

CBD Public Toilet

Feasibility Report

July 2025

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1 Project Background

Community feedback and Council vision identified the need for activation of the City Centre. To achieve this, a dedicated event space has been determined to be crucial.

There are two dedicated public open spaces in the Karratha City Centre (CBD) that serve as a key venue for community events and activities:

- The Quarter Open Space; and
- Walgu Park

To ensure the usability, enhanced convenience and hygiene for residents and visitors to these spaces, and in line with the Council Plan 2025-2035, the City of Karratha (City) has identified the need for additional public restroom facilities in the CBD to enhance public amenities and support the well-being of residents and visitors.

Moreover, additional public toilet access has also been identified as a key requirement by local businesses.

To support infrastructure planning, an internal Feasibility study has been conducted to identify locations for a public toilet facility within walking distance from CBD events spaces in line with strategic documentation and in consultation with relevant stakeholders.



FIGURE 1: AERIAL OF THE KARRATHA CITY CENTRE (HIGHLIGHTED IN YELLOW).

2 Relevant Documentation

2.1 Council Plan 2025 – 2035

The Council Plan (CP) sets the mission, vision and objectives of the City. The following strategic priorities from the CP are relevant to the proposed public toilet project in the Karratha City Centre:

Goal 2: *Our community is welcoming, connected, vibrant, healthy and safe*

Objective: Increase events, markets, arts and cultural activities.

Relevance: To support the growing number of community events in the Karratha CBD, hygienic, accessible, and permanent public amenities are essential. The facilities ensure inclusive participation, promote public health, and enhance comfort and experience of event attendees.

Goal 3: *Everyone is included*

Objective: Improve accessibility of the City of Karratha's facilities, places, spaces, events and infrastructure for all abilities.

Project Relevance: A disability compliant public toilet will improve equity and increase the City's facilities that meet accessible standards.

Goal 4 *Our places and spaces are functional, attractive and reflect our unique identity*

Objective: Provide high amenity, well-maintained foreshores, parks, playgrounds, toilet amenities and streetscapes.

Project Relevance: Enhanced usability and appeal of the CBD as a vibrant, inclusive space.

2.2 Disability Access and Inclusion Plan (2024-2029)

The Disability Access & Inclusion Plan (DAIP) outlines how the City will ensure all people have equal access to the range of facilities throughout the municipality, with the following relevant to the Feasibility Study:

Outcome 1: *People living with disability have the same opportunity as other people to access the services of, and any events organised by, the City of Karratha.*

Strategy 1.1 Ensure access and inclusion is considered as part of all planning, delivery and evaluation of City events and services.

Project Relevance: A public amenity in the Karratha CBD directly supports this strategy by providing an accessible and inclusive facility that meets the needs of all community members.

2.3 Public Toilet Plan

The City does not have a formal Public Toilet Plan and there are currently no established national guidelines specifying required distances between public toilets or number of public toilets required to service specific number of visitors to a public place.

However, other councils, such as the City of Perth and the City of South Perth have both recently developed public toilet strategies and recommendations, which can serve as a valuable reference for this project.

Both abovementioned Councils recommend similar guiding principles:

1. Definition

- City of South Perth:
"The City refers to a public toilet facility as a room or small building owned or maintained by the City of South Perth, containing one or more toilets and possibly also urinals, which is available for use by the general public", (Public Toilet Plan 2020-2035, p.4)
- City of Perth:
"[...]public toilets are facilities which are directly accessible to the public, such as those provided in parks, streets, train and bus stations, public buildings (like libraries), and some retail centres." (Public Toilet Plan 2022-2032, p.6)

2. Proximity

- Public toilets should be easily accessible and located within walking distance of key public spaces, parks, and event venues.
- A general recommendation is to have public toilet spaces approximately 300-800 metres apart, particularly in high foot traffic areas such as the CBD, parks, and event spaces.

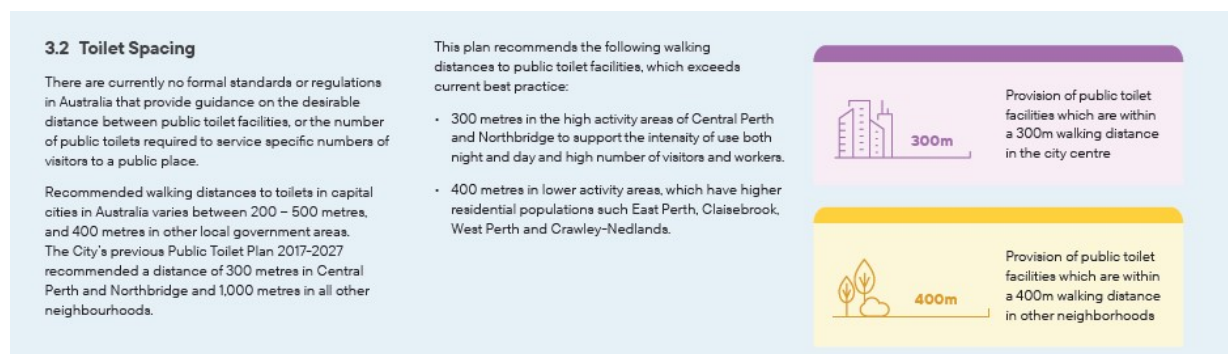


FIGURE 2: TOILET SPACING RECOMMENDATION; (City of Perth: Public Toilet Plan 2022-2032)

3. Accessibility

- Public Toilets should be designed with universal accessibility in mind to ensure inclusion for people with disability and people of diverse gender identity (Gender-Neutral). Both the City of Perth and the City of South Perth reference the [Changing Places](#) program and strongly recommend consideration when developing public toilet facilities.

4. Design

- Security: Toilets should be well-lit, placed in high-visibility areas and follow *safer places by design* guidelines.
- Easy maintenance material and finishes
- Recommendation for sustainable elements such as water-saving features, energy-efficiency and eco-friendly materials.

Note: Development of a Public Toilet Plan has been identified as a key project for Financial Year 26/27 in the City's Council Plan 2025-2035.

Conclusion:

Whilst the Perth CBD differs significantly from the Karratha City Centre in terms of scale and event frequency, the need for accessible public toilets remains essential. Given Karratha's hot climate and the focus on supporting community events, a shorter walking distance to amenities should be considered to ensure comfort, accessibility, and usability for all attendees.

Although not mentioning a specific maximum distance, climate-responsive walking distance to amenities is also recommended in Development WA's Vernacular Document *PV Part 2 – Pilbara Mixed Use Buildings*:

"In the Pilbara, the hot climate reduces the distance people are prepared to walk to access services and facilities."(Pilbara Vernacular, p.23)

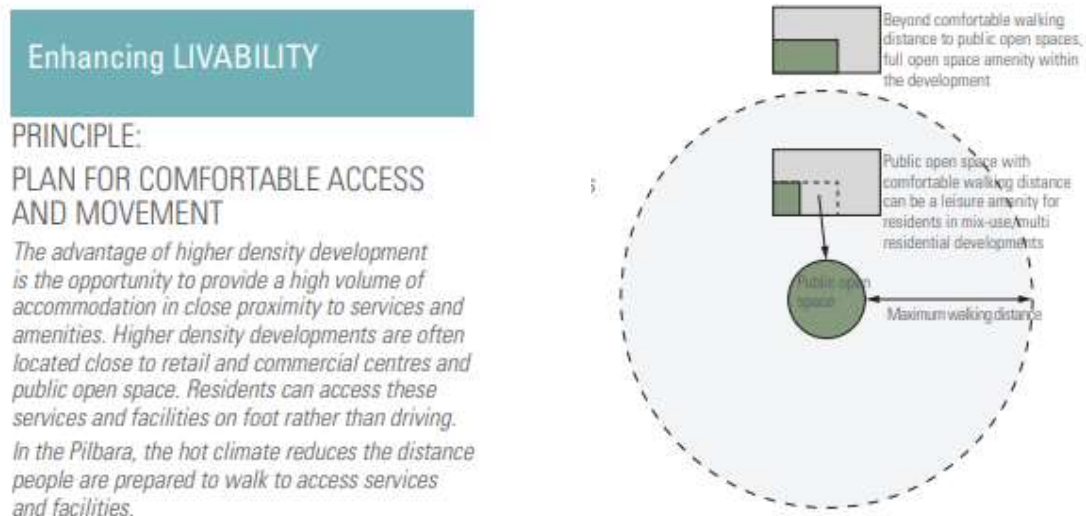


FIGURE 3: MAXIMUM WALKING DISTANCE (DEVELOPMENT WA, PILBARA VERNACULAR)

Whilst accessibility and design considerations are discussed in other sections, for the purpose of this report, the following principles apply:

1. The definition of a public toilet as outlined by the City of South Perth is adopted, i.e. "[...] a public toilet facility is a room or small building owned or maintained by the City of Karratha, containing one or more toilets and possibly also urinals, which is available for use by the general public."
2. A maximum walkable distance of 300 metres from public spaces is used to determine the required spacing and locations.

2.4 Department of Health - Events Guidelines

The *Guidelines for Concerts, Events and Organised Gatherings 2022* prescribes requirements for concerts, events and organised gatherings to ensure that places are safe for patrons, do not disturb neighbouring people and provide uniformity throughout WA.

The guidelines emphasise the importance of providing adequate toilet facilities to prevent queues and maintain hygiene standards. Factors that need to be included are:

- number of attendees;

- the nature of the event;
- the availability of alcohol;
- duration;
- weather; and
- demographic of the attendees.

As a general guide a ratio of 1 toilet to every 100 attendees is recommended. See [Events Guidelines 2022](#) for more details.

