintenance) Rate build-up of below items including fine grading, mulch and winter	14,986.98		
Verges	14909	\$33	Rate buil	ild-up of below items including fine grading, mulch and	Verges		14909	\$34	- /	planted tubestock, maintenance Rate build-up of below items including fine grading, mulch and winter	0.00		
Verges Street Trees	92	\$33 \$352	\$32,403		Verges Street Trees		92	\$34 \$363	\$33,404		1,001.54		
Sub-Total	16906		\$563,053 \$0			Sub-Tota	al 16906		\$580,457		<b>17,403.46</b> 0.00		
Total Footprint Cost	16906		\$0 \$563.053			Total Footprint Cos	t 16906		\$0 \$580,457		0.00		
	10300					rotari ottprint oos	10300		. ,				
Contingency	10%		5% desig \$56,305.32 previous	gn contingency and 5% construction contingency as per s estimate	Contingency		10%		\$58,045.66	5% design contingency and 5% construction contingency as per previous estimate	1,740.35		
Total		\$36.63	\$56,305 \$619,359			Tota		\$37.77	\$58,046 \$638,502		1,740.35 19,143.81		



#### Section C1 - Road Landscaping Rate 2021 Cost Review

Cost and Rate Comparison - Hammond Road

			T8	T 2020 Rate Check			T&T 2021 Rate Check						
Hammond Road Connector Road - Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		Items A		Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
Median Swales	2266	\$24		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	Median Swales		2266	\$25		Median Swales: rate build-up consisting of below items including Fine Grading, Mulch (inorganic), Tubestock (3/m2 incl Terracottem), maintenance)	1,682.73		
Verges	9421.5	\$33	,	Rate build-up of below items including fine grading, mulch and	Verges		9421.5	\$34		Rate build-up of below items including fine grading, mulch and winter planted tubestock, maintenance	9,470.78		
Verges	0	\$33	\$0		Verges		0	\$34	1.1	Rate build-up of below items including fine grading, mulch and winter planted tubestock	0.00		
Street Trees Sub-Tota	132 11820	\$352	\$46,491 \$407,340		Street Trees	Sub-Tota	132 al 11820	\$363	\$47,928 \$419,930		1,436.99 <b>12,590.49</b>		
Total Footprint Cos	11820		\$0 \$0 <b>\$407,340</b>			Total Footprint Cos	st 11820		\$0 \$0 \$419,930		0.00 0.00 <b>12,590.49</b>		
· • • • • • • • • • • • • • • • • • • •				5% design contingency and 5% construction contingency as per					. ,	5% design contingency and 5% construction contingency as per previous			
Contingency	10%		\$40,733.95	previous estimate	Contingency	<b>T</b> -4-	10%		\$41,993.00	estimate	1,259.05		
Tota I otal Project Cos		\$37.91	\$40,734 \$448,073			Tota Tota		\$39.08	\$41,993 \$461,923		1,259.05 13,849.54		



Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

Appendix C2 – Public Open Space

#### Section C2 - Public Open Space 2021 Cost Review

**Consolidated POS** 

			City of Kw	vinana 2020 Rate Check		T&T 2021 Rate Check					
(DCA3) - Casuarina Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	(DCA3) - Casuarina Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)	
District playing field	30,000	\$59.41		Used the area rate of 30,000m2 as this was shown within the data provided on <i>DCA3,DCA4,DCA5</i> & <i>DCA6 - Public</i> <i>Open Space.</i> Believe JBA incorrectly used the DCA 6 POS 2 area of 8392.62m2 instead.	District playing field	30,000	\$60.97	\$1,829,025		\$46,810	
	30,000	\$39.41	\$1,702,214.40			30,000	\$00.97	\$1,029,023	POS revised area as advised by City of Kwinana via		
Misc. POS (estimated on averaged rate for Local and Neighbourhood parks)	189,799	\$116.41	\$22,094,927.37		Misc. POS (estimated on averaged rate for Local and Neighbourhood parks)	35,316	\$119.73	\$4,228,464	email dated 27/04/2021. Total area is now spread between the below items.	-\$17,866,463	
					POS 1 (Neighbourhood Park)	31,617	\$116.97	\$3,698,294	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$3,698,294	
					POS 2 (Neighbourhood Park)	38,019	\$116.97		POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$4,447,147	
					POS 3 (Local Park)	945	\$122.49	\$115,756	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$115,756	
					POS 4 (Neighbourhood Park)	10,091	\$116.97	\$1,180,361	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$1,180,361	
					POS 5 (Local Park)	2,490	\$122.49	\$305,007	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$305,007	
					POS 6 (Local Park)	2,152	\$122.49	\$263,605	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$263,605	
					POS 7 (Neighbourhood Park)	24,363	\$116.97	\$2,849,781	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$2,849,781	
					POS 8 (Local Park)	904	\$122.49	\$110,734	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$110,734	
					POS 9 (Local Park)	1,270	\$122.49		POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$155,566	
Sub-Total	219,799		\$23,877,142		Sub-Total	177,167		\$19,183,739		-\$4,693,402	
Sub-Total	219,799		\$23,877,142		Sub-Total	1/7,10/		\$19,103,739		-9 <del>7</del> ,093,402	
			\$0					\$0			
Total Footprint Cost	219,799	\$108.63	\$23,877,142		Total Footprint Cost	177,167	\$108.28	\$19,183,739		-\$4,693,402	

			City of Kw	inana 2020 Rate Check		T&T 2021 Rate Check						
(DCA4) - Anketell North Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	(DCA4) - Anketell North Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
Neighbourhood Park	54,632	\$113.76	\$6,215,178.14		POS 1 (Neighbourhood Park)	5,429	\$116.97	\$635,039	Area decrease as advised by City of Kwinana via email dated 27/04/2021.	-\$5,580,139		
Local Playing field	49,781	\$61.02	\$3,037,569.80		POS 2 (Local Playing field)	49,005	\$62.70	\$3,072,687	Area decrease as advised by City of Kwinana via email dated 27/04/2021.	\$35,117		
Local Park	6,797	\$119.06	\$809,251.23		POS 3 (Neighbourhood Park)	4,018	\$116.97	\$469,992	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	-\$339,259		
					POS 4 (Neighbourhood Park)	1,655	\$116.97	\$193,588	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$193,588		
					POS 5 (Local Park)	319	\$122.49	\$39,075	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$39,075		
					POS 8 (Neighbourhood Park)	1,548	\$116.97	\$181,072	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$181,072		
					POS 9 (Neighbourhood Park)	2,485	\$116.97	\$290,675	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$290,675		
					POS 11 (Neighbourhood Park)	317	\$116.97	\$37,080	POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$37,080		
					POS 12 (Neighbourhood Park)	1,055	\$116.97		POS revised area as advised by City of Kwinana via email dated 27/04/2021.	\$123,405		
Sub-Total	111,210		\$10,061,999		Sub-Total	65,831		\$5,042,614		-\$5,019,385		
Total Factorial Cash		+00.40	\$0 \$0			<u> </u>	176.60	\$0 \$0		CE 010 38E		
Total Footprint Cost	111,210	\$90.48	\$10,061,999		Total Footprint Cost	65,831	\$76.60	\$5,042,614		-\$5,019,385		

			City of Ky	vinana 2020 Rate Check		T&T 2021 Rate Check						
(DCA5) - Wandi North and South Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	(DCA5) - Wandi North and South Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
Wandi Playing field (POS 22B)	40,800	\$54.09	\$2,206,892.02		Wandi Playing field (POS 22B)	40,800	\$55.64	\$2,270,159		\$63,267		
POS 22A (Playing Fields)	2,133	\$54.09	\$115,353.38		POS 22A (Playing Fields)	2,133	\$55.64	\$118,660		\$3,307		
POS 22C (Neighbourhood Park)	20,968	\$113.76	\$2,385,412.49		POS 22C (Neighbourhood Park)	20,968	\$116.97	\$2,452,662		\$67,250		
Sub-Total	63,901		\$4,707,658		Sub-Total	63,901		\$4,841,481		\$133,824		
			\$0					\$0				
			\$0					\$0				
Total Footprint Cost	63,901	\$73.67	\$4,707,658		Total Footprint Cost	63,901	\$75.77	\$4,841,481		\$133,824		



### Section C2 - Public Open Space 2021 Cost Review

**Consolidated POS** 

			City of Kw	nana 2020 Rate Check					T&T 2021 Rate Check	
(DCA6) - Mandogalup Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	(DCA6) - Mandogalup Public Open Space	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
MANDOGALUP EAST					MANDOGALUP EAST					\$20201
POS1 (Local Park)	2,008	\$119.06	\$239,057.12		POS1 (Local Park)	1,999	\$122.49	\$244,863	POS revised area as advised by City of Kwinana via 3 email dated 27/04/2021.	\$5,806
POS2 (Neighbourhood Park)	8,393	\$113.76	\$954,781.60		POS2 (Neighbourhood Park)	8,525	\$116.97	\$997,184	POS revised area as advised by City of Kwinana via 4 email dated 27/04/2021.	\$42,402
POS3 (Local Park)	1,509	\$119.06	\$179,619.96		POS3 (Local Park)	2,290	\$122.49	\$280,509	POS revised area as advised by City of Kwinana via 9 email dated 27/04/2021.	\$100,889
POS4 (Local Park)	4,551	\$119.06	\$541,881.62		POS4 (Local Park)	6,323	\$122.49	\$774,522	POS revised area as advised by City of Kwinana via 2 email dated 27/04/2021. POS revised area as advised by City of Kwinana via	\$232,641
POS5 (Neighbourhood Park)	10,761	\$113.76	\$1,224,181.45		POS5 (Neighbourhood Park)	11,764	\$116.97	\$1,376,055	POS revised area as advised by City of Kwinana via POS revised area as advised by City of Kwinana via	\$151,874
POS6 (Playing Fields)	11,542	\$113.76	\$1,313,039.43		POS6 (Playing Fields)	11,549	\$55.64	\$642,600	email dated 27/04/2021. 2020 rate was for a neighbourhood park.	-\$670,440
POS7 (Local Park)	2,744	\$119.06	\$326,735.33		POS7 (Local Park)	1,193	\$122.49	\$146,134	Area decrease as advised by City of Kwinana via email dated 27/04/2021.	-\$180,601
					POS8 (Local Park)	1,345			POS revised area as advised by City of Kwinana via gemail dated 27/04/2021.	\$164,753
East Sub-Total	41,507		\$4,779,297		East Sub-Total	44,988		\$4,626,619	9	-\$152,678
POS A (Neighbourhood Park)	24,792	\$113.76	\$2,820,447.66		POS A (Neighbourhood Park)	24,792	\$116.97	\$2,899,962	3	\$79,514
POS B (Local Park)	3,008	\$119.06			POS B (Local Park)	3,008				\$10,326
POS C (Neighbourhood Park)	13,584	\$113.76			POS C (Neighbourhood Park)	13,584	\$116.97			\$43,567
POS D (Neighbourhood Park)	24,246	\$113.76			POS D (Neighbourhood Park)	24,246		\$2,836,096	5	\$77,763
West Sub-Total	65,630		\$7,482,289		Sub-Total	65,630		\$7,693,460		\$211,171
			\$0					\$(		<i>\\</i>
Total Footprint Cost	407.407		\$0		Total Footprint Cost		-	\$(		\$58,493
Total Footprint Cost	107,137	\$114.45	\$12,261,585		i otai rootprint Cost	110,618	\$111.37	\$12,320,079		30,493



### DCP Public Open Space - T&T Rates Schedule 2020

#### City of Kwinana

#### DCP Landscape and Public Open Space - T&T Rates Schedule 2021

		City of K	(winana 2020 Rates	
				City of Kuingen
City of Kwinana Items	Unit	Rate	Assumptions & Comments	City of Kwinana Items
	UNIC	Rate		
Earthworks				Earthworks
Cut to fill	m3	\$ 9.75	Rate obtained from in-house data	Cut to fill
Clearing scrub & trees	m2	\$ 3.00	Rate fair and reasonable based on heavy tree/ light scrub , escalated City of Kwinana rate to 2020	Clearing scrub & trees
Strip topsoil and respread	m2	\$ 1.90	Rate obtained from in-house data based on 150mm topsoil	Strip topsoil and respread
Garden Beds - Landscaping				Garden Beds - Landscaping
Preparation of planting area	m2	\$ 2.52	fair and reasonable	Preparation of planting area
Import topsoil and spread (150mm thick)	m2	\$ 14.10	Rate obtained from in-house data	Import topsoil and spread (150mm thick)
Soil conditioner	m2	\$ 4.23	rate appears fair and reasonable	Soil conditioner
Supply and lay standard mulch by hand	m2	\$ 7.83	Rate obtained from in-house data	Supply and lay standard mulch by hand
Supply and lay high grade mulch by hand	m2	\$ 12.00	Rate obtained from in-house data	Supply and lay high grade mulch by hand
Supply and install plants	m2	\$ 28.43	Rate escalated to 2020 due to limited scope provided	Supply and install plants
Fine grading	m2	\$ 1.39	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Fine grading
Mulch - Inorganic	m2	\$ 11.07	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Mulch - Inorganic
Mulch - Chunky Pine Bark	m2	\$ 9.00	Rate obtained from in-house data	Mulch - Chunky Pine Bark
Tubestock (3/m2) incl Terracottem	m2	\$ 10.57	Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2020	Tubestock (3/m2) incl Terracottem
Tubestock (6/m2) incl Terracottem	m2	\$ 21.13	Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2020	Tubestock (6/m2) incl Terracottem
100L street tree evenly spaced @ 20m	m2	\$ 352.20	Rate fair and reasonable, escalated City of Kwinana rate to 2020	100L street tree evenly spaced @ 20m
Feature semi mature tree	item	\$ 3,522.03	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Feature semi mature tree
irrigation	m2	\$ 6.52	Rate obtained from in-house data	irrigation
turf- village Green	m2	\$ 8.70	Rate obtained from in-house data	turf- village Green
Miscellaneous allowance (kerb edging, feature retaining walls)	m2		Rate fair and reasonable, escalated City of Kwinana rate to 2020	Miscellaneous allowance (kerb edging, feature retaining walls)
Water Supply & Reticulation		÷ 5.05		Water Supply & Reticulation
Irrigation	m2	\$ 6.52	Rate obtained from in-house data	Irrigation
Bore (shallow) - superficial			Rate escalated to 2020 due to limited scope provided	Bore (shallow- superficial
	item		Rate escalated to 2020 due to limited scope provided Rate escalated to 2020 due to limited scope provided	
Bore (Artesian)	item			Bore (Artesian)
Iron Bacteria Filtration Unit	item	\$ 80,503.43	Rate escalated to 2020 due to limited scope provided	Iron Bacteria Filtration Unit
Turfing				Turfing
Prep of turfing area (weed removal & general leveling)	m2		Rate obtained from in-house data	Prep of turfing area (weed removal & general leveling)
Import topsoil and spread (150mm thick)			Rate obtained from in-house data	Import topsoil and spread (150mm thick)
Soil conditioner			Rate obtained from in-house data	Soil conditioner
Supply and lay turf (roll on)	m2		Rate obtained from in-house data	Supply and lay turf (roll on)
Supply and install stolons	m2	\$ 4.00	Rate obtained from in-house data	Supply and install stolons
Fertilising	m2	\$ 0.20	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Fertilising
Soil Wetting Agent	m2	\$ 0.25	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Soil Wetting Agent
Weed spraying	m2	\$ 0.90	Rate obtained from in-house data	Weed spraying
Hardworks				Hardworks
Active piece of equipment	item	\$ 28,176.20	City of Kwinana Rate escalated to 2020 due to minimal scope	Active piece of equipment
Hardcourt	item	\$ 65,409.04	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Hardcourt
Cricket practice nets (2 pitches and net)	item	\$ 59,884.64	Rate obtained from in-house data based on two cricket nets	Cricket practice nets (2 pitches and net)
Cricket pitch	item	\$ 20,000.00	Rate obtained from in-house data	Cricket pitch
Lighting - training level	item	\$ 301,887.87	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Lighting - training level
Lighting - general	item	\$ 50,315.00	General allowance.	Lighting - general
Paths	m2	\$ 44.07	Rate obtained from in-house data	Paths
Fencing (bollard, post & rail, ringlock)	m	\$ 47.00	Rate obtained from in-house data	Fencing (bollard, post & rail, ringlock)
Bollard - Flexipole	item	\$ 70.44	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Bollard - Flexipole
Fence - Timber Post & Rail	m	\$ 96.00	Rate obtained from in-house data	Fence - Timber Post & Rail
Fence - Steel Post & Rail	m	\$ 91.00	Rate obtained from in-house data	Fence - Steel Post & Rail



### Turner & Townsend

		T&	T 2021 Rates	
Unit		Rate	Assumptions & Comments	Variance on Rate Cost (\$2021 vs
				\$2020)
m3	\$	10.05	Rate obtained from in-house data	\$ 0.30
m2	\$	3.09	Rate fair and reasonable based on heavy tree/ light scrub , escalated City of Kwinana rate to 2021	\$ 0.09
m2	\$		Rate obtained from in-house data based on 150mm topsoil	\$ 0.06
m2	\$	2.59	fair and reasonable	\$ 0.08
m2	\$	14.54	Rate obtained from in-house data	\$ 0.44
m2	\$	4.36	rate appears fair and reasonable	\$ 0.13
m2	\$	8.07	Rate obtained from in-house data	\$ 0.24
m2	\$	12.37	Rate obtained from in-house data	\$ 0.37
m2	\$	29.31	Rate escalated to 2021 due to limited scope provided	\$ 0.88
m2	\$	1.43	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.04
m2	\$	11.41	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.34
m2	\$	9.28	Rate obtained from in-house data	\$ 0.28
m2	\$	10.89	Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2021	\$ 0.33
m2	\$	21.79	Rate fair and reasonable for high quality trees, escalated City of Kwinana rate to 2021	\$ 0.65
No	\$	363.09	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 10.89
item	\$	3,630.89	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 108.86
m2	\$	6.72	Rate obtained from in-house data	\$ 0.20
m2	\$	8.97	Rate obtained from in-house data	\$ 0.27
m2	\$	5.19	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.16
m2	\$	6 72	Rate obtained from in-house data	\$ 0.20
item			Rate escalated to 2021 due to limited scope provided	\$ 2,021.73
item			Rate escalated to 2021 due to limited scope provided	\$ 4,665.54
item	\$		Rate escalated to 2021 due to limited scope provided	\$ 2,488.29
				· · ·
m2	\$	2.89	Rate obtained from in-house data	\$ 0.09
m2	\$	14.54	Rate obtained from in-house data	\$ 0.44
m2	\$	4.36	Rate obtained from in-house data	\$ 0.13
m2	\$	6.90	Rate obtained from in-house data	\$ 0.21
m2	\$	4.12	Rate obtained from in-house data	\$ 0.12
m2	\$	0.21	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.01
m2	\$	0.26	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.01
m2	\$	0.93	Rate obtained from in-house data	\$ 0.03
_	-			
item	\$		City of Kwinana Rate escalated to 2021 due to minimal scope	\$ 870.90
item	\$		Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 2,021.73
item	\$		Rate obtained from in-house data based on two cricket nets	\$ 1,850.98
item	\$		Rate obtained from in-house data	\$ -
item			Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 9,331.08
item			General allowance.	\$ 1,555.19
m2	\$		Rate obtained from in-house data	\$ 1.36
m	\$		Rate obtained from in-house data	\$ 1.45
item	\$		Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 2.18 ¢ 2.07
m	\$		Rate obtained from in-house data	\$ 2.97 ¢ 2.81
m	\$	93.81	Rate obtained from in-house data	\$ 2.81

