

Honeysuckle Park Permanent Amenities - Review of Environmental Factors

28 June 2022



Hunter & Central Coast
Development
Corporation



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Prepared by ESS Australia for Hunter and Central Coast Development Corporation

Document controls


Approval and authorisation

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Signed:	
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I, Valentina Misevska, Chief Executive of the Hunter and Central Coast Development Corporation, have examined and considered the Honeysuckle Permanent Amenities Review of Environmental Factors dated 23 June 2022 in accordance with the provisions of s5.5 of the *Environmental Planning and Assessment Act 1979* [and the *State Environmental Planning Policy (Transport and Infrastructure) 2021*, or relevant environmental planning instrument under which the works are permissible] and determine that the proposed development may be carried out as development without consent, subject to compliance with the conditions to manage environmental impacts outlined within the REF.



Signature

21 July 2022
Date

Executive summary

Hunter and Central Coast Development Corporation (HCCDC) has completed construction of the western half of Honeysuckle Park (formerly known as Worth Place Park West) under the dedication framework agreement with City of Newcastle (CN). In accordance with the agreement, the land has transferred to CN as a public open space and recreation area. Over 50 hectares of former industrial and maritime land is being converted to become a centre for entertainment, leisure, tourism, employment and recreation on the edge of Newcastle Harbour.

CN has been consulted continually through the design and development of the Honeysuckle Precinct, with particular attention given to the open space areas. Throughout the consultation process, CN has requested the provision of public toilets within the Honeysuckle Precinct.

The proposal

This proposal is for the construction of a new amenities building containing publicly accessible public toilets within the Honeysuckle foreshore precinct, adjacent to the recently completed the western portion of Honeysuckle Park (the proposal). The proposal is located within the Newcastle local government area (LGA) and supports the overall function of the existing waterfront promenade as part of the CN's open space network.

Need for the proposal

HCCDC has undertaken extensive consultation with CN regarding the design and function of the public open space within the Honeysuckle Precinct. CN has identified the need for public amenities within the open space network connecting along the promenade through to Tree of Knowledge Park. The recently completed Honeysuckle Park recreation area provisioned utilities for future toilets only. Since opening, the park has been well utilised and HCCDC and Council have received numerous enquiries from the public regarding the need of facilities for park users. It is now considered appropriate to locate and construct public toilets within this area of the Honeysuckle Foreshore.

Options considered

The options considered included:

- **Do Nothing** – HCCDC could not provide toilet facilities and the public would need to access other toilets.
- **Alternate Solutions** – a number of alternate locations were considered, with detailed designs progressed for the final options that were presented in the stakeholder consultation.
- **The Proposed Solution** – the construction of a new amenities building containing accessible public toilets in the identified Option 3 location is the preferred proposal.

Statutory and planning framework

Clause 2.73(3)(a)(vi) of State Environmental Planning Policy (Transport and Infrastructure) 2021 permits development on a public reserve under the control of or vested in the council for the purpose of *amenities for people using the reserve, including toilets and change rooms* to be carried out by or on behalf of a public authority without consent.

CN has granted its consent for HCCDC to act as both the proponent of the proposal (i.e. the body proposing to carry out the proposal) and the public authority determining authority. HCCDC must comply with the legal provisions relating to both. This means that HCCDC can both prepare and review any environmental assessment document required under Part 5 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Community and stakeholder consultation

HCCDC have sought feedback since August 2017 on the Honeysuckle West delivery of public spaces including the Public Domain, Cottage Creek, Waterfront Promenade, Honeysuckle Park (formerly Worth Place Park West) and Tree of Knowledge Park.

HCCDC formally consulted with the CN and local residents in accordance with the Transport and Infrastructure SEPP and best practice principles of stakeholder engagement. Details of the community and stakeholder engagement process are contained in **Section 5** of the REF.

In general, local residents' concerns focused on the location of the proposed permanent public toilets and proximity to their place of residence. They were also critical of the lack of forward planning for such facilities within the foreshore precinct.

HCCDC placed the REF on public exhibition for 28 days with submissions considered in **Section 5** of the REF. Further, HCCDC will notify residents, the community and stakeholders of the construction commencement as required.

Environmental impacts

The proposal would have limited environmental impacts during construction as the site was historically a working dockyard, largely being reclaimed land and is now a grassed area forming part of the recreation space. Longer term adverse impacts during operation have been minimised through design and will be managed by the servicing and maintenance of the facility by CN.

Visual impacts

The site has a low, slightly above sea level, height and generally has a level grade. The existing site area includes a wide public foreshore promenade and associated seating, open grass area, tree and mass planting, artworks and a public playground. Several of the existing trees planted along the open space are relatively mature providing a reasonable extent of canopy.

The assessment has concluded that the project and the proposed built forms are consistent with the character of the area and recently constructed structures within Honeysuckle Park. The new amenities building will have a low-moderate accumulative visual impact on the surrounding area, mainly due to the waterfront setting. The proposal has been located to minimise visual impacts on the foreshore land as well as retain security through the design of the central corridor, alignment to ensure doors are visible for the southern promenade and playground, and the overall passive surveillance around the new structure.

Odour impacts

The assessment confirms that there is no odour impact at ground level from the proposed amenities under the normal conditions. It is therefore concluded that the elevated apartments will receive less odour than the ground level due to the dissipation distance. The modelling results have confirmed the current operation will meet the NSW EPA's odour performance criteria.

Noise impacts

Potential noise and vibration impacts on sensitive receivers during construction and operation of the proposal have been assessed. Construction of the structure will occur during standard operating hours and with compact equipment, minimising impacts on sensitive receivers. Operational noise will be consistent with daytime activity along the foreshore and within Honeysuckle Park, with the toilets to be locked of a night. Concerns raised by residents in relation to noise generated from the temporary toilets have informed mitigation measures for the design of the permanent amenities building, including soft closing doors.

Justification and conclusion

The proposal facilitates the ongoing redevelopment and recreational use of what was underutilised land in Honeysuckle and as such is aligned with the key strategies of the Greater Newcastle Metropolitan Plan 2036 (DPE 2018). The *Greater Newcastle Metropolitan Plan 2036* (DPE 2018) also helps to achieve the vision set in the *Hunter Regional Plan 2036* (DPE 2016) for the Hunter to be the leading regional economy in Australia with a vibrant new metropolitan city at its heart. The proposal is consistent with the current land use zoning and long-term vision of CN and HCCDC for the Honeysuckle Precinct.

In accordance with the requirements of Part 5 of the EP&A Act and the EP&A Regulation the proposal has been fully assessed. Based on the assessment of the proposal, the proposal is not likely to significantly affect the environment and therefore does not require the preparation of an Environmental Impact Statement (EIS). In addition, the proposal is not likely to have a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*.

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Appendix A	Consideration of clause 228(2) factors and matters of national environmental significance
Appendix B	Honeysuckle Park Amenities Design
Appendix C	Visual Impact Statement
Appendix D	Odour Impact Statement
Appendix E	Location Options Analysis

1.0 Introduction

Hunter and Central Coast Development Corporation (HCCDC) has completed construction of Honeysuckle Park (formerly Worth Place Park West) recreation area under the dedication framework agreement with City of Newcastle (CN). In accordance with the agreement, the land was transferred to CN as a public open space and recreation area.

CN has been consulted continually through the design and development of the Honeysuckle Precinct, with particular attention given to the open space areas. Throughout the consultation process, CN has requested the provision of public toilets within the Honeysuckle Precinct. HCCDC shall construct a new amenity building within the vicinity of Honeysuckle Park for the benefit of recreational users of the Honeysuckle Foreshore and the broader community.

1.1 Proposal identification

This proposal is for the construction of a new amenities building containing accessible public toilets within the Honeysuckle foreshore precinct, adjacent to the recently completed Honeysuckle Park (the proposal). The proposal area is located within the Newcastle local government area (LGA).

The proposal is described in **Section 3** and the general location is shown in Figure 1-1 and the Proposal area defined by Figure 1-2.



Figure 1-1: Location of the proposal

HCCDC proposes to undertake the following works:

- Establish the area of works and ancillary site;
- Removal of the existing grassed area and associated concrete;
- Construction of two accessible public toilets and connection to required services;
- Complete the site works, remove plant and equipment, and reinstate the site.



Figure 1-2: Proposal area, including ancillary site for parking and storage.

1.2 Purpose of the report

This review of environmental factors (REF) has been prepared by ESS Australia on behalf of HCCDC. For the purposes of these works, HCCDC is the proponent and the determining authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of the REF is to describe the proposal, to document the likely impacts of the proposal on the environment, and to detail protective measures to be implemented.

The description of the proposed work and associated environmental impacts have been undertaken in the context of clause 228 of the *Environmental Planning and Assessment Regulation 2000*, and HCCDC has concluded that the proposal is not likely to have a significant impact on the environment and therefore the necessity for an environmental impact statement is not required.

2.0 Need and options considered

2.1 The need for the proposal

The proposal area is part of the Honeysuckle waterfront promenade. Upon completion of the Honeysuckle Park, both HCCDC and CN received a significant number of public enquiries as to the provision of public toilets in the area.

Providing accessible public toilet facilities are considered necessary to support the recently completed adjacent park and users of the general waterfront promenade. The adjoining recreation area contains barbeques and seating areas, with users potentially staying for extended periods of time. At the time of completion of Honeysuckle Park, only utility provisions for future toilets were constructed. The distance required to travel to use other public amenities is considered unreasonable for families and children, who are frequenting the new recreational area.

HCCDC & CN have identified the need for public toilets to provide improved amenities for the community in this desirable location.

2.2 Alternatives and options considered

The options considered included:

- **Do Nothing** – HCCDC could not provide toilet facilities and the public would need to access other toilets.
- **Alternate Options and/or Locations** – a number of alternate locations were considered at a macro scale (Figure 2-1), however the identified area was the preferred location. Within the identified area, a number of options were identified (Figure 2-2 & Figure 2-3) and stakeholders consulted.
- **The Proposed Solution** – the construction of a new amenities building containing accessible public toilets in the identified Option 3 location is the preferred proposal (Section 3.0).



★ Existing publicly accessible toilet

Figure 2-1: Potential locations across the broader Honeysuckle Precinct considered for the new accessible public toilets.



Figure 2-2: Potential locations within the Honeysuckle Park footprint considered for the new accessible public toilets.

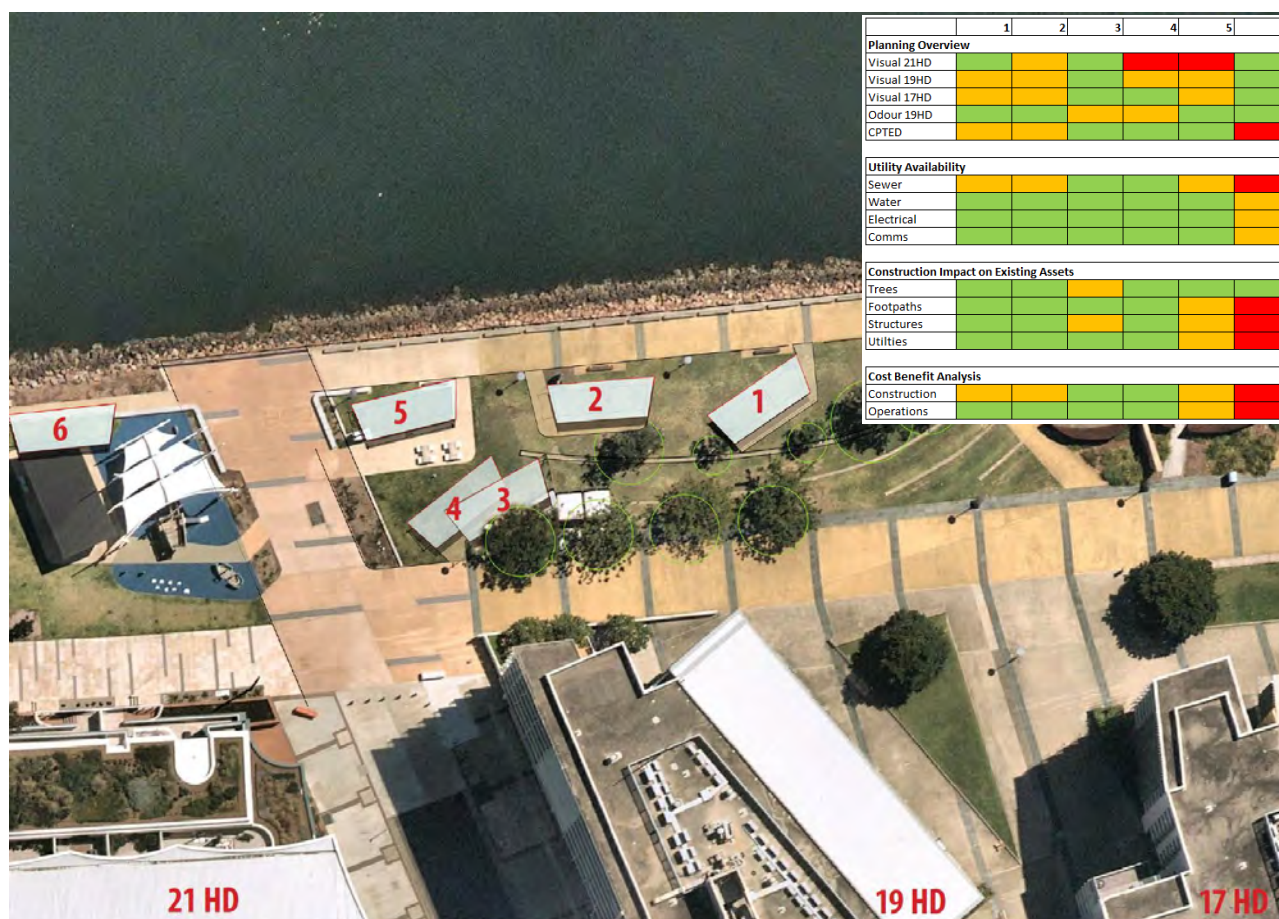


Figure 2-3: Final options considered for the proposed public toilets.

2.3 Analysis of options

The Do Nothing option would not address the need for the proposal and would not fulfill the requirement for public toilet facilities in this location. This option was not progressed.

A number of alternate options and locations were considered, with the key consideration being the proposed location. Within the immediate vicinity of Honeysuckle Park a number of options were

considered (Figure 2.2). Site 3 was excluded as the site is above an underground carparking, with the site unable to be connected to services. Site 2 was assessed, however it is reliant upon the completion of the next stage of promenade and addition issues with connection to services. The area on the vicinity of Site 1 was able to be connected to utilities and services, is within the public domain and is accessible to Honeysuckle Park and the promenade thoroughfare.

Within the area identified as Site 1 six potential locations were identified and used to consult with stakeholders and residents. Council and HCCDC jointly undertook a constraints analysis of the each of the proposed locations. The locations were rated on planning impacts, utility availability, construction feasibility and cost benefit on a sliding scale of good = green, mediocre = orange and poor = red (Appendix E).

Of the six identified locations, location No.3 was identified as the preferred location for the proposal.

3.0 Description of the proposal

3.1 The proposal

This proposal is for the construction of a new amenities building containing accessible public toilets within the Honeysuckle foreshore precinct, adjacent to the recently completed Honeysuckle Park (the proposal). The proposal is located within the Newcastle local government area (LGA) and supports the overall function of adjacent land as part of the CN's open space network. The location is shown in Figure 3-1, with design details shown in Figures 3-2 and 3-3 inclusive.



Figure 3-1: Site location plan showing the proposed location of the public toilet facilities

Key features of the proposal are outlined below.

3.2 Design

The project will see the construction of a small amenities building. The structure has been designed to be consistent with adjoining new shade structure forms along the foreshore. The building contains two equal accessible toilets, with baby change room facilities and an external hand basin and tap.

The built form is angular and finished in a dark grey coloured sheeting which makes it recessive in the surrounding landscape and built environment. A central gap has been created to provide good safety surveillance around and through the building.

The structure has been set partially underneath the existing Cupaniopsis tree plantings that will provide some visual screening, especially when viewed from the upper floor of the adjoining apartments. The structure is offset from the mature trees to not impact adversely on the root zone of the trees.

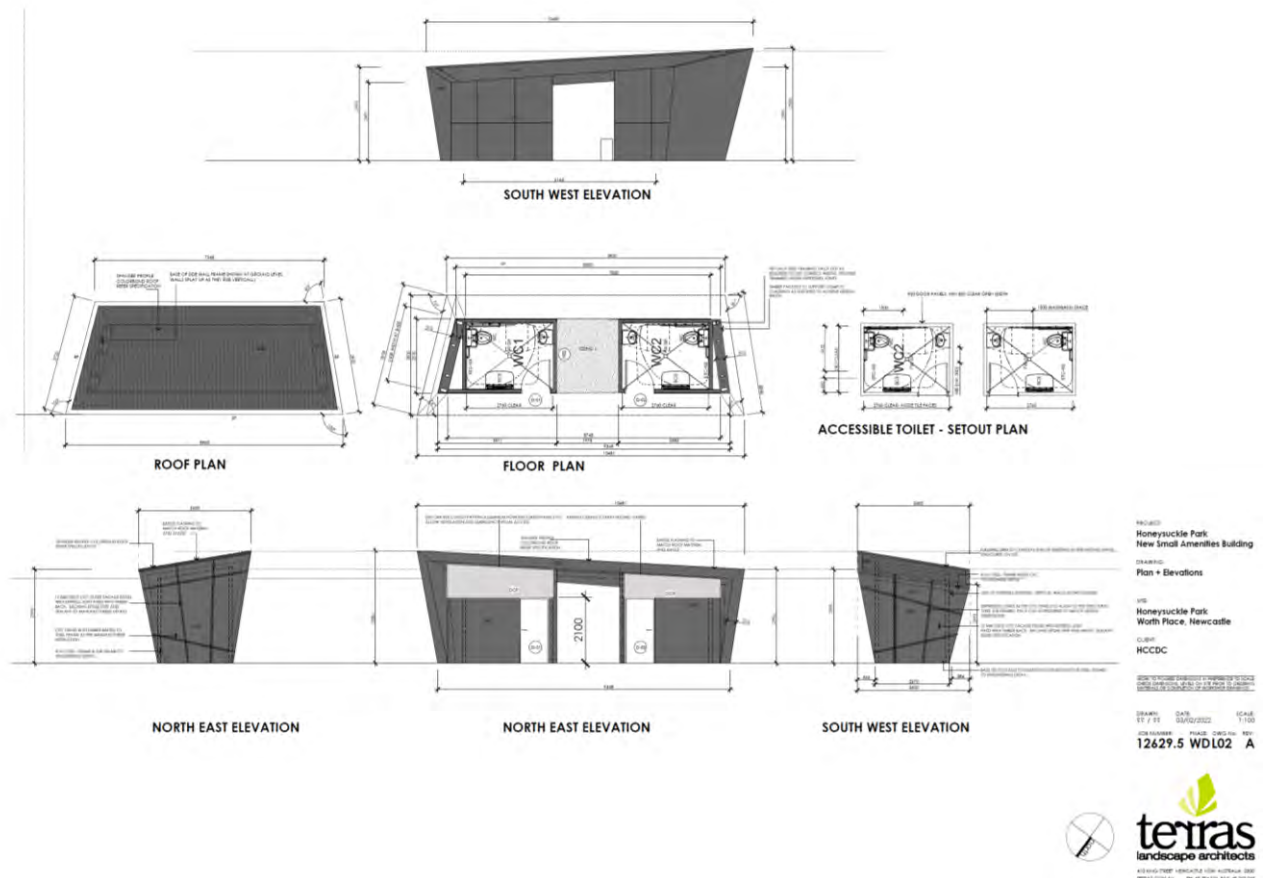


Figure 3-2: Shows the plan and elevations of the new accessible toilet facility



Figure 3-3: A perspective of the new accessible public toilets.

