MOTT MACDONALD

Ergon Townsville Training Centre Relocation

October 2024

This page left intentionally blank for pagination.

Mott MacDonald
Level 14
175 Eagle Street
Brisbane
QLD 4000
Australia

T +61 (0)7 3151 3151
mottmac.com

Energy Queensland Limited

Ergon Townsville Training Centre Relocation

October 2024

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	30/09/24	G.Clipperton	K.Sellers	S.Brown	Draft for client review
B	18/10/24	G.Clipperton	K.Sellers	S.Brown	Final for lodgement.

Document reference:

Contents

Tables

Figures

1 Introduction

Ergon Energy Corporation Limited (Ergon) are proposing to redevelop the Ergon Training Centre at 4 Hartley Street Garbutt. In order to redevelop the Garbutt training centre site, the training centre will need to be temporarily relocated across the road to 15 Hartley Street.

This report provides all of the information required for the application for the temporary relocation of the training centre to the new address, 15 Hartley Street Garbutt, Lot 361EP784. In order to facilitate a future transfer of infrastructure charges, 4 Hartley Street has also been applied over as part of this application. The redevelopment of the existing facility at 4 Hartley Street will be submitted in a separate application.

2 Site characteristics

2.1 Site summary

The Townsville site is a standalone specialised training facility located at 4-28 Hartley Street, within Garbutt's industrial area, opposite Ergon Energy's major depot in Townsville. The 15,950m2 facility was established in 1984 with the site layout suitable for Ergon Energy's training delivery in the 1980s and 1990s. The training site includes a training yard with two small buildings inside the yard boundaries.

The site operates as a Registered Training Organisation (RTO) and provides industry courses, technical training and apprenticeship programs relevant to its workforce and the energy industry. Its training operation ensures that Ergon Energy's workforce is adequately skilled and competent to safely and efficiently operate and maintain the electricity network, thereby ensuring safe and reliable electricity supply for the community. Ergon Energy delivers high-quality vocational training courses and nationally accredited qualifications, as well as safety awareness sessions at the training facility in Townsville.

The facility serves a significant role in educating internal staff, authorised contractors, external parties and the community on critical safety aspects when working in an environment that exposes a person to the medium and high voltage network. This includes electricians working on a switchboard at a customer's premises and network connection officers connecting new customers. As Queensland's regional Distribution Network Service Provider (DNSP), Ergon Energy is uniquely positioned to educate staff and the community regarding the safe operation of the electricity network.

2.2 Site location

The site is located at 15 Hartley Street Garbutt and formally described as Lot 361 on EP784. This application also relates to the existing southern portion of the existing training facility at 4 Hartley Street, described as Lot 581 on EP1760. Garbutt is located four kilometres Southwest from the centre of Townsville.

The subject area for the proposal is shown in the figure below:

Figure 2-1: Lot 361 on EP784 and par of Lot 581 on EP1760

2.3 Site description

The temporary training facility is proposed to be located at 15 Hartley Street Garbutt QLD 4814.

The zoning of the land is Medium Impact Industry. The site is currently used for industrial purposes and storage. The land was previously used as a pole storage site for Ergon Energy. The surrounding land uses include other Medium Impact Industry zoned land to the North and South and Community Facilities directly to the West and East. The North Coast Train line is approximately 200m to the North of the subject site.

The Garbutt industrial area accommodates a wide range of industrial uses, including steel manufacturing, engineering and equipment hire.

The Community Facilities site directly across Hartley Street is the current Ergon Training Centre, which makes this site the perfect location for the temporary location of training classrooms while the current training centre is being redeveloped. Ergon will still use the rear of the current training centre for manual and live line training for the duration of the redevelopment.

Lot 361 on EP784 is freehold and registered to Pinker Developments Pty Ltd (Owner's Consent is provided as an additional form to this application).