### DCP Public Open Space - T&T Rates Schedule 2020

#### City of Kwinana

### DCP Landscape and Public Open Space - T&T Rates Schedule 2021

T&T 2021 Rates

		City of K	winana 2020 Rates	
City of Kwinana				City of Kwinana
Items	Unit	Rate	Assumptions & Comments	Items
Fence - Reserve	m	\$ 45.28	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2020	Fence - Reserve
Fence - Rural	m	\$ 45.28	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2020	Fence - Rural
Fence - Chainlink Galvanised (2.4m)	m	\$ 71.00	Rate obtained from in-house data	Fence - Chainlink Galvanised (2.4m)
Fence - Chainlink PVC Coated (2.4m)	m	\$ 100.63	Rate fair and reasonable for standard PVC Coated fence, escalated City of Kwinana rate to 2020	Fence - Chainlink PVC Coated (2.4m)
Fence - Steel Balustrade	m	\$ 465.00	Rate obtained from in-house data	Fence - Steel Balustrade
Fence - Pool Fencing	m	\$ 120.76	Rate fair and reasonable for standard pool fencing, escalated City of Kwinana rate to 2020	Fence - Pool Fencing
Gate - Boom General	item	\$ 1,610.07	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Gate - Boom General
Gate - Reserve	item	\$ 1,106.92	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Gate - Reserve
Gate - Heavy Duty	item	\$ 2,650.00	Rate obtained from in-house data	Gate - Heavy Duty
Toilets - large (Local Sporting Ground Without Pavilion)	item	\$ 191,195.65	Rate fair and reasonable based on 50m2 standalone structure, escalated City of Kwinana rate to 2020	Toilets - large
Toilets - small	item	\$ 80,503.43	Rate fair and reasonable based on 25m2 standalone structure, escalated City of Kwinana rate to 2020	Toilets - small
Car parking	m2	\$ 130.82	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Car parking
Landscape Furniture				Landscape Furniture
Picnic table	item	\$ 5,836.50	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Picnic table
Shelter	item	\$ 17,308.24	Rate fair and reasonable15m2 steel framed structure, escalated City of Kwinana rate to 2020	Shelter
Play equipment (combination with softfall & shade) - Large unit	item	\$ 150,960.36	Rate escalated to 2020 due to limited scope provided	Play equipment (combination with softfall & shade) - Large unit
Play equipment (combination with softfall & shade) - Small unit	item	\$ 30,188.79	Rate escalated to 2020 due to limited scope provided	Play equipment (combination with softfall & shade) - Small unit
Decking & footbridges	m2	\$ 1,207.55	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Decking & footbridges
Seats (Bench)	item	\$ 3,018.88	Rate escalated to 2020 due to limited scope provided	Seats (Bench)
Bin & dog litter bag dispenser	item	\$ 1,203.57	Rate obtained from in-house data	Bin & dog litter bag dispenser
Bike stand	item	\$ 1,822.49	Rate obtained from in-house data based on 1900mm long bike stand	Bike stand
Drinking fountain	item	\$ 4,358.11	Rate obtained from in-house data	Drinking fountain
BBQ - Small	No	\$ 10,062.93	Rate fair and reasonable, escalated City of Kwinana rate to 2020	BBQ - Small
BBQ - Large	No	\$ 15,094.39	Rate fair and reasonable, escalated City of Kwinana rate to 2020	BBQ - Large
Signage (allowance)	item	\$ 2,012.59	Rate escalated to 2020 due to limited scope provided	Signage (allowance)
Maintenance				Maintenance
Turf and gardens (per annum)	m2	\$ 2.52	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Turf and gardens (per annum)
Conservation / parkland cleared (per annum)	m2	\$ 0.50	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Conservation / parkland cleared (per annum)
Landscape furniture				Landscape furniture
Hardworks				Hardworks
Maintenance 2 years 50c / m2 / annum	item	\$ 1.00	Rate fair and reasonable, escalated City of Kwinana rate to 2020	Maintenance 2 years 50c / m2 / annum



## Turner & Townsend

	T&	T 2021 Rates	
Unit	Rate	Assumptions & Comments	Variance on Rate Cost (\$2021 vs \$2020)
m	\$ 46.68	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2021	\$ 1.40
m	\$ 46.68	Rate fair and reasonable for light weight fencing, escalated City of Kwinana rate to 2021	\$ 1.40
m	\$ 73.19	Rate obtained from in-house data	\$ 2.19
m		Rate fair and reasonable for standard PVC Coated fence, escalated City of Kwinana rate to 2021	\$ 3.11
m		Rate obtained from in-house data	\$ 14.37
m	\$ 124.49	Rate fair and reasonable for standard pool fencing, escalated City of Kwinana rate to	\$ 3.73
item		Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 49.77
item	\$ 1,141.14	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 34.21
item	\$ 2,731.91	Rate obtained from in-house data	\$ 81.91
item	¢ 107 105 24	Rate fair and reasonable based on 50m2 standalone structure, escalated City of Kwinana rate to 2021	\$ 5,909.68
 item		Rate fair and reasonable based on 25m2 standalone structure, escalated City of Kwinana rate to 2021	\$ 5,909.68 \$ 2,488.29
m2		Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 4.04
 item	\$ 6,016.90	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 180.40
item	\$ 17,843.22	Rate fair and reasonable15m2 steel framed structure, escalated City of Kwinana rate	\$ 534.98
item		Rate escalated to 2021 due to limited scope provided	\$ 4,666.05
item		Rate escalated to 2021 due to limited scope provided	\$ 933.11
m2		Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 37.32
No.	\$ 3,112.19	Rate escalated to 2021 due to limited scope provided	\$ 93.31
 No.	\$ 1,240.77	Rate obtained from in-house data	\$ 37.20
item	\$ 1,878.82	Rate obtained from in-house data based on 1900mm long bike stand	\$ 56.33
 item	\$ 4,492.82	Rate obtained from in-house data	\$ 134.71
No	\$ 10,373.97	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 311.04
No	\$ 15,560.95	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 466.55
 item	\$ 2,074.79	Rate escalated to 2021 due to limited scope provided	\$ 62.21
m2	\$ 2.59	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.08
 m2	\$ 0.52	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.02
item	\$ 1.03	Rate fair and reasonable, escalated City of Kwinana rate to 2021	\$ 0.03

Local Sporting Ground with Clubroom Population ratio - 1:5000, Radius - required when an oval with a pavilion is not in a catchment of 5-7km area

Local Sporting Ground with Clubroom - 7.2ha				Т&Т 20	20 Rate Check				Т&Т :	2021 Rate Check
Items	Area (m²)/Qt y	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Q ty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments Variance on Total Unit Cost (\$2021 vs \$2020)
Earthworks Cut to fill over 1,000m3 - allowance	72000	m3	\$9.75	5 \$351,000	Allow 0.5m average over entire site	Earthworks Cut to fill over 1,000m3 - allowance	72000	\$10.05	\$361,849	\$10,849
Clearing scrub & trees - allowance Strip topsoil and respread	72000 72000	m2 m2	\$3.00	\$108,000	Allow 50% of site Allow 100% of site	Clearing scrub & trees - allowance Strip topsoil and respread	72000 72000	\$3.09 \$1.96	\$111,338	\$10,849 \$3,338 \$4,228
Sub total	72000		\$8.28	\$595,800		Sub total	72000	\$8.53		\$18,416
Garden Beds - Landscaped Surrounds	40000			+25.457	A	Garden Beds - Landscaped Surrounds	10000	±0.50	+25.025	\$0 \$778
Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	10000 10000	m2 m2	\$2.52		Assume 1ha Assume 1ha	Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	10000	\$2.59 \$14.54	\$25,935 \$145,358	\$7/8
Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	10000	m2	\$4.23	\$42,264	Assume 1ha	Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	10000	\$4.36	\$43,571	\$1,306
Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine	10000	m2	\$7.83	3 \$78,300	Assume 1ha	Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine	10000	\$8.07	\$80,720	\$2,420
finish install) Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see		m2	\$12.00			finish install) Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see		\$12.37	\$0	\$0
Miscellaneous allowance (kerb edging, feature retaining walls)	10000	m2	\$28.43	3 \$284,278	Assume 1ha Assume 1ha	notes Miscellaneous allowance (kerb edging, feature retaining walls)	10000	\$29.31	\$293,065	\$8,787
Sub total	10000	m2	\$5.03 \$62.13			Sub total	10000	\$5.19 <b>\$64.05</b>	\$51,870 <b>\$640,518</b>	\$1,555 <b>\$19,204</b>
Water Supply & Reticulation						Water Supply & Reticulation				
Irrigation - supply & install materials Bore (shallow - superficial)	68400	m2 Item	\$65,409.04		Assume 95% of POS Allows 20m (50m) bore construction	Irrigation - supply & install materials Bore (shallow - superficial)	68400	\$6.72 \$67,430.77	\$459,752 \$67,431	\$13,784 \$2,022
Bore (artesian) Iron Bacteria Filtration Unit		Item		1		Bore (artesian) Iron Bacteria Filtration Unit		\$155,609.48	\$0	\$0
Sub total		Item	\$80,503.43			Sub total		\$82,991.72 \$7.71		\$0 \$15,806
Turfing										
Prep of turfing area (weed removal & general leveling) Import topsoil and spread (150mm thick)		m2 m2	\$2.80		Completed at earthworks stage	Prep of turfing area (weed removal & general leveling) Import topsoil and spread (150mm thick)		\$2.89 \$14.54		\$0 \$0
Soil conditioner Supply and lay turf (roll on)	55000	m2 m2	\$4.23		Assume 5.5 ha	Soil conditioner Supply and lay turf (roll on)	55000	\$4.36 \$6.90	\$239,639 \$0	\$7,185 \$0
Supply and install stolons	55000	m2	\$4.00	\$220,000	Assume 5.5 ha	Supply and install stolons	55000	\$4.12	\$226,800	\$6,800 \$342 \$1,530
Fertilising Soil Wetting Agent	55000	m2 m2	\$0.20 \$0.25	5	Assume 5.5 ha	Soil Wetting Agent	55000	\$0.21 \$0.26	\$11,411 \$0	\$342
Weed spraying Sub total	55000	m2	\$0.90 <b>\$9.3</b> 3	\$49,500	Assume 5.5 ha	Weed spraying Sub total	55000	\$0.93 \$9.62	\$51,030 \$528,880	\$1,530 \$15,857
Hardworks (supply & install)						Hardworks (supply & install)				
Active piece of equipment (general allowance - basketball court, BMX jumps, hit up wall, exercise equipment) Hardcourt		Item Item	\$28,176.20			Active piece of equipment (general allowance - basketball court, BMX jumps, hit up wall, exercise equipment) Hardcourt		\$29,047.10 \$67,430.77	\$0 \$0	\$0
Cricket practice nets (2 pitches and net)	1	Item	\$59,884.64	4 \$59,885		Cricket practice nets (2 pitches and net)	1	\$61,735.62	\$61,736	\$1,851
Cricket pitch (all seasons) Lighting - training level for active playing field	1	Item Item	\$20,000.00 \$301,887.87	7 \$301,888		Cricket pitch (all seasons) Lighting - training level for active playing field	1	\$20,000.00 \$311,218.95	\$20,000 \$311,219	\$0 \$9,331 \$1,089
Lighting - general (allowance) Paths	1 5640	Item m2	\$35,220.50	) \$35,221 7 \$248,555	allowance only, includes car park 2820m of 2.0 wide path	Lighting - general (allowance) Paths	1 5640	\$36,309.13 \$45.43	\$36,309 \$256,237	\$1,089 \$7,683
Fencing (bollard, post & rail, ringlock)	800	m	\$47.00	) \$37,600	Say 800m	Fencing (bollard, post & rail, ringlock)	800	\$48.45	\$38,762	\$1,162
Bollard - Flexipole Fence - Timber Post & Rail		Item m	\$70.44 \$96.00	)		Bollard - Flexipole Fence - Timber Post & Rail		\$72.62 \$98.97	\$0 \$0	\$0 \$0
Fence - Steel Post & Rail Fence - Reserve (conservation fencing)		m m	\$91.00 \$45.28			Fence - Steel Post & Rail Fence - Reserve (conservation fencing)		\$93.81 \$46.68	\$0 \$0	\$0 \$0
Fence - Rural		m	\$45.28	3		Fence - Rural		\$46.68	\$0	\$0
Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)		m m	\$71.00 \$100.63	3		Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)		\$73.19 \$103.74		\$0 \$0
Fence - Steel Balustrade Fence - Pool Fencing		m m	\$465.00	5		Fence - Steel Balustrade Fence - Pool Fencing		\$479.37 \$124.49	\$0 \$0	<u>\$0</u> \$0
Gate - Boom General Gate - Reserve		Item Item	\$120.76 \$1,610.07 \$1,106.92	7		Gate - Boom General Gate - Reserve		\$1,659.83 \$1,141.14	\$0 \$0	\$0 \$0 \$0
Gate - Heavy Duty		Item	\$2,650.00	D	Provided with pavilion -maintenance costs allocated to	Gate - Heavy Duty		\$2,731.91	\$0	\$0
Toilets - large		Item	\$191,195.65		pavilion maintenance	Toilets - large		\$197,105.34	\$0	\$0
Toilets - small Car parking (includes drainage, signage & landscaping)	280.6	Item m2	\$80,503.43	3	20 on street bays	Toilets - small Car parking (includes drainage, signage & landscaping)	280.6	\$82,991.72 \$134.86	\$0 \$37,842	\$0
Sub total	20010		\$10.28	\$739,855		Sub total	20010	\$10.58		\$1,135 <b>\$22,250</b>
Landscape Furniture (supply & install) Picnic table	2	Item	\$5,836.50	\$11,673	2 off	Landscape Furniture (supply & install) Picnic table	2	\$6,016.90	\$12,034	\$0 \$361 \$1,070
Shelter	2	Item	\$17,308.24	4 \$34,616	2 off	Shelter	2	\$17,843.22	\$35,686	\$1,000
Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1	Item Item	\$30,188.79	9		Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1	\$155,626.41 \$31,121.90	\$155,626 \$0	\$4,666 \$0
Decking & footbridges Seats (Bench)	10	m2 Item	\$1,207.55	5	10 off	Decking & footbridges Seats (Bench)	10	\$1,244.88 \$3,112.19	\$0 \$31,122	\$0 \$0 \$933
Bin & dog litter bag dispenser	4	Item	\$1,203.57	7 \$4,814	4 off	Bin & dog litter bag dispenser	4	\$1,240.77	\$4,963	\$933 \$149 \$113 \$269
Bike stand Drinking fountain		Item Item	\$1,822.49	9 \$3,645 1 \$8,716	2 off 2 off	Bike stand Drinking fountain	2	\$1,878.82 \$4,492.82	\$3,758 \$8,986	\$113
BBQ - small BBQ - large	1	Item Item	\$10,062.93 \$15,094.39	3		BBQ - small BBQ - large	1	\$10,373.97 \$15,560.95	\$0 \$15,561	\$0 \$467
Signage (allowance)		Item	\$2,012.59	9 \$4,025	2 off	Signage (allowance)	2	\$2,074.79	\$4,150	\$124
<u>Sub total</u>			\$3.66			Sub total		\$3.78		\$8,152
Total Development Costs			\$45.07	\$3,245,103		Total Development Costs		\$46.46	\$3,344,788	\$99,685
Indirect Costs Design, contract administration & construction management - % of overall project costs	12%	%		\$389,412		Indirect Costs Design, contract administration & construction management - % of overall project each	12%		\$401,375	\$11,962
project costs <u>Sub total</u>			\$5.41			project costs <u>Sub total</u>			\$401,375	\$11,962
Total Overall Costs			\$50.48	\$ \$3,634,515		Total Overall Costs		\$52.03	\$3,746,163	\$111,647
Maintenance Costs - 2 Years						Maintenance Costs - 2 Years				
<u>IMITEMATE 60363 - 2 16813</u>	I		1	1	1	risingentiente costs - 2 i cars		1		



Section C2 - Public Open Space 2021 Cost Review

Local Sporting Ground with Clubroom Population ratio - 1:5000, Radius - required when an oval with a pavilion is not in a catchment of 5-7km area Local Sporting Ground with Clubroom - 7.2ha

Local Sporting Ground with Clubroom - 7.2na															
				Т&Т 20	20 Rate Check			T&T 2021 Rate Check							
Items	Area (m²)/Qt y	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Q ty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)				
Turf and gardens (per annum)	2	Item	\$100,000.00	\$200,000		Turf and gardens (per annum)	2	\$100,000.00	\$200,000		\$0				
Conservation / parkland cleared (per annum)		Item	\$0.50			Conservation / parkland cleared (per annum)		\$0.52	\$0		\$0				
Landscape furniture	2	Item	\$10,000.00 \$20,000.00	\$20,000	Allowance of \$10,000/yr	Landscape furniture	2	\$10,000.00	\$20,000 \$40,000		\$0				
Hardworks	2	Item	\$20,000.00	\$40,000	Allowance of \$20,000/yr	Hardworks	2	\$20,000.00	\$40,000		\$0				
<u>Sub total</u>			\$3.61			Sub total		\$3.61			\$0				
Total Unit Rate			\$54.09			Total Unit Rate		\$55.64			\$1.55				