3.3 Construction activities

This section provides a summary of the likely construction methodology, work hours, plant and equipment and associated activities that would be used to construct the proposal. For the purpose of this REF, an indicative construction plan and methodology have been provided. Detailed construction plans, and methods would be confirmed following completion of the detailed design. The actual construction method may vary from the description in this chapter due to factors such as identification of on-site conditions during pre-construction activities, ongoing design refinement and consultation with property owners.

Work Methodology

Construction activities would be guided by a Construction Environmental Management Plan (CEMP) to ensure construction work is carried out to HCCDC specifications within the specified work area. Detailed work methodologies would be identified by the construction contractor and refined to respond to engineering and environmental constraints relevant to the proposal area. The actual construction staging and methods may vary from the description in this chapter due to:

- Ongoing refinement of the detailed design
- Key stakeholder consultation such as with council
- Underground utilities and services location and identification
- On-site conditions identified during pre-construction activities
- Statutory requirements, including any work, health and safety (WH&S) regulations and all conditions of approval issued following determination of the REF.

The typical construction stages and activities for the proposal include:

- Establish temporary fencing and exclusion zone fencing, and clearly demarcate clearing limits
- Install temporary environmental controls including erosion, sediment and water quality controls
- Establish ancillary sites and transport plant and equipment to the site
- Remove existing turf and construct concrete pad, construct amenities structure and install fittings
- Carry out finishing work (this would include completing the required landscaping)
- Remove plant and equipment and reinstate the site (this would include removing temporary fencing, ancillary sites and any other construction controls).

Construction Hours and Duration

The workforce would be expected to only be a small number of personnel at any given time during the construction period. The final number of construction workers would be identified by the construction contractor.

Working hours during the construction phase are likely to be:

- Monday – Friday: 7.00am – 6.00pm
- Saturday: 8.00am – 3.00pm
- Sunday and public holidays: No work.

No night work would be required.

Plant and Equipment

An indicative list of plant and equipment that would typically be required is provided below. Additional equipment would be likely used and would be identified during detailed design by the construction contractor.

- Backhoe
- Concrete pump
- Hand held power tools
- Light vehicles and utility vehicles
- Welder

Traffic Management and Access

Standard traffic management measures would be used to minimise traffic impacts expected during construction. The main impacts will be on pedestrians and/or cyclists, with access from the end of Worth Place to the foreshore to be maintained throughout the construction period. During construction, access to businesses and residential properties would be maintained.

Ancillary Facilities

Construction will require an ancillary area for parking of vehicles and the storage of equipment. Activities in the ancillary area include daytime delivery of equipment or materials, storage and construction parking. Following construction, the ancillary area would be removed, cleared of any rubbish and materials, and returned to the existing condition.

3.4 Public Utility Connections

Utilities are already located close to the footprint of the proposed amenities structure. Connection to utilities will be completed in accordance with the requirements of the service provider.

3.5 Property Acquisition

No property acquisition would be required as part of the proposal. The new public amenities would be handed over to council for management once completed.

4.0 Statutory and planning framework

4.1 Relevant Statutory Plans

Environmental Planning and Assessment Act 1979 (EP&A Act)

Under Section 5.5 of the *EP&A Act*, for the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, HDCCC in its consideration of an activity shall, notwithstanding any other provisions of the *EP&A Act* or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

Other Legislation

Consideration has been given to other legislation, including Water Management Act 2000, Contaminated Land Management Act 1997, Biodiversity Conservation Act 2016, Heritage Act 1977, National Parks and Wildlife Act 1974, Roads Act 1993, Protection of the Environment Operations Act 1997 and Coal Mine Subsidence Compensation Act 2017. However, due to the limited environmental impact of the proposal, no further assessment is required.

4.1.1 State Environmental Planning Policies

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 2.73(3)(a)(vi) of State Environmental Planning Policy (Transport and Infrastructure) 2021 permits development on a public reserve under the control of or vested in the council for the purpose of *amenities for people using the reserve, including toilets and change rooms* to be carried out by or on behalf of a public authority without consent.

As the proposal is for amenities for people using the reserve, including toilets, with baby change room facilities, and is to be carried out by HCCDC within a public reserve it can be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979*. Development consent from council is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not affect land or development regulated by State Environmental Planning Policy No. 14 - Coastal Wetlands, State Environmental Planning Policy No. 26 - Littoral Rainforests, State Environmental Planning Policy (Planning Systems) 2021 or State Environmental Planning Policy (Major Development) 2005.

Part 2.2 of the Transport and Infrastructure SEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. Consultation, including consultation as required by Transport and Infrastructure SEPP (where applicable), is discussed in chapter 5 of this REF.

4.1.2 Local Environmental Planning Policies

Newcastle Local Environmental Plan 2012

The Newcastle Local Environmental Plan 2012 (NLEP) applies to land within the Newcastle LGA. The proposal area is located within the RE1 Public Recreation zone (Figure 4-1).

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.

- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

As discussed in Section 4.1.1 above, the proposal is permitted without the consent of council under Transport and Infrastructure SEPP. Therefore, the consent requirements of the LEP do not apply and the proposal may be determined under Division 5.1 of the EP&A Act. Notwithstanding that the consent requirements of the LEP do not apply, the proposed development is consistent with the objectives of the RE1 zone (above) in that it supports the use of public open space and recreation within the locality.

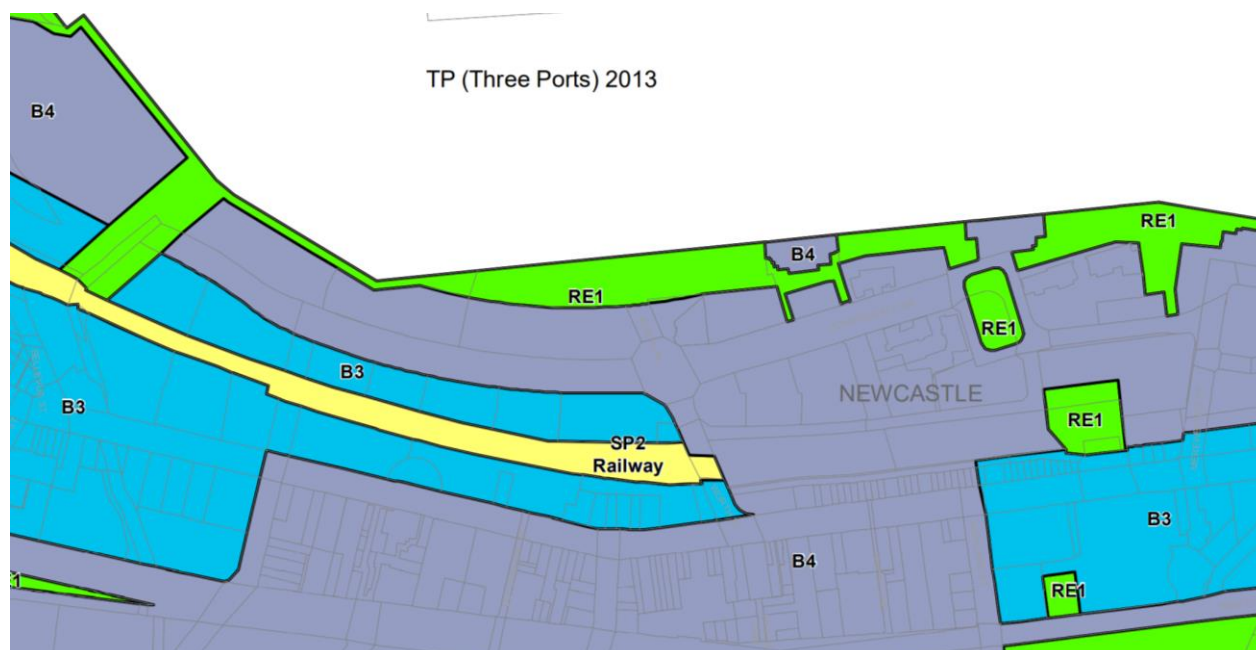


Figure 4-1: Extract from the Newcastle Local Environmental Plan 2012 Land Zoning Map.

4.2 Confirmation of statutory position

The proposal is categorised as development for the purpose of amenities for people using the reserve, including toilets and change rooms and is being carried out by or on behalf of a public authority. Under clause 2.73(3)(a)(vi) of the Transport and Infrastructure SEPP the proposal is permissible without consent. The proposal is not State significant infrastructure or State significant development. The proposal can be assessed under Part 5 of the EP&A Act.

HCCDC is the determining authority for the proposal. This REF fulfils HCCDC's obligation under section 5.5 of the EP&A Act to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the activity.

The description of the proposed work and associated environmental impacts have been undertaken in the context of clause 228 of the *Environmental Planning and Assessment Regulation 2000*, the factors in *Is an EIS Required?* Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979 (*Is an EIS required?* guidelines) (DUAP, 1995/1996), the Threatened Species Conservation Act 1995 (TSC Act), the Fisheries Management Act 1994 (FM Act), and the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

In doing so, the REF helps to fulfil the requirements of:

- Section 5.5 of the *EP&A Act* that HCCDC examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity

The findings of the REF would be considered when assessing:

- Whether the proposal is likely to have a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Part 5.1 of the *EP&A Act*
- The significance of any impact on threatened species as defined by the *Biodiversity Conservation Act 2016* and/or *Fisheries Management Act 1994*, in section 1.7 of the *EP&A Act* and therefore the requirement for a Species Impact Statement
- The significance of any impact on nationally listed biodiversity matters under the EPBC Act, including whether there is a real possibility that the activity may threaten long-term survival of these matters, and whether offsets are required and able to be secured
- The potential for the proposal to significantly impact any other matters of national environmental significance or Commonwealth land and the need, subject to the *EPBC Act* strategic assessment approval, to make a referral to the Australian Government Department of the Environment for a decision by the Commonwealth Minister for the Environment on whether assessment and approval is required under the *EPBC Act*.

5.0 Consultation

5.1 Government agency and stakeholder involvement

Clauses 2.10 to 2.17 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 specify the requirements for consultation with councils and other public authorities for infrastructure development carried out by or on behalf of a public authority. HCCDC has undertaken ongoing consultation with CN regarding the location of the permanent public toilet facilities at the proposed location.

2.10 Consultation with councils—development with impacts on council-related infrastructure or services

Consultation with CN under this clause as the proposed development involves the installation of public amenities on, or the enclosing of, a public place that is under a council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic is not required as the impact is considered minor or inconsequential. No other Government agencies are required to be consulted regarding the proposed development.

2.11 Consultation with councils—development with impacts on local heritage

Consultation with CN under this clause is not required as the proposed development is unlikely to affect the heritage significance or a local heritage item or heritage conservation area.

2.12 Consultation with councils—development with impacts on flood liable land

Consultation with CN under this clause is not required as the proposed development will only change flood patterns to a minor extent due to the size and location of the structure.

2.13 Consultation with State Emergency Service—development with impacts on flood liable land

Consultation with State Emergency Services under this clause is not required as the development is considered to be minor.

2.14 Consultation with councils—development with impacts on certain land within the coastal zone

Consultation with CN under this clause is not required as the site is not within a coastal vulnerability area.

2.15 Consultation with public authorities other than councils

Consultation with other public authorities under this clause is not required the proposed development is not specified development. With respect to clause 16(i) development on land in a mine subsidence district, Subsidence Advisory NSW offers deemed approval for a range of non-masonry structures up to 50sqm in size, with the proposed development considered to be within such parameters.

2.16 Consideration of Planning for Bush Fire Protection

Consultation under this clause is not required as the form of development is not identified within the clause.

2.17 Exceptions

There are no criteria raised within this clause that would trigger exceptions in relation to clauses 2.10-2.15

5.2 Community Engagement

5.2.1 General Public

Since HCCDC completed the Honeysuckle Park and handed over to CN for public use, both HCCDC and CN have fielded a significant number of public enquiries via phone calls, social media posts and emails raising the need for public toilets in the vicinity of the newly opened park and along the waterfront promenade in general.

Both HCCDC and CN has responded to members of the public and users of the park that the provision of public amenities are being assessed and considered.

5.2.2 Local Residents

HCCDC has undertaken consultation with local residents and business owners within the vicinity of the proposal. Three meetings were held on site to discuss the project, proposed locations and justification for the project. CN attended the meetings to discuss Council's perspective and Council's role as the long-term manager of the proposed amenities facility. As an outcome of the consultation process and matters raised, a number of options were considered, and the final location considered to be the preferred option.

A summary of the meetings and issues discussed is included below:

	Comments/Concerns	Responses
Meeting 1 – 31 January 2022	The primary concern for residents is the location of the toilets. They do not want the toilets in front of their apartment building.	The available space to accommodate toilets along the foreshore is limited and HCCDC previously looked at a number of locations within the public domain (Section 2.2)
	Other issues raised by residents: <ul style="list-style-type: none">• odour• graffiti and other vandalism• anti-social behaviour	The permanent toilets will be connected to sewer and no odour impacts are expected. The toilets will be designed in a way that aims to mitigate anti-social activity and satisfy Crime Prevention Through Environmental Design (CPTED).
	Some residents requested the toilet doors not face the apartments.	As a result of this request, the toilet doors will not open out towards the apartments.
Meeting 2 – 25 February 2022	Opposing the location of the proposed toilets on the tiered lawn area near the sculpture, and not wanting them in front of their apartments.	As above, HCCDC and CN have considered a range of options, with the identified area adjacent to the park and playground the preferred location.
	Some residents noted locating the toilets on the tiered lawn area next to the sculpture would destroy the amenity of the artwork.	The final location will not impact on the existing curved concrete artwork.
	Dissatisfaction with lack of planning and foresight, i.e. toilets not included in the Public Domain Plan.	CN acknowledged that earlier planning would have been preferred, however it now is required to address the need for permanent amenities as part of the larger open space area.

	Comments/Concerns	Responses
	Visual impacts, odour, anti-social behaviour.	As above, the design, connection to infrastructure and regular servicing/maintenance are all designed to minimise any associated impacts.
	If the toilets are being constructed to service the playground, then the playground should be moved.	This is not an option that is being considered by HCCDC or CN.
Meeting 3 – 31 March 2022	Again, a key focus from the residents at this meeting was the location, with questions raised included below	
	<i>'Why can't they be put into a nearby building?'</i>	HCCDC indicated the toilets need to be on public land.
	Can the toilets be located in the same spot as the proposed kiosk (as shown in the PDP)?	HCCDC indicated this is a similar location to proposed locations 3 and 4 (shown to attendees at this meeting) (Figure 2-2 within this REF). .
	Why is location 6 not doable? (Figure 2-2 within this REF).	Number 6 was included as an option as it was proposed by the residents. Proposed location 6 is the least favourable option from CN and HCCDC perspective because it has less visibility (relating to CPTED), safety considerations, plumbing considerations and Hunter Water wouldn't approve this location as there are other, more practical locations available. Number 6 will not be the location of the permanent toilet.
	If the toilets are being constructed to service the playground, then why not move the playground?	As stated above, HCCDC and CN indicated this is not a viable option
	Can an existing structure be used to house the toilets? Eg shade structure.	HCCDC indicated existing structures will remain the same.
	Impacts to the existing concrete structure on the tiered lawn.	HCCDC indicated this will not be impacted.
	Some other matters that were raised were concerning impacts on land value from the proposed amenities and residents now suffering due to poor forward planning of facilities	Matters raised regarding land values, compensation and the lack of forward planning were noted.
Meeting 4 – 9 May 2022	Two further meetings were held with residents, one with the strata representative from Lume apartments and one with 19 Honeysuckle Drive representatives	Feedback was noted, however the intention of the meetings were to share information prior to completing and exhibiting the REF.
	The Lume representative indicated the majority of Lume residents would be generally supportive of the preferred location	HCCDC noted the comments provided.

	Comments/Concerns	Responses
	The residents attending from 19 Honeysuckle Drive noted opposition to the preferred location	HCCDC noted the comments provided.

Note: at the conclusion of meeting 3 those in attendance walked down to consider the options proposed (options identified within Figure 2-3). The general consensus of the residents attending meeting 3 was that locations 3 and 4 are best. Figure 5-1 shows the general area for options 3 and 4, with the adopted location being consistent with option 3.

Independent of the meetings, a number of emails were received from residents. Issues raised within the correspondence included:

- Location of the toilets in front of their building;
- Visual/amenity impacts and impacts on views;
- Lack of forward planning for these facilities;
- Alternate locations;
- Compensation/impact on their land values;
- Potential for anti-social behaviour;

Matters raised in the correspondence are consistent with those issues raised during the meetings. The options assessment and final location has taken into consideration these matters.



Figure 5-1: The proposed location of the new accessible toilet facilities as viewed from Honeysuckle Park west near 21 Honeysuckle Drive apartments.

5.3 Public Exhibition

The REF was on public exhibition from Tuesday 17 May to Monday 13 June 2022, with 21 submissions being received. Additionally, a number of comments were made via Facebook, which all also referenced below. The matters raised by the submissions are addressed within the table below. After considering the matters raised through the consultation process, there is no need for any further environmental assessment of the proposal area or amendments to the public amenities design.

Comments/Concerns	Responses
The play area is used a lot and public amenities are warranted in this area.	HCCDC and CN agree that there is a need for amenities in this location.

Comments/Concerns	Responses
The final location of the proposed amenities is not preferred by some residents. Residents have identified Option 6 as their preferred location.	Option 6 was considered and discussed with residents at a number of meetings on site. Option 6 presents a number of issues including connection requirements from HWC and design requirements outlined by CPTED. As a result Option 6 is an impracticable location. The options analysis on the locations has been included in Appendix E.
Support for the public amenities adjacent to Honeysuckle Park and the design will blend in well with existing infrastructure.	Noted.
The location should be reconsidered and issues identified relating to connecting to existing services should be an engineering problem to be solved, not used as an excuse.	As stated above, connection issues and HWC requirements make Option 6 impracticable. The options analysis on the locations has been included in Appendix E.
The current temporary amenities have created an odour issue in the vicinity which is a concern for adjacent residents.	The permanent amenities will not result in the odour and acoustic issued associated with the temporary toilet facilities.
Matters raised during the consultation process in good faith have not been properly considered before plans were finalised.	The matters raised by residents have been considered in determining the final location, orientation and design of the amenities structure. HCCDC have also considered matters relating to the use of the adjoining park and overall foreshore precinct, site constraints and connection requirements for the public amenities.
Concern regarding a lack of consultation with residents over the proposal to locate toilets at Honeysuckle Park.	HCCDC undertook a number of face to face meetings on site, provided information to residents and considered feedback at a number of stages in the design process.
The proposed location of the public amenities will impact on the existing art sculpture and its significance.	The public amenities has been located so as not to impact on the existing art, however it will be located within the vicinity. It is consider that as it is located at the western end of the art sculpture, this will minimise any impact.
Please consider adequate lighting and possible CCTV to reduce anti-social behaviour.	Lighting along the foreshore area, including the recently constructed Honeysuckle Park, is in accordance with Australia Design Standards for open space areas. CN will be the long-term asset owner and manager, and in the future Council may consider upgrades or CCTV if it is deemed necessary.

Comments/Concerns	Responses
<p>There appears to be some inconsistency between the artist renders and site plan in the REF.</p>	<p>Any inconsistency is not intentional, with the purpose of artist renders to provide a visual representation of the final built form. The public amenities structure and location will be constructed in accordance with the construction drawings.</p>
<p>Relevant matters raised within Facebook comments:</p> <ul style="list-style-type: none"> • Much needed. • The design is consistent with BBQ facilities. • Support the orientation of the toilet doors away from the apartments. • Who will be responsible for the cleaning and maintenance of the permanent toilet facilities? • Couldn't the toilets be located in an area nearby and not along the foreshore? 	<p>These matters have been addressed above in response to the submissions received.</p>

6.0 Environmental assessment

This section of the REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposal. All aspects of the environment potentially impacted upon by the proposal are considered. This includes consideration of:

- Potential impacts on matters of national environmental significance under the *EPBC Act*
- The factors specified in the guidelines *Is an EIS required?* (DUAP 1995/1996) as required under clause 228(1) of the *Environmental Planning and Assessment Regulation 2000*. The factors specified in clause 228(2) of the *Environmental Planning and Assessment Regulation 2000* are also considered in Appendix [A].