Basic Ratio: = 1/100

Capacity	Females	Males			Hand wash basins	
	WCs	WCs	Urinal (m)	Urinals	Male	Female
< 1,000	5	1	1.5	3	2	2
1,001 – 2,000	10	3	3	5	4	4
2,001 – 3,000	15	4	4.5	8	6	6
3,001 – 4,000	20	5	6	10	8	8
4,001 – 5,000	25	6	7.5	13	10	10
5,001 – 6,000	30	8	9	15	12	12
6,001 – 7,000	35	9	10.5	18	14	14
7,001 – 8,000	40	10	12	20	16	16
8,001 – 9,000	45	11	13.5	23	18	18
9,001 – 10,000	50	13	15	25	20	20

FIGURE 4: TOILET TO ATTENDEE RATIO, (EVENTS GUIDELINES 2022, P.143)

3 Needs Analysis

3.1 Community Benefit / Impact

Implementation of a new public toilet amenity aims to deliver multiple primary and secondary benefits to the community. These benefits are:

Primary:

- Enhanced convenience and hygiene for visitors to the City Centre.
- Increased accessibility for individuals with disabilities.
- Contribution to the overall activation and vibrancy of the City Centre.

Secondary:

- Improvement in local business satisfaction and visitor experiences.
- Support for community events by providing necessary amenities.

3.2 Events

Feedback was sought from the Community Events Team regarding current use of the Quarter open space for community events:

- Approximately **5 to 6 community events** are held in the space per year of which 2-3 are smaller events held on the grassed area and 2-3 are larger events which include road

closures to sections (opposite Quarter) of Sharpe Avenue and Warambie Road.

- FY25/26 Quarter events calendar as at May 2025 includes:

Date	Event
01.11.2025	Halloween at the Quarter
21.03.2026	Harmony Week Celebration
07.06.2026	Bark in the Park

Due to the limited number of events it is not realistic to provide an amenity that caters to the maximum expected attendance.

- Whilst not all patrons will be at the venue at the same time, on average a total of **800 people** attend smaller events, whereas larger events will attract **1500-2000 patrons**.
- Events held in the space are generally family orientated and cater for children and caregivers.
- Event planning ensures clear signage, good lighting, clear pathways and accessible toilet facilities.
 - o Depending on the size of the event between **2-6 portable toilets** are hired, which includes one accessible toilet.
- One (1) accessible and two (2) unisex portable toilets were placed at the quarter for the 2025 Red Earth Art Festival (REAF).



FIGURE 5: PORTABLE TOILETS PLACED AT THE QUARTER FOR RED EARTH ART FESTIVAL
(2 UNISEX, 1 ACCESSIBLE TOILET)

Note: Feedback for events held at Walgu Park has not been sought since the adjoining precinct comprises public amenities.

3.3 General Use

The proposed public toilet prioritises general use over specific event utilisation and because of this, it is difficult to determine the appropriate number of units to provide.

The National Construction Code (NCC) has a Sanitary Facilities Calculator to assist in calculating the required number of sanitary facilities for building projects. It cannot be reliably used in this instance due to the event space having no building classification, (NCC 2022 Volume One Sanitary Facilities Calculator, [Calculators | ABCB](#)).

A detailed foot traffic survey and analysis of patron attendance patterns across times of the day and year would be required to accurately inform the exact needs requirements of a public toilet amenity, however, does not form part of this report or scope.

3.4 Comparable Public Open Spaces – Mardalup Park East Perth

The City of Perth has recently released a Concept Design for a public toilet facility at Mardalup Park in East Perth, featuring two unisex toilets and one unisex accessible toilet (UAT). The location shares similarities with the proposed site at the City's Quarter open space.

Both locations are centrally positioned within mixed-use environments, surrounded by residential and commercial properties. Mardalup Park, with its playground and proximity to community space, reflects the Quarter lawn's role as a public events space in the town centre. These shared characteristics suggest similar patterns in public use, including regular visits from families, workers and tourists.



FIGURE 6: MARDALUP PARK CONCEPT DESIGN

3.5 Conclusion

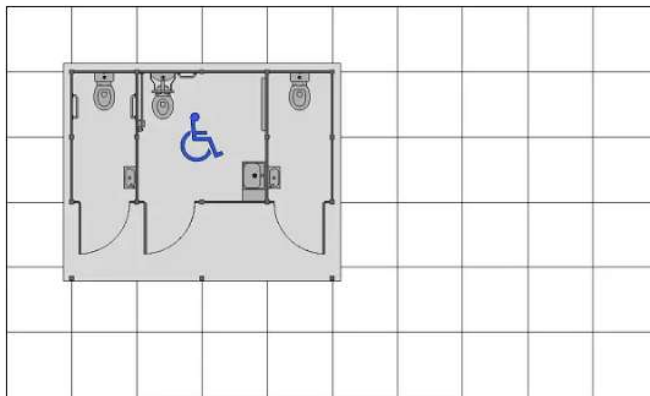
Based on the above assessment, a facility comprising two unisex toilets and one UAT is recommended for the Quarter open space. This configuration ensures functionality and accessibility whilst minimising visual impact on the surrounding public open space.

While the proposed facility will not sufficiently support large-scale events, it will supplement existing facilities, alleviate pressure on nearby businesses and contribute to the overall usability and appeal of the Quarter open space.

4 Design

4.1 Layout and size

Space requirements are calculated based on dimensions of a standard Modus Australia floorplan for two (2) ambulant toilets, one (1) Universal Access toilet, a services access and one Changing Places toilet. Overall footprint of proposed typology including Changing Places is estimated to be 37-40sqm (10m x 3.7-4.0m).



Standard 3 Floorplan

- 2 Ambulant Toilet
- 1 Universal Access Toilet
- 4800mm x 2400mm

[Make an Enquiry](#)

FIGURE 7: MODUS PREFAB - STANDARD TYPOLOGY FLOORPLAN



Changing Places Toilet Option 1B Floorplan

- 3700mm x 3600mm
- Prefabricated Kit-Form Building
- 1 Changing Place Restroom Facility
- 1 toilet including back rest, grab rails
- 1 Adjustable height change table with disposable cover
- Automatic door with secure entry

[Make an Enquiry](#)

FIGURE 8: MODUS PREFAB - CHANGING PLACES FLOORPLAN EXCLUDING SHOWER

4.2 Materials, fixtures and fittings

Preferred fixtures and fittings should be confirmed with Building Maintenance and Sanitation prior to procurement. A standard suite of materials and fixtures has been identified for reference below:

- Sanitary bins – wall chute preferred
- General waste bin (as required)
- Sharps containers – wall chute preferred
- Stainless steel seats
- Soap dispenser – vandal proof metal dispenser
- Hand dryer (as required)

- Mirror – polished stainless steel
- Non-slip floor – tiled or concrete
- Toilet paper – vandal proof metal dispenser
- Wash basin – stainless steel
- Baby change (as required)

4.3 Safer Places by Design

The *Safer Places by Design Guidelines* support the creation of well-designed built environments through principles of Crime Prevention Through Environmental Design (CPTED).

Safety of a public space is determined by ability to provide surveillance, sightlines, legibility and protection from entrapment. Design also plays a key role in encouraging people to use a place and deter offending.

The following principles should inform the design and location of the proposed toilet facility:



FIGURE 9: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES
(CITY OF PERTH PUBLIC TOILET PLAN 2022-2032)

4.5 Inclusion of Art

Due to the central location of the proposed toilet facility, key consideration should be given to the following: exterior finishes, the inclusion of public art or mural, response to place that reflects and enhances the character of the surrounding area.

The following documents are recommended for consideration:

- Pilbara Vernacular [Pilbara Vernacular - Overview - DevelopmentWA - Shaping our State's future;](#)
- Karratha Vernacular [karratha_vernacular_april_2011.pdf;](#)
- Public Art Policy https://intranet.karratha.wa.gov.au/directorate/corporate_services/management/DAO%20Edit%20Only/CS12_Public_Art_Policy.pdf;
- Local Planning Strategy [City of Karratha Local planning strategy;](#)
- City of Perth Public Toilet Plan [City of Perth Public Toilet Plan 2022-2032.pdf;](#)

5 Site Analysis

5.1 Visual Audit

A visual audit of current CBD facilities was undertaken to gain an understanding of locality of existing public toilets in relation to the main CBD events spaces, Walgu Park and the Quarter open space. Refer to Figure 10 on the next page for location map. The blue hatch denotes City owned spaces and developments, while the green hatch denotes City vested spaces and reserves.

As identified in Chapter 2.3:

- a maximum walkable distance of 300 metres from public spaces is used to determine the required spacing and locations; and
- a public toilet facility is defined as a room or small building owned or maintained by the City of Karratha.

Utilising the [National Public Toilet Map](#) and local knowledge and resources, the only publicly accessible toilet facilities located within the 300-metre radius from either Public Space are:

- **Karratha City Shopping Centre:** Operated by third-party management, this facility has limited opening hours and its accessibility and availability are therefore constrained.
- **Red Earth Arts Precinct:** Purpose built events facility with City managed toilet facilities including accessible toilets. It is affected by its limited opening hours and ad-hoc events timing.

Another public toilet at **BP Karratha** is situated marginally outside the defined area (400m). This facility does not include accessible toilets and is not managed by the City. Furthermore, it lacks the amenity and presentation expected of a facility serving a central space.

Although there are other existing toilet facilities within 300m of the Quarter events space, they are located within private businesses such as restaurants and cafes (e.g., Lo's, Stadium, Fiorita, Dessy O'Dowds, Milky Lane, etc.). These facilities are not intended for public use and are unsuitable for everyday community needs or accommodating increased demand during public events.

The Quarter HQ, which houses several State Government Departments and operates as a commercial facility, also does **not** provide any public accessible toilets.

Further, the Quarter public open space is in close proximity to residential and hotel infrastructure making it an attractive space for residents and visitors, whereas Walgu Park is surrounded by businesses and shops

Conclusion:

There is a City-managed public toilet within the recommended 300-metre radius from the REAP.

There is currently no City-managed public toilet within the 300-metre radius of the Quarter public space which highlights a gap in City Centre infrastructure particularly during public events.

Therefore, an options analysis was conducted within the 300m radius of the Quarter event space as the preferred amenity location.