Section C2 - Public Open Space 2021 Cost Review

**District Sporting Ground** 

District Sporting Ground - 15.00ha											
_				T&T 202	0 Rate Check				T&T 2021 R	late Check	Variance on
Items	Area (m²)/Qty	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Total Unit Cost (\$2021 vs
Earthworks						Earthworks					\$2020)
Cut to fill over 1,000m3 - allowance	150,000 150,000	m3 m2	\$9.75		Allow 0.5m average over 75% of the site Allow 25% of the site	Cut to fill over 1,000m3 - allowance Clearing scrub & trees - allowance	150,000 150,000	\$10.05 \$3.09	<u>\$565,389</u> \$115,977		\$16,951.70 \$3,477.27
Clearing scrub & trees - allowance Strip topsoil and respread	150,000		\$3.00 \$1.90		Allow 75% of the site	Strip topsoil and respread	150,000	\$1.96	\$220,357		\$6,606.82
Sub total	,		\$5.83	\$874,688		Sub total		\$6.01	\$901,723		\$27,035.80
Garden Beds - Landscaped Surrounds						Garden Beds - Landscaped Surrounds					
Prep of planting area (weed removal & general leveling)	44,378	m2	\$2.52	\$111,643	Assume 4.4378ha -Assume remaining 0.5ha is natural bush	Prep of planting area (weed removal & general leveling)	44,378	\$2.59	\$115,094		\$3,450.79
Thep of planting area (weed removal & general leveling)	-		φ2.52		to remain Assume 4.4378ha -Assume remaining 0.5ha is natural bush		-	-			
Import topsoil and machine spread (150mm thick)	44,378	m2	\$14.10	\$625,730	to remain	Import topsoil and machine spread (150mm thick)	44,378	\$14.54	\$645,071		\$19,340.74
Soil conditioner (20mm thick blended into top 200mm @ \$60/m3	44,378	m2	\$4.23	\$187,561	Assume 4.4378ha -Assume remaining 0.5ha is natural bush	Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	44,378	\$4.36	\$193,358		\$5,797.33
plus \$3 install) Supply and lay standard mulch by hand (75mm layer - \$50/m3 +	44,378	m2	\$7.83	\$347,480	to remain Assume 4.4378ha -Assume remaining 0.5ha is natural bush	install) Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install)	44,378	\$8.07	\$358,220		\$10,740.28
\$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3		1112	\$7.05	\$547,400	to remain	Supply and lay high grade mulch by hand (75mm layer - \$50/m3 + \$3.50 fine	44,570	40.07	\$330,220		
+ \$3.50 fine finish install)		m2	\$12.00			finish install)		\$12.37	\$0		\$0.00
Supply and install plants (includes allowance for 1 x 100l tree per	44,378	m2	\$28.43	\$1,261,568	Assume 4.4378ha -Assume remaining 0.5ha is natural bush	Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see	44,378	\$29.31	\$1,300,562		\$38,993.91
40m2) see notes	44 270		¢5.02	\$223,286	to remain Assume 4.4378ha -Assume remaining 0.5ha is natural bush	notes	44,378	\$5.19	\$230,188	,	#6 001 ES
Miscellaneous allowance (kerb edging, feature retaining walls)	44,378	m2	\$5.03		to remain	Miscellaneous allowance (kerb edging, feature retaining walls)	44,378				\$6,901.58
Sub total			\$62.13	\$2,757,267		<u>Sub total</u>		\$64.05	\$2,842,492		\$85,224.63
Water Supply & Reticulation	126 606		10.5-	4004 010	Annual 12 ((0)-	Water Supply & Reticulation	126 605	10.00	+010 =11		\$0.00
Irrigation - supply & install materials Bore (shallow - superficial)	136,690	m2 Item	\$6.52 \$65,409.04	\$891,219	Assume 13.669ha	Irrigation - supply & install materials Bore (shallow - superficial)	136,690	\$6.72 \$67,430.77	\$918,766		\$27,546.76 \$0.00
Bore (artesian)	1	Item	\$150,943.94	\$150,944	Assume 1 artesian bore with reservoir tanks	Bore (artesian)	1	\$155,609.48	\$155,609	)	\$4,665.54
Iron Bacteria Filtration Unit		Item	\$80,503.43	¢1 042 162		Iron Bacteria Filtration Unit		\$82,991.72	\$0		\$0.00 <b>\$32,212.30</b>
Sub total			\$7.62	\$1,042,163		Sub total		\$7.86	\$1,074,375		\$32,212.30
Turfing						Turfing					
Prep of turfing area (weed removal & general leveling)		m2	\$2.80		Completed at earthworks stage	Prep of turfing area (weed removal & general leveling)		\$2.89	\$0		\$0.00 \$0.00
Import topsoil and spread (150mm thick) Soil conditioner	87,200	m2 m2	\$14.10 \$4.23	\$368,545	Assume 8.720ha	Import topsoil and spread (150mm thick) Soil conditioner	87,200	\$14.54 \$4.36	\$0 \$379,936		\$0.00
Supply and lay turf (roll on)		m2	\$6.69			Supply and lay turf (roll on)		\$6.90	\$0		\$0.00
Supply and install stolons Fertilising	87,200 87,200	m2 m2	\$4.00 \$0.20		Assume 8.720ha Assume 8.720ha	Supply and install stolons Fertilising	87,200 87,200	\$4.12 \$0.21	\$359,581 \$18,092		\$10,781.09 \$542.45
Soil Wetting Agent		m2	\$0.25			Soil Wetting Agent		\$0.26	\$0	)	\$0.00
Weed spraying	87,200	m2	\$0.90 <b>\$9.33</b>	\$78,480 \$813,374	Assume 8.720ha	Weed spraying Sub total	87,200	\$0.93 <b>\$9.62</b>	\$80,906 \$838,515		\$2,425.75 \$25,140.67
Sub total			\$9.55	\$613,374				\$9.02	\$636,313		\$25,140.07
Hardworks (supply & install)						Hardworks (supply & install)					
Active piece of equipment (general allowance - basketball court,		Item	\$28,176.20			Active piece of equipment (general allowance - basketball court, BMX jumps, hit		\$29,047.10	\$0		\$0.00
BMX jumps, hit up wall, exercise equipment) Hardcourt		Item	\$65,409.04			up wall, exercise equipment) Hardcourt		\$67,430.77	\$0		\$0.00
Cricket practice nets (2 pitches and net)	2		\$59,884.64	\$119,769	Say 2 sets	Cricket practice nets (2 pitches and net)	2		\$123,471	1	\$3,701.96
Cricket pitch (all seasons)	2	Item	\$20,000.00	\$40,000	Say 2 off	Cricket pitch (all seasons)	2	\$20,000.00	\$40,000		\$0.00
Lighting - training level for active playing field		Item	\$450,000.00	\$450,000	Lighting to 2 playing fields only, assume some poles will be common use	Lighting - training level for active playing field		\$450,000.00	\$450,000		\$0.00
Lighting - general (allowance)	1	Item	\$50,315.00		Allowance only	Lighting - general (allowance)	1	\$51,870.19	\$51,870		\$1,555.19
Paths Fencing (bollard, post & rail, ringlock)	<u>11,760</u> 1,500		\$44.07 \$47.00		Say 5,880m of 2.0 wide path Say 1.5km	Paths Fencing (bollard, post & rail, ringlock)	11,760 1,500	\$45.43 \$48.45	<u>\$534,282</u> \$72,679		\$16,019.04 \$2,179.09
Bollard - Flexipole	1,000	Item	\$70.44	\$70,000		Bollard - Flexipole	2,000	\$72.62	\$0		\$0.00
Fence - Timber Post & Rail		m	\$96.00			Fence - Timber Post & Rail		\$98.97	\$0		\$0.00
Fence - Steel Post & Rail Fence - Reserve (conservation fencing)		m m	\$91.00 \$45.28			Fence - Steel Post & Rail Fence - Reserve (conservation fencing)		\$93.81 \$46.68	\$0 \$0		\$0.00 \$0.00
Fence - Rural		m	\$45.28			Fence - Rural		\$46.68	\$0		\$0.00
Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)		m m	\$71.00 \$100.63			Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)		\$73.19 \$103.74	\$0 \$0		\$0.00 \$0.00
Fence - Steel Balustrade		m	\$465.00			Fence - Steel Balustrade		\$479.37	\$0	)	\$0.00
Fence - Pool Fencing		m	\$120.76			Fence - Pool Fencing		\$124.49	\$0		\$0.00
Gate - Boom General Gate - Reserve		Item Item	\$1,610.07 \$1,106.92			Gate - Boom General Gate - Reserve	-	\$1,659.83 \$1,141.14	<u>\$0</u> \$0		\$0.00 \$0.00
Gate - Heavy Duty		Item	\$2,650.00			Gate - Heavy Duty		\$2,731.91	\$0		\$0.00
Toilets - large		Item	\$191,195.65		Maintenance costs allocated to pavilion maintenance	Toilets - large		\$197,105.34	\$0		\$0.00
Toilets - small Car parking (includes drainage, signage & landscaping)	561	Item m2	\$80,503.43 \$130.82	\$73 415	40 on street bays	Toilets - small Car parking (includes drainage, signage & landscaping)	561	\$82,991.72 \$134.86	\$0 \$75,684		\$0.00 \$2,269.19
Sub total	501	1112	\$130.82	\$1,322,263		Sub total	501	\$134.80	\$1,347,987		\$25,724.48
Landscape Furniture (supply & install) Picnic table	6	Item	\$5,836.50	\$35,019	6 off	Landscape Furniture (supply & install) Picnic table	6	\$6,016.90	\$36,101		\$0.00 \$1,082.41
Shelter	6	Item	\$17,308.24	\$103,849	6 off	Shelter	6	\$17,843.22	\$107,059		\$3,209.89
Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1	Item Item	\$150,960.36 \$30,188.79	\$150,960	1 off	Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1	\$155,626.41 \$31,121.90	\$155,626 \$0		\$4,666.05 \$0.00
Decking & footbridges		m2	\$1,207.55			Decking & footbridges		\$1,244.88	\$0	)	\$0.00
Seats (Bench)		Item	\$3,018.88	\$60,378	20 off	Seats (Bench)	20	\$3,112.19	\$62,244		\$1,866.22
Bin & dog litter bag dispenser Bike stand		Item Item	\$1,203.57 \$1,822.49	\$9,629 \$10,935		Bin & dog litter bag dispenser Bike stand	8		\$9,926 \$11,273		\$297.61 \$337.99
Drinking fountain		Item	\$4,358.11	\$13,074		Drinking fountain	3	\$4,492.82	\$13,478	3	\$404.12
BBQ - small	2	Item Item	\$10,062.93 \$15,094.39	\$45,283	3 off	BBQ - small BBQ - large	2	\$10,373.97 \$15,560.95	\$0 \$46,683		\$0.00 \$1,399.66
		Item	\$2,012.59	\$43,283		Signage (allowance)	6		\$40,003		\$373.24
BBQ - large Signage (allowance)	0	100111									
	0		\$2.94	\$441,203		Sub total		\$3.03	\$454,840		\$13,637.18
Signage (allowance)	6							\$3.03			\$13,637.18 \$208,975.05



Section C2 - Public Open Space 2021 Cost Review **District Sporting Ground** 

District Sporting Ground - 15.00ha														
				T&T 202	0 Rate Check		T&T 2021 Rate Check							
Items	Area (m²)/Qty	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments (\$2021 vs \$2020)				
Design, contract administration & construction management - % of overall project costs	12%	%		\$870,115		Design, contract administration & construction management - % of overall project costs	12%	%	\$895,191.91	\$25,077.01				
Sub total			\$5.80	\$870,115		Sub total		\$5.97	\$895,192	\$25,077.01				
Total Overall Costs			\$54.14	\$8,121,072		Total Overall Costs		\$55.70	\$8,355,124	\$234,052.06				
Maintenance Costs - 2 Years						Maintenance Costs - 2 Years				\$0.00				
Turf and gardens (per annum)	1	Item	\$675,000.00	\$675,000		Turf and gardens (per annum)	1	\$675,000.00	\$675,000	\$0.00				
Conservation / parkland cleared (per annum)	1	Item	\$5,000.00			Conservation / parkland cleared (per annum)	1	\$5,000.00		\$0.00				
Landscape furniture	2	Item	\$15,000.00		Allowance of \$15,000/yr	Landscape furniture	2	\$15,000.00		\$0.00				
Hardworks	2	Item	\$40,000.00	\$80,000	Allowance of \$40,000/yr	Hardworks	2	\$40,000.00	\$80,000	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00				
Sub total			\$5.27	\$790,000		Sub total		\$5.27	\$790,000	\$0.00				
Total Unit Rate			\$59.41			Total Unit Rate		\$60.97		\$1.56				



Local Sporting Ground with Small facility building Population ratio - 1:5000, Radius - required when an oval with a pavilion is not in a catchment of 5-7km area Local Sporting Ground with Small facility building - 4.6ha

Local Sporting Ground with Small facility building - 4.6ha				T&T 2020 Rate Check				T&T 1	2021 Rate Check	
Items	Area (m²)/Qt y	Unit	Unit Rate	Total Unit Cost (\$2020) Assumptions & Comments	Items	Area (m²)/Q ty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
Earthworks Cut to fill over 1,000m3 - allowance	46000	m3	\$9.75	\$224,250 Allow 0.5m average over entire site	Earthworks Cut to fill over 1,000m3 - allowance	46000	\$10.05	\$231,181		
Clearing scrub & trees - allowance	46000	m2	\$3.00	\$69,000 Allow 50% of site	Clearing scrub & trees - allowance	46000	\$3.09	\$71,133		\$6,931 \$2,133
Strip topsoil and respread Sub total	46000	m2	\$1.90 \$8.28		Strip topsoil and respread Sub total	46000	\$1.96 <b>\$8.53</b>	\$90,101 <b>\$392,416</b>		\$2,701 <b>\$11,766</b>
Garden Beds - Landscaped Surrounds					Garden Beds - Landscaped Surrounds		+0.50	+500		\$0
Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick)	204 204		\$2.52 \$14.10	\$513 Assume 0.0204ha \$2,876 Assume 0.0204ha	Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick)	204 204	\$2.59 \$14.54	\$529 \$2,965		\$16 \$89
Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	204	m2	\$4.23	\$862 Assume 0.0204ha	Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	204	\$4.36	\$889		\$27
Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install)	204	m2	\$7.83	\$1,597 Assume 0.0204ha	Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine	204	\$8.07	\$1,647		\$49
Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine finish install) Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see		m2	\$12.00		finish install) Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see		\$12.37	\$0		\$0
notes	204		\$28.43	\$5,799 Assume 0.0204ha	notes	204	\$29.31	\$5,979		\$179
Miscellaneous allowance (kerb edging, feature retaining walls) Sub total	204	m2	\$5.03 \$62.13	\$1,026 Assume 0.0204ha \$12,675	Miscellaneous allowance (kerb edging, feature retaining walls) Sub total	204	\$5.19 <b>\$64.05</b>	\$1,058 <b>\$13,067</b>		\$32 \$392
Water Supply & Reticulation	40700				Water Supply & Reticulation	40700	+6.72	+202 724		\$0
Irrigation - supply & install materials Bore (shallow - superficial)	43700	m2 Item	\$6.52 \$65,409.04	\$284,924 Assume 95% of POS \$65,409 Allows 20m (50m) bore construction	Irrigation - supply & install materials Bore (shallow - superficial)	43700	\$6.72 \$67,430.77	\$293,731 \$67,431		\$8,807 \$2,022
Bore (artesian) Iron Bacteria Filtration Unit		Item Item	\$150,943.94 \$80,503.43		Bore (artesian) Iron Bacteria Filtration Unit		\$155,609.48 \$82,991.72	\$0 \$0		\$0 \$0
Sub total		Item	\$8.02		Sub total		\$8.26	\$361,162		\$10,828
Turfing Prep of turfing area (weed removal & general leveling)		m2	\$2.80	Completed at earthworks stage	Turfing Prep of turfing area (weed removal & general leveling)		\$2.89	\$0		\$0 \$0
Import topsoil and spread (150mm thick) Soil conditioner	43656	m2	\$14.10 \$4.23		Import topsoil and spread (150mm thick) Soil conditioner	43656	\$14.54 \$4.36	\$0 \$190,212		\$0 \$5,703
Supply and lay turf (roll on)		m2	\$6.69		Supply and lay turf (roll on)		\$6.90	\$0		\$3,703
Supply and install stolons Fertilising	43656 43656	m2 m2	\$4.00 \$0.20		Supply and install stolons Fertilising	43656	\$4.12 \$0.21	\$180,021 \$9,058		\$0 \$5,397 \$272 \$0
Soil Wetting Agent		m2	\$0.25		Soil Wetting Agent	43656	\$0.26	\$0		\$0
Weed spraying Sub total	43656		\$0.90 <b>\$9.33</b>		Weed spraying Sub total	43030	\$0.93 <b>\$9.62</b>	\$40,505 <b>\$419,796</b>		\$1,214 <b>\$12,586</b>
Hardworks (supply & install)					Hardworks (supply & install)					
Active piece of equipment (general allowance - basketball court, BMX jumps, hit up wall, exercise equipment)		Item	\$28,176.20		Active piece of equipment (general allowance - basketball court, BMX jumps, hit up wall, exercise equipment)		\$29,047.10	\$0		\$0
Hardcourt Cricket practice nets (2 pitches and net)	1	Item Item	\$65,409.04 \$59,884.64	\$59,885 1 set	Hardcourt Cricket practice nets (2 pitches and net)	1	\$67,430.77 \$61,735.62	\$0 \$61,736		\$0 \$1,851
Cricket pitch (all seasons) Lighting - training level for active playing field	1	Item Item	\$20,000.00 \$301,887.87	\$20,000 1 off \$301,888	Cricket pitch (all seasons) Lighting - training level for active playing field	1	\$20,000.00 \$311,218.95	\$20,000 \$311,219		\$0
Lighting - general (allowance)		Item	\$35,220.50	\$35,221 allowance only, includes car park	Lighting - general (allowance)	1	\$36,309.13	\$36,309		\$9,331 \$1,089
Paths Fencing (bollard, post & rail, ringlock)	800 800		\$44.07 \$47.00		Paths Fencing (bollard, post & rail, ringlock)	800 800	\$45.43 \$48.45	\$36,346 \$38,762		\$1,090 \$1,162
Bollard - Flexipole Fence - Timber Post & Rail		Item m	\$70.44 \$96.00		Bollard - Flexipole Fence - Timber Post & Rail		\$72.62 \$98.97	\$0 \$0		\$0 \$0
Fence - Steel Post & Rail		m	\$91.00		Fence - Steel Post & Rail Fence - Reserve (conservation fencing)		\$93.81	\$0		\$0
Fence - Reserve (conservation fencing) Fence - Rural		m m	\$45.28 \$45.28		Fence - Rural		\$46.68 \$46.68	\$0 \$0		\$0 \$0
Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)		m m	\$71.00 \$100.63		Fence - Chainlink Galvanised (2.4m) Fence - Chainlink PVC Coated (2.4m)	+ +	\$73.19 \$103.74	\$0 \$0		\$0 \$0
Fence - Steel Balustrade Fence - Pool Fencing		m m	\$465.00 \$120.76		Fence - Steel Balustrade Fence - Pool Fencing		\$479.37 \$124.49	\$0 ¢0		\$0 \$0
Gate - Boom General		Item	\$1,610.07		Gate - Boom General		\$1,659.83	\$0		\$0 \$0
Gate - Reserve Gate - Heavy Duty		Item Item	\$1,106.92 \$2,650.00		Gate - Reserve Gate - Heavy Duty		\$1,141.14 \$2,731.91	\$0 \$0		\$0 \$0
Toilets - large		Item	\$191,195.65	Provided with pavilion -maintenance costs allocated to pavilion maintenance	Toilets - large		\$197,105.34	\$0		\$0
Toilets - small		Item	\$80,503.43		Toilets - small		\$82,991.72	\$0		\$0
Car parking (includes drainage, signage & landscaping) Sub total	140.3	m2	\$130.82 \$11.05	\$18,354 10 on street bays \$508,203	Car parking (includes drainage, signage & landscaping) Sub total	140.3	\$134.86 <b>\$11.38</b>	\$18,921 \$523,293		\$567 <b>\$15,090</b>
Landscape Furniture (supply & install)		Th	AE 000	A 4 5 (72) D aff	Landscape Furniture (supply & install)		+6.016.05			
Picnic table Shelter	2	Item Item	\$5,836.50 \$17,308.24	\$34,616 2 off	Picnic table Shelter	2	\$6,016.90 \$17,843.22	\$12,034 \$35,686		\$361 \$1,070
Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1		\$150,960.36 \$30,188.79	\$150,960 1 off	Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit	1	\$155,626.41 \$31,121.90	\$155,626 \$0		\$1,070 \$4,666 \$0
Decking & footbridges		m2	\$1,207.55		Decking & footbridges		\$1,244.88	\$0		\$0 \$0 \$933 \$149 \$113 \$135
Seats (Bench) Bin & dog litter bag dispenser		Item Item	\$3,018.88 \$1,203.57	\$4,814 4 off	Seats (Bench) Bin & dog litter bag dispenser	10	\$3,112.19 \$1,240.77	\$31,122 \$4,963		\$933 \$149
Bike stand Drinking fountain	2	Item Item	\$1,822.49 \$4,358.11	\$3,645 2 off	Bike stand Drinking fountain	2	\$1,878.82 \$4,492.82	\$3,758 \$4,493		\$113
BBQ - small		Item	\$10,062.93		BBQ - small		\$10,373.97	\$0		\$0
BBQ - large Signage (allowance)		Item Item	\$15,094.39 \$2,012.59	\$15,094 1 off \$4,025 2 off	BBQ - large Signage (allowance)	2	\$15,560.95 \$2,074.79	\$15,561 \$4,150		\$0 \$467 \$124
Sub total			\$5.64		Sub total		\$5.81			\$8,017
Total Development Costs			\$41.71	\$1,918,446	Total Development Costs	+ +	\$42.98	\$1,977,125		\$58,679
Indirect Costs Design, contract administration & construction management - % of overall project costs	12%	%		\$230,213	Indirect Costs Design, contract administration & construction management - % of overall present costs	1.20/		\$237,255.00		\$7,042
project costs <u>Sub total</u>	12 /0	,,,	\$5.00		project costs Sub total	12%	\$5.16	\$237,233.00 \$237,255		\$7,042
Total Overall Costs			\$46.71	\$2,148,659	Total Overall Costs		\$48.14	\$2,214,380		\$65,721
Maintenance Costs - 2 Years					Maintenance Costs - 2 Years					+