Site-specific safeguards and management measures are provided to mitigate the identified potential impacts.

6.1 Visual Impact Assessment

Terras Landscape Architects have undertaken a visual assessment of project site and the proposed building works for the site (**Appendix C**). The proposed new amenities building location has been selected from a number of locations that have been assessed and reviewed by the client and through consultation with residents. The local character is typical of harbour foreshore public open space with associated residential and commercial land development. The foreshore open space is a continuous strip of publicly accessible land that permits the public to travel along the foreshore and link to adjoining park and beach locations.

The site has a low, slightly above sea level, height and generally has a level grade. The existing site area includes a wide public foreshore promenade and associated seating, open grass area, tree and mass planting, artworks and a public playground. Several of the existing trees planted along the open space are relatively mature providing a reasonable extent of canopy.

The visual impact rating has been assessed to be MEDIUM in almost all viewing locations. This is a result of not only limited viewing potential but where views are possible the impact is consistent with the character of the area and thus the loss of visual quality is minimal given the existing elements placed along the foreshore.

The assessment concludes that the project and the proposed built forms are consistent with the character of the area, will have a low-moderate accumulative visual impact on the surrounding area, mainly due to the waterfront setting and not as a visual effect. The proposal has been located to minimise visual impacts on the foreshore land and surrounding residents and businesses. The toilet doors are aligned so they do not open towards the foreshore apartments, but are still visible from the southern promenade and playground for passive surveillance. The location also considers the needs for the toilets to be on public land which retaining the design of the central corridor.

6.2 Odour Impact Assessment

EnvironOdour Australia were engaged to prepare a Level 2 odour impact assessment report for the proposed public toilets (**Appendix D**). EnvironOdour undertook the odour impact assessment for the proposed public toilets (1 male and 1 female toilet), adjacent to a recently completed recreation area, to evaluate the potential odour impact in the vicinity of the proposed amenities. The level 2 odour impact assessment follows the procedures published by the Environmental Protection Authority (EPA), New South Wales (*EPA Technical Framework for Assessment and Management of Odours, November 2006*).

The Ausplume computer model is used to predict ground level concentrations of odours. Ausplume calculates the hourly ground level odour concentration in the synthetical meteorological data set at each gridded receptor. As required, the maximum odour concentrations are used to plot

the odour concentration contour. The predicted odour contour can then be compared to applicable odour performance criteria.

The predicted maximum odour concentration at the sensitive receptors is less than 0.9 OU. This confirms that there is no odour impact at ground level from the proposed amenities under the normal conditions. It is therefore concluded that the elevated apartments will receive less odour than the ground level due to the dissipation distance. The modelling results have confirmed the current operation will meet the NSW EPA's odour performance criteria.

6.3 Noise Impact Assessment

Potential noise and vibration impacts on sensitive receivers during construction and operation of the proposal have been assessed. Although residential receivers are adjacent to the proposal, they are not located directly next to the proposal. The residential receivers are located in multi-storey apartment buildings, about six to ten storeys in height. Noise from the recreation area along the foreshore, including the recently completed Honeysuckle Park, occurs to varying degrees across day and night times. Overall, any noise increase resulting from the proposal would be minor and not represent a significant change from existing ambient noise in the surrounding area.

During the consultation process, adjacent residents raised concerns regarding noise associated with the temporary toilets located in close proximity to the location of the proposed permanent. The noise generated from doors closing and being rattled was identified as the primary cause of noise complaints. These matters will be addressed through design mitigation measures.

6.4 Consideration of other potential for impacts

Environmental Aspect	REF Impacts	Significance
Soils and Geology	The proposal's construction works will involve limited ground disturbance and exposure of soil as the amenities building has a small footprint.	No significant impact.
Ecology	The location is already highly modified space, with grass and adjoining pedestrian pathways. There is no native vegetation or habitat that will be impacted by the proposal.	No significant impact
Noise and Vibration	There will be minor noise or vibration impacts during the construction process, with construction to occur during standard operating hours. There will be minor ongoing noise impacts consistent with current activity within the open space area of the foreshore.	No significant impact
Light	There will be potential for additional light impacts at night around the new facilities, however it will be not greater than adjacent lighting on the pedestrian walkway.	No significant impact

Environmental Aspect	REF Impacts	Significance
Non-Indigenous Heritage	The proposed structure is minor in scale and will not impact on any heritage within the foreshore promenade.	No significant impact.
Aboriginal Heritage	<p>The proposal area does not appear on the National Heritage List, Commonwealth Heritage List, State Heritage Register and Register of Declared Aboriginal Places.</p> <p>Previous Aboriginal archaeological due diligence assessment within the vicinity of the site concluded that the area has been significantly disturbed through a range of factors including historical use and remediation works, then the more recent construction of parklands and pedestrian walkways. On this basis, the proposal area is considered as having little to no potential for intact archaeological deposits but may contain ex-situ Aboriginal objects in a highly disturbed context.</p> <p>The construction of the amenities structure upon the site will result in limited site disturbance.</p>	No significant impact.
Traffic and Access	<p>Construction traffic will occur during the construction period, with work vehicles, equipment and materials being located within the ancillary area. These will have a minor insignificant impact occurring during the construction period.</p> <p>Pedestrian access from Worth Place will be maintained during construction.</p>	No significant impact
Land Uses	The public facilities are ancillary to the adjacent recreation area and consistent with activities undertaken within the Public Recreation zone.	No significant impact
Cumulative and Consequential Impacts	The proposal is minor in nature and will not result in cumulative impacts as it is ancillary to the general activities within the Public Recreation zone.	No significant impact

6.5 Management Measures

The proposal is minor in nature and will not result in significant impacts. A number of residents have raised impacts which have occurred as a result of the temporary toilets located adjacent to the proposed new amenities building. To ensure odour and noise impacts are managed long term, the following management measures are proposed.

Impact	Environmental safeguards	Responsibility	Timing
Odour impacts	To minimise ongoing odour impacts associated with the public amenities, CN shall undertake appropriate cleaning, management and maintenance to maintain hygiene standards.	HCCDC/CN	Ongoing
Noise Impacts	The outward opening doors for the 2 disabled access toilets are to be fitted with a soft closing mechanism.	HCCDC/CN	Detailed Design
	Works must comply with the Interim Construction Noise Guideline (NSW EPA, 2009) and Noise Policy for Industry (EPA, 2017), including schedule work and deliveries during standard daytime working hours of 7am to 6pm Monday to Friday and 8am to 1pm Saturday. No work to be scheduled on Sundays or public holidays.	HCCDC/Contractor	During Construction

7.0 Environmental management

7.1 Environmental management plans (or system)

No safeguards or management measures have been identified in the REF due to the limited impact of the proposal upon the site. Should the proposal proceed, and matters arise during operations of the amenities, management measures would be applied by CN.

7.2 Licensing and approvals

The permanent amenities are being located within the site as part of the dedication framework agreement between HCCDC and CN to deliver recreation facilities within the Honeysuckle Precinct. As operational land, CN will undertake management of the amenities within the recreation space, with HCCDC providing these facilities on behalf of Council.

8.0 Conclusion

8.1 Justification

CN has identified the need for public toilet facilities within the Honeysuckle Precinct. With the recent completion of Honeysuckle Park recreation area, such facilities are urgently required. The recreation area contains play equipment, barbeques, shade structures and seating, which encourage longer periods within the area. The construction of permanent public toilets within the vicinity will support the adjacent recreation areas.

The proposal is subject to assessment under Division 5.1 of the *EP&A Act*. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

8.2 Conclusion

The construction of permanent public toilets within the Honeysuckle foreshore precinct, adjacent to the recently completed Honeysuckle Park, is subject to assessment under Part 5 of the *EP&A Act*. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration (where relevant) of conservation agreements and plans of management under the *NPW Act*, joint management and biobanking agreements under the *TSC Act*, wilderness areas, critical habitat, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal *EPBC Act*.

The proposal as described in the REF best meets the project objectives and will have no significant impact in the location. The proposal will complement the recently completed recreation area and provide much needed accessible public amenities in this location. On balance the proposal is considered justified, and the following conclusions are made.

Significance of impact under NSW legislation

The proposal would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Part 5.1 of the *EP&A Act*. A Species Impact Statement is not required. The proposal is subject to assessment under Part 5 of the *EP&A Act*. Consent from Council is not required.

Significance of impact under Australian legislation

The proposal is not likely to have a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*. A referral to the Australian Department of the Environment is not required.

9.0 Certification

This review of environmental factors provides a true and fair review of the proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposal.



Shannon Sullivan
Planning Manager
ESS Australia Pty Limited
Date: 09/05/2022

Terms and acronyms used in this REF

Term / Acronym	Description
CN	City of Newcastle
CPTED	Crime Prevention Through Environmental Design
EIA	Environmental Impact Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
HCCDC	Hunter and Central Coast Development Corporation
Transport and Infrastructure SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.

Appendix A

Consideration of clause 228(2) factors

Clause 228(2) Checklist

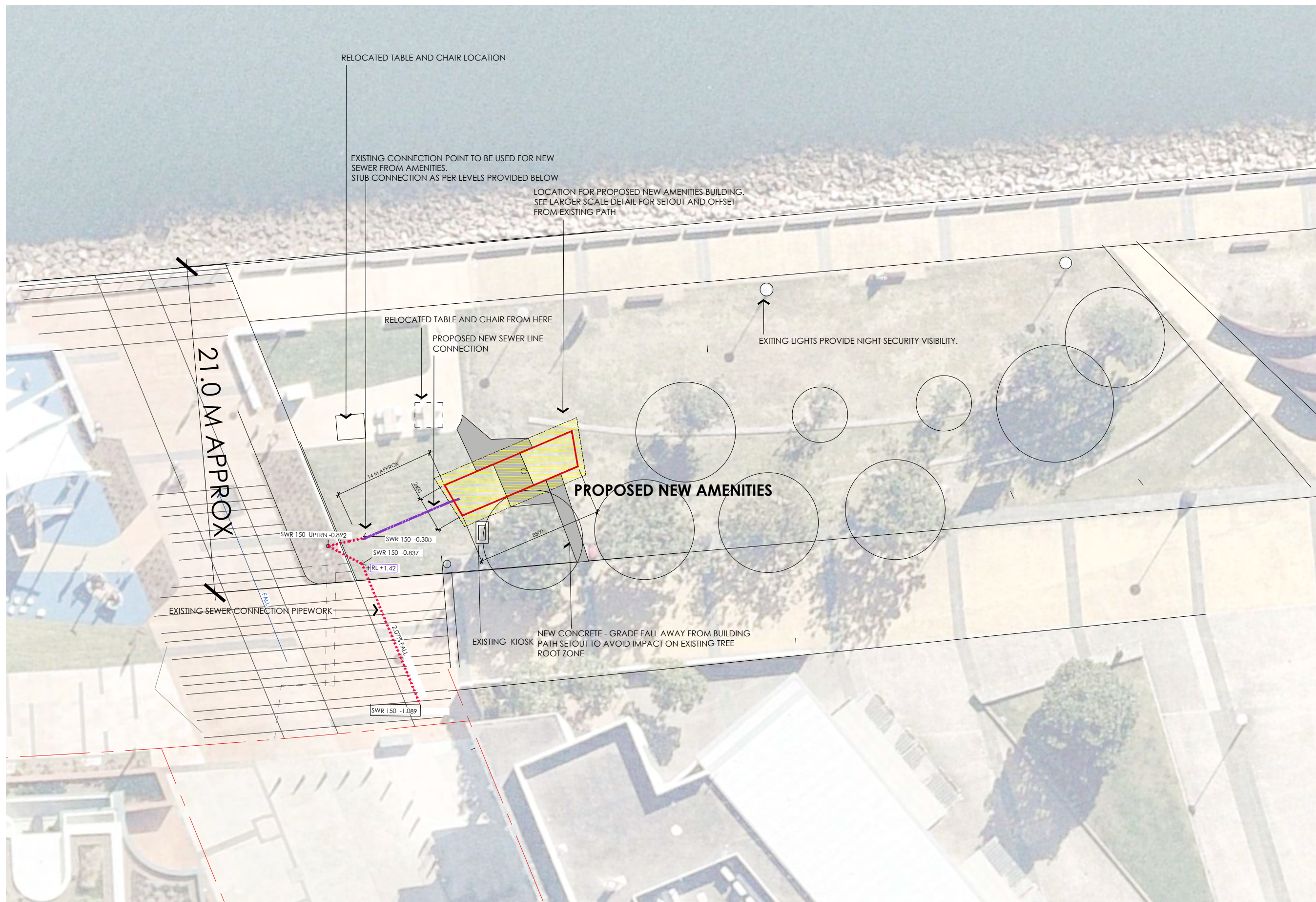
In addition to the requirements of the *Is an EIS required?* guideline (DUAP 1995/1996) as detailed in the REF, the following factors, listed in clause 228(2) of the *Environmental Planning and Assessment Regulation 2000*, have also been considered to assess the likely impacts of the proposal on the natural and built environment.

Factor	Impact
<ul style="list-style-type: none"> Any environmental impact on a community? The facility is for public use and will provide long term benefits for the community by providing needed facilities in an appropriate location. 	Minor, positive
<ul style="list-style-type: none"> Any transformation of a locality? The proposed facilities complement the recently completed recreation area. 	Minor, positive
<ul style="list-style-type: none"> Any environmental impact on the ecosystems of the locality? The location is already highly modified space, with grass and adjoining pedestrian pathways. 	Nil impact.
<ul style="list-style-type: none"> Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? The facilities are located along the foreshore area, however they provide needed public amenities which are not currently present in this location. The public toilets will be located adjacent to the existing tree line, minimising visual impact and impact on the overall aesthetic of the area. 	Minor positive
<ul style="list-style-type: none"> Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? The Honeysuckle foreshore is a highly modified man-made area adjacent to Newcastle Harbour. 	Nil impact.
<ul style="list-style-type: none"> Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)? Impacts are not expected as there is no native vegetation or habitat. 	Nil impact.
<ul style="list-style-type: none"> Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? Impacts are not expected, and mitigation measures are proposed. Refer to Flora and Fauna Assessment Report. 	Nil impact.
<ul style="list-style-type: none"> Any long-term effects on the environment? The proposal is for permanent public toilet facilities within a highly modified area of the foreshore, as such there will be no long term effects resulting from this proposal. 	Nil impact.
<ul style="list-style-type: none"> Any degradation of the quality of the environment? 	Nil impact.

Factor	Impact
The proposal has minimal site construction requirements and mostly impacts on an area currently turfed.	
<ul style="list-style-type: none"> Any risk to the safety of the environment? <p>The facilities are self-contained and orientated to provide casual surveillance. As a result there are no external risks.</p>	Nil impact.
<ul style="list-style-type: none"> Any reduction in the range of beneficial uses of the environment? <p>The proposal would result in longer periods of use and engagement of the community with the recreation area.</p>	Long-term, positive
<ul style="list-style-type: none"> Any pollution of the environment? <p>The toilets will be connected to water and sewer infrastructure. Ongoing cleaning and regular maintenance, will minimise any odour or amenity impacts.</p>	Nil impact.
<ul style="list-style-type: none"> Any environmental problems associated with the disposal of waste? <p>The toilets will be connected to Hunter Water sewer, with the design allowing for a typical gravity fed waste disposal.</p>	Nil impact.
<ul style="list-style-type: none"> Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? <p>None of these resources required for the proposal are or are likely to become in short supply as a result of the proposal.</p>	Nil impact
<ul style="list-style-type: none"> Any cumulative environmental effect with other existing or likely future activities? <p>The facilities complement and are ancillary to the recently completed recreation area.</p>	Nil impacts
<ul style="list-style-type: none"> Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? <p>The proposal is located in the coastal zone but would not result in any impact on coastal processes and coastal hazards.</p>	Nil impact.

Appendix B

Honeysuckle Park Amenities Design



PROJECT:
**Honeysuckle Park
New Small Amenities Building**

DRAWING:
Site Location Plan

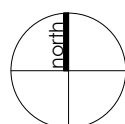
SITE:
Honeysuckle Park
Worth Place, Newcastle

CLIENT:
HCCDC

WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE.
CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING
MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS

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JOB NUMBER: 12629.5 PHASE: WDL01 DWG No: A REV:

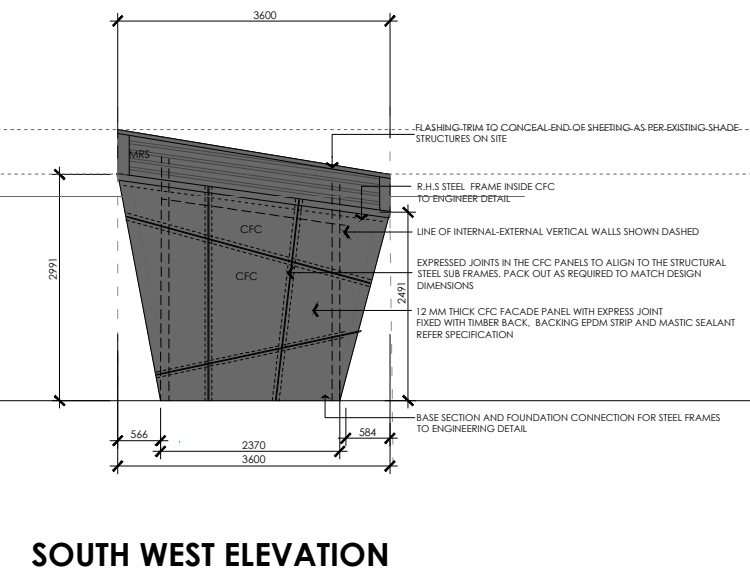
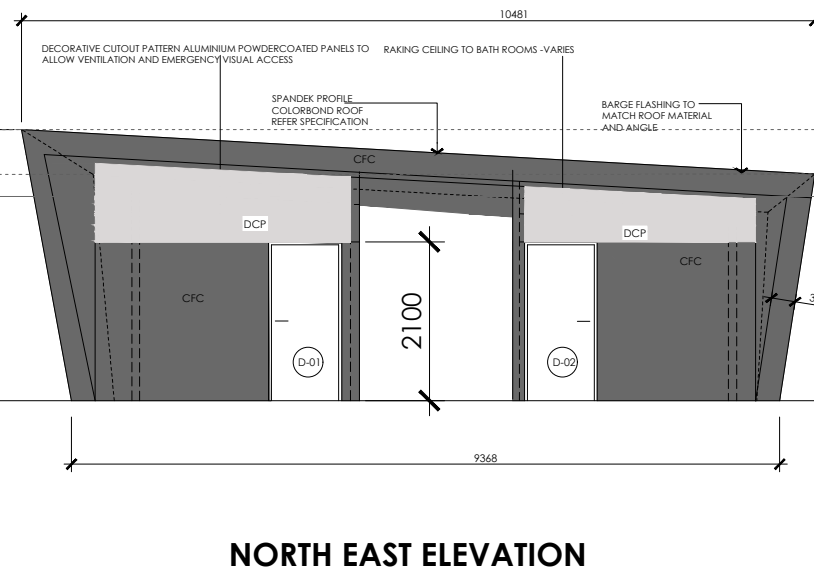
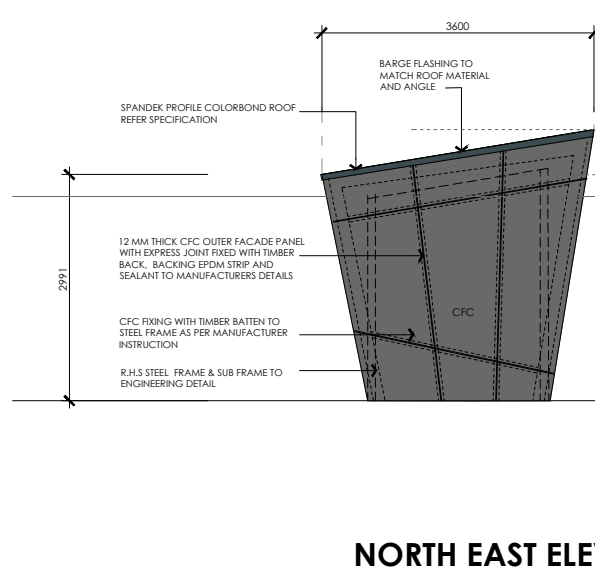
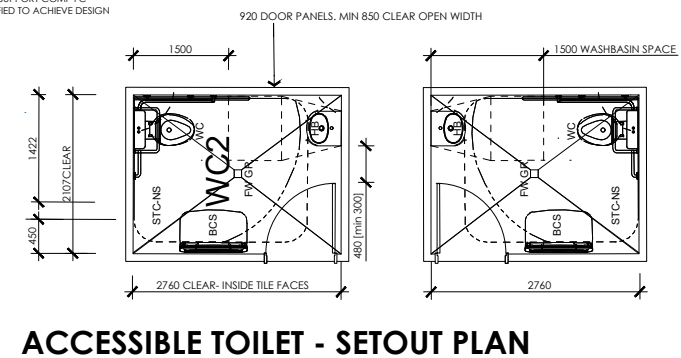
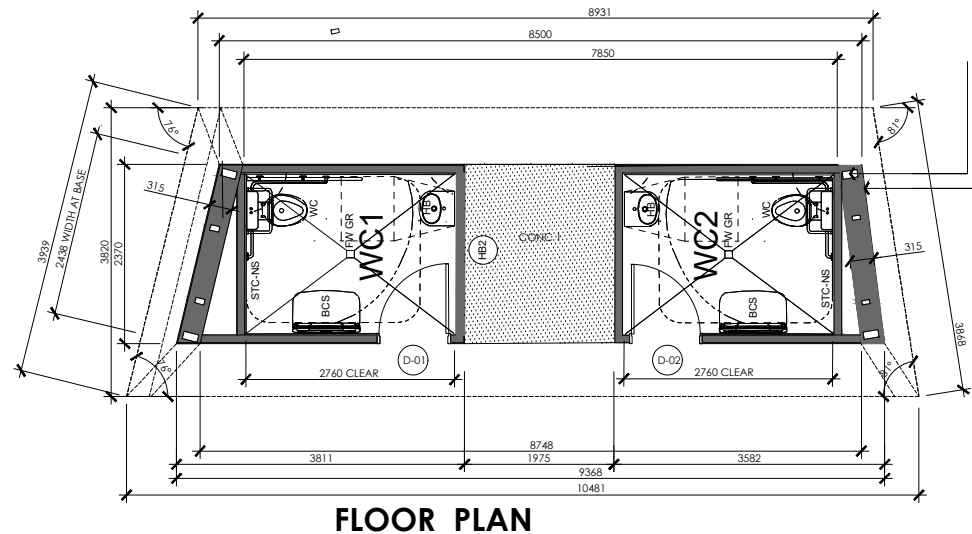
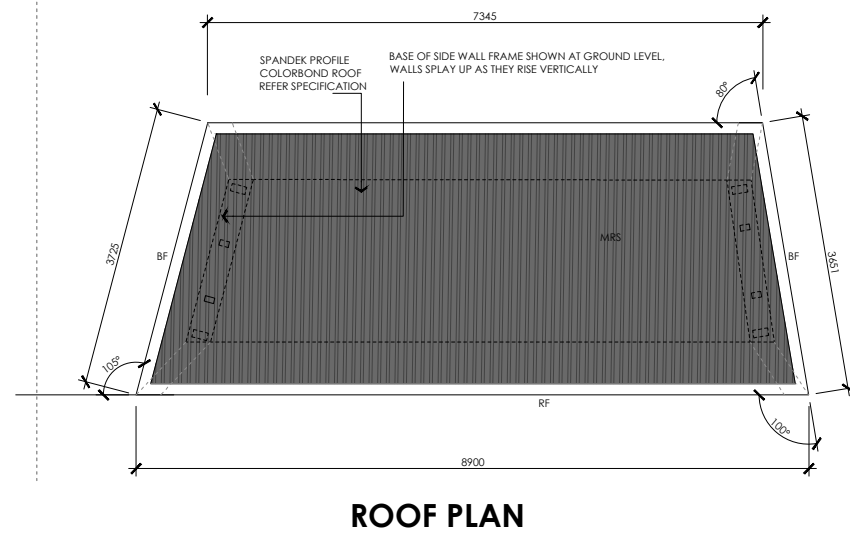
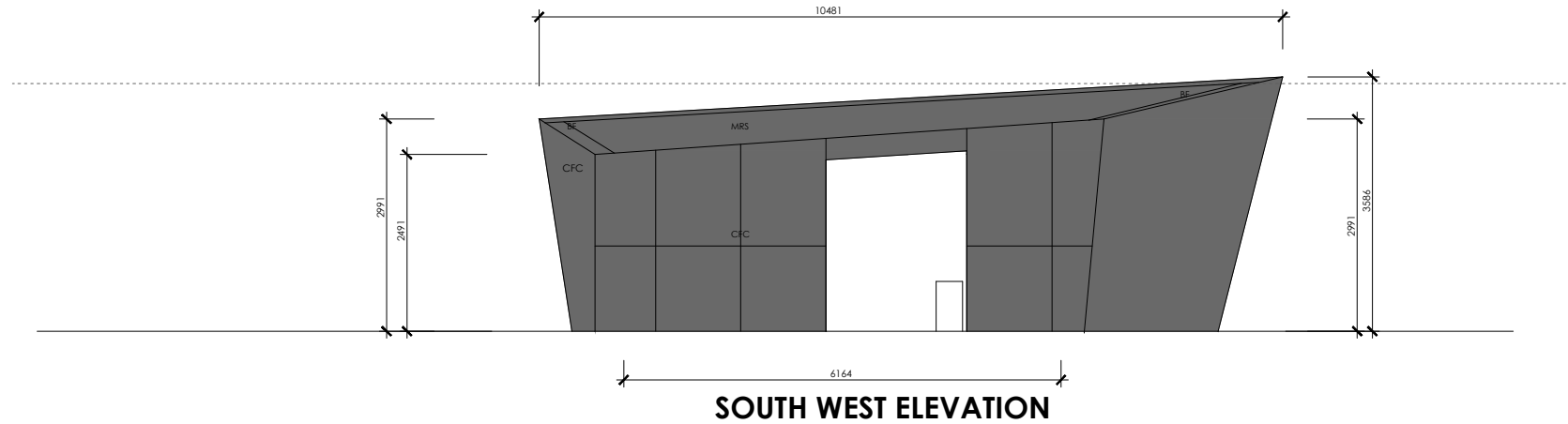




 terras

 landscape architects

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PROJECT:
**Honeysuckle Park
New Small Amenities Building**

DRAWING:
Plan + Elevations

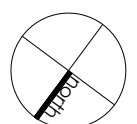
SITE:
**Honeysuckle Park
Worth Place, Newcastle**

CLIENT:
HCCDC

WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE.
CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING
MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS

DRAWN: ?? / ?? DATE: 03/02/2022 SCALE: 1:100

JOB NUMBER: 12629.5 WDL02 PHASE: DWG No: A REV:



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EXISTING

Existing View - Temporary Toilet Shown



ARTISTS RENDER ILLUSTRATION OF PROPOSED STRUCTURE

PROPOSED NEW AMENITIES BUILDING SHOWN IN PLACE

PROJECT:
**Honeysuckle Park
New Small Amenities Building**

DRAWING:
3D Imagery

SITE:
**Honeysuckle Park
Worth Place, Newcastle**

CLIENT:
HCCDC

WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE.
CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING
MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS

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Proposed New Amenities Structure

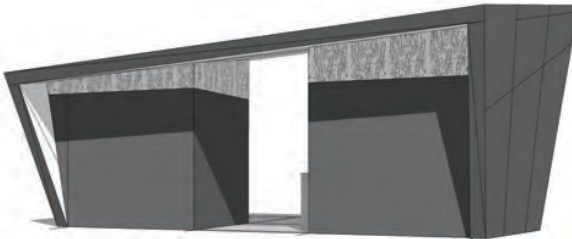


BANKSIA [HONEYSUCKLE] MOTIF CUTOUT INTO ALUMINIUM PANELS OVER AMENITIES SECTION - REPLICATE THEME AND REDUCE SOLID VISUAL MASS. ILLUMINATED FOR NIGHT FEATURE - IDENTIFICATION

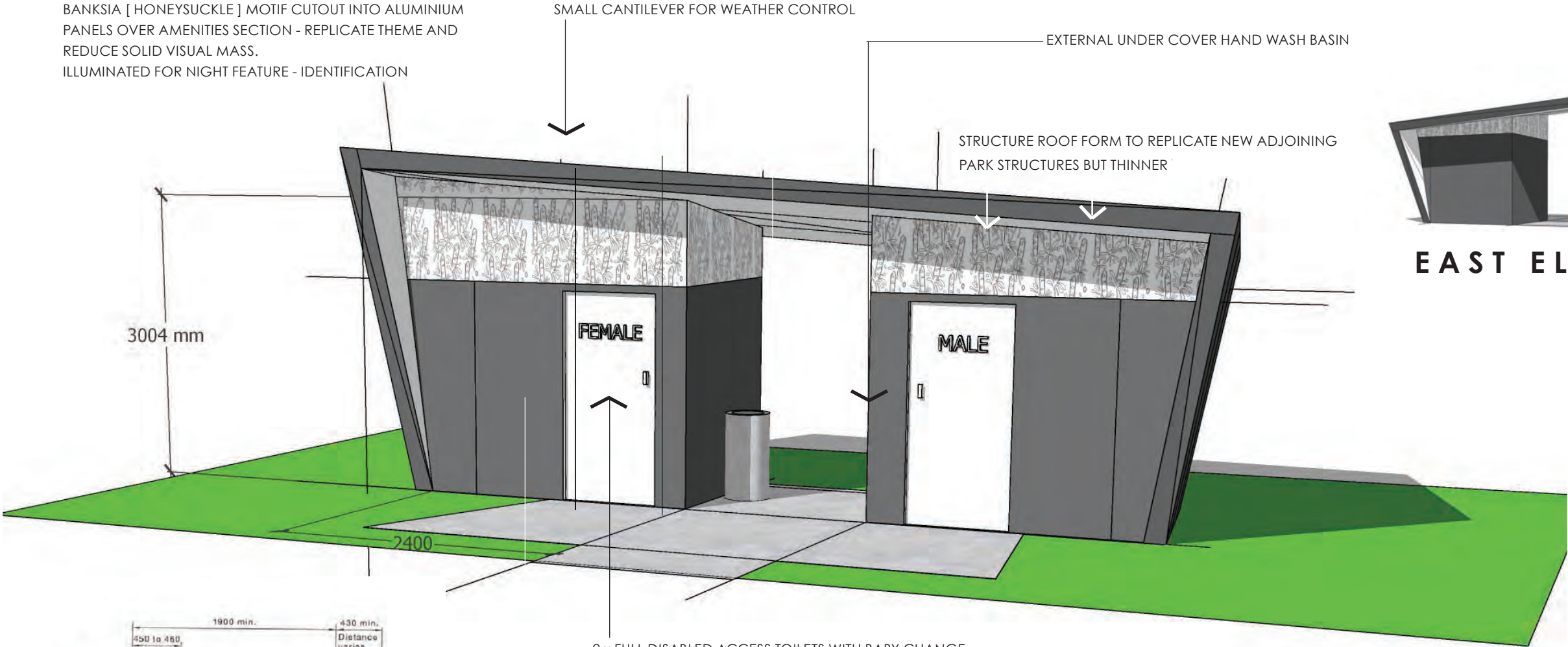
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EXTERNAL UNDER COVER HAND WASH BASIN

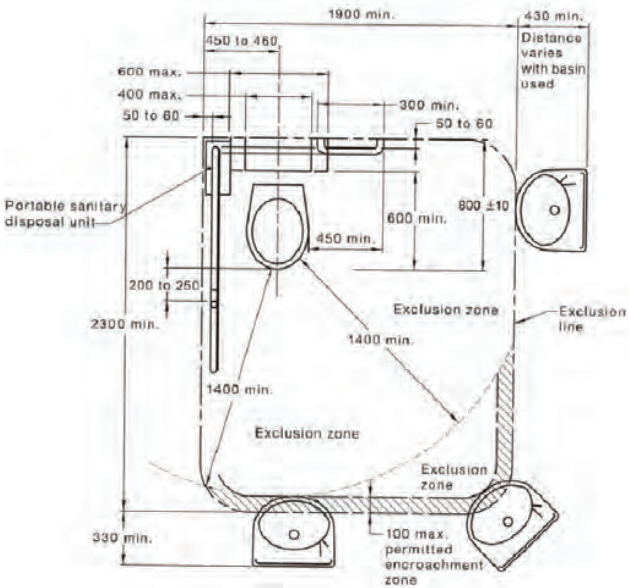
STRUCTURE ROOF FORM TO REPLICATE NEW ADJOINING PARK STRUCTURES BUT THINNER



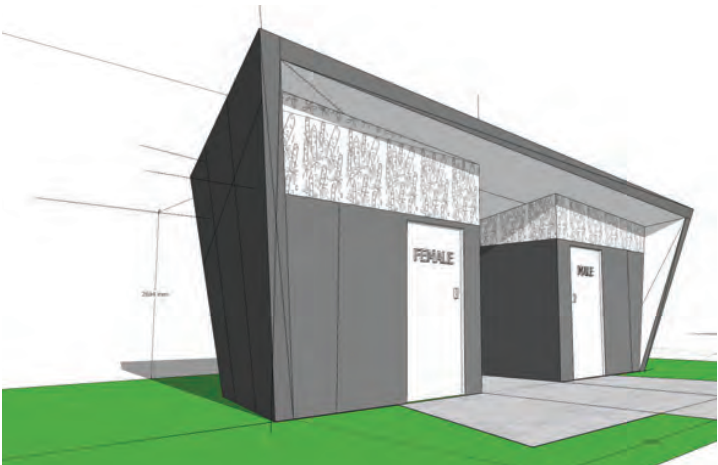
EAST ELEVATION



2 x FULL DISABLED ACCESS TOILETS WITH BABY CHANGE FACILITY - ALL DOOORS OPEN OUTWARD TO ENSURE SECURITY SURVEILLANCE AND NO SOUTHWARD OPENINGS



TYPICAL PLAN



WESTERN ELEVATION

PROJECT:
**Honeysuckle Park
New Small Amenities Building**

DRAWING:
Concept Design Images

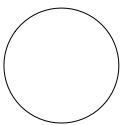
SITE:
**Honeysuckle Park
Worth Place, Newcastle**

CLIENT:
HCCDC

WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE.
CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING
MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS

DRAWN: ?? / ?? DATE: 03/02/2022 SCALE: 1:100

JOB NUMBER: 12629.5 WDL04 PHASE: DWG No: REV: A



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Appendix C

Visual Impact Statement

EXISTING SITE CONDITION



VISUAL IMPACT ASSESSMENT REPORT - HONEYSUCKLE PARK

Honeysuckle Park - New Amenities Building

prepared for: Honeysuckle Central Coast Development Corporation



412 King Street Newcastle NSW 2305. ABN 67129348842 0249294926

TERRAS LANDSCAPE ARCHITECTS has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. This document has been prepared based on the Client's description of its requirements and TERRAS's experience, having regard to assumptions that can reasonably be expected to make in accordance with sound professional principles. No other party should rely on this document without the prior written consent of TERRAS. TERRAS undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

VISUAL IMPACT ASSESSMENT REPORT - HONEYSUCKLE PARK

Honeysuckle Park - New Amenities Building

prepared for: Honeysuckle Central Coast Development Corporation

A

Updated issue to client

SWR

12.04.2022

VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE

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4

VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE

1. ASSESSMENT SUMMARY

Terras Landscape Architects have undertaken a visual assessment of project site and the proposed building works for the site. The criteria for the visual assessment has been detailed and viewpoint data sheets have been prepared using site photographs to allow the reader to gain a visual appreciation of the views from the identified significant viewing locations.

Additional descriptive text and information has been provided to support this investigation.

This summary has been provided as a brief commentary on the findings of the visual assessment.

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The site is located on the Newcastle Harbour foreshore public foreshore land and central with the Honeysuckle precinct at the Worth Place Intersection with the harbour foreshore.

The proposed new amenities building has been selected from a number of locations that have been assessed and reviewed by the client and through public consultation.

The local character is typical of harbour foreshore public open space associated with associated residential and commercial land development. The foreshore open space is a continuous strip of publicly accessible land that permits the public to travel along the foreshore and link to adjoining park and beach locations.

The site has a low, slightly above sea level height and generally has a level grade.

The existing site area includes a wide public foreshore promenade and associated seating, open grass area, tree and mass planting, artworks and a public playground. Several of the existing trees planted along the open space are relatively mature providing a reasonable extent of canopy.

The visual impact rating has been assessed to be MEDIUM in almost all viewing locations, this is a result of not only limited viewing potential but where views are possible the impact is consistent with the character of the area and thus the loss of visual quality is minimal given the existing elements placed along the foreshore.

- The proposed new 3-4m high amenities building is a small low profile structure designed in a form to complement the adjoining new shade structures constructed within the new playground - park area. The structure is proposed to be dark grey for reduced visual appearance.

- The proposed location is located so that sight lines are maintained through Worth Place to the harbour and to the north.

The proposed locations uses the existing 'Tuckeroo' trees as a visual screen to assist in minimising the views to the amenities building from adjoining residential apartments, especially from upper levels.

We consider the project and the proposed built forms are consistent with the character of the area, will have a low-moderate accumulative visual impact on the surrounding area, mainly due to the waterfront setting and not as a visual effect. The proposal has been located to minimise visual impacts on the foreshore land as well as retain security the design of the central corridor, a public location, alignment to ensure doors are visible for the southern promenade and playground.

2. INTRODUCTION

2.1. OBJECTIVES

The objectives of this report areas follows:

- To identify and describe the existing visual/landscape environment and to evaluate its current current qualities including an assessment of visual quality.
- To identify viewsheds and to locate and/or identify typical viewpoints from which the impacted areas may be seen.
- To determine what the likely impacts the proposal may cause to the prevailing visual/ landscape quality of the area and to make recommendations, where appropriate, to reduce the visual impact of the proposed development if required.

2.2. METHODOLOGY

The methodology applied to this study involves systematically evaluating the visual environment pertaining to the site and using value judgements based on community responses to scenery. This identifies aspects that are more objective (such as the physical setting, character and visibility of a proposal), from more subjective aspects, such as the compatibility of the proposal with the setting.

Visual data collection involves systematically evaluating the visual environment from relevant viewpoints through fieldwork to determine the actual potential for views to the site. Once a viewpoint has been identified, data is recorded both photographically and as detailed notes.

The selection of viewpoints has generally been based on locations where potential for views of the proposed development would occur. Viewpoint selection criteria include consideration of where views can be obtained from publicly frequented locations, such as major traffic corridors, prominent look-outs or locations of high scenic value or where members of the local community may be affected. This assessment has been undertaken in accordance of the requirements of Guidelines for Landscape Character and Visual Impact Assessment (RMS, 2013) and as such, the work has been carried out following the below steps:

- Assess the Visibility of the Proposal. This includes a review of the existing visual environment/landscape setting of the locality.
- Identify key existing viewpoints and their sensitivity. This requires the preparation of a viewpoint analysis using a representative number of viewpoints located within a reasonable distance of the site located within its visual catchment.
- Assess visual impacts. A brief description of the proposal is included within this section followed by an assessment of the likely impacts based on a composite of the sensitivity of the view and the magnitude of the proposal being a combination of scale, size and character having regard to the proximity of the viewer.