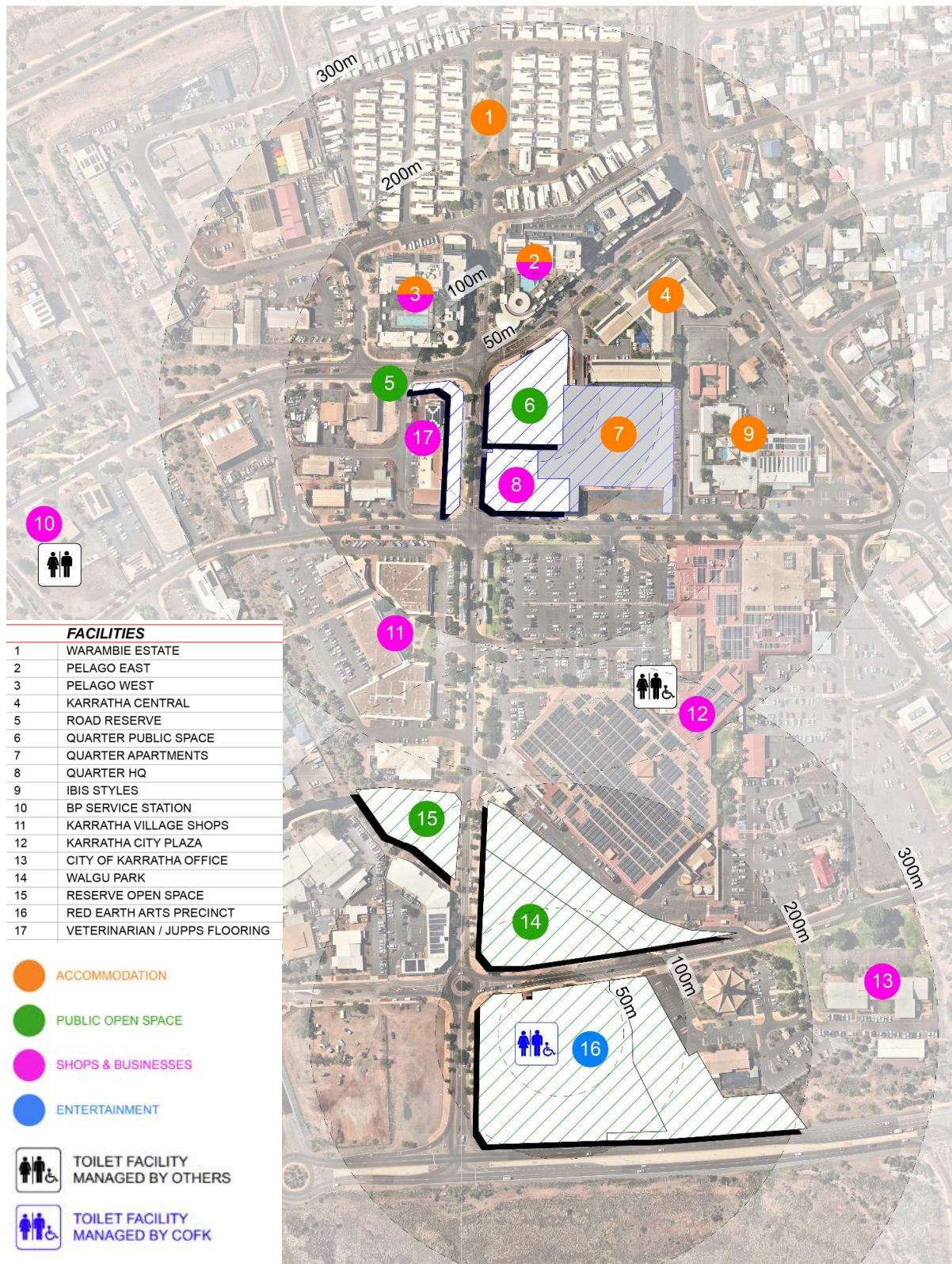


FIGURE 10: LOCATION MAP KARRATHA CITY CENTRE

6 Options Analysis

There are three Government owned lots suitable for placement of a public toilet facility within the identified 300m radius, (see Figure 11):

Lot 7080 – The Quarter HQ, a commercial building complex with a mix of offices, restaurants and shops. Building and land are currently owned by the City of Karratha. Upper levels are occupied by commercial clients including State Government Departments. The Ground floor houses restaurants, cafes and shops with several retail bays vacant or having never been leased.

Lot 7078 - Lawn Space to the north of the Quarter. The lawn space has previously been earmarked for hotel development, and it is currently utilised as a public space for the community. Review of the *Kimberley/ Pilbara/ Gascoyne Joint Development Assessment Panel Agenda* identified that only a portion of Lot 7078 is subject to site development (refer orange outline in Figure 11). The agenda stipulates that the portion outside the of the hotel development site is to remain as a public park and the footpath across the site is also to remain.

Road Reserve - Grassed area to the West of Sharpe Avenue. It forms part of the streetscape, lawn space and access to established businesses.

A visual assessment identified five potential locations across the three lots that were further investigated for site services and existing infrastructure. The white outline in Figure 11 indicates the footprint and impact of the toilet facility within the proposed locations (approx. 40 sqm).



FIGURE 11: LOCATION MAP

6.1 Site Services

A Before You Dig Australia (BYDA) request was submitted in April 2025, providing information on the location of existing services and their proximity to the proposed toilet facility. For clarity, services are displayed individually in Figures below. Location of the public toilet amenity is indicatively represented by the smaller white rectangle, which could be relocated anywhere within the larger white area.

Note: Investigations into geology, topography, heritage and environment did not form part of this report. It is recommended that an Aboriginal Cultural Heritage request be submitted for final selected location.

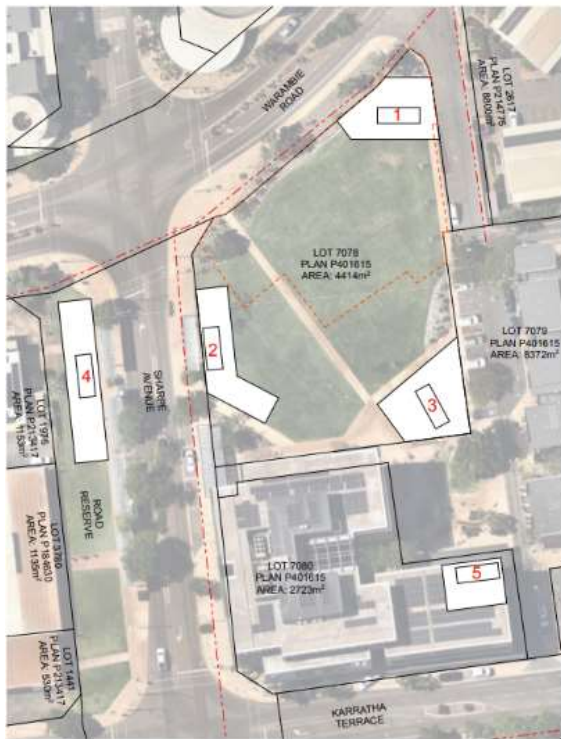


FIGURE 12 ELECTRICAL

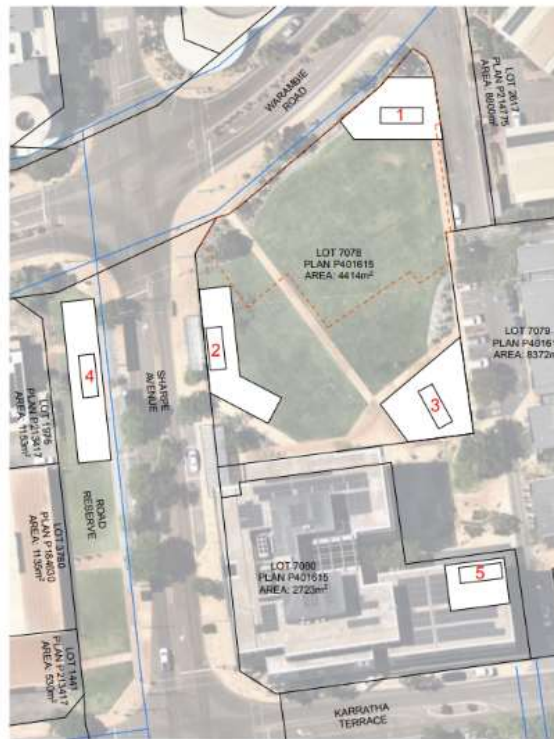


FIGURE 13: WATER

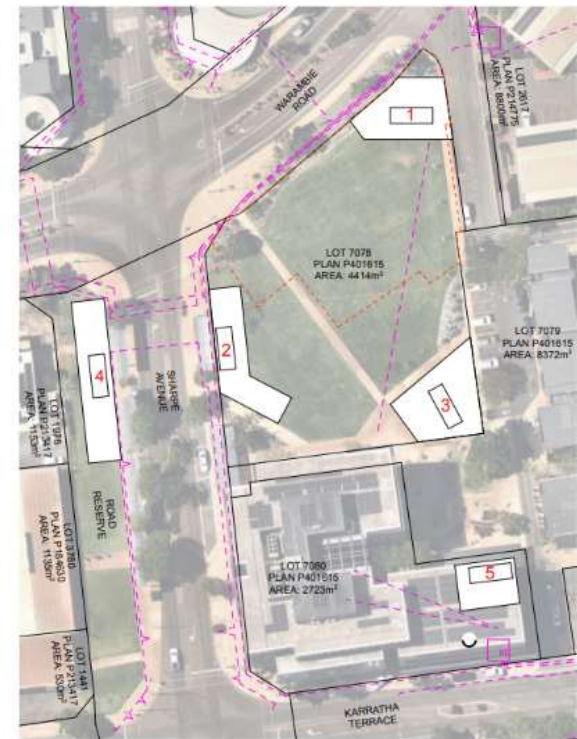


FIGURE 14: SEWER

6.2 Existing Infrastructure

The site was assessed based on *Safer Places by Design* principles and existing built form i.e.:

- Accessibility: Proximity to parking and disabled parking, road crossings.
- Surveillance: Visibility from surrounding businesses and streets.
- Existing Street Lighting.