Local Sporting Ground with Small facility building Population ratio - 1:5000, Radius - required when an oval with a pavilion is not in a catchment of 5-7km area

				T&T 20	20 Rate Check			T&T 2021 Rate Check						
Items	Area (m²)/Qt y	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Q ty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)			
Turf and gardens (per annum)	2	Item	\$100,000.00	\$200,000		Turf and gardens (per annum)	2	\$100,000.00	\$200,000		\$0			
Conservation / parkland cleared (per annum)		Item	\$0.50			Conservation / parkland cleared (per annum)		\$0.02	\$0		\$0			
Landscape furniture	2	Item	\$10,000.00	\$20,000	Allowance of \$10,000/yr	Landscape furniture	2	\$10,000.00	\$20,000		\$0			
Hardworks	2	Item	\$20,000.00		Allowance of \$20,000/yr	Hardworks	2	\$20,000.00	\$40,000		\$0			
<u>Sub total</u>			\$5.65			Sub total		\$5.65			\$0			
Total Unit Rate			\$52.36			Total Unit Rate		\$53.79			\$1.43			



Local Sporting Ground without facility building Population ratio - 1:5000, Radius - within 1-2km of every dwelling Local Sporting Ground without facility building - 4.6ha

Local Sporting Ground without facility building - 4.6ha				T&T 2020 R	ata Chack				T&T 2021 R	Pata Chack	
Items	Area (m²)/Qty	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
Earthworks Cut to fill over 1,000m3 - allowance	46000	m3	\$9.75	\$224,250	Allow 0.5m average over entire site	Earthworks Cut to fill over 1,000m3 - allowance	46000	\$10.05	\$231,181		\$6,931.36
Clearing scrub & trees - allowance	46000	m2	\$3.00	\$69,000	Allow 50% of site	Clearing scrub & trees - allowance	46000	\$3.09 \$1.96	\$71,133 \$90,101		\$2,132.73
Strip topsoil and respread <u>Sub total</u>	46000	m2	\$1.90 \$8.28	\$87,400	Allow 100% of site	Strip topsoil and respread Sub total	46000	\$1.96 \$8.53	\$90,101 \$392,416		\$2,701.45 \$11,765.55
Garden Beds - Landscaped Surrounds						Garden Beds - Landscaped Surrounds					\$0.00
Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick)	1144 1144	m2 m2	\$2.52 \$14.10	\$2,878	Assume 0.1144ha Assume 0.1144ha	Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick)	1144 1144	\$2.59 \$14.54	\$2,967 \$16,629		\$88.96 \$498.58
Import lopsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	1144	m2	\$4.23		Assume 0.1144ha		1144	\$4.36	\$4,984		\$149.45
install) Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine	1144		\$7.83	\$8,958	Assume 0.1144ha Assume 0.1144ha	Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install) Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine finish	1144	\$8.07	\$9,234		\$276.87
Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine		m2	\$12.00			Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine finish install)		\$12.37	\$0		\$0.00
finish install) Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see	1144	m2	\$28.43	¢22 521			1144	\$29.31	\$33,527		\$1,005.21
notes Miscellaneous allowance (kerb edging, feature retaining walls)	1144	m2	\$20.43	\$5 756	Assume 0.1144ha Assume 0.1144ha	Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see notes Miscellaneous allowance (kerb edging, feature retaining walls)	1144	\$5.19	\$5,934		\$1,003.21
Sub total	1144	1112	\$62.13	\$71,078	Assume 0.114ma	Sub total	1144	\$64.05	\$73,275		\$2,196.97
						-	+				
											+0.00
Water Supply & Reticulation Irrigation - supply & install materials	44800	m2	\$6.52	\$292,096	Assume 100% of turf & garden	Water Supply & Reticulation           Irrigation - supply & install materials	44800	\$6.72	\$301,124		\$9,028.42
Bore (shallow - superficial)	1	Item	\$6.52 \$65,409.04 \$150,943.94	\$65,409	Allows 20m (50m) bore construction Allows approx 100m bore construction	Bore (shallow - superficial)	1	\$6.72 \$67,430.77 \$155,609.48	\$67,431		\$2,021.73
Bore (artesian) Iron Bacteria Filtration Unit		Item Item	\$80,503.43		Allows approx 100m bore construction	Bore (artesian) Iron Bacteria Filtration Unit		\$82,991.72	\$0		\$0.00
Sub total	<u> </u>		\$7.98	\$357,505		Sub total		\$8.23	\$368,555		\$11,050.16
Turfing Prep of turfing area (weed removal & general leveling)		m2	\$2.80		Completed at earthworks stage	Turfing           Prep of turfing area (weed removal & general leveling)		\$2.89	\$0		\$0.00 \$0.00 \$0.00
Import topsoil and spread (150mm thick)		m2	\$14.10			Import topsoil and spread (150mm thick)		\$2.89 \$14.54	\$0		\$0.00
Soil conditioner Supply and lay turf (roll on)	43656	m2 m2	\$4.23 \$6.69	\$184,509	Assume 4.3656ha	Soil conditioner Supply and lay turf (roll on)	43656	\$4.36 \$6.90	\$190,212		\$5,703.01
Supply and install stolons Fertilising	43656	m2	\$4.00	\$174,624	Assume 4.3656ha	Supply and install stolons	43656	\$4.12	\$180,021		\$0.00
Soil Wetting Agent	43656	m2 m2	\$0.20 \$0.25	\$8,/86	Assume 4.3656ha	Soil Wetting Agent	43656	\$0.21 \$0.26	<u>\$9,058</u> \$0		\$271.57 \$0.00 \$1,214.43
Weed spraying	43656	m2	\$0.90		Assume 4.3656ha	Weed spraying	43656	\$0.26 \$0.93	\$40,505		\$1,214.43
<u>Sub total</u>			\$9.33	\$407,210		Sub total		\$9.62	\$419,796		\$12,586.48
Hardworks (supply & install)						Hardworks (supply & install)					
Active piece of equipment (general allowance - basketball court, BMX jumps,		Thomas	420 176 20			Active piece of equipment (general allowance - basketball court, BMX jumps, hit up		420.047.10	¢0		±0.00
hit up wall, exercise equipment)		Item	\$28,176.20			wall, exercise equipment)		\$29,047.10	\$0		\$0.00
Hardcourt Cricket practice nets (2 pitches and net)	1	Item Item	\$65,409.04 \$59,884.64	\$0 \$59,885	1 set	Hardcourt Cricket practice nets (2 pitches and net)	1	\$67,430.77 \$61,735.62	\$0 \$61,736		\$0.00 \$1,850.98
Cricket pitch (all seasons)	1	Item	\$20,000.00	\$20,000	1 off	Cricket pitch (all seasons)	1	\$20,000.00 \$311,218.95	\$20,000 \$311,219		\$0.00
Lighting - training level for active playing field Lighting - general (allowance)	1	Item Item	\$301,887.87 \$50,315.00	\$301,888 \$50,315	JBA increased from 25K to 50K - allowance only	Lighting - training level for active playing field Lighting - general (allowance)	1	\$311,218.95 \$51,870.19	\$311,219 \$51,870		\$9,331.08
Paths Fencing (bollard, post & rail, ringlock)	2400	m2 m	\$44.07	\$105,768	Say 1200m of 2.0 wide path Say 700m	Paths	2400	\$45.43 \$48.45	\$109,037 \$33,917		\$3,269.19 \$1,016.91
Bollard - Flexipole	700	Item	\$47.00 \$70.44	\$32,900		Fencing (bollard, post & rail, ringlock) Bollard - Flexipole	700	\$72.62	\$35,917		\$1,010.91
Fence - Timber Post & Rail Fence - Steel Post & Rail		m m	\$96.00 \$91.00			Fence - Timber Post & Rail Fence - Steel Post & Rail		\$98.97 \$93.81	\$0 \$0		\$0.00 \$0.00 \$0.00
Fence - Reserve (conservation fencing)		m	\$45.28			Fence - Reserve (conservation fencing)		\$46.68	\$0		\$0.00
Fence - Rural Fence - Chainlink Galvanised (2.4m)		m m	\$45.28 \$71.00			Fence - Rural Fence - Chainlink Galvanised (2.4m)		\$46.68 \$73.19	\$0 \$0		\$0.00 \$0.00 \$0.00
Fence - Chainlink PVC Coated (2.4m)		m	\$100.63			Fence - Chainlink PVC Coated (2.4m)		\$103.74	\$0		\$0.00 \$0.00 \$0.00 \$0.00 \$0.00
Fence - Steel Balustrade Fence - Pool Fencing		m m	\$465.00 \$120.76			Fence - Steel Balustrade Fence - Pool Fencing		\$479.37 \$124.49	\$0 \$0		\$0.00
Gate - Boom General Gate - Reserve		Item Item	\$1,610.07 \$1,106.92			Gate - Boom General Gate - Reserve		\$1,659.83 \$1,141.14	\$0 \$0		\$0.00
Gate - Heavy Duty		Item	\$2,650.00			Gate - Heavy Duty		\$2,731.91	\$0		\$0.00 \$0.00
Toilets - large	1	Item	\$191,195.65	\$191,196	Required if no pavilion	Toilets - large	1	\$197,105.34	\$197,105		\$5,909.68
Toilets - small Car parking (includes drainage, signage & landscaping)	140.3	Item m2	\$80,503.43 \$130.82	\$18.354	10 on street bays	Toilets - small Car parking (includes drainage, signage & landscaping)	140.3	\$82,991.72 \$134.86	\$0 \$18.921		\$0.00
Sub total			\$130.82 <b>\$16.96</b>	\$780,305		Sub total		\$17.47	\$18,921 <b>\$803,805</b>		\$23,500.33
Landscape Furniture (supply & install) Picnic table	2	Item	\$5 836 50	¢11 673	2 off	Landscape Furniture (supply & install) Picnic table	2	\$6.016.90	\$12 034		\$360.80
Shelter	2	Item	\$5,836.50 \$17,308.24	\$11,673 \$34,616 \$150,960	2 off	Shelter	2	\$6,016.90 \$17,843.22 \$155,626.41	\$12,034 \$35,686 \$155,626		\$360.80 \$1,069.96 \$4,666.05
Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit		Item Item	\$150,960.36 \$30,188.79	\$150,960	110 1	Play equipment (combination with softfall & shade) - Large unit Play equipment (combination with softfall & shade) - Small unit		\$155,626.41 \$31,121.90	\$155,626 \$0		\$4,666.05
Decking & footbridges		m2	\$1,207.55	*20.400	10 off	Decking & footbridges		\$31,121.90 \$1,244.88 \$3,112.19	\$0		\$0.00 \$0.00 \$933.11
Seats (Bench) Bin & dog litter bag dispenser	10	Item Item	\$3,018.88 \$1,203.57	\$30,189 \$4,814	4 off	Seats (Bench) Bin & dog litter bag dispenser	4	\$1,240.77	\$31,122 \$4,963		\$148.81
Bike stand Drinking fountain	2	Item Item	\$1,822.49	\$3,645 \$4,358	2 off	Bike stand Drinking fountain	2	\$1,878.82 \$4,492.82	\$3,758 \$4,493		\$112.66 \$134.71
BBQ - small	1	Item	\$4,358.11 \$10,062.93			BBQ - small	1	\$10.373.97	\$0		\$0.00
BBQ - large Signage (allowance)		Item Item	\$15,094.39 \$2,012.59	\$15,094 \$4,025	1 ott	BBQ - large Signage (allowance)	1	\$15,560.95 \$2,074.79	\$15,561 \$4,150		\$0.00 \$466.55 \$124.41
<u>Sub total</u>		100111	\$5.64	\$259,376	2.01	<u>Sub total</u>		\$5.81	\$267,393		\$8,017.06
Total Development Costs			\$49.05	\$2,256,123		Total Development Costs		\$50.55	\$2,325,240		\$69,116.54
										· · · · · · · · · · · · · · · · · · ·	
Indirect Costs Design, contract administration & construction management - % of overall	12%	%		\$270,735		Indirect Costs           Design, contract administration & construction management - % of overall project	12%		\$279,029		\$8,293.99
project costs Sub total	1270	70	\$5.89	\$270,735		costs Sub total	12 /0	\$6.07	\$279,029		\$8,293.99
Total Overall Costs	<b>├</b>	T	\$54.93	\$2,526,858		Total Overall Costs		\$56.61	\$2,604,269		\$77,410.53
Maintenance Costs - 2 Years				-		Maintenance Costs - 2 Years					
Turf and gardens (per annum) Conservation / parkland cleared (per annum)	2	Item Item	\$90,000.00 \$0.50		Allowance of \$90,000/yr	Turf and gardens (per annum) Conservation / parkland cleared (per annum)	2	\$90,000.00 \$0.02	\$180,000.00 All \$0.00	lowance of \$90,000/yr	\$0.00
Landscape furniture	2	Item	\$0.50 \$20,000.00	\$40,000	Allowance of \$20,000/yr Allowance of \$30,000/yr	Landscape furniture	2	\$0.02 \$20,000.00	\$40,000.00 All	lowance of \$20,000/yr	\$0.00 \$0.00
Hardworks Sub total	2	Item	\$30,000.00 \$6.09	\$60,000 <b>\$280,000</b>	Allowance of \$30,000/yr	Hardworks Sub total	2	\$30,000.00 <b>\$6.09</b>	\$60,000.00 All \$280,000	lowance of \$30,000/yr	\$0.00 \$0.00
Total Unit Rate			\$61.02					\$62.70			\$1.68
TULAI UNIL KALE	I		\$01.02			Total Unit Rate		\$02.70			\$1.68