2.3. TERMINOLOGY

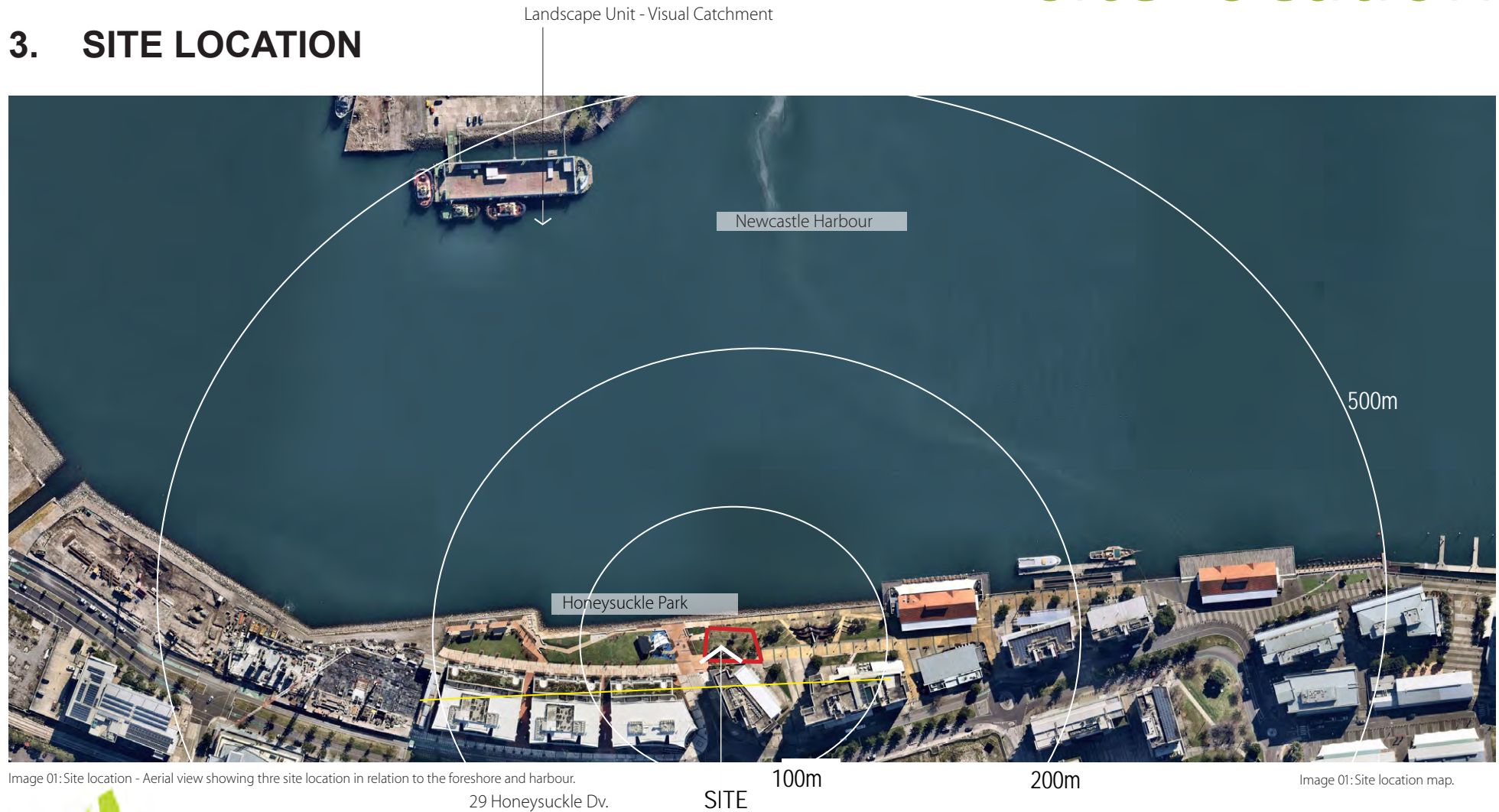
The below meaning for the following terms shall apply to this report:

- The proposal/development site is that activity which has the potential to produce a visual impact either during the works or as a result of it.
- The subject site (referred to also as the site) is defined as the land area directly affected by the proposal within defined boundaries.
- The study area consists of the subject site plus the immediate surrounding land potentially Affected by the proposal during its construction and operation phase.
- The study locality is the area of land within the regional visual catchments whereby the proposal can be readily recognised. Generally this is confined to a one-kilometre radius beyond which individual buildings are difficult to discern especially amongst other development where contrasts are low. Further, visual sensitivity generally declines significantly beyond this range due to the broad viewing range that can be had from vantage points. For this study the locality has been limited to the visual catchments that have distances less than 1 kilometre, as views beyond this are restricted and distant.

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VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE site location

3. SITE LOCATION



4. EXISTING VISUAL ENVIRONMENT

4.1. VISUAL CATCHMENT - AREA CHARACTER

The site lies within the City of Newcastle local government area. The site location diagram illustrates the character of the local area in plan form and shows the extent of existing harbour, public foreshore park and associated apartments and foreshore buildings and facilities, parkland and playground area.

The local area character identified within the visual catchment in the plan above is predominantly harbourside open space adjoining the open waters of the Newcastle Harbour with adjoining residential apartments to the south of the site.

The panoramic views to the harbour is a dominant visual element when looking north across the site.

Views from the harbour or from the shore of the northern Stockton foreshore looking south to the Honeysuckle Park site includes an extensive panoramic view of the harbour development.

The scale of the buildings to the south, in both site area and height has significant visual impact on the site already. The visual experience is of the high rise adjoining development to the south of the foreshore land is significant. The scale of the buildings has a big impact on the landscape and often limits views to adjoining areas. Any visual assessment of the visual impact of the proposed amenities building must be assessed with regard to the existing visual character and the impacts of those existing elements.



Image 02: Existing visual environment

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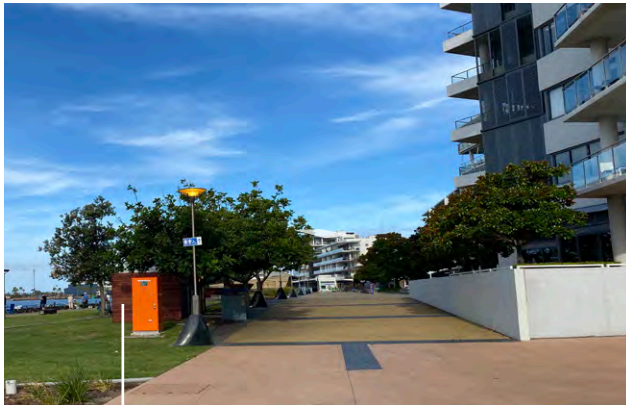
VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE existing site context

LOCALITY CONTEXT IMAGE SHOWING SURROUNDING DEVELOPMENT



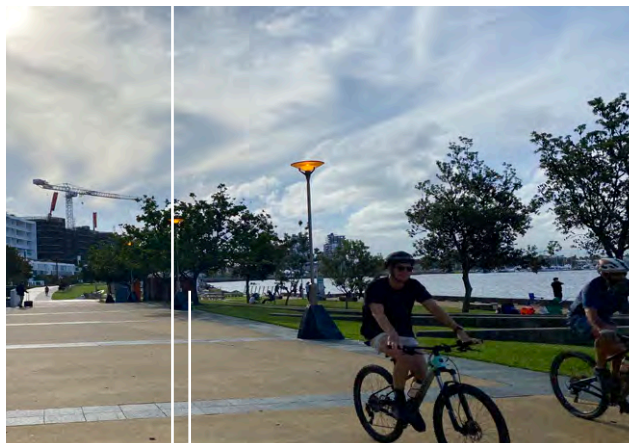
Image 03: Aerial view looking north across the site - provided for context only to assist in orientation and appreciation of surrounding site character.

5. SITE PHOTOS - EXISTING CONDITIONS



Existing temporary toilet cubicles

Image 04: Existing site photos



Existing temporary toilet cubicles



Existing temporary toilet cubicles

6. THE PROPOSAL

6.1. THE PROPOSED PROJECT

The project will see the construction of a small amenities building. The structure has been designed to be consistent with adjoining new shade structure forms along the foreshore. The building contains two equal accessible toilet change rooms and an external hand basin and tap.

The built form is angular and finished in a dark grey coloured sheeting which makes it recessive in the surrounding landscape and built environment. A central gap has been created to provide good safety surveillance around and through the building.

The structure has been set partially underneath the existing Cupaniopsis tree plantings that will provide some visual screening, especially when viewed from the upper floor of the adjoining apartments. The structure is offset from the mature trees to not impact adversely on the root zone of the trees.

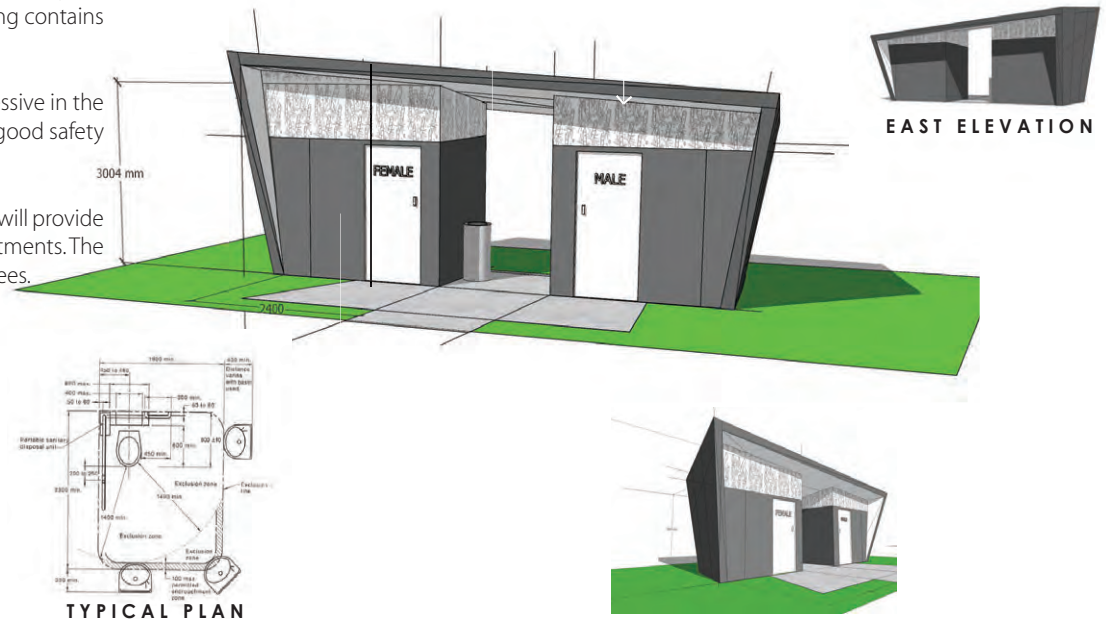


Image 05: Indicative desing form for the proposed works.

6.2. VIEWPOINT ANALYSIS

This section of the VIA considers the likely impact that the proposed development may have on the local visual environment. This is achieved by selecting particular sites, referred to as viewpoints, conducting inspections and determining how the development will appear from these locations.

Where accessible, areas within the study locality were visited to gain an appreciation of views and sight lines back to the subject site. This VIA will assess the existing visual amenity of the site and resultant visual impact of the proposed development.

Landscape assessment is concerned with changes to the physical landscape in terms of features/elements that may give rise to changes in character. Visual appraisal is concerned with the changes that arise in the composition of available views as a result of changes to the landscape, people's responses to the changes and to the overall effects on visual amenity. Changes may result in adverse (negative) or beneficial (positive) effects.

The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the following assessment is based on the best practice guidance listed above, information and data analysis techniques, uses subjective professional judgement.

Many potential viewpoints were assessed for inclusion in this report. Due to local topography, existing vegetation and development, the proposed subdivision will have the greatest visual effect upon those areas directly east, south east and north east within a 1km radius of the subject site. It is assumed the areas that will be most affected by the proposed development are the perimeter public roads and from adjoining development.

Photography for the photomontages was undertaken by Terras Landscape Architects using a Samsung NX1. A 50 mm focal length prime lens was attached to the Canon. For aerial images a drone with a 26mm focal lens was used, due to inaccessibility of that location. Some of the viewpoints include a panoramic view to assist in appreciation of the location.

7. ASSESSMENT CRITERIA

7.1. VISUAL QUALITY

The visual quality of an area is essentially an assessment of how viewers may respond to designated scenery. Scenes of high visual quality are those that are valued by a community for the enjoyment and improved amenity that they can create. Conversely, scenes of low visual quality are of little scenic value to the community with a preference that they be changed and improved, often through the introduction of landscape treatments (e.g. screen planting).

As visual quality relates to aesthetics, its assessment tries to anticipate subjective responses. There is evidence to suggest that certain landscapes are continually preferred over others with preferences related to the presence or absence of certain elements.

The rating of visual quality of this study has been based on the following generally accepted conclusions arising from scientific research (DOP, 1988).

- Visual quality increases as relative relief and topographic ruggedness increases.
- Visual quality increases as vegetation pattern variations increase.
- Visual quality increases due to the presence of natural and/or agricultural landscapes.
- Visual quality increases owing to the presence of waterforms (without becoming common) and related to water quality and associated activity.
- Visual quality increases with increases in land use compatibility.

The visual quality for the project has been assessed as MEDIUM marked in red.

VISUAL QUALITY REFERENCE TABLE				
		RATING		
		LOW	MEDIUM	HIGH
ELEMENT	LANDFORM / RELIEF			
	CONTRAST	FLAT TERRAIN DOMINANT. RIDGELINES NOT OFTEN SEEN.	UNDULATING TERRAIN DOMINANT. LITTLE CONTRAST OR RUGGEDNESS. RIDGELINES PROMINENT IN ONLY HALF OF LESS OF LANDSCAPE UNITS.	HIGH HILLS IN FOREGROUND AND MIDDLE GROUND. PRESENCE OF CLIFFS, ROCKS AND OTHER GEOLOGICAL FEATURES. HIGH RELIEF (E.G. STEEP SLOPES RISING FROM WATER OR PLAIN). RIDGELINES PROMINENT IN MOST OF LANDSCAPE UNIT.
	VEGETATION			
	DIVERSITY AND CHANGING PATTERNS	ONE OR TWO VEGETATION TYPES PRESENT IN FOREGROUND. UNIFORMITY ALONG SKYLINE	PATTERNING IN ONLY ONE OR TWO AREAS. 3 OR 4 VEGETATION TYPES IN FOREGROUND FEW EMERGENT OR FEATURE TREES	HIGH DEGREE OF PATTERNING IN VEGETATION. 4 OR MORE DISTINCT VEGETATION TYPES. EMERGENT TREES PROMINENT AND DISTINCTIVE TO REGION.
	NATURALNESS			
	CORRECT BALANCE	DOMINANCE OF DEVELOPMENT WITHIN MANY PARTS OF A LANDSCAPE	SOME EVIDENCE OF DEVELOPMENT BUT NOT DOMINANT	ABSENCE OF DEVELOPMENT OR MINIMAL DISTURBANCE WITHIN LANDSCAPE UNIT. PRESENCE OF PARKLAND OR OTHER OPEN SPACE INCLUDING BEACH, LAKESIDE, ETC.
	WATER			
	PRESENCE, EXTENT AND CHARACTER	LITTLE OR NO VIEW OF WATER. WATER IN THE BACKGROUND WITHOUT PROMINENCE. PRESENCE OF POLLUTED WATER OR STAGNANT WATER.	MODERATE EXTENT OF WATER. PRESENCE OF CALM WATER. NO ISLANDS, CHANNELS, MEANDERING WATER. INTERMITTENT STREAMS, LAKES, RIVERS, ETC.	DOMINANCE OF WATER IN FOREGROUND AND MIDDLE GROUND. PRESENCE OF FLOWING WATER, TURBULENCE AND PERMANENT WATER.
	DEVELOPMENT			
	FORM & IDENTITY	PRESENCE OF COMMERCIAL AND INDUSTRIAL STRUCTURES. PRESENCE OF LARGE SCALE DEVELOPMENT (E.G. MINING INFRASTRUCTURE, ETC) RESIDENTIAL DEVELOPMENT	PRESENCE OF ESTABLISHED RESIDENTIAL DEVELOPMENT. SMALL SCALE, INDUSTRIAL ETC IN MIDDLEGROUND. PRESENCE OF SPORTS AND RECREATION FACILITIES.	PRESENCE OF RURAL STRUCTURES (E.G. FARM BUILDINGS, FENCES ETC.). HERITAGE BUILDINGS AND OTHER STRUCTURES APPARENT. ISOLATED DOMESTIC SCALE STRUCTURES.

7.2. VISUAL SENSITIVITY

Another aspect affecting visual assessments is visual sensitivity. This is the estimate of the significance that a change will have on a landscape and to those viewing it. For example, a significant change that is not frequently seen may result in a low visual sensitivity although its impact on a landscape may be high.

The assessment of visual sensitivity is based on a number of variables such as: the number of people affected; viewer location including distance from the source; the surrounding land use and degree of change. Variables may also include viewer position, i.e. inferior, where the viewer's sightline is below the horizontal axis as characterised by looking up (least preferred), neutral, where the viewer sightline is generally along the horizontal axis, and, superior, where the viewer sightline is above the horizontal axis as characterised by looking down to an object (most preferred).

Generally the following principles apply:

- Visual sensitivity decreases as the viewer distance increases. This occurs as changes to the scenic environment must be assessed over a broader viewshed which is comprised of a greater number of competing elements.
- Visual sensitivity decreases as the viewing time decreases.
- Visual sensitivity can also be related to viewer activity (e.g. a person viewing an affected site while engaged in recreational activities will be more strongly affected by change than someone passing a scene in a car travelling to a desired destination).

The following table outlines the visual sensitivity based on the above criteria. The project assessment has been outlined in red and is assessed as MEDIUM

Visual effect is the interaction between a proposal and the existing visual environment. It is often expressed as the level of visual contrast of the proposal against its setting or background in which it is viewed.

This is particularly important should any proposed development extend above the skyline unless, once again, there are particular circumstances that may influence viewer perception and/or visual impact. Low visual effect occurs when a proposal blends in with its existing viewed landscape due to a high level of integration of one or several of the following: form, shape, pattern, line, texture or colour. High visual effect results when a proposal presents itself with high visual contrast to its viewed landscape with little or no integration and/or screening.

VISUAL SENSITIVITY TABLE					
		DISTANCE ZONES			
		FOREGROUND		MIDGROUND	
		0-0.5km	0.5-1km	1-1.5km	1.5 - 2km
LAND USE	RESIDENTIAL: RURAL OR URBAN	MODERATE SENSITIVITY	MODERATE SENSITIVITY	LOW SENSITIVITY	LOW SENSITIVITY
	NATURAL AREAS	HIGH SENSITIVITY	HIGH SENSITIVITY	HIGH SENSITIVITY	MODERATE SENSITIVITY
	TOURIST OR PASSIVE RECREATION	HIGH SENSITIVITY	HIGH SENSITIVITY	MODERATE SENSITIVITY	MODERATE SENSITIVITY
	MAJOR TRAVEL CORRIDORS	HIGH SENSITIVITY	MODERATE SENSITIVITY	MODERATE SENSITIVITY	MODERATE SENSITIVITY
	TOURIST ROADS	HIGH SENSITIVITY	MODERATE SENSITIVITY	MODERATE SENSITIVITY	LOW SENSITIVITY
	MINOR ROADS	MODERATE SENSITIVITY	LOW SENSITIVITY	LOW SENSITIVITY	LOW SENSITIVITY
	AGRICULTURAL AREAS	LOW SENSITIVITY	LOW SENSITIVITY	LOW SENSITIVITY	LOW SENSITIVITY

7.3. VISUAL EFFECT

It should be noted that a high visual effect does not necessarily equate with a reduction in scenic quality. It is the combination of both visual sensitivity and visual effect that results in visual impact. The following table illustrates how visual effect and visual sensitivity levels combine to produce varying degrees of visual impact.