Basic characteristics of the site are outlined in the table below:

Table 2-1: Basic characteristics of the site

Characteristics	Description	
Description	361EP784	581EP1760
Area	5796.49m^2	15950m^2
Use	Industrial purposes and storage and previously used as a pole storage site by Ergon Energy.	The site is currently utilised as a Training Facility for Ergon Energy.
Ownership	The registered owner for the site is Pinker Developments Pty Ltd.	The registered owner for the site is Ergon Energy Corporation Limited.
Zone	Medium Impact Industry	Community Infrastructure
Improvements	The property contains improvements from the permanently closed Dale & Meyers timber trade Centre. Including two existing occupied buildings, gravel hardstand areas utilised for storage and a 1.8m high chain wire security fence to the boundary.	Seven existing small buildings/sheds, overhead electrical training facilities, gravel and bitumen hardstand areas utilised for storage and an existing large Technical Training and Development building in the southern portion of the subject allotment.
Easements	No easements registered on title.	Easement A on SP304686 is registered to Ergon Energy Corporation Limited and is located to the southwestern border of the site.
Natural characteristics	The lot is flat and pre-cleared with open space used for the storage of wood for the previous land use of Timber Trade.	The lot is flat and pre-cleared with open space used for the storage of wood for the previous land use of Timber Trade.
Topography	The subject allotment's lowest level is approximately 4.5m AHD at the existing access onto the property from Hartley Street, the highest level is approximately 5.3m AHD along the rear boundary of the property. The land of the subject allotment generally slopes from front to back at an average grade of 1 in 200 or 0.5% which is typical for industrial zoned land in Garbutt.	The subject allotment's lowest level is approximately 4.6m AHD on the western boundary of the property adjacent to Hartley Street. The subject site generally slopes downward from east to west and north to south at approximately 0.5% which tends to follow the natural slope of the land in this area.
Access	Hartley Street is located to the east of the site. There is an existing access road/path off Bolam Street (north of the site) in the old railway lot which may provide informal access to the western border of the lot.	Hartley Street is located to the east of the site. Vehicular access is provided via one (1) existing crossover located along Hartley Street.
Regional Plan	North Queensland Regional Plan	North Queensland Regional Plan

2.4 Approval history

Townsville's ePlanning service provides planning approval history for premises within Townsvile. This site only includes approvals from 1st July 2008 and onwards. ePlanning does not detail any applications that relate to Lot 361EP784.

A Standard Planning and Development Certificate was received on the 21st June 2024 from the Townsville City Council. The search including the following building and sign approvals for the current structures on site. These relate to the Dale and Meyers Timber Trade Centre that historically operated from the site.

2.4.1 Site approval history

Date	Approval history
2.11.1969	26264 – New Warehouse (Building Permit, Plans & Final)
6.04.1973	31107- New Warehouse (Building Permit, Places & Final)
25.01.1994	93/3158 – 3 x Signs (Building Permit & Plans)

2.4.2 Surrounding approval history

Approvals for surrounding sites are outlined in the table below.

Table 2-2: Adjoining planning approvals

Site	Approval history
4 - 28 Hartley Street GARBUTT QLD 4814	BP18/2416. Class 9b Assembly Building - Training Workshop with Storage Mezzanine - Ergon Energy. This application relates to the property opposite the site to the east. The application was lodged on 15/11/18 and finalised on the 13/11/18.
19 Hartley Street GARBUTT QLD 4814	There are 2 applications associated with this address. These include: 1. MCU19/0101. Code Assessable - Extension to Existing Warehouse - Non-Compliant Accepted Development no more than 2 AO's. The premises is located in the lot adjacent to the south of the site. The application was lodged 27/09/19 and finalised on 28/10/19. 2. BP24/1329. Class 8 - Extension to workshop. Lodged 18/06/24 finalised 30/04/24.
13 Hartley Street GARBUTT QLD 4814	The premises is on the lot adjacent to the north of the Project Area. There are several applications listed over this site including: 1. MCU19/0134. Code Assessable - Low Impact Industry and Warehouse - Non-Compliant Accepted Development no more than 2AO's combined with OPW19/0133. Lodged 17/12/19 finalised 15/04/20. 2. OPW19/0133. Code Assessable - Civil and Landscaping Works combined with MCU19/0134. Lodged 17/12/19 finalised 15/04/20.