Section C2 - Public Open Space 2021 Cost Review

#### Neighbourhood Park - 1.0ha Neighbourhood Park-1.0ha

Neighbourhood Park-1.0ha			T&T 2020	Rate Check				T&T 2021 F	ate Check	
Items	Area (m²)/Qty Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)
Earthworks Cut to fill over 1,000m3 - allowance	2000 m3	\$9.75	\$19 500	Allow nominal 2,000m3	Earthworks Cut to fill over 1,000m3 - allowance	2000	\$10.05	\$20,103		
Clearing scrub & trees - allowance	m2	\$3.00		Nil	Clearing scrub & trees - allowance	2000	\$3.09	\$0		\$603 \$0
Strip topsoil and respread <u>Sub total</u>	m2	\$1.90 \$1.95			Strip topsoil and respread Sub total		\$1.96 <b>\$2.01</b>	\$0 <b>\$20,103</b>		\$603
		\$1.55	\$15,500				\$2.01	\$20,105		
Garden Beds - Landscaped Surrounds					Garden Beds - Landscaped Surrounds					
Prep of planting area (weed removal & general leveling)	5000 m2 5000 m2	\$2.52	\$12,579	Allow 50% of POS Allow 50% of POS	Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	5000 5000	\$2.59 \$14.54	\$12,967 \$72,679		\$389 \$2,179
Prep of planting area (weed removal & general leveling) Import topsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3	1 1				Import topsoil and machine spread (150mm thick) Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3					
install)	5000 m2	\$4.23	\$21,132	Allow 50% of POS	install)	5000	\$4.36	\$21,785		\$653
Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine	m2	\$7.83			Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install) Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine		\$8.07	\$0		\$0
finish install)	5000 m2	\$12.00	\$60,000	Allow 50% of POS	finish install)	5000	\$12.37	\$61,855		\$1,855
Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see	5000 m2	\$28.43		Allow 50% of POS	Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see	5000	\$29.31	\$146,532		\$4,393
notes Miscellaneous allowance (kerb edging, feature retaining walls)	5000 m2	\$5.03	\$25,157	Allow 50% of POS	notes Miscellaneous allowance (kerb edging, feature retaining walls)	5000	\$5.19	\$25,935		\$778
Sub total	5000 112	\$66.30			Sub total	5000	\$68.35	\$341,754		\$10,247
Water Supply & Reticulation					Water Supply & Reticulation					
Irrigation - supply & install materials	10000 m2	\$6.52 \$65,409.04	\$65,200	Assume 100% of POS	Irrigation - supply & install materials	10000	\$6.72	\$67,215		\$2,015
Bore (shallow - superficial) Bore (artesian)	1 Item Item	\$65,409.04 \$150,943.94	\$65,409	Allows 20m (50m) bore construction	Bore (shallow - superficial) Bore (artesian)		\$67,430.77 \$155,609.48	\$67,431 \$0		\$2,022
Iron Bacteria Filtration Unit	Item				Iron Bacteria Filtration Unit		\$82,991.72	\$0		\$0
<u>Sub total</u>	<u>                                     </u>	\$13.06	\$130,609		Sub total		\$13.46	\$134,646		\$4,037
Turfing Prep of turfing area (weed removal & general leveling)	10000 m2	\$2.80	\$14.000	Allow 50% of POS	Turfing Prep of turfing area (weed removal & general leveling)	10000	\$2.89	\$14,433		\$0
Import topsoil and spread (150mm thick)	10000 m2	¢14.10	\$70,500	Allow 50% of POS	Import topsoil and spread (150mm thick)	10000	\$14.54 \$4.36	\$72,679 \$21,785		\$2,179
Soil conditioner	10000 m2	\$4.23		Allow 50% of POS	Soil conditioner	10000	\$4.36	\$21,785		\$653
Supply and lay turf (roll on) Supply and install stolons	10000 m2 m2	\$6.69	\$33,450	Allow 50% of POS	Supply and lay turf (roll on) Supply and install stolons	10000	\$6.90 \$4.12	\$34,484		\$433 \$2,179 \$653 \$1,034 \$0 \$31
Supply and install stolons Fertilising	10000 m2	\$0.20	\$1,006	Allow 50% of POS	Fertilising	10000	\$0.21	\$1,037		\$31
Soil Wetting Agent Weed spraying	<u>m2</u> 10000 m2	\$0.25	¢4 500	Allow 50% of POS	Soil Wetting Agent Weed spraying	10000	\$0.26 \$0.93	\$0 \$4,639		1 50
Sub total	10000 1112	\$28.90	\$4,500		Sub total	10000	\$0.93 \$29.81	\$4,039 \$149,058		\$139 \$4,469
Hardworks (supply & install)		_			Hardworks (supply & install)					
Active piece of equipment (general allowance - basketball court, BMX jumps, hit	1 Item	\$28,176.20	\$28,176		Active piece of equipment (general allowance - basketball court, BMX jumps, hit	1	\$29,047.10	\$29,047		\$871
up wall, exercise equipment) Hardcourt	Item	\$65,409.04			up wall, exercise equipment) Hardcourt		\$67,430.77	\$0		\$0
Cricket practice nets (2 pitches and net)	Item	\$59,884.64			Cricket practice nets (2 pitches and net)		\$61,735.62	\$0		\$0
Cricket pitch (all seasons)	Item	\$20,000.00			Cricket pitch (all seasons)		\$20,000.00	\$0		\$0
Lighting - training level for active playing field Lighting - general (allowance)	Item Item	\$301,887.87 \$50,315.00			Lighting - training level for active playing field Lighting - general (allowance)		\$311,218.95 \$51,870.19	\$0 \$0		\$0 \$0
Paths	400 m2	\$44.07	\$35,256	Say 400m	Paths	400	\$45.43	\$36,346		\$1,090
Fencing (bollard, post & rail, ringlock) Bollard - Flexipole	m Item	\$47.00			Fencing (bollard, post & rail, ringlock) Bollard - Flexipole		\$48.45 \$72.62	\$0 \$0		\$0 \$0
Fence - Timber Post & Rail	m	\$96.00			Fence - Timber Post & Rail		\$98.97	\$0		\$0
Fence - Steel Post & Rail	m	\$91.00			Fence - Steel Post & Rail		\$93.81	\$0		\$0
Fence - Reserve (conservation fencing) Fence - Rural	m	\$45.28 \$45.28			Fence - Reserve (conservation fencing) Fence - Rural		\$46.68 \$46.68	\$0 \$0		\$0 \$0
Fence - Chainlink Galvanised (2.4m)	m	\$71.00			Fence - Chainlink Galvanised (2.4m)		\$46.68 \$73.19	\$0		\$0
Fence - Chainlink PVC Coated (2.4m) Fence - Steel Balustrade	m	\$100.63 \$465.00			Fence - Chainlink PVC Coated (2.4m) Fence - Steel Balustrade		\$103.74 \$479.37	\$0 \$0		\$0 \$0
Fence - Pool Fencing	m	\$120.76			Fence - Pool Fencing		\$124.49	\$0		\$0
Gate - Boom General	Item	\$1,610.07 \$1,106.92			Gate - Boom General		\$1,659.83	\$0		±0
Gate - Reserve Gate - Heavy Duty	Item Item	\$1,106.92			Gate - Reserve Gate - Heavy Duty		\$1,141.14 \$2,731.91	\$0 \$0		\$0 \$0 \$0
Toilets - large	Item				Toilets - large		\$197,105.34	\$0		\$0
Toilets - small	Item	\$80,503.43			Toilets - small		\$82,991.72	\$0		\$0
Car parking (includes drainage, signage & landscaping) Sub total	m2	\$130.82 \$6.34	\$63,432	4 on street bays allowed in Civil roadworks	Car parking (includes drainage, signage & landscaping) Sub total		\$134.86 <b>\$6.54</b>	\$0 <b>\$65,393</b>		\$0 \$1,961
			,,				1	+/		
Landscape Furniture (supply & install)					Landscape Furniture (supply & install)					\$0
Picnic table Shelter	2 Item 1 Item			2 off (Added concrete slab below	Picnic table Shelter	2	\$6,016.90 \$17,843.22	\$12,034		\$361 \$535 \$4,666
Play equipment (combination with softfall & shade) - Large unit	1 Item	\$150,960,36	\$150,960	including softfall	Play equipment (combination with softfall & shade) - Large unit	1	\$17,843.22	\$17,843 \$155,626		\$535
Play equipment (combination with softfall & shade) - Small unit	Item	\$30,188.79 \$1,207.55 \$3,018.88			Play equipment (combination with softfall & shade) - Small unit		\$31,121,90	\$0		\$0
Decking & footbridges Seats (Bench)	25 m2 2 Item	\$1,207.55	\$30,189	Allowance 25m2	Decking & footbridges Seats (Bench)	25	\$1,244.88 \$3,112.19	\$31,122 \$6,224		\$933
Bin & dog litter bag dispenser	2 Item	\$1,203.57	\$2 407	Allowance 25m2 2 off 2 off	Bin & dog litter bag dispenser	2	\$1,240.77	\$2,482		\$74
Bike stand Drinking fountain	1 Item 1 Item		\$1,822	1 off	Bike stand Drinking fountain	1	\$1,878.82	\$1,879		\$0 \$933 \$933 \$187 \$74 \$56 \$135 \$311
BBQ - small	1 Item	\$10,062.93	\$10,063	1 off	BBQ - small	1	\$4,492.82 \$10,373.97	\$4,493 \$10,374		\$311
BBQ - large	Item	\$15,094.39			BBQ - large		\$15,560.95	\$0		<b>Φ</b>
Signage (allowance) Sub total	1 Item	\$2,012.59	\$2,013 \$236,831		Signage (allowance) Sub total		\$2,074.79 <b>\$24.42</b>	\$2,075 <b>\$244,152</b>		\$62 \$7,320
Total Development Costs					Total Development Costs					
		\$92.65	\$926,468				\$95.51	\$955,104		\$28,636
Indirect Costs Design, contract administration & construction management - % of overall					Indirect Costs Design, contract administration & construction management - % of overall					
project costs	12% %		\$111,176		project costs	12%		\$114,612.53		\$3,436
<u>Sub total</u>	<u>                                     </u>	\$11.12	\$111,176		Sub total		\$11.46	\$114,613		\$3,436
<u>Total Overall Costs</u>		\$103.76	\$1,037,644		Total Overall Costs		\$106.97	\$1,069,717		\$32,073
					Maintenance Costs - 2 Years					
Maintananco Costo - 2 Voara					indificentice costs = 2 Tears	ı I				
Maintenance Costs - 2 Years Turf and gardens (per annum)	2 Item	\$25,000.00	\$50,000	Allowance of \$25,000/yr	Turf and gardens (per annum)	2	\$25,000.00	\$50.000 All	owance of \$25,000/yr	\$0
	2 Item m2 2 Item	\$0.50		Allowance of \$25,000/yr Allowance of \$10,000/yr		2	\$25,000.00 \$0.50 \$10,000.00	\$0	owance of \$25,000/yr	\$0 \$0



Neighbourhood Park - 1.0ha

		Т&Т 2020	Rate Check		T&T 2021 Rate Check						
ty Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)		
2 Item	\$15,000.00	\$30,000	Allowance of \$15,000/yr	Hardworks	2	\$15,000.00	\$30,000	Allowance of \$15,000/yr	\$0		
	\$10.00	\$100,000		Sub total		\$10.00	\$100,000		\$0		
	\$113.76			Total Unit Rate		\$116.97			\$3.21		
	ty Unit 2 Item	ty Unit Unit Kate 2 Item \$15,000.00 \$10.00	ty Unit Unit Rate (\$2020) 2 Item \$15,000.00 \$30,000	ty         Unit         Unit Rate         (\$2020)         Assumptions & comments           2         Item         \$15,000.00         \$30,000         Allowance of \$15,000/yr           \$10.00         \$100,000         \$100,000         \$100,000	ty     Unit     Unit Rate     Total Unit Cost (\$2020)     Assumptions & Comments       2     Item     \$15,000.00     \$30,000     Allowance of \$15,000/yr       4     \$10.00     \$100,000	ty     Unit     Unit Rate     Total Unit Cost (\$2020)     Assumptions & Comments     Area (m <sup>3</sup> )/Qty       2     Item     \$15,000.00     \$30,000     Allowance of \$15,000/yr     Hardworks     2       \$10.00     \$100,000     \$100,000     \$100,000     \$100,000     \$100,000	ty     Unit     Unit Rate     Total Unit Cost (\$2020)     Assumptions & Comments     Area (m³)/Qty     Unit Rate       2     Item     \$15,000.00     \$30,000     Allowance of \$15,000/yr     Hardworks     2     \$15,000.00       3     \$10.00     \$100,000     \$100,000     \$100,000     \$100,000     \$100,000	ty     Unit Rate     Total Unit Cost (\$2020)     Total Unit Cost (\$2020)     Total Unit Cost (\$2020)     Total Unit Cost (\$2021)       2     Item     \$15,000.00     \$30,000     Allowance of \$15,000/yr     Hardworks     2     \$15,000.00     \$30,000       -     \$10.00     \$100,000     Sub total     \$10.00     \$100,000	ty     Unit Rate     Total Unit Cost (\$2020)     Total Unit Cost (\$2020)     Assumptions & Comments       2     Item     \$15,000.00     \$30,000     Allowance of \$15,000/yr       4     \$100     \$100,000       5     \$100,000       9     100		



Section C2 - Public Open Space 2021 Cost Review

Local Park - 0.3ha

Local Park - 0.3ha			T&T 2020 Rate	Ohaab				T&T 2021 Rate Ch	le	
		1	1&1 2020 Rate		-			T&T 2021 Rate Ch	eck	Variance on
Items	Area (m²)/Qty Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments	Items	Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Total Unit Cost (\$2021 vs \$2020)
Earthworks Cut to fill over 1,000m3 - allowance	500 m3	\$9.75	¢4.875	Allow nominal 500m3	Earthworks Cut to fill over 1,000m3 - allowance	500	\$10.05	\$5,026		\$151
Clearing scrub & trees - allowance	m2	\$3.00	\$4,075	Nil	Clearing scrub & trees - allowance	500	\$3.09	\$0		\$0
Strip topsoil and respread Sub total	m2	\$1.90 \$1.63	\$4,875		Strip topsoil and respread Sub total		\$1.96 \$1.68			\$0 \$151
Garden Beds - Landscaped Surrounds Prep of planting area (weed removal & general leveling)	3000 m2	\$2.52	¢3 774	Allow 50% of POS	Garden Beds - Landscaped Surrounds Prep of planting area (weed removal & general leveling)	3000	\$2.59	\$3,890		\$0 \$117
Import topsoil and machine spread (150mm thick)	3000 m2	\$2.52		Allow 50% of POS	Import topsoil and machine spread (150mm thick)	3000	\$14.54			\$654
Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	3000 m2	\$4.23	\$6,340	Allow 50% of POS	Soil conditioner (20mm thick blended into top 200mm @ \$60/m3 plus \$3 install)	3000	\$4.36	\$6,536		\$196
Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install)	m2	\$7.83			Supply and lay standard mulch by hand (75mm layer - \$50/m3 + \$3 install)		\$8.07	\$0		\$0
Supply and lay high grade mulch by hand (75mm layer - $90/m3 + 3.50$ fine finish install)	3000 m2	\$12.00	\$18,000	Allow 50% of POS	Supply and lay high grade mulch by hand (75mm layer - \$90/m3 + \$3.50 fine finish install)	3000	\$12.37	\$18,556		\$556
Supply and install plants (includes allowance for 1 $\times$ 100l tree per 40m2) see notes	3000 m2	\$28.43	\$42,642	Allow 50% of POS	Supply and install plants (includes allowance for 1 x 100l tree per 40m2) see notes	3000	\$29.31	\$43,960		\$1,318
Miscellaneous allowance (kerb edging, feature retaining walls) Sub total	3000 m2	\$5.03 \$66.30	\$7,547 <b>\$99,452</b>	Allow 50% of POS	Miscellaneous allowance (kerb edging, feature retaining walls) Sub total	3000	\$5.19 <b>\$68.35</b>	\$7,780 <b>\$102,526</b>		\$233 <b>\$3,074</b>
Water Supply & Reticulation					Water Supply & Reticulation					\$0
Irrigation - supply & install materials	3000 m2	\$6.52		Assume 100% of POS	Irrigation - supply & install materials	3000	\$6.72			\$605
Bore (shallow - superficial) Bore (artesian)	1 Item Item	\$65,409.04 \$150,943.94	\$65,409	Allows 20m (50M) bore construction	Bore (shallow - superficial) Bore (artesian)	1	\$67,430.77 \$155,609.48	\$67,431 \$0		\$2,022
Iron Bacteria Filtration Unit	Item	\$80,503.43	+04.000		Iron Bacteria Filtration Unit		\$82,991.72	\$0		\$0
Sub total		\$28.32	\$84,969		Sub total		\$29.20	\$87,595		\$2,626
Turfing					Turfing					\$0
Prep of turfing area (weed removal & general leveling)	3000 m2 3000 m2	\$2.80		Allow 50% of POS	Prep of turfing area (weed removal & general leveling)	3000	\$2.89			\$130 \$654
Import topsoil and spread (150mm thick) Soil conditioner	3000 m2	\$14.10 \$4.23	\$6,340	Allow 50% of POS Allow 50% of POS	Import topsoil and spread (150mm thick) Soil conditioner	3000 3000	\$14.54 \$4.36			\$196
Supply and lay turf (roll on)	3000 m2	\$6.69	\$10,035	Allow 50% of POS	Supply and lay turf (roll on)	3000	\$6.90	\$10,345		\$196 \$310
Supply and install stolons Fertilising	<u>m2</u> 3000 m2	\$4.00	\$302	Allow 50% of POS	Supply and install stolons Fertilising	3000	\$4.12 \$0.21			\$0 \$9
Soil Wetting Agent	m2	\$0.25	±1.250		Soil Wetting Agent	2000	\$0.26	\$0		\$0
Weed spraying Sub total	3000 m2	\$0.90 \$28.92	\$1,350 \$43,377	Allow 50% of POS	Weed spraying Sub total	3000	\$0.93 <b>\$29.81</b>	\$1,392 <b>\$44,717</b>		\$42 \$1,341
Hardworks (supply & install) Active piece of equipment (general allowance - basketball court, BMX jumps,					Hardworks (supply & install) Active piece of equipment (general allowance - basketball court, BMX jumps,					
hit up wall, exercise equipment)	Item	\$28,176.20			hit up wall, exercise equipment)		\$29,047.10	\$0		\$0
Hardcourt Cricket practice nets (2 pitches and net)	Item Item	\$65,409.04 \$59,884.64			Hardcourt Cricket practice nets (2 pitches and net)		\$67,430.77 \$61,735.62			\$0 \$0
Cricket pitch (all seasons)	Item	\$20,000.00			Cricket plactice nets (2 plactice and net)		\$20,000.00	\$0		\$0
Lighting - training level for active playing field	Item	\$301,887.87		Consided by street liskts	Lighting - training level for active playing field		\$311,218.95	\$0		\$0
Lighting - general (allowance) Paths	250 M2	\$50,315.00 \$44.07	\$22,035	Serviced by street lights allow 250m	Lighting - general (allowance) Paths	250	<u>\$51,870.19</u> \$45.43	\$0		\$0 \$681
Fencing (bollard, post & rail, ringlock)	m 50 Item	\$47.00	*2 522	Allowed EQ	Fencing (bollard, post & rail, ringlock)	50	\$48.45			\$0
Bollard - Flexipole Fence - Timber Post & Rail	50 Item m	\$70.44 \$96.00	\$3,522	Allowed 50	Bollard - Flexipole Fence - Timber Post & Rail	50	\$72.62 \$98.97			\$109
Fence - Steel Post & Rail	m	\$91.00			Fence - Steel Post & Rail		\$93.81	\$0		\$0
Fence - Reserve (conservation fencing) Fence - Rural	m	\$45.28 \$45.28			Fence - Reserve (conservation fencing) Fence - Rural		\$46.68 \$46.68	\$0 \$0		\$0 \$0
Fence - Chainlink Galvanised (2.4m)	m	\$71.00			Fence - Chainlink Galvanised (2.4m)		\$73.19	\$0		\$0
Fence - Chainlink PVC Coated (2.4m) Fence - Steel Balustrade	m	\$100.63 \$465.00			Fence - Chainlink PVC Coated (2.4m) Fence - Steel Balustrade		\$103.74 \$479.37			<u>\$0</u> \$0
Fence - Pool Fencing	m	\$120.76			Fence - Pool Fencing		\$124.49	\$0		\$0
Gate - Boom General Gate - Reserve	Item Item	\$1,610.07 \$1,106.92			Gate - Boom General Gate - Reserve		\$1,659.83 \$1,141.14	\$0 \$0		\$0 \$0
Gate - Heavy Duty	Item	\$2,650.00			Gate - Heavy Duty		\$2,731.91	\$0		\$0
Toilets - large	Item	\$191,195.65			Toilets - large		\$197,105.34			\$0
Toilets - small Car parking (includes drainage, signage & landscaping)	Item m2	\$80,503.43 \$130.82			Toilets - small Car parking (includes drainage, signage & landscaping)		\$82,991.72 \$134.86			\$0 \$0
Sub total		\$8.52	\$25,557		Sub total		\$8.78			\$790°
Landscape Furniture (supply & install)					Landscape Furniture (supply & install)					
Picnic table	Item	\$5,836.50			Picnic table		\$6,016.90			\$0
Shelter Play equipment (combination with softfall & shade) - Large unit	Item Item	\$17,308.24 \$150,960.36			Shelter Play equipment (combination with softfall & shade) - Large unit		\$17,843.22 \$155,626.41	\$0 \$0		\$0 \$0
Play equipment (combination with softfall & shade) - Small unit	1 Item	\$30,188.79	\$30,189		Play equipment (combination with softfall & shade) - Small unit	1	\$31,121.90	\$31,122		\$933
Decking & footbridges Seats (Bench)	2 Item	\$1,207.55 \$3,018.88	\$6,038	2 off	Decking & footbridges Seats (Bench)	2	\$1,244.88 \$3,112.19			\$0
Bin & dog litter bag dispenser	1 Item	\$1,203.57	\$1,204	1 off	Bin & dog litter bag dispenser	1	\$1,240.77	\$1,241		\$187 \$37 \$56
Bike stand Drinking fountain	1 Item Item	\$1,822.49 \$4,358.11	\$1,822	1 0ff	Bike stand Drinking fountain	1	\$1,878.82 \$4,492.82			\$56
BBQ - small	Item	\$10,062.93			BBQ - small		\$10,373.97	\$0		\$0
BBQ - large Signage (allowance)	Item Item	\$15,094.39 \$2,012.59			BBQ - large Signage (allowance)		\$15,560.95 \$2,074.79	\$0 \$0		\$0 \$0
Sub total		\$13.08	\$39,253		Sub total		\$13.49			\$1,213
Total Development Costs		\$99.16	\$297,482		Total Development Costs		\$102.23	\$306,677		\$9,195
Indirect Costs					Indirect Costs					
					Design, contract administration & construction management - % of overall					1 11 100
Design, contract administration & construction management - % of overall	12% %		\$35,698			12%		\$36,801.27		\$1,103
	12% %	\$11.90	\$35,698 \$35,698		project costs	12%	\$12.27			\$1,103