Figure 15 illustrates the existing parking space (yellow outline) and locations of existing streetlights (pink circles). There is ample parking space adjacent to location 3, including two disabled parking bays. Whilst there are some parking bays along Sharpe Avenue, none are suitable for disability access.

Figure 16 highlights the visibility of the proposed location, demonstrating opportunities for passive surveillance.

Note: Selecting a site that aligns with existing infrastructure in an already modern, recently developed environment promotes a sustainable approach, minimising the need for alterations and ultimately lowering overall project costs.

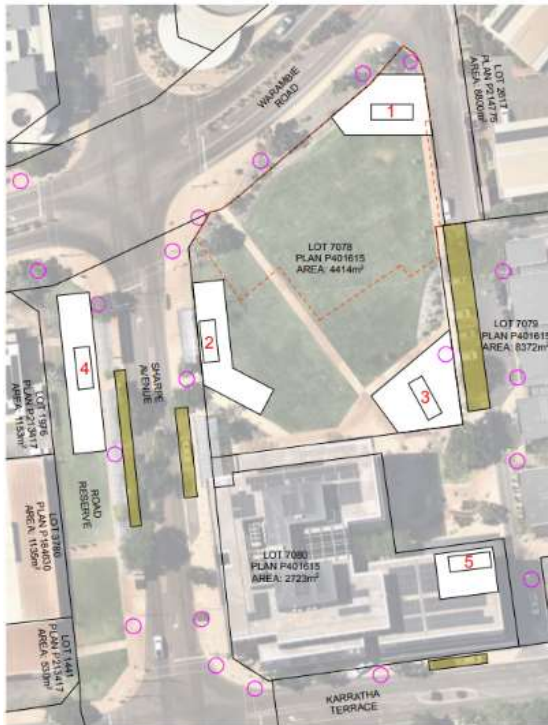


FIGURE 15: STREET LIGHTS AND PARKING

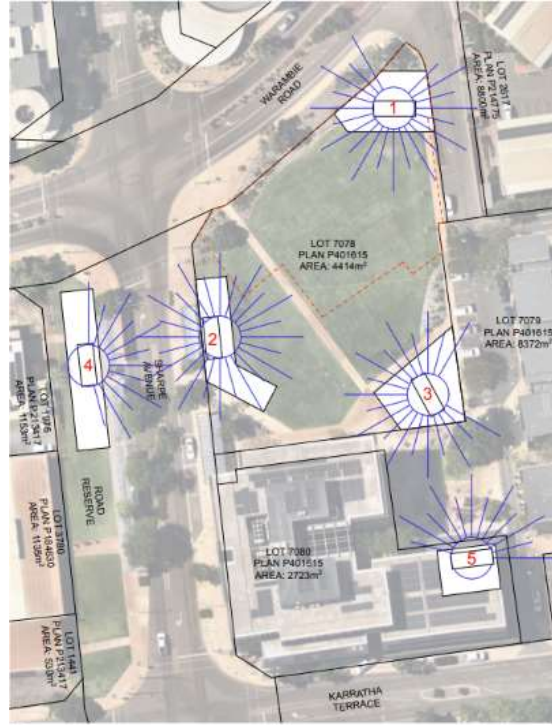


FIGURE 16: VISIBILITY

6.3 Options Assessment

To determine the most suitable location for a public toilet facility an options analysis was conducted. Parameters were identified through research and site analysis and then compared through a pairwise matrix to gain weightings in accordance with levels of importance. Each site was then scored against these parameters in a range from 1-3 with 3 being the highest score and 1 being the lowest. Location options were ultimately ranked in accordance with their score with 1 being the most favourable outcome.

The assessment identified the top three most suitable location, Option 1, 2 and 3, for a toilet facility to be on Lot 7078, the lawn space to the north of the Quarter as shown in Table 1 below.

Subsequent options (4 and 5) scored last, mainly due to lack of existing infrastructure such as street lighting, safety concerns and financial implication due to distance to services and major alterations to existing layout required.

A detailed Assessment is outlined in Appendix A.

Table 1: Feasibility Assessment and Parameters

ASSESSMENT	Option 1	Option 2	Option 3
Description	NE Corner of Quarter (Warambie Rd)	West side Quarter (Sharpe Ave)	SE Corner Quarter (Adjacent Lo's)
Land Ownership	2	3	3
Distance to services (Water, Sewer, Electricity)	3	1	1
Pedestrian Access / Safety	3	3	3
Parking	2	2	3
Impact to businesses and residences	3	3	1
Requires altering existing design / layout	3	3	2
Existing street lighting	2	3	3
Purpose of Space	3	3	3
TOTAL (Weighted Score)	2.59	2.58	2.47
RANK	1	2	3

LEGEND	3	2	1
Land Ownership	Qty - No development planned	Qty - Development planned within 5 years	Owned by others
Distance to services (Water, Sewer, Electricity)	All within 10m	1+ service connection +10m but no crossings	1+ service connection +10m and crossings
Pedestrian Access / Safety	Direct access and within view at all times	Direct access but not within view at all times.	Access requires crossing road or road closure.
Parking	More than 10 bays and 1+ disabled bay within 30m	3-10 parking bays and no disabled parking within 30m	Less than 3 bays or requires road crossing
Impact to businesses and residences	No Impact	Impact on 1-2 businesses	Impact on 3+ businesses
Requires altering existing design / layout	No or minor alterations (garden)	Moderate alterations (Linemarking/footpaths)	Major alterations (shade structures, buildings)
Existing street lighting	3+ light poles within 20m	1-2 light poles within 20m	No existing lighting
Purpose of Space	Event Space	Open Space	Commercial / Business Space

6.4 Conclusion

Based on the criteria matrix results, Option 1 is the most suitable location for a public toilet facility. Option 2 and 3 are both viable alternatives should land use changes occur in Option 1. An Opinion of Probable Cost (OPC) under Chapter 7 determines the most favourable financial outcome.

Option 1

- Highest overall score
- Excellent pedestrian access and visibility
- Minimal impact on nearby businesses
- Requires only minor design alterations
- In closest proximity to services

Options 2 and 3

- Scoring nearly equal to Option 1
- Good surveillance, and existing infrastructure (lighting and CCTV)
- Moderate design alterations required
- Longer distance to services
- Outside proposed hotel development site.

7 Financials

7.1 Funding Opportunities

7.1.1 Changing Places

In line with the Council Plan (2025-2035) and the Disability Access Inclusion Plan (2024-2029) a funding opportunity has been identified to incorporate a **Changing Places Facility (CPF)** in this project. The funding program Commonwealth Accessible Australia initiative is governed by the Federal Department of Social Services (DSS). Whilst the primary goal is to deliver a publicly accessible amenity to the CBD area, enhance the town centre and support event spaces, the inclusion of a CPF has been considered to improve accessibility outcomes for the broader community.

To assess suitability, feedback was sought from the Community Development team regarding conditions, site constraints, and funding eligibility. A summary of the feedback is provided below:

Background

- There are currently no existing CPFs in the City of Karratha
- Initial discussions considered the inclusion of both an adult change facility and toilet.
- The CBD has been identified as a suitable location for general, overall access, e.g. access to general business, REAF, City run events, other events.
- **CPFs are locked and require a Master Locksmiths Access Key (MLAK), which is needs-tested and ordered online. No access to general public.**
- One CPF is better than none. Eligible persons will travel within the City of Karratha to access the facility; does not need to be within walking distance. Providing a facility also extends to increased tourist attraction for the City of Karratha.
- Current lack of CPF in Karratha creates significant barriers for residents with high-care needs, limiting participation in social and recreational activities.

Site Selection

- Must be close to accessible parking, (or with adequate space to incorporate accessible parking).
- Nationally, CPFs are often located near leisure centres, aquatic facilities, foreshore areas, and water play zones due to their versatility in providing amenities for these activities.
- Other potential locations identified within the City include the Dampier Foreshore and surrounds, Karratha Leisureplex (KLP), Red Earth Art Precinct (Walgu Park), and Point Samson Beach.
- There is no limit on the number of CPFs per local government area; funding is not population-dependent.
- Space Limitations - Smallest CPF design (1A) without a shower measures 3.2m x 3.86m (internal).

Fixed vs Mobile Facility

- A **fixed facility** is the preferred option. It allows inclusion on national CPF maps, increasing visibility and accessibility for residents and tourists with high-support needs.

- A **mobile facility** is a secondary option and may be suitable for activation of events or locations such as the Roebourne Races and other activation of the Eastern Corridor.
- Mobile facilities require specialist equipment for delivery and are not suitable for permanent integration. They are also generally less visually appealing.

Funding

Fixed Facility:

- Up to 50% funding available for CPF components only.
- Funding does NOT cover adjacent standard male/female/unisex toilets.
- CPF component must be managed as a separate project.
- LGAs with *Inclusive Beaches* may qualify for up to 100% funding (according to Modus Website).
- Modus, a registered CPF supplier, can assist with costing and project separation.
- Accreditation: Changing Places Assessor to review proposed facility at multiple stages of the project.

Mobile Facility:

- Requirements as listed above, however eligible for up to 100% funding.

Timeline

- Commencement of Construction within 12 months from grant
- Completion of Construction within 18 months
- Accreditation requirements apply.

Conclusion

The viability of installing a Changing Places Facility (CPF) in the CBD will depend heavily on both budget constraints and available space. While the CBD presents a strategic location aligned with accessibility and activation goals, further investigation is needed to determine whether a more suitable site elsewhere in the City of Karratha should take priority e.g. Point Samson beach where 100% funding for inclusive beach location may be possible. Regardless of the final location, a fixed facility should be strongly considered to ensure long-term benefits and improved inclusion for residents and visitors.