VISUAL EFFECT TABLE		
LEVELS	HIGH	RESULTS WHEN A PROPOSAL PRESENTS ITSELF WITH HIGH VISUAL CONTRAST TO ITS VIEWED LANDSCAPE WITH LITTLE OR NO INTEGRATION AND/OR SCREENING.
	MODERATE	RESULTS WHERE A PROPOSAL NOTICEABLY CONTRASTS WITH ITS VIEWED LANDSCAPE, HOWEVER, THERE HAS BEEN SOME DEGREE OF INTEGRATION (E.G. GOOD SITING PRINCIPLES EMPLOYED, RETENTION OF SIGNIFICANT EXISTING VEGETATION, PROVISION OF SCREEN LANDSCAPING, CAREFUL COLOUR SELECTION AND/OR APPROPRIATELY SCALED DEVELOPMENT).
	LOW	OCCURS WHEN A PROPOSAL BLENDS IN WITH ITS EXISTING VIEWED LANDSCAPE DUE TO A HIGH LEVEL OF INTEGRATION OF ONE OR SEVERAL OF THE FOLLOWING: FORM, SHAPE, PATTERN, LINE, TEXTURE OR COLOUR. IT CAN ALSO RESULT FROM THE USE OF EFFECTIVE SCREENING OFTEN USING A COMBINATION OF LANDFORM AND LANDSCAPING.
	NEGLECTIBLE	THERE ARE NO VIEWS OF THE PROPOSAL COMPONENTS AND AS SUCH THERE IS NOT IMPACT

7.4. VISUAL IMPACT

Visual impact is the assessment of changes in the appearance of the landscape as the result of some intervention typically man-induced, to the visual quality of an area having regard to visual sensitivity and visual effect and the other attributes that these elements embody as discussed above.

Visual impact may be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction). When visual impacts are negative, the loss of visual quality needs to be determined and when they are found to be undesirable or unacceptable, then mitigation measures need to be formulated with the aim of reducing the impact to within, at least acceptable limits.

The following table illustrates how visual effect and visual sensitivity levels combine to produce varying degrees of visual impact. The project assessment summary is marked in red.

VISUAL IMPACT TABLE					
		VISUAL EFFECTS LEVELS			
		HIGH	MODERATE	LOW	NEGLECTIBLE
VISUAL SENSITIVITY LEVELS	HIGH	HIGH IMPACT	HIGH IMPACT	MODERATE IMPACT	NEGLECTIBLE IMPACT
	MODERATE	HIGH IMPACT	MODERATE IMPACT	LOW IMPACT	NEGLECTIBLE IMPACT
	LOW	MODERATE IMPACT	LOW IMPACT	LOW IMPACT	NEGLECTIBLE IMPACT
	NEGLECTIBLE	NEGLECTIBLE IMPACT	NEGLECTIBLE IMPACT	NEGLECTIBLE IMPACT	NEGLECTIBLE IMPACT

VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK, WORTH PLACE

viewpoint locations

1.1. VIEWPOINT LOCATIONS



Viewpoint worksheet location



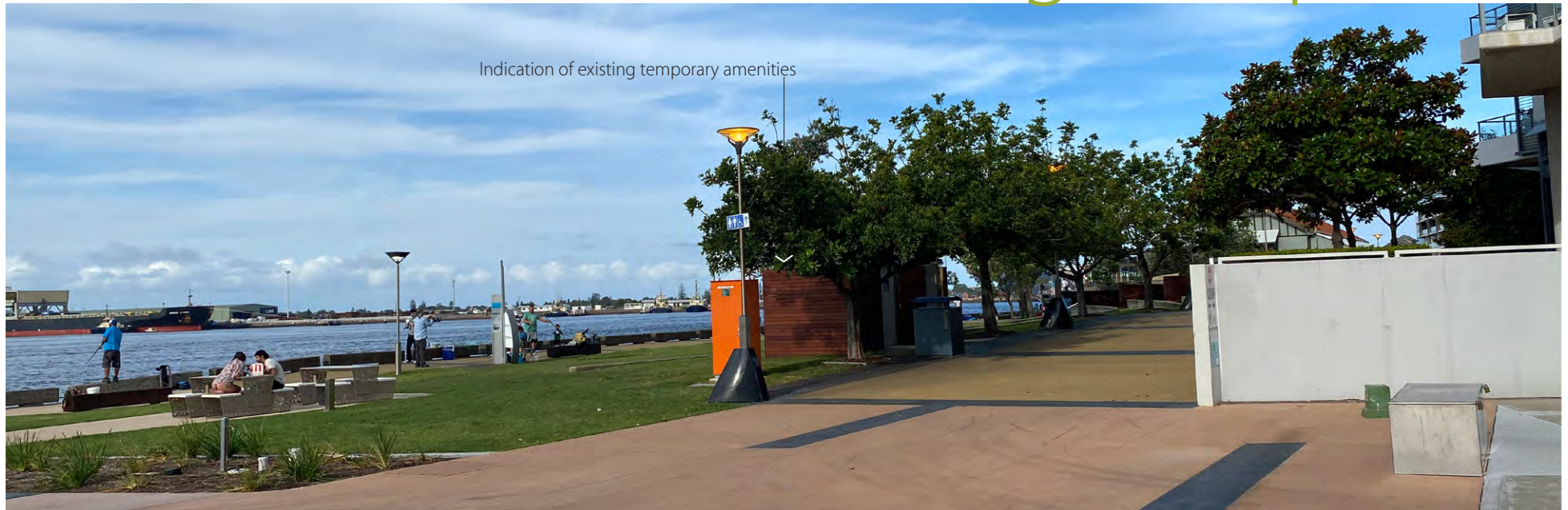
Viewpoint location attempted but no views possible



Image 06: Aerial view showing the locations of viewpoints adopted for the visual assessment.

Image 11: Site plan and viewpoint locations used for visual assessment and data

existing viewpoint 1



VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE

viewpoint 1 montage



Viewpoint 1		Viewpoint 1			
Viewing Location Description	Good example of existing views into the site from the public access promenade when pedestrian walk to the east along the harbour foreshore. View taken from the Worth Place Road intersection looking out towards the harbour. Note the extent and location of existing trees, electrical cabinet, artworks, light poles and trees, furniture than contribute to the existing modified character.	Visual Evaluation Criteria			
Elevation	[Eye level].		LOW	MEDIUM	HIGH
Distance to The Site	40m to location of the works [development on the foreshore site.]	Viewer Position			
Viewpoint Quality	LOW	Viewer Access			
		Visual Sensitivity			
		Visual Effect			
		Visual Impact - Significance Rating	Based on above criteria is: Medium		



VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE

viewpoint 2 montage

proposed new amenities structure



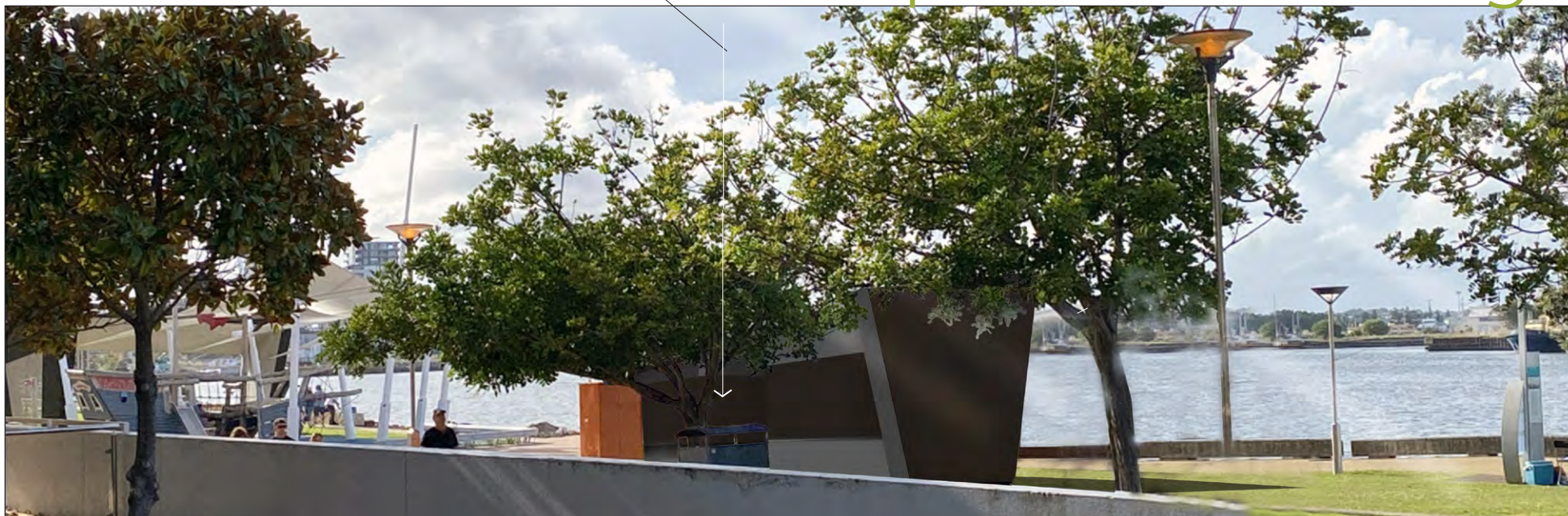
Viewpoint 2		Viewpoint 2	
Viewing Location Description	An elevated viewpoint from the upper levels of the apartments at 21 Honeysuckle Drive. Panoramic harbour views are possible from this location. The proposed amenities is a component of the shoreside public space and has little impact of visual effect as it is seen as part of the general development in the area.	Visual Evaluation Criteria	
Elevation	RL 23.0 AHD [approx].	Viewer Position	
Distance to The Site [boundary]	50m	Viewer Access	
Viewpoint Quality	HIGH	Visual Sensitivity	
		Visual Effect	
		Visual Impact - Significance Rating	Based on above criteria is: Medium

existing viewpoint 3



viewpoint 3 montage

proposed new amenities structure



Viewpoint 3		Viewpoint 3			
Viewing Location Description	Viewpoint located on the property at 19 Honeysuckle Drive directly across from the promenade location where the proposed amenities are to be located. The location here is a commercial premise and slightly elevated from the promenade.	Visual Evaluation Criteria			
			LOW	MEDIUM	HIGH
Elevation	RL 4.5 AHD [Eye level].	Viewer Position			
Distance to The Site [boundary]	15m	Viewer Access			
Viewpoint Quality	MEDIUM	Visual Sensitivity			
		Visual Effect			
		Visual Impact - Significance Rating	Based on above criteria is: Medium		



proposed new amenities structure

viewpoint 4 montage



Viewpoint 4		Viewpoint 4			
Viewing Location Description	Located on the promenade looking south. A sight that pedestrians will have when using the foreshore promenade. The proposed amenities is set off the promenade and located behind existing trees. The proposed structure is seen as an additional foreshore element and does not contribute detrimentally as a significant visual element due to existing surrounding infrastructure.	Visual Evaluation Criteria			
Elevation	RL 4.5 AHD [Eye level].	Viewer Position		LOW	MEDIUM
Distance to The Site [boundary]	50m	Viewer Access			HIGH
Viewpoint Quality	LOW	Visual Sensitivity			
		Visual Effect			
		Visual Impact - Significance Rating	Based on above criteria is: Medium		

existing temporary amenities structure to be removed



viewpoint 5 montage

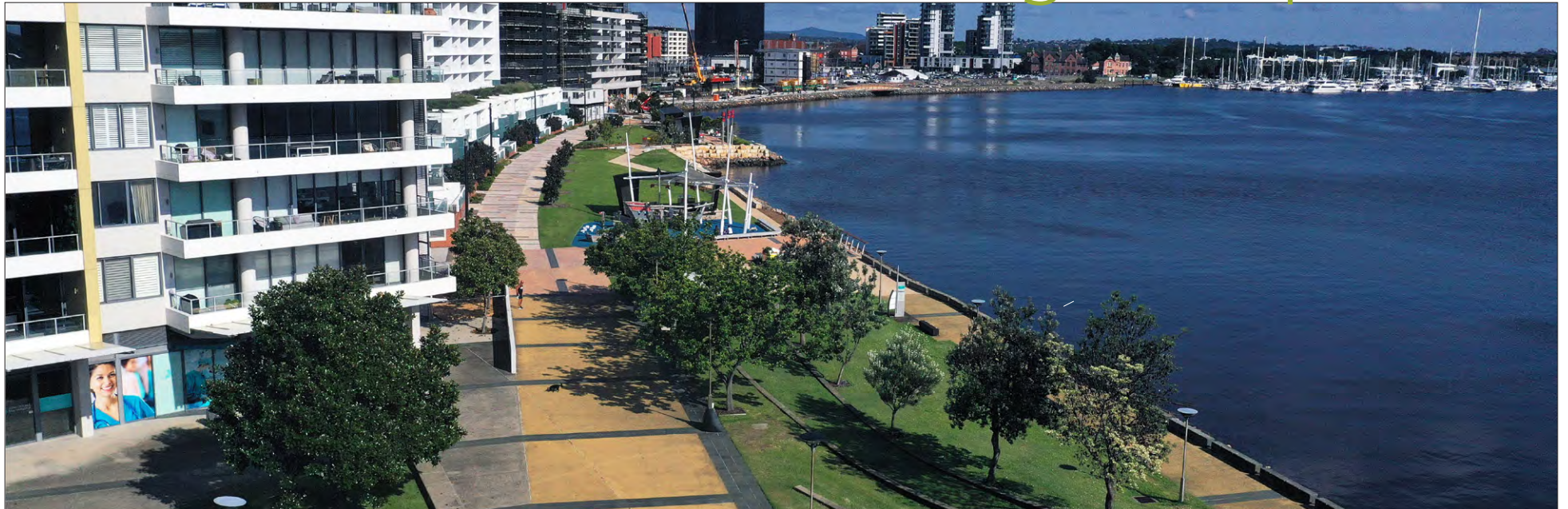
proposed new amenities structure



Viewpoint 5		Viewpoint 5	
Viewing Location Description	Elevated viewing location - image is shown when the viewer is looking downwards. Located on the fourth floor level of 19 Honeysuckle Drive. The structure is partially screened by existing trees. The overall impact is low as it forms part of the existing landscape character.	Visual Evaluation Criteria	
Elevation	RL 15.0 AHD [Eye level].		LOW MEDIUM HIGH
Distance to The Site [boundary]	30m	Viewer Position	
Viewpoint Quality	MEDIUM	Viewer Access	
		Visual Sensitivity	
		Visual Effect	
		Visual Impact - Significance Rating	Based on above criteria is: Low/Med

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VISUAL IMPACT ASSESSMENT REPORT - AMENITIES - HONEYSUCKLE PARK. WORTH PLACE existing viewpoint 6



proposed new amenities structure screened by exist trees

viewpoint 6 montage



Viewpoint 6		Viewpoint 6			
Viewing Location Description	Located around the position of the upper floor apartments around 11 Honeysuckle Drive. The view is looking south and takes in the panoramic views to the harbour. Due to the more distance location of the proposed amenities structure and its location behind existing trees the visual impact from this location is low [minimal]	Visual Evaluation Criteria			
Elevation	RL 15.5 AHD [Eye level].	Viewer Position		LOW	MEDIUM
Distance to The Site [boundary]	150m	Viewer Access			HIGH
Viewpoint Quality	MEDIUM	Visual Sensitivity			
		Visual Effect			
		Visual Impact - Significance Rating	Based on above criteria is: Low		



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Appendix D

Odour Impact Statement

Consulting Report

On

**Odour Impact Assessment (Level 2)
for Honeysuckle Park Amenities,
Newcastle**

Prepared by

John Jiang

on

11 April 2022

For

ESS Australia

Disclaimer and Limitation

EnvironOdour Australia Pty Ltd will act in all professional matters as a faithful adviser to the Client and exercise all reasonable skill and care in the provision of its professional services.

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Client: ESS Australia

Job No: EJ487	Version	Prepared by	Reviewed by	Submitted to Client	
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1. Introduction

EnvironOdour Australia has been engaged by ESS Australia on behalf of the Hunter and Central Coast Development Corporation to prepare a Level 2 odour impact assessment report for the proposed public toilets (1 male and 1 female toilet) adjacent to a recently completed recreation area. As a result of Honeysuckle Permanent Amenities - Review of Environmental Factors (REF), an odour impact assessment has been prepared to evaluate the potential odour impact in the vicinity of the proposed amenities.

The level 2 odour impact assessment will follow the procedures published by the Environmental Protection Authority (EPA), New South Wales (*EPA Technical Framework for Assessment and Management of Odours, November 2006*).

This report describes odour dispersion modelling procedures and the offside odour impact in the vicinity of the proposed amenities.

2. The site

This proposal is for the construction of accessible public toilets within the Honeysuckle foreshore precinct, adjacent to the recently completed Worth Place Park West park. The proposal is located within the Newcastle local government area and supports the overall function of adjacent land as part of the Newcastle open space network. The locality plan is shown in Figure 1. The subject site is marked in yellow.

The amenities comprise of two toilets for both male and female. The floor plan and north east elevation view with their dimensions is shown in Figure 2. From the odour emission point of view, it is a naturally ventilated volume source.