Section C2 - Public Open Space 2021 Cost Review

Local Park - 0.3ha

Local Park - 0.3ha												
items				T&T 2020 Rate	Check	Items		T&T 2021 Rate Check				
	Area (m²)/Qty	Unit	Unit Rate	Total Unit Cost (\$2020)	Assumptions & Comments		Area (m²)/Qty	Unit Rate	Total Unit Cost (\$2021)	Assumptions & Comments	Variance on Total Unit Cost (\$2021 vs \$2020)	
Maintenance Costs - 2 Years						Maintenance Costs - 2 Years						
Turf and gardens (per annum)	2	Item	\$9,000.00	\$18,000	Allowance of \$9,000/yr	Turf and gardens (per annum)	2	\$9,000.00	\$18,000	Allowance of \$9,000/yr	\$0	
Conservation / parkland cleared (per annum)		m2	\$0.50			Conservation / parkland cleared (per annum)		\$0.52			\$0	
Landscape furniture	2	Item	\$3,000.00	\$6,000	Allowance of \$3,000/yr	Landscape furniture	2	\$3,000.00	\$6,000	Allowance of \$3,000/yr	\$0	
Hardworks					Not applicable	Hardworks				Not applicable	\$0	
Sub total			\$8.00	\$24,000		Sub total		\$8.00	\$24,000	1	\$0	
Total Unit Rate			\$119.06			Total Unit Rate		\$122.49			\$3.43	



Turner & Townsend

Development Contribution Plan – Roads, Open Drains, Road Landscaping and Public Open Space

**Appendix D - Document Register** 



# **DCP Document Register**

Section	Document Description	File Issue	Comments
Section A. Roads	01 Bertram Road		
	Drawings		
	DCA 1 - Bertram Road Upgrade	Pdf	
	DBYD 200130 NBN	Pdf	
	200131 ATCO	Pdf	
	200131 HVLV Map - SEQ 94276035	Pdf	
	200131 Overhead Map - SEQ 94276035 200131 Telstra.dwf	Pdf DWF	
	02 Wellard Road	DWI	
	Drawings		
	DCA1- Wellard Road Upgrade 03 Millar Road	Pdf	
	Drawings		
	DCA2 - Millar Road	Pdf	
	04 Mortimer Road		
	Drawings DCA 2 -Mortimer road	Pdf	
	DBYD		
	04 Atco	Pdf	
L	04 Telstra.dwf 04 Water Corp	DWF Pdf	
	05 Sunrise Blvd		
	Drawings		
	05 Sunrise Blvd Drawings DCA 2 - Sunrise Blvd	Pdf Pdf	
	06 Thomas Road	Pui	
	Drawings		
	DCA 3 4 - Thomas Road	Pdf	
	DBYD 06 Telstra - Thomas Road.dwf	DWF	
	ACTO	Pdf	
	NBN	Pdf	
	Optus WC	Pdf Pdf	
	WP	Pdf	
	WP	Pdf	
	HVLV WP Overhead	Pdf Pdf	
	07 Anketell Road	Fui	
	Drawings		
	DCA 4 5 - Anketell Road DBYD	Pdf	
	94277236.dwf	DWF	
	94277242 LBN Co Response Plan	Pdf	
	ATCO	Pdf	
	HVLV Map - SEQ 94277235 NBN	Pdf Pdf	
	Optus	Pdf	
	Overhead Map - SEQ 94277235	Pdf	
	WC 2 WC	Pdf Pdf	
	08 Hammond Road		
	Drawings	D.11	
	DCA 6 - Hammond Road 09 Interconnector	Pdf	
	Drawings		
	DCA 6 - Hammond Road	Pdf	
	10 Lyon Road Drawings		
<u> </u>	10 Lyon Road Drawings	Pdf	
	DCA 5 - Lyon Road	Pdf	
	DBYD		
	ATCO - Map_HP_SEQ_94277479 Comms - LBN Co Response Plan	Pdf Pdf	
<u> </u>	Comms - Optus Underground	Pdf	
	Comms - Telstra - 94277477	Pdf	
	NBN - Comms - 20200130_002949587984_1	Pdf Pdf	
	WC - Maps           WP HVLV Map - SEQ 94277476	Pdf Pdf	
	WP Overhead Map - SEQ 94277476	Pdf	
	11 Cordata		
L	Drawings	l	

Section	Document Description	File Issue	Comments
	DCA 5 - Honeywood Ave Cordata Ave	Pdf	
	11 Peel Main Drain Crossing		
	Drawings		
	DCA 3 - Peel Sub	Pdf	
	Lot 611 670 Culvert Crossing	Pdf	
	Other drawings		
	200131 Pedestrian Ramp, Tactiles & Hand Rail	Pdf	
	200131 Typical Concrete Footpath	Pdf	
	200203 DCP road works extent	Pdf	
Section B. Open Drains	01 Bertram Road Drainage		
	April 2019 Bertram Basin Relocation	Excel	
	02 DCA 2 & 3 - Peel Sub		
	DCA 3 - Peel Sub (Casuarina Piping)	Pdf	
	DCA 3 - Peel Sub (Casualina riping)	Pdf	
	DCA 3 - Peel Sub (Drawings only) DCA2 & DCA3 - Peel Sub Drainage	Excel	
ection C. Landscape and Publ Open Space	ic 01 DCA1-6 - Landscape and POS		
• •	DCA1- Wellard Road and Bertram Road Landscape DCP	Excel	
	DCA1- DCA6 Road landscaping estimates	Excel	
	DCA2 & DCA3 - Peel sub Drainage	Excel	
	DCA3, DCA4, DCA5 & DCA6 - Public Open Space	Excel	

# 18 Reports – Civic Leadership

# 18.1 Amendment to the City's 2021/2022 Schedule of Fees and Charges

#### SUMMARY:

The purpose of this report is to obtain Council approval to amend the following fees and charges in the City's 2021/2022 Schedule of Fees and Charges as detailed below.

#### **OFFICER RECOMMENDATION:**

#### That Council:

1. Amend the City's 2021/2022 Schedule of Fees and Charges to include the following new fees:

Fee and Charge Description and explanatory comment	Statutory Fee Indicator	GST Indicator	Proposed New Fee
Building - General	÷	•	
Description: Property Status Report. Explanatory Comment: Identifying approved and unauthorised building works on the property. Includes one site inspection.	No	Yes	\$360.00
Building - Building/Certification Fees - (Refer Buildi			
Description: Certificate of Construction Compliance. Explanatory Comment: Includes one site inspection; additional inspections charged as per fee listed below. Priced on application	No	Yes	\$540.00 minimum.
Description: Certificate of Building Compliance - Class 1 & 10. Explanatory Comment: Includes one site inspection; additional inspections charged as per fee listed below. Priced on application.	No	Yes	\$360.00 minimum
Description: Certificate of Building Compliance - Class 2 - 9. Explanatory Comment: Includes one site inspection; additional inspections charged as per fee listed below. Priced on application.	No	Yes	\$540.00 minimum.
Description: Additional inspections. Explanatory Comment: Per hour.	No	Yes	\$180.00
Description: Certificate of Design Compliance - Class 1 & 10 Buildings. Explanatory Comment: Class 1 & 10 Buildings.	No	Yes	\$360.00 minimum
Description: Certificate of Design Compliance - Class 2 - 9 Buildings. Explanatory Comment: Class 2 - 9 Buildings.	No	Yes	\$540.00 minimum + 0.1% of Construction Value

Description: Provision of Information & Advice from Building Services. Explanatory Comment: Per hour.	No	Yes	\$180.00
Description: Compile an alternative solution for class 1 and 10. Explanatory Comment: Minimum starting rate. Priced on application.	No	Yes	\$360.00 minimum

2. Authorise the publication of a local public notice stating the intention to amend the City's 2021/2022 Schedule of Fees and Charges effective 21 days from the date of the local public notice for the following new fees:

Fee and Charge Description and explanatory comment	Statutory Fee Indicator	GST Indicator	Proposed New Fee
Building - General		•	
Description: Property Status Report.	No	Yes	\$360.00
Explanatory Comment: Identifying approved and			
unauthorised building works on the property. Includes			
one site inspection. Building - Building/Certification Fees - (Refer Build	ing Act 2014		
Description: Certificate of Construction Compliance.	No	Yes	\$540.00
Explanatory Comment: Includes one site inspection;	NO	163	minimum.
additional inspections charged as per fee listed below.			
Priced on application			
Description: Certificate of Building Compliance - Class	No	Yes	\$360.00
1 & 10.			minimum
Explanatory Comment: Includes one site inspection;			
additional inspections charged as per fee listed below.			
Priced on application.			
Description: Certificate of Building Compliance - Class	No	Yes	\$540.00
2-9.			minimum.
Explanatory Comment: Includes one site inspection; additional inspections charged as per fee listed below.			
Priced on application.			
Description: Additional inspections.	No	Yes	\$180.00
Explanatory Comment: Per hour.	NO	103	φ100.00
Description: Certificate of Design Compliance - Class	No	Yes	\$360.00
1 & 10 Buildings.			minimum
Explanatory Comment: Class 1 & 10 Buildings.			
Description: Certificate of Design Compliance - Class	No	Yes	\$540.00
2 - 9 Buildings.			minimum +
Explanatory Comment: Class 2 - 9 Buildings.			0.1% of
			Construction
		Ň	Value
Description: Provision of Information & Advice from	No	Yes	\$180.00
Building Services. Explanatory Comment: Per hour.			
Description: Compile an alternative solution for class	No	Yes	\$360.00
1 and 10.			minimum
Explanatory Comment: Minimum starting rate. Priced			
on application.			

# 3. Amend the City's 2021/2022 Schedule of Fees and Charges, as outlined below, effective immediately.

# a. Fee Pricing Amendments:

Fee and Charge Description	Adopted Fee \$	Proposed Amended Fee \$
All City Services – Photocopying and printing		
Photocopying and printing - Black and white.	\$1.60	\$0.60
Building - General		
Description: Conduct a site inspection.	\$108.00	\$180.00
Explanatory Comment: Per hour.		
Environmental Health - General Administration, Certi	fication and Inspecti	on Fees
Health (Miscellaneous Provisions) Act and Food Act -	\$75.00	\$30.00
Re-issue, replacement or issue of amended approval		
registration or other Documentation where not		
elsewhere specified.		
Environmental Health - Miscellaneous Applications	1	
Swimming Pool Fees for Health (Miscellaneous	\$150.00 each	\$600.00 per year
Provisions) Act Aquatic Facilities where an EHO	session (note:	for single water
conducts inspections and sampling for <i>Health</i>	\$1800.00 per year)	body and
(Miscellaneous Provisions) Act, Regulation & Code of		\$300.00 per year
Practice compliance		for additional
		water body
Inspection Fee associated with a Public Pool Closure	\$300.00	\$150.00
Notice, aquatic facility reopening assessment prior to		
rescinding a Notice and/or annual summer reopening		
assessment of a Swimming pool/aquatic facility carried		
out by an EHO. This may be in conjunction with the		
Office of Executive Director Public Health.		
Environmental Health - Food Act Fees and Charges	¢450.00	¢20.00
Search for any Food Business notification, application	\$150.00	\$30.00
or related documentation, labelling requirements, plans,		
conditions, Improvement Notices, Prohibition Notices,		
sample analysis reports, determinations or the like.		

## b. Fee and Charge Description Amendments:

Adopted Fee and Charge Description	Proposed Fee and Charge Description		
Environmental Health - General Administration, Certification and Inspection Fees			
Health (Miscellaneous Provisions) Act and Food Act - Re-issue, replacement or issue of amended approval registration or other Documentation where not elsewhere specified.	<i>Health (Miscellaneous Provisions) Act</i> and <i>Food Act</i> - reissue approvals or registration or other documentation.		
Environmental Health - Miscellaneous Applications			
Swimming Pool Fees for Health (Miscellaneous Provisions) Act Aquatic Facilities where an EHO conducts inspections and sampling for Health (Miscellaneous Provisions) Act, Regulation & Code of Practice compliance	Aquatic facility inspection, sampling and delivery fee under the Health ( <i>Aquatic</i> <i>Facilities</i> ) <i>Regulations</i> 2007 & Code of Practice compliance		

Inspection Fee associated with a Public Pool Closure	Aquatic facility reinspection,		
Notice, aquatic facility reopening assessment prior to	assessment for reopening of a closed		
rescinding a Notice and/or annual summer reopening	pool, resampling and delivery fee under		
assessment of a Swimming pool/aquatic facility carried	the Health (Aquatic		
out by an EHO. This may be in conjunction with the	Facilities) Regulations 2007 & Code of		
Office of Executive Director Public Health.	Practice		
Environmental Health - Not-For-Profit Organisations and Community Groups including			
School Canteens Food Business			
Search for any Food Business notification, application	Search for any Food Business		
or related documentation, labelling requirements, plans,	approvals, applications, plans, notices,		
conditions, Improvement Notices, Prohibition Notices,	reports or documentations.		

# c. Explanatory Comments Amendments:

Fee and Charge Description	Adopted Explanatory Comment	Proposed Explanatory Comment			
Environmental Health - Miscellaneous Applications					
Aquatic facility inspection, sampling and delivery fee under the Health ( <i>Aquatic</i> <i>Facilities</i> ) <i>Regulations 2007 &amp;</i> <i>Code of Practice (description</i> <i>amended as per b. Fee &amp;</i> <i>Description Amendment above).</i>	Inspection fee may include site audit, site inspection and may also include chemical and bacteriological sampling as required with delivery of samples to the Laboratories, each session, as specified by Dept. of Health WA. Routine inspection allows for 1 hour inspection time of fee listed per hour and additional time may be charged at the specified rate or part thereof after 1 hour via a Tax Invoice to the Strata Company or site owner.	Fee may include inspection, chemical and bacteriological sampling and delivery of samples to an approved laboratory each session. Fees shall be calculated on a pro-rata basis by the month for aquatic facility that are opened on a seasonal basis.			
Aquatic facility reinspection, assessment for reopening of a closed pool, resampling and delivery fee compliance under the Health ( <i>Aquatic</i> <i>Facilities</i> ) <i>Regulations 2007</i> & Code of <i>Practice</i> ( <i>description</i> <i>amended as per b. Fee</i> & <i>Description Amendment above</i> ).	Inspection fee includes sampling and delivery of samples to Laboratories each session as specified by Dept. of Health WA. Applicable to Public Pools and Aquatic facilities including strata Pools in complexes where more than 30 units are located and require compliance by EHO. Fee allows for maximum of 2 hours EHO Work and any additional work will be charged at fee listed per hour or part thereof via a tax invoice.	Fee may include inspection, chemical and bacteriological sampling and delivery of samples to an approved laboratory each session.			