7.1.2 Public Amenity Facilities

Currently, there are no opportunities for funding by grant organisations for public amenity facilities. This is largely due to their focus on disability access and inclusion as evident in the Changing Places program.

7.1.3 Public Art

External funding opportunities are available from the Department of Creative Industries, Tourism and Sport (DCITS) through their *Arts Projects for Organisations* funding program. Between \$5,000 and \$80,000 is available and the funding round opens August 2025, with a closing date in September 2025.

Alternatively, internal funding for integrated public art could be drawn from relevant Capital Works budgets, as outlined in the City's Public Art Policy.

Note: Development of a Public Art Strategy and Masterplan has been identified as a key project in the City's Council Plan 2025-2035 for financial year 26/27.

7.1.4 Public Toilet Works Program

The provision of public toilets is an essential service that supports access to diverse activities and promotes a liveable, sustainable, and hygienic environment. Bayside, a local government in Victoria has developed a Public Toilet Strategy to expand and improve amenities across the City. Similarly, the City of Karratha could develop a Public Toilets Works Program. Internal funding for Public Toilet facilities could then be incorporated in the annual budget over the next 10 years that may reflect focus and commitment to the wider community.

13. Program of capital works		
To deliver the strategic objectives outlined in this Strategy, the following program of capital works program is proposed.		
Priority (or timeframe)	Capital project	Estimated costs
2024/25	Renewal of Brighton Beach Southern Terrace public toilet (TOI31) The existing toilet block will be replaced with a new facility in the same location, including 6-8 standard, ambulant, and accessible cubicles. A new outdoor shower and drinking fountain shall also be provided.	\$700,000
2025/26	Renewal of Balcombe Road carpark public toilet (TOI12) The existing toilet block will be replaced with a new facility in the same location, including a mix of ambulant and accessible cubicles.	\$350,000
2026/27	Renewal of Beaumaris Concourse public toilet (TOI09) The existing toilet block will be replaced with a new facility in the same location, including an ambulant and accessible cubicle.	\$450,000
2027/28	Replacement of Ricketts Point Bluestone Foreshore toilet (TOI36) The existing toilet block will be replaced with a new facility in the same location, including a mix of standard, ambulant, and accessible cubicles.	\$450,000
2025-2028	Public Toilets – Minor Works and Accessibility Improvement – additional budget provided to Council's public toilet minor works program for improving accessibility	\$75,000 per year

*subject to budget approval

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FIGURE 17: BAYSIDE PUBLIC TOILET STRATEGY – CAPITAL WORKS PROGRAM

7.2 Cost Considerations

7.2.1 Construction Cost

An internal Opinion of Probable Cost (OPC) has been developed for each proposed location as outlined in table 2, below. The costs are based on a cost estimate supplied by Modus Australia June 2025 for the supply and installation of a prefabricated toilet block and assumes all construction to be completed in the same year. It includes Region D material loading (10%), allowances for external works and site services, a construction contingency (10%), project management costs (10%), a regional loading factor (65%), and does not include GST.

The OPC does not factor in an architectural design, which would increase the total cost by approximately \$50,000. Refer to Appendix B for a detailed breakdown.

Table 2: Capital build estimate summary

Location	Cost Toilet Block (2 unused, 1 UAT)		Changing Places	Total	Score
Option 1	\$	400,595.00	\$ 462,000.00	\$ 862,595.00	9.00
Option 2	\$	360,526.25	\$ 462,000.00	\$ 822,526.25	10.00
Option 3	\$	381,045.00	\$ 462,000.00	\$ 843,045.00	9.46
Option 4	\$	444,835.63	\$ 462,000.00	\$ 906,835.63	8.10
Option 5	\$	464,346.88	\$ 462,000.00	\$ 926,346.88	7.76

Relative cost scoring has been applied to the five options with 10 being the highest score and providing the most cost-effective outcome.

While Option 2 received the highest score, indicating it is the most cost-effective solution, it is worth noting that the financial impact of selecting Option 1 or 3 is relatively minor. Option 1 would result in an additional cost of approximately \$40,000, and Option 3 would incur an extra \$20,000, suggesting that both can be viable alternatives if they offer other benefits that justify the slightly higher expenditure.

Note: At this early stage of the project, the OPC delivers a rough order of magnitude, estimated to have an accuracy of +/- 40%, where detailed investigations into ground conditions and designs have not yet been undertaken. As such, the costs contained within the OPC should be used to guide an initial budget that must be refined as the project progresses.

7.2.2 Operational, Maintenance and Lifecycle Cost

When constructing a capital project like a public amenity facility, there are ongoing costs associated with operating and maintaining the building. In line with other similar projects, consideration has been given to recurrent maintenance, servicing and cleaning, utility costs and insurances, and capital renewal. It is estimated that the cost of providing this facility does not outweigh the positive impact it would have to the community and is therefore recommended to proceed with construction of such an amenity.

As the lifecycle cost is not impacted by any of the proposed locations, it has not been included in the OPC for clarity.

Note: The estimated cost to run this facility over a 20-year life cycle is \$38,500 per year.

7.2.3 Conclusion

Based on OPC, Options 1 to 3 all represent cost-effective locations for construction of a toilet facility compared to Options 4 and 5. This is due to minimal modifications to existing infrastructure required, adequate existing lighting, and trenching requirements only across softscapes (no trenching under road required). Final site selection should be based on factors identified in the site analysis

Note: Inclusion of a Changing Places facility would result in a substantial cost overrun, exceeding the allocated budget limit of \$410,000.

8 Recommendation and next steps

It has been established that placement of a toilet facility on Lot 7078 would provide the most favourable outcome. Based on the options analysis and Opinion of Probable Cost it is recommended that a toilet facility will be placed in the location of Option 3. This location is preferred over option 2 due to better parking availability and distance from the main streets already built infrastructure. It is also recommended over Option 1 as it offers a more cost-effective outcome and avoids potential impacts to future development of the site. Furthermore, Option 3 is the preferred location for portable toilets during events, keeping consistency with existing events planning and layouts.

The following considerations are recommended prior to procuring design or design & construct:

- It is recommended that long term future ownership of Lot 7078 be determined initially.
- Subject to the lot being owned by the City for the foreseeable future this report should be shared with town planning to ensure alignment with overall vision for the space.
- To be determined whether a Changing Places facility is to be included in this project. Whilst there is adequate space available for placement of such a facility, inclusion of this component would result in significant budget implications.
- Consider requesting feedback from disability groups for suitability of proposed locations on Lot 7078 (next meeting October 2025).
- Given the significance of the location, the budget for this project should be reviewed with consideration for procuring an architectural design only to ensure construction of a visually appealing facility and opportunity to community for design review at Concept stage.
- Consultation with Communities for inclusion of art (e.g. mural) and method of art procurement.

9 References

- Bayside Public Toilet Strategy [Attachment 1 - Bayside Public Toilet Strategy.PDF](#)
- Changing Places Program [Changing Places](#)
- City of Karratha Council Plan (2025-2035) [city of karratha council plan 2025-2035.pdf](#)
- City of Perth Public Toilet Plan (2022-2032) [City of Perth Public Toilet Plan 2022-2032.pdf](#)
- City of South Perth - Public Toilet Plan (2020-2035) [Microsoft Word - Public Toilet Plan-FINAL.docx](#)
- Disability Access and Inclusion Plan (2024-2029) [disability access and inclusion plan 2024-29.pdf](#)
- Event Guidelines 2022 [Events Guidelines 2022](#)
- Kimberley/ Pilbara/ Gascoyne Joint Development Assessment Panel Agenda 17 September 2019 [20190917 - Agenda - No 24 - City of Karratha](#)
- Mardalup Park Public Toilet – Concept Design - [New Mardalup Park Public Toilet - Concept Design | New Mardalup Park public toilet | Engage Perth](#)
- National Public Toilet Map [National Public Toilet Map](#)
- Pilbara Vernacular [Pilbara Vernacular - Overview - DevelopmentWA - Shaping our State's future](#)
- City of Karratha Public Art Policy [https://intranet.karratha.wa.gov.au/directorate/corporate_services/management/DAO%20Edit%20Only/CS12 Public Art Policy.pdf](https://intranet.karratha.wa.gov.au/directorate/corporate_services/management/DAO%20Edit%20Only/CS12%20Public%20Art%20Policy.pdf)
- Safer Places by Design Guidelines [safer-places-by-design-cpted-guidelines.pdf](#)

10 Appendices

- A. Feasibility Assessment
- B. Opinion of Probable Cost
- C. Lifecycle Cost
- D. Site Photos
- E. Quarter Ground floor plans

Appendix A

CBD TOILET BLOCK - Feasibility Assessment

ASSESSMENT	Option 1	Option 2	Option 3	Option 4	Option 5
Description	NE Corner of Quarter (Warambie Rd)	West side Quarter (Sharpe Ave)	SE Corner Quarter (Adjacent Lo's)	Road Reserve West Side (Sharpe Ave)	Quarter Vacant Space (Internal)
Land Ownership	2	3	3	3	2
Distance to services (Water, Sewer, Electricity)	3	1	1	2	1
Pedestrian Access / Safety	3	3	3	1	2
Parking	2	2	3	1	2
Impact to businesses and residences	3	3	1	2	3
Requires altering existing design / layout	3	3	2	2	1
Existing street lighting	2	3	3	2	1
Purpose of Space	3	3	3	2	1
TOTAL (Weighted Score)	2.59	2.58	2.47	1.99	1.58
RANK	1	2	3	4	5