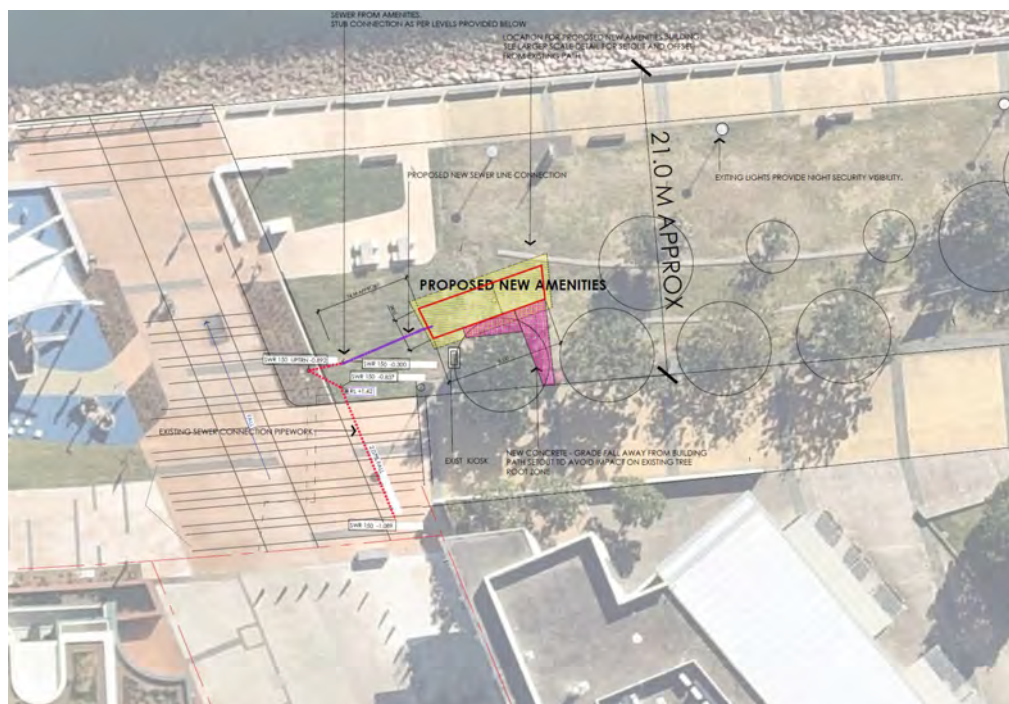


Figure 1 The site location (Option 3)

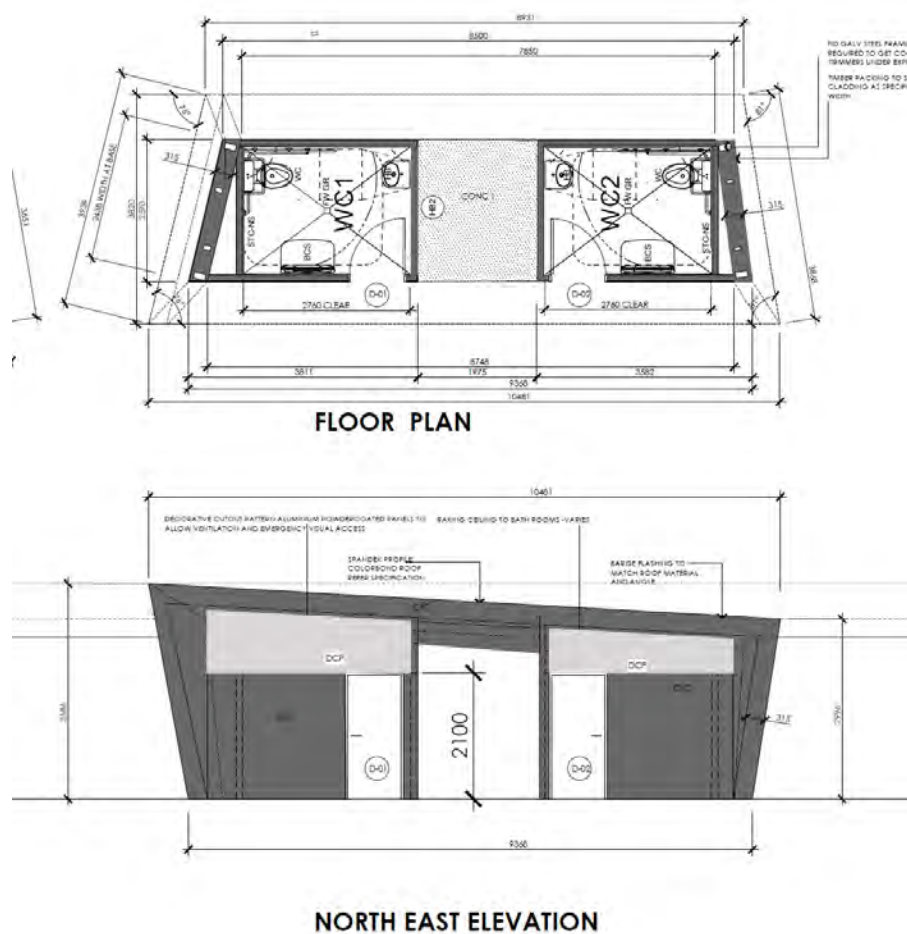


Figure 2 Floor plan to elevation view

3. Dispersion model

The Ausplume computer model is used to predict ground level concentrations of odours. Ausplume is a Gaussian dispersion model developed by the Environment Protection Authority of Victoria (EPAV, 1999). The model has undergone continual revisions since then and is widely used throughout Australia to assess air quality impacts from industrial and other sources. The Ausplume version used in the study is 6.0.

Ausplume requires a meteorological data file typically consisting of 1-hour averaged values such as wind speed, wind direction, sigma theta, temperature, mixing heights and stability class. NSW EPA documented Level 2 odour impact assessments are screening-level dispersion modelling assessments using worst-case input data, rather than site-specific data.

Ausplume calculates the hourly ground level odour concentration in the synthetical meteorological data set at each gridded receptor. As required, the maximum odour concentrations are used to plot the odour concentration contour. The predicted odour contour can then be compared to applicable odour performance criteria.

Ausplume has many user-selectable options for the adjustment of dispersion parameters. The options considered most appropriate for the circumstances are selected. Special issues are discussed in the remainder of this section.

3.1. Source characterisation

Both toilets are modelled as two separated volume sources. For modelling purposes, it is assumed that the amenities are operating 24 hours a day, 7 days a week. The actual operating hours may be fewer hours than this estimate.

For a well cleaned and ventilated toilet, the odour concentration is normally less than 30 OU/m³. For the purpose of odour dispersion modelling, a conservative approach is used to model the toilet as the worst case all year around.

The latest BCA 2019 has specified the minimum air flow rate at the amenity:

Certification from the builder, or suitably qualified person, as to compliance with Part 3.8.7 of BCA 2019, Volume 2 for a Class 1 building or Part F6 of BCA 2019, Volume 1 for a Class 2 building or Class 4 part of a building, specifically stating that: Any exhaust system from a bathroom or sanitary compartment has a minimum flow rate of 25L/s

The discharging air flow has been estimated using air change per hour of 12 times. This leads to the air flow rate of 59 L/s.

The source dimensions, environmental conditions and odour emission rates for the Ausplume dispersion model are tabulated in Table 1.

Table 1 Summary of odour emission

Description	Values
Toilet area, m ²	6.5
Height, m	2.7
Volume m ³	17.7
Stack temperature, °C	25
Air Change per Hour, times	12
Flow rate, m ³ /s	0.059
Odour concentration, OU/m ³	300
Odour emission rate, OU/s	17.7

3.1. Meteorological data

A Level 2 odour impact assessment must use “synthetic” worst-case meteorological data. An in-house software (MetAnalysis) was used to format the hourly observations into Ausplume format (Table 3). There are several parameters: date and time, temperature, wind speed, wind direction, atmospheric stability (Pasquill class), and mixing depth. The data set covers 401 days (9648 hours) of data. A wind rose illustrating the annual wind regime for the site is shown in Figure 3.

Table 2 Summary of meteorological data

Starting date:	210101	Ending date:	220206
Days:	402	Hours:	9648
Data count:	9648	Days calculated:	401
Min. Velocity:	0.5	Max. Velocity:	20
Min Temp:	1	Max Temp:	41
Min Mixing Height:	110	Max Mixing Height:	9145

The statistics of meteorological data is summarised in Appendix 1. The stability class distribution versus wind direction is shown in Table 5. The stability class

distribution versus wind direction is shown in Table 6. Wind speed distribution versus wind speed is shown in Table 7. The stability class distribution versus time of the day is listed in Table 9. Wind speed, wind direction, wind stability, mixing height distribution are also shown in Figure 8 - Figure 12 respectively.

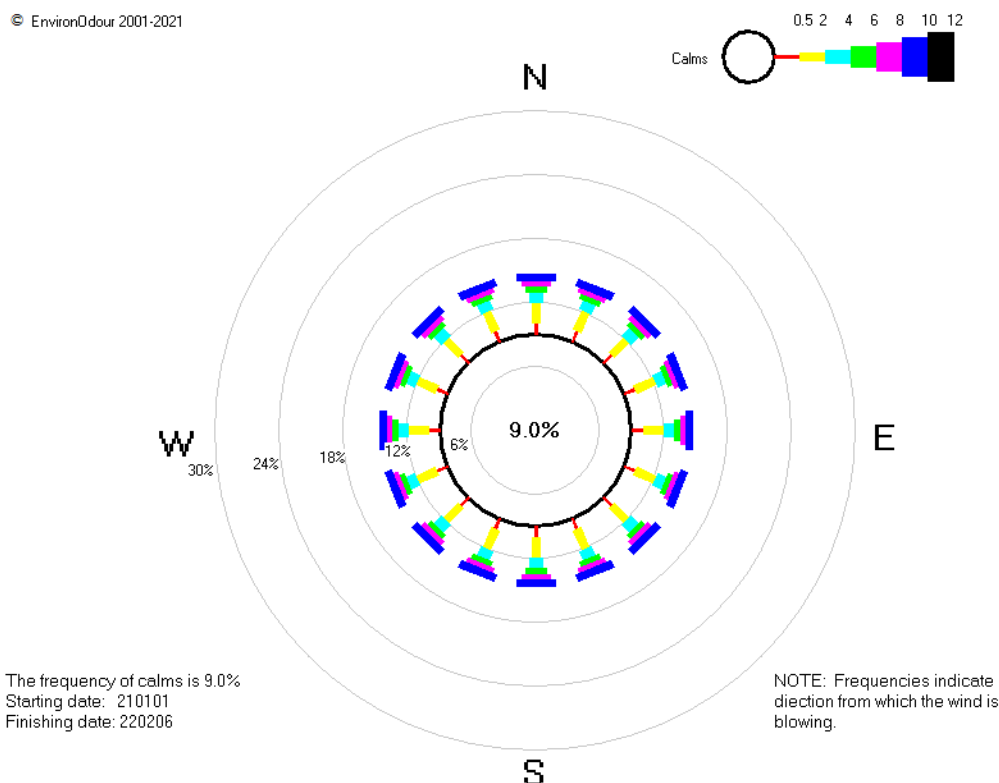


Figure 3 Wind rose for synthetical meteorological data (9648 hours)

3.2. Roughness height

The site has a mixture of commercial and urban residential areas. A conservative estimate of the roughness height in these circumstances is 0.4 metres, which is consistent with a predominantly residential environment.

3.3. Topography

The terrain surrounding the site is flat. In this instance, the effects of topography on odour dispersion were not considered in the study.

3.4. Receptor grid

The receptor grid was defined in local (arbitrary) coordinates at 25 metre intervals over an area of 1000m x 1000m. The fine grid results in a smoother odour contour.

3.5. Discrete locations

As suggested by ESS, four sensitive receptors (3 residential buildings and 1 café) are selected. Their coordinates are entered into the Ausplume dispersion configuration file.

3.6. Odour performance criteria for acceptable odour impact

Odour performance criteria are contained in "Technical framework: assessment and management of odour from stationary sources in NSW", November 2006, produced by the Department of Environment & Climate Change, previously known as the EPA (NSW EPA 2006). These are shown in Table 3.

Table 3 Odour performance criteria

Population of affected community	Impact assessment criteria for complex mixtures of odorous air pollutants (OU)
Urban area (≥ 2000) and/or schools and hospitals	2.0
~ 500	3.0
~ 125	4.0
~ 30	5.0
~ 10	6.0
Single residence ($\leq \sim 2$)	7.0

It was assumed that the area around the site is an urban area. Therefore, the relevant odour performance criterion is 2 OU as a nose response time average. For a one hour averaged value, the peak-to-mean ratios shown in Table 4 must be used to convert the nose response averages to one hour averaged value (P/M60) as the Ausplume dispersion model uses (NSW EPA 2006).

For the source type in this study (i.e. volume source), the applicable P/M60 ratio is 2.3 for near-field receptors and far-field receptors during neutral/convective conditions. In the study, the P/M60 ratio is 2.3 for all stabilities and distances.

Therefore, the odour impact criteria of the hourly averaged value (which is 0.9 OU after the conversion) will give a conservative estimate of odour impacts in comparison to the odour performance criterion.

Table 4 Factors for estimating peak concentrations in flat terrain

Source type	Pasquill–Gifford stability class	Near-field P/M60*	Far-field P/M60*
Area	A, B, C, D	2.5	2.3
	E, F	2.3	1.9
Line	A–F	6	6
Surface wake-free point	A, B, C	12	4
	D, E, F	25	7
Tall wake-free point	A, B, C	17	3
	D, E, F	35	6
Wake-affected point	A–F	2.3	2.3
Volume	A–F	2.3	2.3

* Ratio of peak 1-second average concentrations to mean 1-hour average concentrations

4. Odour dispersion modelling results

The predicted maximum ground level contour for the proposed amenities is shown in Figure 4. The modelling results are expressed as the ground level odour concentrations (in cyan) at the 100th percentile hourly value. The Ausplume output file is listed in Appendix 2.

Both toilets are marked as red triangles. The discrete locations are marked by red plus signs.

As described throughout the report, a number of conservative assumptions were made in deriving the contours. The real odour impact will be less than the predicted value in this case.

The predicted maximum odour concentration at the sensitive receptors is less than 0.9 OU. This confirms that there is no odour impact at ground level from the proposed amenities under the normal conditions. It is therefore obvious that the elevated apartments will receive less odour than the ground level due to the dissipation distance. The modelling results have confirmed the current operation will meet the NSW EPA's odour performance criteria.

5. Conclusion

The odour modelling results have shown that the maximum ground odour concentration was less than 0.9 OU. This confirms that the level 2 odour impact assessment for the site is a "pass".



Figure 4 Predicted odour concentration contours at the ground level (hourly 100th percentile)

6. Glossary of terms

"m" means metres.

"m³" means cubic metres of air at ambient conditions.

"OU" means odour units using the Australian Standard AS/NZS 4323.3:2001 terminology.

"OU m³/s" means odour units per cubic metre of air at ambient conditions. This is a measure of odour emission rate using the Australian Standard AS/NZS 4323.3:2001 terminology.

7. Reference

- Approved methods - for the Modelling and Assessment of Air Pollutants in New South Wales, Department of Environment & Climate Change, August 2005
- Technical framework Assessment and management of odour from stationary sources in NSW, Department of Environment & Climate Change, November, 2006
- Approved methods - for the Sampling and Analysis of Air Pollutants in New South Wales, Department of Environment & Climate Change, August 2005
- AS/NZS 4323.3:2001 – Stationary source emissions - Determination of odour concentration by dynamic olfactometry, Standards Australia.

Appendix 1. Summary of meteorological data

Table 5 Stability class distribution versus wind direction

WD \ AS	A	B	C	D	E	F	Sum
N	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
NNE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
NE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
ENE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
E	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
ESE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
SE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
SSE	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
S	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
SSW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
SW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
WSW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
W	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
WNW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
NW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
NNW	0.6%	0.6%	1.3%	2.3%	0.9%	0.6%	6.3%
Sum	9.0%	9.0%	20.9%	37.3%	14.9%	9.0%	100.0%

Table 6 Wind speed distribution versus wind direction

WD \ WS	0 - 0.5	0.5 - 2	2 - 4	4 - 6	6 - 8	8 - 10	>10	Sum
N	8.96%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	14.65%
NNE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
NE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
ENE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
E	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
ESE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
SE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
SSE	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
S	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
SSW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
SW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
WSW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
W	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
WNW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
NW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
NNW	0%	1.12%	1.96%	0.93%	0.56%	0.47%	0.65%	5.69%
Sum	8.96%	17.91%	31.34%	14.93%	8.96%	7.46%	10.45%	100%

Table 7 Stability class distribution versus wind speed

WS / AS	A	B	C	D	E	F	Sum
< 0.5	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	9.0%
1.54	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	17.9%
3.09	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	26.9%
5.14	0.0%	0.0%	6.0%	6.0%	6.0%	0.0%	17.9%
8.23	0.0%	0.0%	4.5%	9.0%	0.0%	0.0%	13.4%
10.5	0.0%	0.0%	1.5%	6.0%	0.0%	0.0%	7.5%
> 10.8	0.0%	0.0%	0.0%	7.5%	0.0%	0.0%	7.5%
Sum	3.9%	3.9%	9.1%	16.3%	6.5%	3.9%	100.0%

Table 8 Stability class distribution versus time of day

Time \ AS	A	B	C	D	E	F	Sum
1-2	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
3-4	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
5-6	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
7-8	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
9-10	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
11-12	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
13-14	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
15-16	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
17-18	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
19-20	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
21-22	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
23-24	0.7%	0.7%	1.7%	3.1%	1.2%	0.7%	8.3%
Sum	9.0%	9.0%	20.9%	37.3%	14.9%	9.0%	100.0%