Environmental Health - Not-For-Profit Organisations and Community Groups including School Canteens Food Business			
Search for any Food Business approvals, applications, plans, notices, reports or documentations.	Min fee per hour or part thereof after the first hour for each search requested in writing and includes copying and supply of the documentation.	Copying and supply of the documentation.	

# 4. Remove the following fees from the City's 2021/2022 Schedule of Fees and Charges, as outlined below, effective immediately.

Environmental Health - Miscellaneous Applications	
Fee and Charge Description	Fee to be removed
Application for Family Day and Child Care.	\$75.00
Application for Hairdressing Premises, including mobile hairdressing.	\$150.00
Application for Skin Penetration Premises.	\$150.00

#### NOTE: AN ABSOUTE MAJORITY OF COUNCIL IS REQUIRED

#### **DISCUSSION:**

The City's 2021/2022 Schedule of Fees and Charges was adopted by Council at the Ordinary Council Meeting held on 23 June 2021. A review of the adopted fees and charges has highlighted some new items that need to be added and some errors and/or omissions presented at the time of adoption that need to be changed.

#### All City Services

#### Photocopying and printing

Photocopying and printing for A3 pages (black and white) was raised from \$0.60 to \$1.60 in error. As it was decided that photocopying fees should not be raised in 2021/2022, the fee should revert to \$0.60 per page.

#### **Building Fees and Charges**

#### General

One existing fee has been identified to increase -Conduct a site inspection.

One new fee has been identified – Property Status Report.

These fees are existing fees and have been increased to align with other councils. The site inspection fee is in addition to other charges for services and needs to stand alone. The property status report fee is a new fee for a service that the City would like to introduce once we have the resources. Officers will conduct a site inspection of a property and provide a report on the approved and unapproved dwellings and structures as well as a copy of approved plans.

#### **Building/Certification Fees - (Refer Building Act 2011)**

Eight new fees have been identified -Certificate of Construction Compliance. Certificate of Building Compliance - Class 1 & 10. Certificate of Building Compliance - Class 2 - 9. Additional inspections – per hour. Certificate of Design Compliance - Class 1 & 10 Buildings. Certificate of Design Compliance - Class 2 - 9 Buildings. Provision of Information & Advice from Building Services. Compile an alternative solution for class 1 and 10.

The revised fees are not statutory and are for services offered by the City as a business unit. These fees are for additional services that the City can provide but are still in development and subject to resources being secured. The City currently refers applicants to the private sector for these services but anticipates opportunity to deliver these once resources are secured. A review has been done to ensure that these new fees are comparable with other Councils.

As these are new fees and charges it is requested that Council authorises the publication of a local public notice stating the intention to amend the City's 2021/2022 Schedule of Fees and Charges effective 21 days from the date of the local public notice.

#### **Environmental Health Fees & Charges**

#### Hairdressing premises

There are no legislative requirements under the *Hairdressing Establishment Regulations* 1972 adopted under the *Health (Miscellaneous Provisions) Act* to register, notify or make application to operate a hairdressing premises. The provisions for setting fees are not applicable and the application fee is required to be removed. The inspection fee will remain to recover the cost of the inspection required to be undertaken to ensure the premises complies with the *Hairdressing Establishment Regulations* 1972.

#### Skin penetration premises

The *Health (Skin Penetration Procedure) Regulations 1998* requires a notification to operate a skin penetration premises. Notification is not one of the activities listed under Section 6.16 (2) (d) of the *Local Government Act.* The provisions for setting fees are not applicable and the application fee is required to be removed. An inspection fee will remain to recover the cost of the inspection required to be undertaken to ensure the premises complies with the *Health (Skin Penetration Procedure) Regulations 1998* and Code of Practice for Skin Penetration Procedures.

#### Family day care and child care

All assessment of family day care and child care are undertaken under the *Food Act* 2008. The application fee is required to be removed. Other legislative requirements are assessed by the Family Day Care Scheme provider under the *Education and Care Services National Regulations.* 

#### **Pool sampling**

The City received a second complaint in relation to the fees currently charged for pool sampling. Benchmarking carried out against eleven other Metropolitan Local Governments revealed that the average charge is \$382 and maximum charge is \$950 for a single water body per annum. Currently adopted fees are around five times higher than average charge when compared to other Metropolitan Local Governments. The *Health (Aquatic Facilities) Regulations 2007* requires the Local Government to collect two water samples from each water body of each aquatic facility at least once per month and transporting samples to approved laboratories. The analysis costs are covered by Department of Health Pathwest arrangements. Section 6.16 (2)(f) under the *Local Government Act 1995* allows a Local Government to impose a service charge to meet the cost of providing a prescribed service. The new proposed charge is significantly reduced to achieve consistency with other Local Governments.

#### **General Administration, Certification and Inspection Fees**

Fee reduced to reflect actual time and cost of service.

#### Food Act Fees and Charges – documentation and searches

Fee reduced to reflect actual time and cost of service.

As these are amendments to existing adopted fees and charges it is requested that Council authorises the amendment effective immediately.

#### LEGAL/POLICY IMPLICATIONS:

Local Government Act 1995 states:

Section 6.16. Imposition of fees and charges

- (3) Fees and charges are to be imposed when adopting the annual budget but may be
  - (a) imposed\* during a financial year; and
  - (b) amended\* from time to time during a financial year.

\* Absolute majority required

Section 6.19. Local government to give notice of fees and charges

If a local government wishes to impose any fees or charges under this Subdivision after the annual budget has been adopted it must, before introducing the fees or charges, give local public notice of —

- (a) its intention to do so; and
- (b) the date from which it is proposed the fees or charges will be imposed.

#### FINANCIAL/BUDGET IMPLICATIONS:

Adopting the changes to the 2021/2022 Schedule of Fees and Charges will not materially impact the City's budgeted income and expected financial position.

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

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

# ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:

There are no implications on any determinants of health as a result of this report.

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following outcome and objective detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	Visionary leadership dedicated to acting for its community	5.1 Model accountable and ethical governance, strengthening trust with the community

#### **COMMUNITY ENGAGEMENT:**

There are no community engagement implications as a result of this report.

## **18.2 Budget Variations**

#### SUMMARY:

To amend the 2021/2022 budget to reflect various adjustments to the General Ledger. Item 1 will have nil effect to the budgeted surplus position and Item 2 will have an effect on the brought forward surplus as detailed below.

#### **OFFICER RECOMMENDATION:**

That Council approves the required budget variations to the Current Budget for 2021/2022 as follows.

ITEM #	DESCRIPTION	CURRENT BUDGET	INCREASE/ DECREASE	REVISED BUDGET
1	Capital Expenditure – Drainage – Developer Contributions – DCA	Nil	(328,874)	(328,874)
	Reserve Transfer – Restricted Grants and Contributions Reserve	Nil	60,000	60,000
	Reserve Transfer – DCA1 Reserve	Nil	268,874	268,874
2	Capital Expenditure – Reserve Development – Bird Watering station	Nil	(5,890)	(5,890)
	Brought forward surplus	700,000	5,890	705,890

#### NOTE: AN ABSOLUTE MAJORITY OF COUNCIL IS REQUIRED

#### **DISCUSSION:**

#### **Budget Variations:**

ITEM #	DESCRIPTION	CURRENT BUDGET	INCREASE/ DECREASE	REVISED BUDGET
1	Capital Expenditure – Drainage – Developer Contributions – DCA	Nil	(328,874)	(328,874)
	Reserve Transfer – Restricted Grants and Contributions Reserve	Nil	60,000	60,000
	Reserve Transfer – DCA1 Reserve	Nil	268,874	268,874

The capital project for DCA 1 Stormwater drainage has been identified as a project that should have been carried forward from 2020/2021. It is proposed that the remaining funds for this project are budgeted for in the 2021/2022 financial year funded by amounts previously transferred to the Restricted Grants and Contributions Reserve and DCA 1 Reserve.

#### 18.2 BUDGET VARIATIONS

2	Capital Expenditure – Reserve	Nil	(5,890)	(5,890)
	Development – Bird Watering station Brought forward surplus	700,000	5,890	705,890

The capital project for the purchase of a Bird Watering station was approved June 2021 from savings identified in the consultancy budget for 2020/2021. It missed the cut off for a budget variation in 2020/2021. As the purchase occurred in July 2021 (and now installed) it is proposed that the funds for this project are budgeted for in the 2021/2022 financial year and the brought forward surplus is increased to reflect those monies not spent in the last financial year.

#### LEGAL/POLICY IMPLICATIONS:

The *Local Government Act 1995* Part 6 Division 4 s 6.8 (1) requires the local government not to incur expenditure from its municipal fund for an additional purpose except where the expenditure-

(b) is authorised in advance by resolution\*

"additional purpose" means a purpose for which no expenditure estimate is included in the local government's annual budget.

\*requires an absolute majority of Council.

#### FINANCIAL/BUDGET IMPLICATIONS:

The financial implications are detailed in this report.

#### ASSET MANAGEMENT IMPLICATIONS:

The allocation of funds towards the upgrading and purchase of City assets will be included in the City's Asset Management Strategy.

#### ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:

There are no implications on any determinants of health as a result of this report.

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following outcome and objective detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan	Visionary leadership dedicated to	5.1 Model accountable and
	acting for its community	ethical governance,
		strengthening trust with the
		community

#### 18.2 BUDGET VARIATIONS

# **COMMUNITY ENGAGEMENT:**

There are no community engagement implications as a result of this report.

# 18.3 Proposed Cat Local Law 2021

#### SUMMARY:

At its ordinary meeting of 27 January 2021, Council resolved to approve state-wide and local public notices of its proposal to make the City of Kwinana Cat Local Law ('Cat Local Law'). The Cat Local Law was also provided to the Department of Local Government, Sport and Cultural Industries (DLGSC) for their comment.

Between 10 February 2021 and 2 April 2021, the City received 40 submissions from the community as well as DLGSC in relation to the Cat Local Law. 28 of those 40 submissions were in support, though 13 suggested various amendments. A further 6 opposed the law while 6 failed to state a clear position.

As a result of submissions received, amendments have been made to the proposed Cat Local Law. Due to the amendments constituting a significant change to the law, it is proposed that the proposed Cat Law Cat, as detailed at Attachment A, again be advertised for public submissions prior to consideration by Council for adoption.

#### **OFFICER RECOMMENDATION:**

That Council approve state-wide and local public notices of its proposal to make the amended City of Kwinana *Cat Local Law 2021*, as detailed at Attachment A.

#### DISCUSSION:

As a result of comments received from DLGSC and the community, the proposed Cat Local Law has been narrowed in scope to address the following matters:

- 1. limiting the number of cats that can be kept by requiring a permit for more than 2 cats;
- 2. creating an offence to not comply with a notice to prevent a cat causing a nuisance
- 3. ensuring cats remain under effective control in any public place; and
- 4. permitting the City to issue notices and/or infringements for failure to comply.

Based on DLGSC feedback regarding concerns as to their enforceability, provisions concerning the abandonment of cats, destruction of cats as well as the seizure of nuisance cats has been removed from the proposed Cat Local Law.

Minor grammatical changes have also been made, based on DLGSC comments.

The version detailed at Attachment B shows all tracked changes.

As the changes to the law are not minor in nature, the proposed Cat Local Law is required to be advertised for public comment again prior to implementation by Council.

#### 18.3 PROPOSED CAT LOCAL LAW 2021

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

Section 3.12 of the *Local Government Act 1995* sets out the procedure to be followed to make a local law as follows:

- The purpose and effect of the proposed local law needs to be included in the agenda and minutes of this meeting;
- Statewide and local public notice that the City intends to make a local law and its purpose and effect. Also, that copies are available for public comment over a six week period and the closing date for public submissions;
- Provide a copy to the Minister for Local Government;
- Consider any submissions made before making the local law;
- Publish the local law in the Government Gazette;
- Give local public notice of when the local law comes into operation and that copies are available; and
- Provide an explanatory memorandum of the process used to the Minister for Local Government.

#### FINANCIAL/BUDGET IMPLICATIONS:

Cost of advertising of the proposed local law in state-wide and local papers is estimated to be \$900.

The cost of publication of the local law in the *Government Gazette* at a cost of \$272.55 per page, is estimated at \$9,500 once adopted by Council.

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

There are no direct asset management implications associated with this report.

#### **ENVIRONMENTAL/PUBLIC HEALTH IMPLICATIONS:**

The enacting of a Cat Local Law is intended to present significant environmental benefit to the district, specifically focussing on reducing the impact on native wildlife.

#### STRATEGIC/SOCIAL IMPLICATIONS:

This proposal will support the achievement of the following outcomes and objective detailed in the Corporate Business Plan.

Plan	Outcome	Objective
Corporate Business Plan 2017 - 2022	Civic leadership.	5.8 Apply best practice principles and processes to maximise efficiencies and quality.

#### 18.3 PROPOSED CAT LOCAL LAW 2021

## COMMUNITY ENGAGEMENT:

Community engagement is proposed to take place in the form required by section 3.12(3) of the *Local Government Act* 1995 – Procedure for making local laws and includes the requirement to give statewide public notice that the local government proposes to make a local law the purpose and effect of which is summarised in the notice.

The proposed law was open for public comment from 10 February 2021 to 2 April 2021, during which time 40 people/groups provided feedback. Of those who responded:

- 28 support, though 13 of those suggested various amendments;
- 6 opposed the law; and
- 6 failed to state a clear position.

In addition, comment was also sought from Department of Local Government, Sport and Cultural Industries.



# City of Kwinana Proposed Cat Local Law 2021



# City of Kwinana

# PROPOSED CAT LOCAL LAW 2021

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# Cat Act 2011 Local Government Act 1995

# City of Kwinana

# **PROPOSED CAT LOCAL LAW 2021**

Under the powers conferred by the *Cat Act 2011,* the *Local Government Act 1995* and all other powers enabling it, the Council of the City of Kwinana resolved on [date] to adopt the following local law.

# PART 1 — PRELIMINARY

#### 1.1 Citation

This Local Law may be cited as the City of Kwinana Cat Local Law 2021.

#### 1.2 Definitions

(1) In this local law unless the context requires otherwise —

Act means the Cat Act 2011;

*applicant* means the occupier of the premises who makes an application for a permit under this local law;

authorised person has the same meaning as in the Act;

cat has the same meaning as in the Act;

cat management facility has the same meaning as in the Act;

Cat Haven means the Cat Welfare Society Inc., trading as "Cat Haven";

*cattery* means a facility where two (2) or more cats are kept, bred, boarded, housed or trained temporarily, whether for profit or otherwise, and where the occupier of the premises is not the ordinary person liable for the control of such cats;

CEO means the Chief Executive Officer of the local government;

Council means the Council of the local government;

*district* means the district of the local government;

effective control in relation to a cat means any of the following methods-

- (a) held by a person who is capable of controlling the cat;
- (b) securely tethered;
- (c) secured in a cage;
- (d) any other means of preventing escape;

local government means the City of Kwinana;

owner in relation to a cat has the same meaning as in the Act;

*permit* means a permit issued by the local government under this local law;

*permit holder* means a person who holds a valid permit issued by the local government under this local law;

person liable for the control of means each of the following in relation to a cat —

- (a) the registered owner of the cat; or
- (b) the owner of the cat; or
- (c) the occupier of any premises where the cat is ordinarily kept or ordinarily permitted to live; or
- (d) a person who has the cat in their possession or under their control, but does not include a registered veterinary surgeon, or a person acting on their behalf, in the course of their professional practice;

premises has the same meaning as in the Act;

prescribed means prescribed under regulations made under the Act;

**RSPCA** means the Royal Society for the Prevention of Cruelty to Animals (Inc) of Western Australia;

Schedule means a schedule to this local law;

*veterinary clinic* has the meaning given to it in the *Veterinary Surgeons Act 1960*; and

veterinary hospital has the meaning given to it in the Veterinary Surgeons Act 1960.

# 1.3 Commencement

This local law comes into operation 14 days after the date of its publication in the *Government Gazette*.

# 1.4 Application

This local law applies throughout the district.

# PART 2 — KEEPING OF CATS

#### 2.1 Limit on number of cats

- (1) Subject to subclause (2), a person shall not:
  - (a) keep more than two (2) cats at a premises at one time; or
  - (b) operate a cattery or cat management facility

without a valid permit issued by the local government.

(2) Subclause (1) does not apply to the following:

- (a) a cattery or cat management facility operated by either:
  - (i) the local government; or
  - (ii) a person or body prescribed by the *Cat Regulations 2012*;
- (b) a refuge of the RSPCA or Cat Haven; or
- (c) a veterinary clinic or veterinary hospital.

(3) For the purpose of calculating the number of cats at a premises pursuant to subclause (1), cats under 6 months of age are not to be included.

# 2.2 Application for permit

- (1) Applications to the local government for a permit to be issued pursuant to clause 2.1(1) are to be
  - (a) made in writing in a form approved by the local government;
  - (b) made by the occupier of the premises for which the permit is sought;
  - (c) where the applicant is not the owner of the premises, an application must include the written consent of all property owners; and
  - (c) be accompanied by such fee as may be determined by the local government.
- (2) In determining an application for a permit pursuant to subclause (1) the local government may consider such matters as it deems appropriate and may request the applicant
  - (a) consult with nearby landowners and/or occupiers;
  - (b) advise nearby landowners and/or occupiers that they may make submissions to the local government on the application for a permit within 14 days of receiving that advice, before determining the application for the permit; or
  - (c) provide such further or other information as deemed necessary in order for it to make a determination.

# 2.3 Decision on application

- (1) Upon receiving an application for a permit pursuant to clause 2.2(1), the local government may
  - (a) approve the application for a permit subject to the conditions specified at clause 2.4(1); or
  - (c) refuse the application for a permit.
- (2) If the local government approves an application under subclause (1), it shall issue a permit to the applicant in the form determined by the CEO.
- (3) If the local government refuses to approve an application under subclause (1), it shall advise the applicant accordingly in writing as to the reasons why it was not granted.

# 2.4 Conditions

- (1) Every permit issued by the local government pursuant to clause 2.2(1) are subject to the following conditions
  - (a) each cat kept on the premises to which the permit relates shall comply with the requirements of the Act;
  - (b) each cat shall be contained on the premises unless under the effective control of a person;
  - (c) the permit holder will provide adequate space for the exercise of the cats;
  - (d) the premises shall be maintained in good order and in a clean and sanitary condition;

- (e) persons undertaking the breeding of cats are to keep records of purchases/transfer of kittens for two years (including details of the buyer's name, address and the microchip number);
- (f) premises may be inspected by the local government; and
- (g) such further conditions as the local government considers appropriate, including but not limited to the maximum number of cats permitted to be kept at the premises.
- (2) The holder of a permit issued by the local government pursuant to clause 2.2(1) shall comply with all conditions specified by the local government in relation to such permit.
- (3) The local government may revoke a permit in the event the permit holder fails to comply with a condition stipulated in a permit issued.