LEGEND	3	2	1	Weighting	Comment
Land Ownership	City - No development planned	City - Development planned within 5 years	Owned by others	27%	Significant reputational impact if land is sold/ facility is removed. Significant financial impact if facility is to be demolished/ relocated.
Distance to services (Water, Sewer, Electricity)	All within 10m	1+ service connection +10m but no crossings	1+ service connection +10m and crossings	17%	Significant financial impact if extensive trenching/ trenching under road is required
Pedestrian Access / Safety	Direct access and within view at all times	Direct access but not within view at all times.	Access requires crossing road or road closure.	19%	Safety concern particularly for families with young children
Parking	More than 10 bays and 1+ disabled bay within 30m	3-10 parking bays and no disabled parking within 30m	Less than 3 bays or requires road crossing	9%	Significant financial impact if no existing parking, financial impact if no existing disabled parking
Impact to businesses and residences	No Impact	Impact on 1-2 businesses	Impact on 3+ businesses	1%	Minor implication
Requires altering existing design / layout	No or minor alterations (garden beds)	Moderate alterations (Linemarking/footpaths)	Major alterations (shade structures, buildings)	17%	Significant financial impact if removal or modification of existing built infrastructure required.
Existing street lighting	3+ light poles within 20m	1-2 light poles within 20m	No existing lighting	6%	Surveillance, security concern
Purpose of Space	Event Space	Open Space	Commercial / Business Space	5%	Minor implication

100%

Appendix A

ASSESSMENT		Option 1	Option 2	Option 3	Option 4	Option 5
Description		NE Corner of Quarter (Warambie Rd)	West side Quarter (Sharpe Ave)	SE Corner Quarter (Adjacent Lo's)	Road Reserve West Side (Sharpe Ave)	Quarter Vacant Space (Internal)
Land Ownership	Score	2	3	3	3	2
	Description	Site earmarked for development as per hotel outline in Location Map				1. May not be owned by the City long term 2. Potential loss of revenue by using vacant commercial space estimated at \$350-500 per m2 if leased.
Distance to services (Water, Sewer, Electricity)	Score	3	1	1	2	1
	Description		sewer and electricity available, water requires trenching under road	electricity available, water and sewer unknown as private land	depending on location, sewer may need further trenching.	existing facilities, extra work required to retrofit
Pedestrian Access / Safety	Score	3	3	3	1	2
	Description				Road Crossing required	not within view at all times
Parking	Score	2	2	3	1	2
	Description	3-10 parking bays but no disabled parking	3-10 parking bays but no disabled parking	2 disabled parking bays and additional standard parking	Less than 3 parking bays or road crossing required. Building of disabled parking bay would require significant modification to existing infrastructure.	closest parking 30m, however good access
Impact to businesses and residences	Score	3	3	1	2	3
	Description			Impact to restaurant (Lo's), impact to to residential units at strata property.	Impact to Veterinary clinic	
Requires altering existing design / layout	Score	3	3	2	2	1
	Description			trenching under footpath required	trenching under road required, alteration to car park space required, alteration to footpath required	Major alteration to existing built structure required
Existing street lighting	Score	2	3	3	2	1
	Description	2 lights within 20m			2 lights within 20m	No existing street lighting
Purpose of Space	Score	3	3	3	2	1
	Description				Road reserve, Open space	Commercial/ business space

Pairwise - Appendix A

	1	2	3	4	5	6	7	8	9
	Land Ownership	Distance to services (Water, Sewer, Electricity)	Pedestrian Access / Safety	Parking	Impact to businesses and residences	Requires altering existing design / layout	Existing street lighting	Purpose of Space	Calculated Weight
A Land Ownership		More	More	More	More	Same	Much More	Same	27%
B Distance to services (Water, Sewer, Electricity)			Same	Same	More	Less	More	More	17%
C Pedestrian Access / Safety				More	More	Same	More	More	19%
D Parking					More	Less	Same	Same	9%
E Impact to businesses and residences						Much Less	Much Less	Less	1%
F Requires altering existing design / layout							Much More	Same	17%
G Existing street lighting								Less	6%
H Purpose of Space									5%

100.0%

Note: Compare columns against rows, e.g.
(A) Land Ownership has more/less/same importance as
(2) Distance to services

		1	2	3	4	5	6	7	8	9		
		Land Ownership	Distance to services (Water, Sewer, Electricity)	Pedestrian Access / Safety	Parking	Impact to businesses and residences	Requires altering existing design / layout	Existing street lighting	Purpose of Space			
A	Land Ownership		5	5	5	5	2	8	2	32.00	27%	
B	Distance to services (Water, Sewer, Electricity)	0.2		2	2	5	0.5	5	5	19.70	17%	
C	Pedestrian Access / Safety	0.2	0.5		5	5	2	5	5	22.70	19%	
D	Parking	0.2	0.5	0.2		5	0.5	2	2	10.40	9%	
E	Impact to businesses and residences	0.2	0.2	0.2	0.2		0.2	0.2	0.5	1.70	1%	
F	Requires altering existing design / layout	0.5	2	0.5	2	5		8	2	20.00	17%	
G	Existing street lighting	0.125	0.2	0.2	0.5	5	0.125		0.5	6.65	6%	
H	Purpose of Space	0.5	0.2	0.2	0.5	2	0.5	2		5.90	5%	
										119.05	100%	

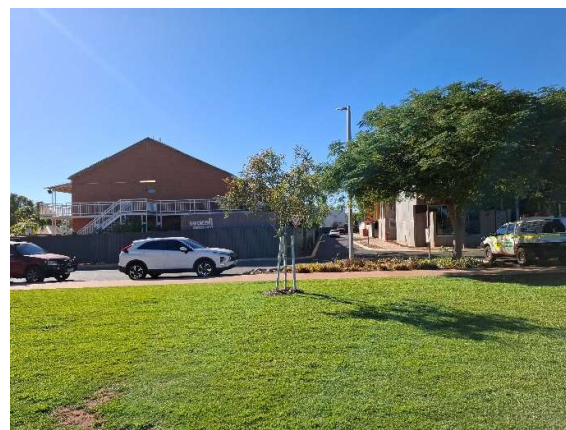
=Much More Important	=More Important	The =Same		=Less Important	=Much Less Important
8	5	2		0.500	0.200