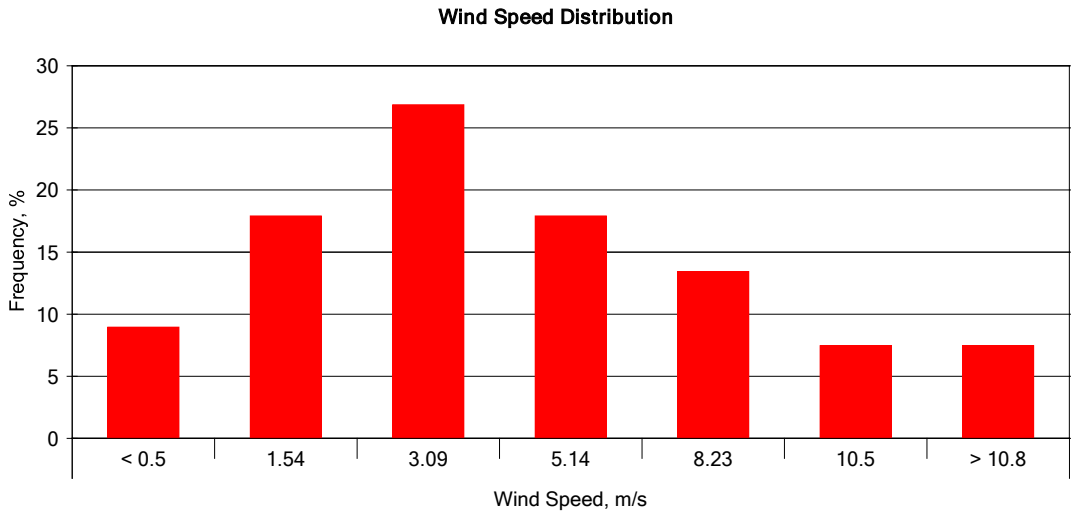


Figure 5 Wind speed distribution

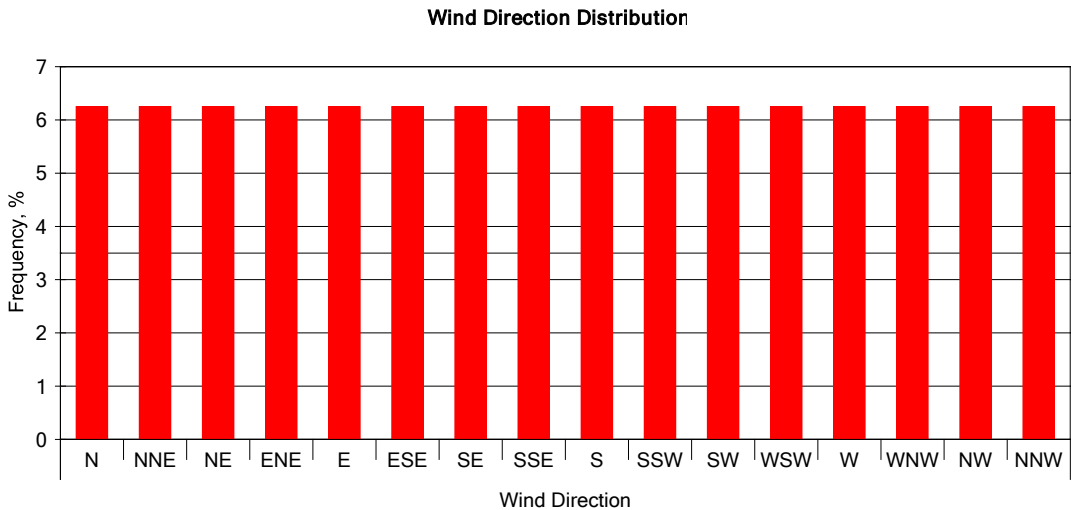


Figure 6 Wind direction distribution

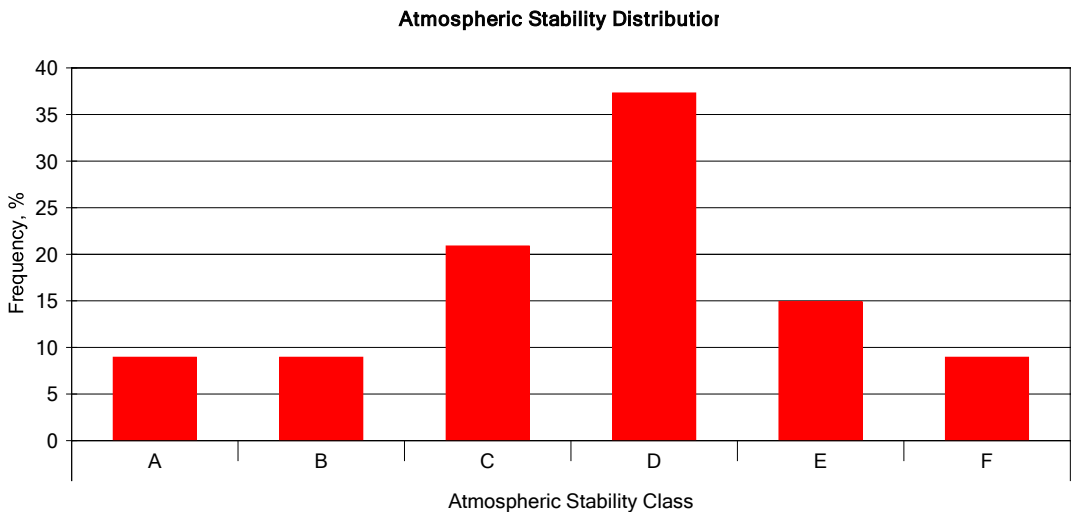


Figure 7 Atmospheric stability class distribution

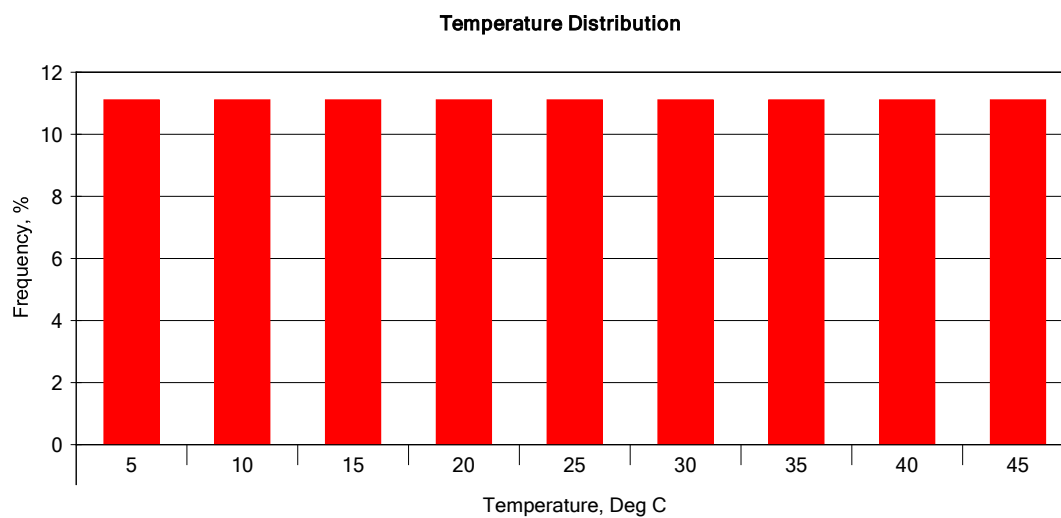


Figure 8 Ambient temperature distribution

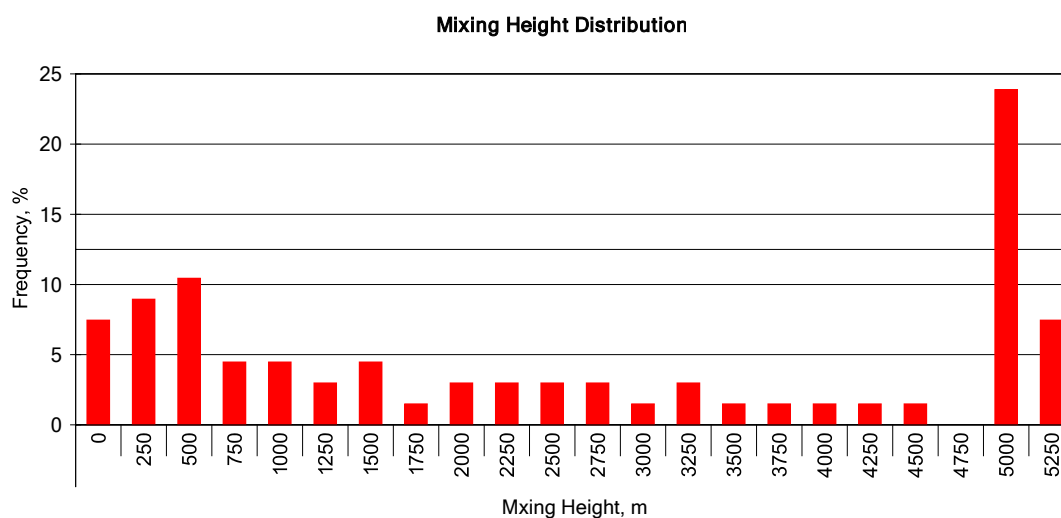


Figure 9 Mixing height distribution

Appendix 2. Ausplume configuration file

1

The Malt Room

Concentration or deposition	Concentration
Emission rate units	OUV/second
Concentration units	Odour_Units
Units conversion factor	1.00E+00
Constant background concentration	0.00E+00
Terrain effects	None
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	Yes
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m
Use the convective PDF algorithm?	No
Averaging time for sigma-theta values	60 min.

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Sigma-theta
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.800m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients given by the hourly met. file, a value from the following table (in K/m) is used:

Wind Speed Category	Stability Class					
	A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035

3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES

Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES

1 hour

1

The Malt Room

SOURCE CHARACTERISTICS

VOLUME SOURCE: 1

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
384801	6356329	0m	3m	3m	1m

(Constant) emission rate = 1.77E+01 OUV/second
No gravitational settling or scavenging.

VOLUME SOURCE: 2

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
384807	6356331	0m	3m	3m	1m

(Constant) emission rate = 1.77E+01 OUV/second
No gravitational settling or scavenging.

1

The Malt Room

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):

384563.m 384588.m 384613.m 384638.m 384663.m 384688.m 384713.m
384738.m 384763.m 384788.m 384813.m 384838.m 384863.m 384888.m
384913.m 384938.m 384963.m 384988.m 385013.m 385038.m 385063.m

and these y-values (or northings):

6356222.m 6356247.m 6356272.m 6356297.m 6356322.m 6356347.m
6356372.m
6356397.m 6356422.m 6356447.m 6356472.m 6356497.m 6356522.m
6356547.m
6356572.m 6356597.m 6356622.m 6356647.m 6356672.m 6356697.m
6356722.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEV	HEIGHT	No.	X	Y	ELEV	HEIGHT
1	384768	6356302	0.0	0.0	3	384856	6356307	0.0	0.0
2	384817	6356313	0.0	0.0	4	384875	6356313	0.0	0.0

METEOROLOGICAL DATA : This is a simulation of meteorological file

- Peak values for the 100 worst cases (in Odour_Units)
Averaging time = 1 hour

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	6.97E-01	04,03/11/21	(384788, 6356322, 0.0)
2	6.97E-01	20,09/11/21	(384788, 6356322, 0.0)
3	6.97E-01	12,16/11/21	(384788, 6356322, 0.0)
4	6.97E-01	04,23/11/21	(384788, 6356322, 0.0)
5	6.97E-01	20,29/11/21	(384788, 6356322, 0.0)
6	6.97E-01	12,06/12/21	(384788, 6356322, 0.0)
7	6.97E-01	04,13/12/21	(384788, 6356322, 0.0)
8	6.97E-01	20,19/12/21	(384788, 6356322, 0.0)
9	6.97E-01	12,26/12/21	(384788, 6356322, 0.0)
10	6.39E-01	15,06/06/21	(384813, 6356322, 0.0)
11	6.39E-01	07,23/06/21	(384813, 6356322, 0.0)
12	6.39E-01	23,09/07/21	(384813, 6356322, 0.0)
13	6.39E-01	15,26/07/21	(384813, 6356322, 0.0)
14	6.39E-01	07,12/08/21	(384813, 6356322, 0.0)
15	6.39E-01	23,28/08/21	(384813, 6356322, 0.0)
16	6.39E-01	15,14/09/21	(384813, 6356322, 0.0)
17	6.39E-01	07,01/10/21	(384813, 6356322, 0.0)
18	6.39E-01	23,17/10/21	(384813, 6356322, 0.0)
19	6.19E-01	04,06/06/21	(384788, 6356322, 0.0)
20	6.19E-01	20,22/06/21	(384788, 6356322, 0.0)
21	6.19E-01	12,09/07/21	(384788, 6356322, 0.0)
22	6.19E-01	04,26/07/21	(384788, 6356322, 0.0)
23	6.19E-01	20,11/08/21	(384788, 6356322, 0.0)
24	6.19E-01	12,28/08/21	(384788, 6356322, 0.0)
25	6.19E-01	04,14/09/21	(384788, 6356322, 0.0)

26	6.19E-01	20,30/09/21	(384788, 6356322,	0.0)
27	6.19E-01	12,17/10/21	(384788, 6356322,	0.0)
28	6.14E-01	15,03/11/21	(384813, 6356322,	0.0)
29	6.14E-01	07,10/11/21	(384813, 6356322,	0.0)
30	6.14E-01	23,16/11/21	(384813, 6356322,	0.0)
31	6.14E-01	15,23/11/21	(384813, 6356322,	0.0)
32	6.14E-01	07,30/11/21	(384813, 6356322,	0.0)
33	6.14E-01	23,06/12/21	(384813, 6356322,	0.0)
34	6.14E-01	15,13/12/21	(384813, 6356322,	0.0)
35	6.14E-01	07,20/12/21	(384813, 6356322,	0.0)
36	6.14E-01	23,26/12/21	(384813, 6356322,	0.0)
37	6.13E-01	04,02/01/22	(384788, 6356322,	0.0)
38	6.13E-01	04,06/01/22	(384788, 6356322,	0.0)
39	6.13E-01	04,10/01/22	(384788, 6356322,	0.0)
40	6.13E-01	04,14/01/22	(384788, 6356322,	0.0)
41	6.13E-01	04,18/01/22	(384788, 6356322,	0.0)
42	6.13E-01	04,22/01/22	(384788, 6356322,	0.0)
43	6.13E-01	04,26/01/22	(384788, 6356322,	0.0)
44	6.13E-01	04,30/01/22	(384788, 6356322,	0.0)
45	6.13E-01	04,03/02/22	(384788, 6356322,	0.0)
46	6.13E-01	14,02/01/22	(384838, 6356322,	0.0)
47	6.13E-01	14,06/01/22	(384838, 6356322,	0.0)
48	6.13E-01	14,10/01/22	(384838, 6356322,	0.0)
49	6.13E-01	14,14/01/22	(384838, 6356322,	0.0)
50	6.13E-01	14,18/01/22	(384838, 6356322,	0.0)
51	6.13E-01	14,22/01/22	(384838, 6356322,	0.0)
52	6.13E-01	14,26/01/22	(384838, 6356322,	0.0)
53	6.13E-01	14,30/01/22	(384838, 6356322,	0.0)
54	6.13E-01	14,03/02/22	(384838, 6356322,	0.0)
55	6.11E-01	12,02/01/22	(384838, 6356347,	0.0)
56	6.11E-01	12,06/01/22	(384838, 6356347,	0.0)
57	6.11E-01	12,10/01/22	(384838, 6356347,	0.0)
58	6.11E-01	12,14/01/22	(384838, 6356347,	0.0)
59	6.11E-01	12,18/01/22	(384838, 6356347,	0.0)
60	6.11E-01	12,22/01/22	(384838, 6356347,	0.0)
61	6.11E-01	12,26/01/22	(384838, 6356347,	0.0)
62	6.11E-01	12,30/01/22	(384838, 6356347,	0.0)
63	6.11E-01	12,03/02/22	(384838, 6356347,	0.0)
64	6.05E-01	10,03/11/21	(384813, 6356347,	0.0)
65	6.05E-01	02,10/11/21	(384813, 6356347,	0.0)
66	6.05E-01	18,16/11/21	(384813, 6356347,	0.0)
67	6.05E-01	10,23/11/21	(384813, 6356347,	0.0)
68	6.05E-01	02,30/11/21	(384813, 6356347,	0.0)
69	6.05E-01	18,06/12/21	(384813, 6356347,	0.0)
70	6.05E-01	10,13/12/21	(384813, 6356347,	0.0)
71	6.05E-01	02,20/12/21	(384813, 6356347,	0.0)
72	6.05E-01	18,26/12/21	(384813, 6356347,	0.0)
73	5.86E-01	07,02/01/22	(384788, 6356347,	0.0)
74	5.86E-01	07,06/01/22	(384788, 6356347,	0.0)
75	5.86E-01	07,10/01/22	(384788, 6356347,	0.0)
76	5.86E-01	07,14/01/22	(384788, 6356347,	0.0)
77	5.86E-01	07,18/01/22	(384788, 6356347,	0.0)
78	5.86E-01	07,22/01/22	(384788, 6356347,	0.0)

79	5.86E-01	07,26/01/22	(384788, 6356347,	0.0)
80	5.86E-01	07,30/01/22	(384788, 6356347,	0.0)
81	5.86E-01	07,03/02/22	(384788, 6356347,	0.0)
82	5.86E-01	16,03/11/21	(384817, 6356313,	0.0)
83	5.86E-01	08,10/11/21	(384817, 6356313,	0.0)
84	5.86E-01	24,16/11/21	(384817, 6356313,	0.0)
85	5.86E-01	16,23/11/21	(384817, 6356313,	0.0)
86	5.86E-01	08,30/11/21	(384817, 6356313,	0.0)
87	5.86E-01	24,06/12/21	(384817, 6356313,	0.0)
88	5.86E-01	16,13/12/21	(384817, 6356313,	0.0)
89	5.86E-01	08,20/12/21	(384817, 6356313,	0.0)
90	5.86E-01	24,26/12/21	(384817, 6356313,	0.0)
91	5.82E-01	07,03/11/21	(384788, 6356347,	0.0)
92	5.82E-01	23,09/11/21	(384788, 6356347,	0.0)
93	5.82E-01	15,16/11/21	(384788, 6356347,	0.0)
94	5.82E-01	07,23/11/21	(384788, 6356347,	0.0)
95	5.82E-01	23,29/11/21	(384788, 6356347,	0.0)
96	5.82E-01	15,06/12/21	(384788, 6356347,	0.0)
97	5.82E-01	07,13/12/21	(384788, 6356347,	0.0)
98	5.82E-01	23,19/12/21	(384788, 6356347,	0.0)
99	5.82E-01	15,26/12/21	(384788, 6356347,	0.0)
100	5.78E-01	02,02/01/22	(384788, 6356297,	0.0)

Appendix E

Location Options Analysis

APPENDIX E - TOILET BLOCK LOCATIONS ANALYSIS

	1	2	3	4	5	6
PLANNING OVERVIEW						
Visual Impact 21HD	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views. Some impacts to pedestrian views towards harbour.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.	Significant view impacts to closest residents. High visibility to all residents. High visual impacts to pedestrian views towards harbour.	Significant view impacts to closest residents. High visibility to all residents. High visual impacts to pedestrian views towards harbour.	Shielded by existing BBQ facility. Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.
Visual Impact 19HD	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.
Visual Impact 17HD	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.	Minimal visual impacts for closest residents. Moderate visibility for higher residential levels, but no impact to views.	Minimal to no visual impacts for closest residents. Some visibility for higher residential levels, but no impact to views.
Odour Impact 19HD	Negligible impact to closest residents due to distance from building.	Negligible impact to closest residents due to distance from building.	Potential moderate impact to closest residents due to distance from building.	Potential moderate impact to closest residents due to distance from building.	Negligible impact to closest residents due to distance from building.	Negligible impact to closest residents due to distance from building.
Crime Prevention (CPTED)	Isolation and orientation towards harbour pose a higher risk for pedestrian safety. Requires adequate visibility towards playground and lighting.	Isolation and orientation towards harbour pose a higher risk for pedestrian safety. Requires adequate visibility towards playground and lighting.	Proximity to and orientation towards playground area allows for good visibility and safety.	Proximity to and orientation towards playground area allows for good visibility and safety.	Proximity to and orientation towards playground area allows for good visibility and safety.	Isolation and orientation towards harbour pose a high risk for pedestrian safety. BBQ facility blocks visibility adding to higher risk.

UTILITY AVAILABILITY						
Sewer	Sewer accessibility limited due to distance from connection point and low site levels compromising gravity mains.	Sewer accessibility limited due to distance from connection point and low site levels compromising gravity mains.	Sewer available and in proximity with little constraint.	Sewer available and in proximity with little constraint.	Sewer accessibility limited due to existing footpaths and low site levels compromising gravity mains.	Limited access through Worth Place floodway due to stormwater lines. Low levels through floodway would further compromise gravity mains.
Water	Water available and in proximity with little constraint.	Water available and in proximity with little constraint.	Water available and in proximity with little constraint.	Water available and in proximity with little constraint.	Water available and in proximity with little constraint.	Limited access to water. Would require augmentation to western side of floodway.
Electrical	Electrical available and in proximity with little constraint.	Electrical available and in proximity with little constraint.	Electrical available and in proximity with little constraint.	Electrical available and in proximity with little constraint.	Electrical available and in proximity with little constraint.	Limited access to electrical. Would require augmentation to western side of floodway.
Communications	Communication lines available and in proximity with little constraint.	Communication lines available and in proximity with little constraint.	Communication lines available and in proximity with little constraint.	Communication lines available and in proximity with little constraint.	Communication lines available and in proximity with little constraint.	Limited access to comms. Would require augmentation to western side of floodway.

CONSTRUCTION IMPACTS ON EXSITING ASSETS						
Trees	No impact on existing trees.	No impact on existing trees.	Potential impact on existing trees.	No impact on existing trees.	No impact on existing trees.	No impact on existing trees.
Footpaths	No impact on existing footpaths.	No impact on existing footpaths.	No impact on existing footpaths.	No impact on existing footpaths.	Moderate impact on existing footpaths.	Significant impact on existing paved floodway and footpaths.

Structures	No impact on existing structures.	No impact on existing structures.	Potential minor impact on western end of concrete blade wall (part of public art to the east)	No impact on existing structures.	Potential impact on existing seating and other furniture. Would need to be relocated.	Potential significant impact on existing BBQ facility and / or playground structure to accommodate new toilet block.
Utilities	Little to not impact on existing utilities	Little to not impact on existing utilities	Little to not impact on existing utilities	Little to not impact on existing utilities	Moderate impact on existing utilities servicing seating lighting and water taps.	Significant impact to existing stormwater lines in Worth Place floodway.

COST BENEFIT ANALYSIS						
Construction	Distance from existing services connection points will add to costs. Additional turfed areas to be replaced. Additional infrastructure required.	Distance from existing services connection points will add to costs. Additional turfed areas to be replaced. Additional infrastructure required.	Close to existing service connection points. Minimal disruption to existing assets.	Close to existing service connection points. Minimal disruption to existing assets.	Removal of existing footpath and furniture required. Potential pump system required due to level difference with connection point.	Significant remove / relocation / reinstatement required of footpaths, stormwater lines, playground equipment and furniture. Pump out system required due to level differences with connection point.
Operations	Standard operational requirements apply for community toilet block. No additional maintenance requirements identified.	Standard operational requirements apply for community toilet block. No additional maintenance requirements identified.	Standard operational requirements apply for community toilet block. No additional maintenance requirements identified.	Standard operational requirements apply for community toilet block. No additional maintenance requirements identified.	Potential pump out sewer system requiring additional maintenance and replacement.	Pump out sewer system requiring additional maintenance and replacement.