# 2.5 Duration of a permit

Unless otherwise specified in a condition on a permit, a permit commences on the date of issue and expires —

- (a) upon revoking by the local government; or
- (b) upon the permit holder ceasing to reside at the premises to which the permit relates.

# 2.6 Permit not transferable

A permit is not transferrable either in relation to the permit holder or the premises.

# 2.7 Permit to be kept at premises and available for view

(1) A permit issued by the local government shall be kept at the premises to which it applies and shall be provided to an authorised person on demand.

# PART 3 — CONTROL OF CATS

# 3.1 Cats wandering

- (1) A cat shall not be in a public place unless the cat is under effective control.
- (2) A cat shall not be in a place that is not a public place without the consent of the owner or occupier.
- (3) If a cat is at any time in contravention of clause 3.1(1) or 3.1(2)
  - (a) the person liable for the control of such cat commits an offence; and
  - (b) an authorised person may seize and impound the cat and deal with the cat pursuant to the Act.

# 3.2 Cat creating a nuisance

- (1) The person liable for the control of a cat shall prevent the cat from creating a nuisance.
- (2) For the purpose of subclause (1), the term nuisance includes —

- (a) an activity or condition which causes an unreasonable interference with the use and enjoyment of a person in their ownership or occupation of land; or
- (b) interference which causes material damage to land or other property on the land affected by the interference.
- (3) Where, in the opinion of an authorised person, a cat is creating a nuisance, the local government may give written notice to a person liable for the control of such cat requiring that person to abate the nuisance within the timeframe specified in such notice.
- (4) When a nuisance has occurred and a notice to abate the nuisance is given, the notice remains in force for the period specified by the local government on the notice or until the local government withdraws the notice.
- (5) A person given a notice to abate the nuisance shall comply with the notice within the period specified in the notice.

# PART 4 — FEES, CHARGES AND COSTS

# 4.1 Fees, charges and costs

The following are to be imposed and determined by the local government under sections 6.16 to 6.19 of the *Local Government Act 1995* —

- (a) the charges to be levied under section 31(1)(a) of the Act relating to the removing and impounding of a cat;
- (b) the charges to be levied under section 31(1)(b) of the Act relating to keeping and caring for a cat;
- (c) the costs incurred by the operator of a cat management facility under section 31(1)(c) of the Act for the microchipping of a cat prior to release if so required under section 33 of the Act;
- (d) the cost incurred by the operator of a cat management facility under section 31(1)(d) of the Act for the sterilisation of a cat if so required under section 33 of the Act; and
- (e) the costs of the destruction and the disposal of a cat under section 34 of the Act.

# PART 5 — ENFORCEMENT

# 5.1 Penalties

(1) A person who fails to comply with or who contravenes any provision of this local law commits an offence and is liable to a maximum penalty of not less than \$200 and not exceeding \$1,000 and, if the offence is a continuing offence, a maximum daily penalty of \$500.

# 5.2 Prescribed offences

(1) An offence against any provision of this local law is a prescribed offence for the purposes of section 62(1) of the Act.

- (2) The amount appearing in the final column of Schedule 1, directly opposite a prescribed offence in that Schedule, is the modified penalty for that prescribed offence.
- (3) For the purposes of guidance only, before issuing an infringement notice to a person in respect of the commission of a prescribed offence, an authorised person should be satisfied that:
  - (a) the commission of the prescribed offence is a relatively minor matter; and
  - (b) only straightforward issues of law and fact are involved in determining whether the prescribed offence was committed, and the facts in issue are readily ascertainable.

# 5.3 Form of notices

- (1) The form of an infringement notice is Form 6 in the *Cat Regulations 2012,* Schedule 1.
- (2) The form of withdrawal of the infringement notice is Form 7 in the *Cat Regulations* 2012, Schedule 1.

# 5.4 Serving of infringement notices

An infringement notice served under section 62 of the Act or this local law may be given to a person by way of the following:

- (a) personally;
- (b) by registered mail addressed to the person; or
- (c) by leaving it for the person at her or his last known postal address.

# Schedule 1 Prescribed Offences

[clause 8.2(2)]

ltem No	Offence	Nature of offence	Modified penalty
			\$
1	2.1(1)	Exceeding maximum number of cats at a premises	200
2	2.4(2)	Failure to comply with a permit condition	200
3	3.1	Cat wandering	200
4	3.2(1)	Cat causing a nuisance	200
5	3.2(5)	Failure to comply with a notice	200

Dated this	day of	2021
The Common Seal of the City of Kwinana was hereunto affixed in the presence of :	) ) )	

Carol Adams Mayor Wayne Jack Chief Executive Officer



# City of Kwinana Proposed Cat Local Law 2021



# City of Kwinana

# PROPOSED CAT LOCAL LAW 2021

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# Cat Act 2011 Local Government Act 1995

# City of Kwinana

# PROPOSED CAT LOCAL LAW 2021

Under the powers conferred by the *Cat Act 2011*, the *Local Government Act 1995* and all other powers enabling it, the Council of the City of Kwinana resolved on [date] to adopt the following local law.

# PART 1 — PRELIMINARY

#### 1.1 Citation

This Local Law may be cited as the City of Kwinana Cat Local Law 2021.

#### 1.2 Definitions

(1) In this local law unless the context requires otherwise —

abandon means to cease to look after;

Act means the Cat Act 2011;

*applicant* means the occupier of the premises who makes an application for a permit under this local law;

authorised person has the same meaning as in the Act;

cat has the same meaning as in the Act;

cat management facility has the same meaning as in the Act;

Cat Haven means the Cat Welfare Society Inc., trading as "Cat Haven";

*cattery* means a facility where <u>two (2) or more</u> cats are kept, bred, boarded, housed or trained temporarily, whether for profit or otherwise, and where the occupier of the premises is not the ordinary person liable for the control of <u>thesuch</u> cats;

CEO means the Chief Executive Officer of the local government;

Council means the Council of the local government;

district means the district of the local government;

effective control in relation to a cat means any of the following methods-

- (a) held by a person who is capable of controlling the cat;
- (b) securely tethered;
- (c) secured in a cage;
- (d) any other means of preventing escape;

local government means the City of Kwinana;

owner in relation to a cat has the same meaning as in the Act;

*permit* means a permit issued by the local government under this local law;

*permit holder* means a person who holds a valid permit issued by the local government under this local law;

person liable for the control of means each of the following in relation to a cat -

- (a) the registered owner of the cat; or
- (b) the owner of the cat; or
- (c) the occupier of any premises where the cat is ordinarily kept or ordinarily permitted to live; or
- (d) a person who has the cat in their possession or under their control, but does not include a registered veterinary surgeon, or a person acting on their behalf, in the course of their professional practice;

premises has the same meaning as in the Act;

prescribed means prescribed under regulations made under the Act;

**RSPCA** means the Royal Society for the Prevention of Cruelty to Animals (Inc) of Western Australia;

Schedule means a schedule to this local law;

*veterinary clinic* has the meaning given to it in the *Veterinary Surgeons Act 1960*; and

veterinary hospital has the meaning given to it in the Veterinary Surgeons Act 1960.

# 1.3 Commencement

This local law comes into operation 14 days after the date of its publication in the *Government Gazette*.

# 1.4 Application

This local law applies throughout the district.

# PART 2 — KEEPING OF CATS

#### 2.1 Limit on number of cats

- (1) Subject to subclause (2), a person shall not:
  - (a) keep more than two (2) cats at a premises at one time; or
  - (b) operate a cattery or cat management facility

without a valid permit issued by the local government.

- (2) Subclause (1) does not apply to the following:
  - (a) a cattery or cat management facility operated by either:
    - (i) the local government; or
    - (ii) a person or body prescribed by the *Cat Regulations 2012*;
  - (b) a refuge of the RSPCA or Cat Haven; or

- (c) a veterinary clinic or veterinary hospital.
- (3) For the purpose of calculating the number of cats at a premises pursuant to subclause (1), cats under 6 months of age are not to be included.

# 2.2 Application for permit

- Applications to the local government for a permit to be issued pursuant to clause
   2.1(1) are to be
  - (a) made in writing in a form approved by the local government;
  - (b) made by the occupier of the premises for which the permit is sought;
  - (c) where the applicant is not the owner of the premises, an application must include the written consent of all property owners; and
  - (c) be accompanied by such fee as may be determined by the local government.
- (2) In determining an application for a permit pursuant to subclause (1) the local government may consider such matters as it deems appropriate and may request the applicant
  - (a) consult with nearby landowners and/or occupiers;
  - (b) advise nearby landowners and/or occupiers that they may make submissions to the local government on the application for a permit within 14 days of receiving that advice, before determining the application for the permit; or
  - (c) provide such further or other information as deemed necessary in order for it to make a determination.

# 2.3 Decision on application

- (1) Upon receiving an application for a permit pursuant to clause 2.2(1), the local government may
  - (a) approve the application for a permit subject to the conditions specified at clause 2.4(1); or
  - (c) refuse the application for a permit.
- (2) If the local government approves an application under subclause (1), it shall issue a permit to the applicant in the form determined by the CEO.
- (3) If the local government refuses to approve an application under subclause (1), it shall advise the applicant accordingly in writing as to the reasons why it was not granted.

# 2.4 Conditions

- (1) Every permit issued by the local government pursuant to clause 2.2(1) are subject to the following conditions
  - (a) each cat kept on the premises to which the permit relates shall comply with the requirements of the Act;
  - (b) each cat shall be contained on the premises unless under the effective control of a person;
  - (c) the permit holder will provide adequate space for the exercise of the cats;

- (d) the premises shall be maintained in good order and in a clean and sanitary condition;
- (e) persons undertaking the breeding of cats are to keep records of purchases/transfer of kittens for two years (including details of the buyer's name, address and the microchip number);
- (f) premises may be inspected by the local government; and
- (g) such further conditions as the local government considers appropriate, including but not limited to the maximum number of cats permitted to be kept at the premises.
- (2) The holder of a permit issued by the local government pursuant to clause 2.2(1) shall comply with all conditions specified by the local government in relation to such permit.
- (3) The local government may revoke a permit in the event the permit holder fails to comply with a condition stipulated in a permit issued.

# 2.5 Duration of a permit

Unless otherwise specified in a condition on a permit, a permit commences on the date of issue and expires —

- (a) upon revoking by the local government; or
- (b) upon the permit holder ceasing to reside at the premises to which the permit relates.

# 2.6 Permit not transferable

A permit is not transferrable either in relation to the permit holder or the premises.

# 2.7 Permit to be kept at premises and available for view

(1) A permit issued by the local government shall be kept at the premises to which it applies and shall be provided to an authorised person on demand.

# PART 3 — ABANDONMENTCONTROL OF CATS

# 3.1 Abandonment of catsCats wandering

- (1) An <u>A cat shall not be in a public place unless the cat is under effective control.</u>
- (2) A cat shall not be in a place that is not a public place without the consent of the owner of a cat, or occupier.
- (3) If a cat is at any othertime in contravention of clause 3.1(1) or 3.1(2) —
- (a) the person liable for the control of a cat, shall not abandon such cat-

(2) For the purposes of subsection (1), delivering a cat into the custody of commits an offence; and

(b) an authorised person shall not may seize and impound the cat and deal with the cat pursuant to be regarded as having abandoned a catthe Act.

# PART 4 — NUISANCE CATS

#### 4.1<u>3.2</u> Cat creating a nuisance

- (1) The person liable for the control of a cat shall prevent the cat from creating a nuisance-to another person or exposing another person to health and/or safety risks.
- (2) For the purpose of subclause (1), the term nuisance includes
  - (a) an activity or condition which causes an unreasonable interference with the use and enjoyment of a person in their ownership or occupation of land; or
  - (b) interference which causes material damage to land or other property on the land affected by the interference.
- (3) Where, in the opinion of an authorised person, a cat is creating a nuisance, the local government may give written notice to a person liable for the control of such cat requiring that person to abate the nuisance within the timeframe specified in such notice.
- (4) When a nuisance has occurred and a notice to abate the nuisance is given, the notice remains in force for the period specified by the local government on the notice or until the local government withdraws the notice.
- (5) A person given a notice to abate the nuisance shall comply with the notice within the period specified in the notice.
- (6) An authorised officer may seize any cat pursuant to section 27 of the Act for noncompliance by a person liable for the control of a cat with the requirements of a notice issued pursuant to subclause (3).

#### PART 5 --- CONTROL OF CATS ON PRIVATE PROPERTIES

#### 5.1 Cats to be confined

- (1) An occupier of a premises on which a cat is kept must ---
  - (a) cause the premises on which the cat is kept to be fenced in a manner capable of confining the cat;
  - (b) ensure the fence or enclosure used to confine the cat and every gate or door in the fence or enclosure is of a type, height and construction which having regard to the breed, age, size and physical condition of the cat is capable of preventing the cat at all times from passing over, under or through it;
  - (c) ensure that every gate or door in the fence or enclosure is kept closed at all times when the cat is on the premises (unless the gate is temporarily opened in a manner that ensures that the cat remains confined) and is fitted with:
    - (i) an efficient self-closing mechanism;
    - (ii) an efficient self-latching mechanism attached to the inside of the gate or door; and

- (iii) a mechanism which enables the gate or door to be permanently locked;
- (d) maintain the fence or enclosure and all gates and doors in the fence or enclosure in good order and condition; and
- (e) where no part of the premises consists of open space, yard or garden or there is no open space or garden or yard of which the occupier has exclusive use or occupation, ensure that other means exist on the premises for effectively confining the cat within the premises.
- (2) An occupier who fails to comply with subclause (1), commits an offence.
- (3) Where a cat is not contained on a property, the local government may give written notice to person liable for the control of a cat, requiring that person to contain the cat on the property and within the timeframe specified in the notice.
- (4) When a notice is issued to contain a cat on a property, the notice remain in force for the period specified on the notice or until the withdrawn by the local government.
- (5) A person issued a notice to contain a cat on a property must comply with such notice within the time period specified on the notice.

# PART 6 — DESTRUCTION OF CATS

#### 6.1 Destruction of cats

- (1) An owner of a cat may request the local government to destroy the cat pursuant to section 49(1)(b) of the Act.
- (2) Where an owner requests a cat be destroyed, the owner must
  - (a) complete and sign a form of authorisation showing:
    - (i) the name and residential address of the owner making the request;
      - (ii) a description of the cat including its breed, colour, sex and age;
      - (iii) the reason for destruction; and
  - (b) provide evidence to the satisfaction of the local government that the person making the request is the owner of the cat.
- (3) The local government may charge an owner a fee in respect of the destruction of a cat under subclause (2) and the local government from time to time shall determine the fee.

## PART 7 — FEES, CHARGES AND COSTS

#### 74.1 Fees, charges and costs

The following are to be imposed and determined by the local government under sections 6.16 - to 6.19 of the *Local Government Act 1995* -

(a) the charges to be levied under section 31(1)(a) of the Act relating to the removing and impounding of a cat;

- (b) the charges to be levied under section 31(1)(b) of the Act relating to keeping and caring for a cat;
- (c) the costs incurred by the operator of a cat management facility under section 31(1)(c) of the Act for the microchipping of a cat prior to release if so required under section 33 of the Act;
- (d) the cost incurred by the operator of a cat management facility under section 31(1)(d) of the Act for the sterilisation of a cat if so required under section 33 of the Act; and
- (e) the costs of the destruction and the disposal of a cat under section 34 of the Act.

# PART 85 — ENFORCEMENT

# 85.1 Penalties

(1) A person who fails to comply with or who contravenes any provision of this local law commits an offence and is liable to a maximum penalty of not less than \$200 and not exceeding \$1,000 and, if the offence is a continuing offence, a maximum daily penalty of \$500.

# 85.2 Prescribed offences

- (1) An offence against any provision of this local law is a prescribed offence for the purposes of section 62(1) of the Act.
- (2) The amount appearing in the final column of Schedule 1, directly opposite a prescribed offence in that Schedule, is the modified penalty for that prescribed offence.
- (3) For the purposes of guidance only, before issuing an infringement notice to a person in respect of the commission of a prescribed offence, an authorised person should be satisfied that:
  - (a) the commission of the prescribed offence is a relatively minor matter; and
  - (b) only straightforward issues of law and fact are involved in determining whether the prescribed offence was committed, and the facts in issue are readily ascertainable.

# 85.3 Form of notices

- (1) The form of an infringement notice is Form 6 in the *Cat Regulations 2012,* Schedule 1.
- (2) The form of withdrawal of the infringement notice is Form 7 in the *Cat Regulations* 2012, Schedule 1.

# **85**.4 Serving of infringement notices

An infringement notice served under section 62 of the Act or this local law may be given to a person by way of the following:

- (a) personally;
- (b) by registered mail addressed to the person; or

(c) by leaving it for the person at her or his last known postal address.

# Schedule 1 Prescribed Offences

[clause 8.2(2)]

Item No	Offence	Nature of offence	Modified penalty
			\$
1	2.1(1)	Exceeding maximum number of cats at a premises	200
2	2.4(2)	Failure to comply with a permit condition	200
3	3.1 <del>(1)</del>	Abandonment of a catCat wandering	200
4	4.1 <u>3.2</u> (1)	Cat causing a nuisance	200
5	4.1 <u>3.2</u> (5)	Failure to comply with a notice	200
6	<del>5.1(2)</del>	Failure to confine	<del>200</del>

Dated this	day of	2021
The Common Seal of the City of Kwinana was hereunto affixed in the presence of :	) ) )	

Carol Adams Mayor Wayne Jack Chief Executive Officer

# 19 Notices of motions for consideration at the following meeting if given during the meeting

# 20 Late and urgent Business

Note: In accordance with Clauses 3.13 and 3.14 of Council's Standing Orders, only items resolved by Council to be Urgent Business will be considered.

COUNCIL DECISION ### MOVED CR

SECONDED CR

That Council deal with the ..... items of urgent business as presented in the Addendum to the Agenda.

- 21 Reports of Elected Members
- 22 Answers to questions which were taken on notice

Nil

- 23 Mayoral Announcements
- 24 Confidential items
- 25 Close of meeting