Appendix B: Opinion of Probable Cost																					
Opinion of Probable Cost		Option 1				Option 2				Option 3				Option 4				Option 5			
	NE Corner of Quarter (Warambie Rd)				West side Quarter (Sharpe Ave)				SE Corner Quarter (Adjacent Lo's)				Road Reserve West Side (Sharpe Ave)				Quarter Vacant Space (Internal)				
	Quantity	Unit	Rate (\$)	Total (\$)	Quantity	Unit	Rate (\$)	Total (\$)	Quantity	Unit	Rate (\$)	Total (\$)	Quantity	Unit	Rate (\$)	Total (\$)	Quantity	Unit	Rate (\$)	Total (\$)	
1 Toilet Block - 2 unisex, 1 UAT (Design and Construct)																					
1.01 Supply	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	
1.02 Region D Material Loading	10%	sum	\$ 55,000.00	\$ 5,500.00	10%	sum	\$ 55,000.00	\$ 5,500.00	10%	sum	\$ 55,000.00	\$ 5,500.00	10%	sum	\$ 55,000.00	\$ 5,500.00	10%	sum	\$ 55,000.00	\$ 5,500.00	
1.03 Install	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	1	sum	\$ 55,000.00	\$ 55,000.00	
TOTAL BUILDING COST				\$ 115,500.00				\$ 115,500.00				\$ 115,500.00				\$ 115,500.00				\$ 115,500.00	
2 External Works & Landscaping																					
2.01 Allowance for Site Clearing	40	m2	\$ 10.00	\$ 400.00	40	m2	\$ 10.00	\$ 400.00	40	m2	\$ 10.00	\$ 400.00	40	m2	\$ 10.00	\$ 400.00	0	m2	\$ 10.00	\$ -	
2.02 Allowance for demolition of structures/ pavement	10	m2	\$ 200.00	\$ 2,000.00	10	m2	\$ 200.00	\$ 2,000.00	10	m2	\$ 200.00	\$ 2,000.00	0	m2	\$ 200.00	\$ -	20	m2	\$ 1,000.00	\$ 20,000.00	
2.03 Allowance for ground/ earthworks	40	m2	\$ 100.00	\$ 4,000.00	40	m2	\$ 100.00	\$ 4,000.00	40	m2	\$ 100.00	\$ 4,000.00	40	m2	\$ 100.00	\$ 4,000.00	0	m2	\$ 100.00	\$ -	
2.04 Allowance for car parking modification (if applicable)	1	P.Sum	\$ 10,000.00	\$ 10,000.00	0	sum	\$ 10,000.00	\$ -	0	sum	\$ 10,000.00	\$ -	2	sum	\$ 10,000.00	\$ 20,000.00	0	sum	\$ 10,000.00	\$ -	
2.05 Allowance for hard and soft landscaping, remediation	10	m2	\$ 250.00	\$ 2,500.00	10	sum	\$ 250.00	\$ 2,500.00	10	sum	\$ 250.00	\$ 2,500.00	20	sum	\$ 250.00	\$ 5,000.00	20	sum	\$ 350.00	\$ 7,000.00	
2.06 Allowance for fitment; bins, seats, furniture	1	P.Sum	\$ 11,500.00	\$ 11,500.00	1	sum	\$ 11,500.00	\$ 11,500.00	1	sum	\$ 11,500.00	\$ 11,500.00	1	sum	\$ 11,500.00	\$ 11,500.00	1	sum	\$ 11,500.00	\$ 11,500.00	
2.07 Allowance for signage	1	P.Sum	\$ 5,000.00	\$ 5,000.00	1	P.Sum	\$ 5,000.00	\$ 5,000.00	1	P.Sum	\$ 5,000.00	\$ 5,000.00	1	P.Sum	\$ 5,000.00	\$ 5,000.00	1	P.Sum	\$ 5,000.00	\$ 5,000.00	
2.08 Allowance for main Contractor Preliminaries and Margins	10%	sum	\$ 35,400.00	\$ 3,540.00	10%	sum	\$ 25,400.00	\$ 2,540.00	10%	sum	\$ 25,400.00	\$ 2,540.00	10%	sum	\$ 45,900.00	\$ 4,590.00	10%	sum	\$ 43,500.00	\$ 4,350.00	
External Works & Landscaping Total				\$ 38,940.00				\$ 27,940.00				\$ 27,940.00				\$ 50,490.00				\$ 47,850.00	
3 Site Services																					
3.01 Allowance for service trench to building	10	linear metre	\$ 600.00	\$ 6,000.00	20	linear metre	\$ 600.00	\$ 12,000.00	30	linear metre	\$ 600.00	\$ 18,000.00	20	linear metre	\$ 600.00	\$ 12,000.00	10	linear metre	\$ 2,000.00	\$ 20,000.00	
3.02 Allowance for service infrastructure to building	10	linear metre	\$ 300.00	\$ 3,000.00	20	linear metre	\$ 300.00	\$ 6,000.00	30	linear metre	\$ 300.00	\$ 9,000.00	20	linear metre	\$ 300.00	\$ 6,000.00	10	linear metre	\$ 1,000.00	\$ 10,000.00	
3.03 Allowance for Carpark/Street Lighting	1	P. Sum	\$ 20,000.00	\$ 20,000.00	0	P. Sum	\$ 20,000.00	\$ -	0	P. Sum	\$ 20,000.00	\$ -	1	P. Sum	\$ 20,000.00	\$ 20,000.00	1	P. Sum	\$ 20,000.00	\$ 20,000.00	
3.04 Allowance for CCTV	1	sum	\$ 1,000.00	\$ 1,000.00	1	sum	\$ 5,000.00	\$ 5,000.00	1	sum	\$ 5,000.00	\$ 5,000.00	1	sum	\$ 1,000.00	\$ 1,000.00	sum		\$ 1,000.00	\$ -	
3.05 Allowance for Main Contractors Prelimiaries and Margins	10%	Sum	\$ 30,000.00	\$ 3,000.00	10%	Sum	\$ 23,000.00	\$ 2,300.00	10%	Sum	\$ 32,000.00	\$ 3,200.00	10%	Sum	\$ 39,000.00	\$ 3,900.00	10%	Sum	\$ 50,000.00	\$ 5,000.00	
External Services Sub Total				\$ 33,000.00				\$ 25,300.00				\$ 35,200.00				\$ 42,900.00				\$ 55,000.00	
TOTAL CONSTRUCTION COSTS (Perth)				\$ 187,440.00				\$ 168,740.00				\$ 178,640.00				\$ 208,890.00				\$ 218,350.00	
Regional Loading Factor	65%	sum	\$ 187,440.00	\$ 121,836.00	65%	sum	\$ 168,740.00	\$ 109,681.00	65%	sum	\$ 178,640.00	\$ 116,116.00	65%	sum	\$ 208,890.00	\$ 135,778.50	65%	sum	\$ 218,350.00	\$ 141,927.50	
TOTAL CONSTRUCTION COSTS (Karratha)				\$ 309,276.00				\$ 278,421.00				\$ 294,756.00				\$ 344,668.50				\$ 360,277.50	
4 On-Costs																					
4.01 Construction Contingency	10%	sum	\$ 309,276.00	\$ 30,927.60	10%	sum	\$ 278,421.00	\$ 27,842.10	10%	sum	\$ 294,756.00	\$ 29,475.60	10%	sum	\$ 344,668.50	\$ 34,466.85	10%	sum	\$ 360,277.50	\$ 36,027.75	
4.02 Statutory Charges	1	sum	\$ 3,000.00	\$ 3,000.00	1	sum	\$ 1,500.00	\$ 1,500.00	1	sum	\$ 1,600.00	\$ 1,600.00	1	sum	\$ 3,000.00	\$ 3,000.00	1	sum	\$ 3,000.00	\$ 3,000.00	
4.03 Building Act Compliance	1	sum	\$ 1,000.00	\$ 1,000.00	1	sum	\$ 1,000.00	\$ 1,000.00	1	sum	\$ 1,000.00	\$ 1,000.00	1	sum	\$ 1,000.00	\$ 1,000.00	1	sum	\$ 1,000.00	\$ 1,000.00	
4.04 Public Art Installation	5.00%	P. Sum	\$ 309,276.00	\$ 15,463.80	5.00%	P. Sum	\$ 278,421.00	\$ 13,921.05	5.00%	P. Sum	\$ 294,756.00	\$ 14,737.80	5.00%	P. Sum	\$ 344,668.50	\$ 17,233.43	5.00%	P. Sum	\$ 360,277.50	\$ 18,013.88	
4.05 Service connection	1	P.Sum	\$ 10,000.00	\$ 10,000.00	1	P. Sum	\$ 10,000.00	\$ 10,000.00	1	P. Sum	\$ 10,000.00	\$ 10,000.00	1	P. Sum	\$ 10,000.00	\$ 10,000.00	1	P. Sum	\$ 10,000.00	\$ 10,000.00	
4.06 Other Costs				\$ -				\$ -				\$ -				\$ -				\$ -	
4.07 Professional Fees	20%	sum		\$ -	20%	sum		\$ -	20%	sum		\$ -	20%	sum		\$ -	20%	sum		\$ -	
On-Costs Sub Total				\$ 60,391.40				\$ 54,263.15				\$ 56,813.40				\$ 65,700.28				\$ 68,041.63	
GROSS PROJECT COST				\$ 369,667.40				\$ 332,684.15				\$ 351,569.40				\$ 410,368.78				\$ 428,319.13	
5 Escalation																					
5.01 Base date of pricing - 30.06.2025				\$ -				\$ -				\$ -				\$ -				\$ -	
5.02 Allowance for escalation to start on site	%			\$ -				\$ -				\$ -				\$ -				\$ -	
Escalation Sub Total				\$ -				\$ -				\$ -				\$ -				\$ -	
6 Local Authority Management Costs																					
6.01 Project Management Costs	10%	sum	\$ 309,276.00	\$ 30,927.60	10%	sum	\$ 278,421.00	\$ 27,842.10	10%	sum	\$ 294,756.00	\$ 29,475.60	10%	sum	\$ 344,668.50	\$ 34,466.85	10%	sum	\$ 360,277.50	\$ 36,027.75	
6.02 Total Local Authority Costs	sum			\$ -				\$ -				\$ -				\$ -				\$ -	
Total Local Authority Costs				\$ 30,927.60				\$ 27,842.10				\$ 29,475.60				\$ 34,466.85				\$ 36,027.75	
ESTIMATED GROSS PROJECT (COMMITMENT) TOTAL COST				\$ 400,595.00				\$ 360,526.25				\$ 381,045.00				\$ 444,835.63				\$ 464,346.88	
7 Changing Place Facility																					
7.01 Supply	1	sum	\$ 170,000.00	\$ 170,000.00	1	sum	\$ 170,000.00	\$ 170,000.00	1	sum	\$ 170,000.00	\$ 170,000.00	1	sum	\$ 170,000.00	\$ 170,000.00	1	sum	\$ 170,000.00	\$ 170,000.00	
7.02 Install	1	sum	\$ 110,000.00	\$ 110,000.00	1	sum	\$ 110,000.00	\$ 110,000.00	1	sum	\$ 110,000.00	\$ 110,000.00	1	sum	\$ 110,000.00	\$ 110,000.00	1	sum	\$ 110,000.00	\$ 110,000.00	
7.03 Regional Loading Factor	65%	sum	\$ 280,000.00	\$ 182,000.00	65%	sum	\$ 280,000.00	\$ 182,000.00	65%	sum	\$ 280,000.00	\$ 182,000.00	65%	sum	\$ 280,000.00	\$ 182,000.00	65%	sum	\$ 280,000.00	\$ 182,000.00	
Total Changing Places				\$ 462,000.00				\$ 462,000.00				\$ 462,000.00				\$ 462,000.00				\$ 462,000.00	
ESTIMATED GROSS PROJECT (COMMITMENT) TOTAL COST INCLUDING CHANGING PLACES				\$ 862,595.00				\$ 822,526.25				\$ 843,045.00				\$ 906,835.63				\$ 926,346.88	
\$ 360,526.25			Score	9.00				10.00				9.46				8.10				7.76	
			Variance	1.00				0.00				0.54				1.90				2.24	

CBD Public Toilet - Lifecycle Costs LCC ANALYSIS PLAN

Cost Generating Activities	Capital or Operating	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Life Cycle Phases																						
Maintenance																						
Spare parts and consumables	Op		250	275	303	333	366	403	443	487	536	589	648	713	785	863	949	1044	1149	1264	1390	1529
Equipment and facilities	Op		500	550	605	666	732	805	886	974	1072	1179	1297	1427	1569	1726	1899	2089	2297	2527	2780	3058
Routine maintenance	Op		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Major programmed maintenance	Op											40000										52000
Unscheduled maintenance	Op		5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Total		0	6750	6825	6907.5	6998.25	7098.075	7207.8825	7328.67075	7461.537825	7607.691608	47768.46077	7945.306845	8139.83753	8353.821283	8589.203411	8848.123752	9132.936127	9446.22974	9790.852714	10169.93799	62586.93178 \$ 254,956.25
Support services																						
Disassembly, recycling or safe disposal	Op																					40000
Administrative overheads	Op		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Insurance	Op		1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Cleaning	Op		15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600	15600
Utilities and fees	Op		6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500
Total		0	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	23700	63700 \$ 514,000.00
Total Operating Costs		\$0	\$30,450	\$30,525	\$30,608	\$30,698	\$30,798	\$30,908	\$31,029	\$31,162	\$31,308	\$71,468	\$31,645	\$31,840	\$32,054	\$32,289	\$32,548	\$32,833	\$33,146	\$33,491	\$33,870	\$126,287 \$ 768,956.25

Option 1



Above: Corner Warambie Rd and
Barlow Lane – ENE facing

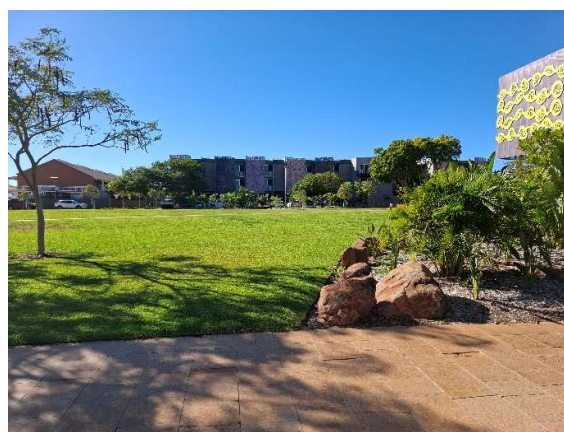
Right: Warambie Road – North facing



Option 2

Right: Sharpe Avenue – West facing

Below: Sharpe Avenue – East Facing



Option 3



Above: Barlow Lane – East facing

Right: Barlow Lane – North and South Facing

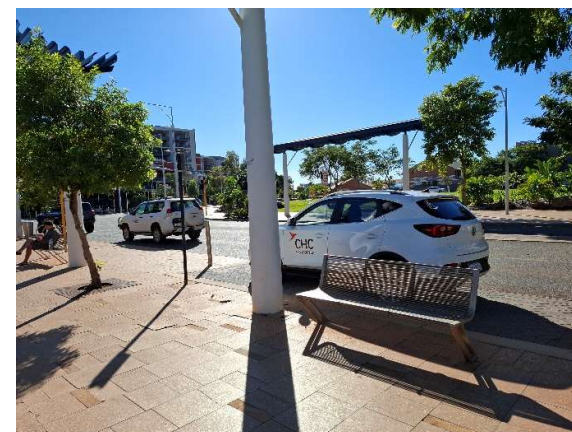


Option 4



Above: Sharpe Avenue – West Facing

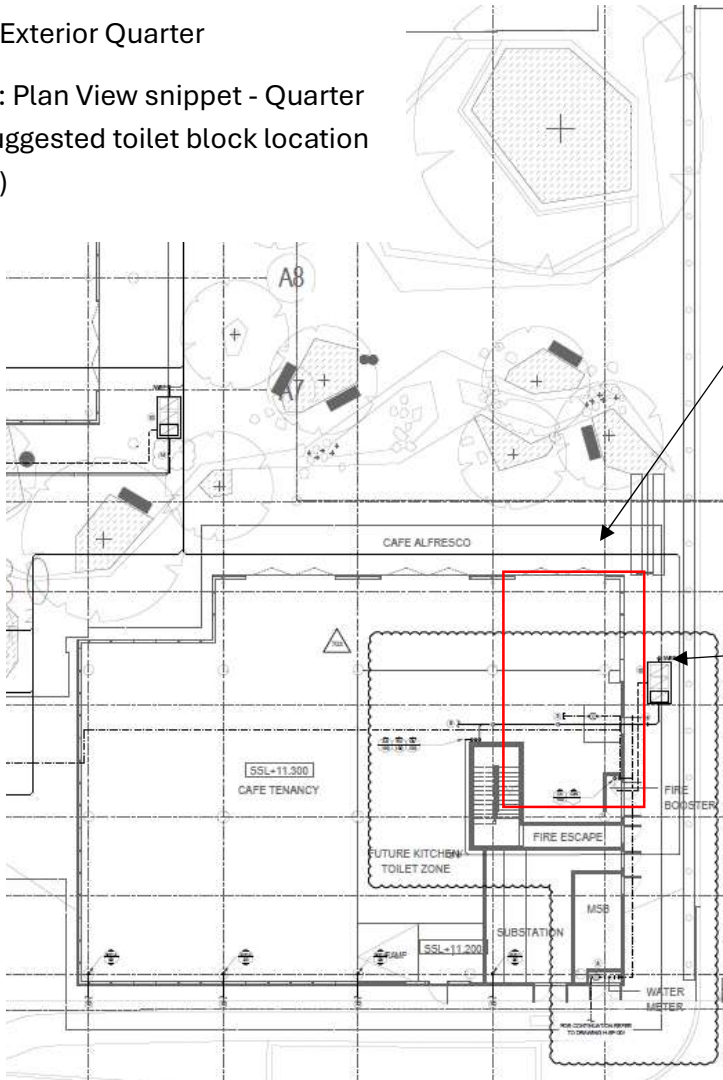
Right: Sharp Avenue South and north east facing.



Option 5

Right: Exterior Quarter

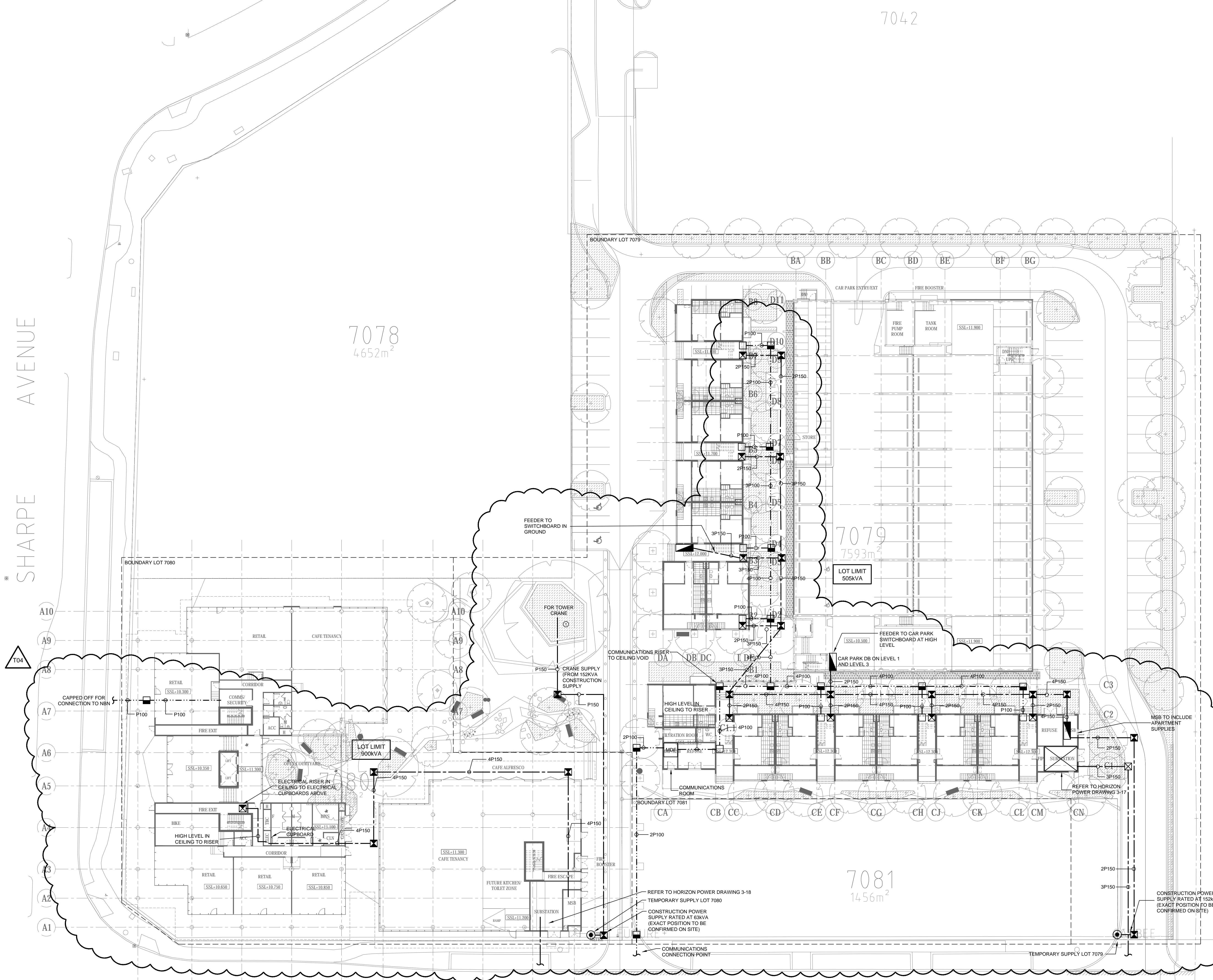
Below: Plan View snippet - Quarter
and suggested toilet block location
(in red)



DESCRIPTION NOTES

○ TEMPORARY SUPPLY TO CRANE LOCATED ON LOT 7079 TO ORIGINATE FROM TEMPORARY SUPPLY ON 7080 AS APPROVED BY HORIZON POWER. EQUIPMENT AND CABLEING TO BE CLEARLY LABELED WITH DETAILS OF POINT OF ISOLATION & POINT OF SUPPLY. ALL CABLEING TO BE DISCONNECTED AND PHYSICALLY REMOVED UPON COMPLETION OF WORKS.

- LEGEND
- COMMUNICATIONS PIT
 - POWER PIT
 - COMMUNICATIONS RISER
 - LV RISER
 - HV PIT (1m x 1m)
 - POWER CONDUIT (SIZE AS INDICATED)
 - COMMUNICATIONS CONDUIT (SIZE AS INDICATED ANNOTATED TO NBN REQUIREMENTS)
 - HORIZON POWER PILLAR



Rev.	Description	Date	Rev.	Description	Date	Rev.	Description	Date	Rev.	Description	Date
T01	ISSUED FOR TENDER	18.03.14									
T02	REISSUED FOR TENDER	10.04.14									
T03	REISSUED FOR TENDER	30.04.14									
T04	REISSUED FOR TENDER	28.05.14									



NDY QA SYSTEM
REASON FOR ISSUE
TENDER
AUTHORISATION
MG : 28 May 2014
VERIFICATION OF
LATEST AMENDMENT
MG : 28 May 2014

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ABN 29 033 234 571

Project: THE QUARTER
KARRATHA
Title: ELECTRICAL SERVICES
SITE SERVICES

Scale: 1:250 @ B1
Date: FEB 2014
Drawn: MA
Designed: DO
Project No: P66947-002E

Set Of
Cod No.
E-SP-01
Drawing No.
T04
E-SP-01