	3. MCU23/0123. Code Assessable - Warehouse - Non-Compliant Accepted Development. Lodged 27/11/23 finalised 15/05/24. 4. MCU23/0123.01. Minor Change to Approval - Generally in Accordance - Additional Shed. Lodged 27/06/24 finalised 11/07/24.
21 Hartley Street GARBUTT QLD 4814	BP15/0540. Class 10a Non-Habitable Building – Carport. Lodged 26/02/15 finalised 26/02/15.

3 Proposed development

The Townsville specialised training facility operates as a Registered Training Organisation (RTO) and provides industry courses, technical training and apprenticeship programs relevant to its workforce and the electricity industry.

Its training operation ensures that Ergon Energy's workforce is adequately skilled and competent to safely and efficiently operate and maintain the electricity network, thereby ensuring safe and reliable electricity supply for the community

The training facility is over 35 years old and the buildings are aged, in a poor state of repair and/or nearing end of life.

Between 2017 and 2023/24, the number of Training sessions run yearly are increasing at 41% p.a., while the number of participants is increasing at 26.3% p.a. year-on-year. Utilisation of the 7 training rooms on-site are expected to reach 100% utilisation during the 2023/24 financial year.

Energy Queensland Limited are proposing to redevelop the Ergon Training Centre at 4 Hartley Street Garbutt. In order to redevelop the Garbutt training centre site, the training centre will need to be temporarily relocated across the road to 15 Hartley Street. This application relates to the temporary relocation of the training centre to the new address, 15 Hartley Street Garbutt, Lot 361EP784. The redevelopment of the existing facility will be submitted in a separate application.

Appendix 1 provides the Site Plan for the development.

3.1 Design and operation

3.1.1 Proposed use

The proposal includes 10 demountable buildings joined by 611m^2 of decking. The temporary Training Centre will also include ramping, stairways, car parking and driveway.

The facility includes three office spaces, five training spaces and one lunchroom. On site parking has been included for 29 car parking spaces, including on PWD parking space. Two truck parking spaces have also been included.

3.1.2 Staff

The site will have 17 permanently trainers/employees based on site.

The training centre will have a maximum anticipated attendance of 32 students on site.

3.1.3 Services

STP Consultants have provided a civil engineer services report which is included in Appendix 3.

The site is connected to all local services. Including overhead electricity supply.

3.1.4 Visual impacts

The proposal is located within an industrial area of Garbutt. The facility will sit behind the existing buildings on site, see figure below. The potential visual impact of the facility is negligible as the site will only be partially visual from the Hartley Street due to its location on the site.

The proposal also includes a new landscaping buffer for the Hartley Street frontage.

Figure 3-1: Google Street View

4 Key planning matters

4.1 Biodiversity

There is no protected vegetation, regulated vegetation management (RVM) or MSES located at the site.

4.2 Flooding

As indicated on the Townsville City Council flooding maps, the site is subject to minor inundation from flooding in the defined flood event of 1% AEP. During the defined flood event the front of the allotment will have an approximate depth of water of 400mm and will taper to 0mm by approximately halfway into the allotment. The Defined Flood Event Levels for the subject site are as follows:

- AEP 1% Flood – RL4.88m AHD
- AEP 2% Flood – RL4.85m AHD.

Floor levels should be set a minimum of 300mm above the Defined Flood Event (DFE).

The figure below shows the flood hazard areas as part of the Townsville City Plan and identifies the site as predominantly low and medium hazard area with a small amount of the northeastern portion identified as high hazard area.

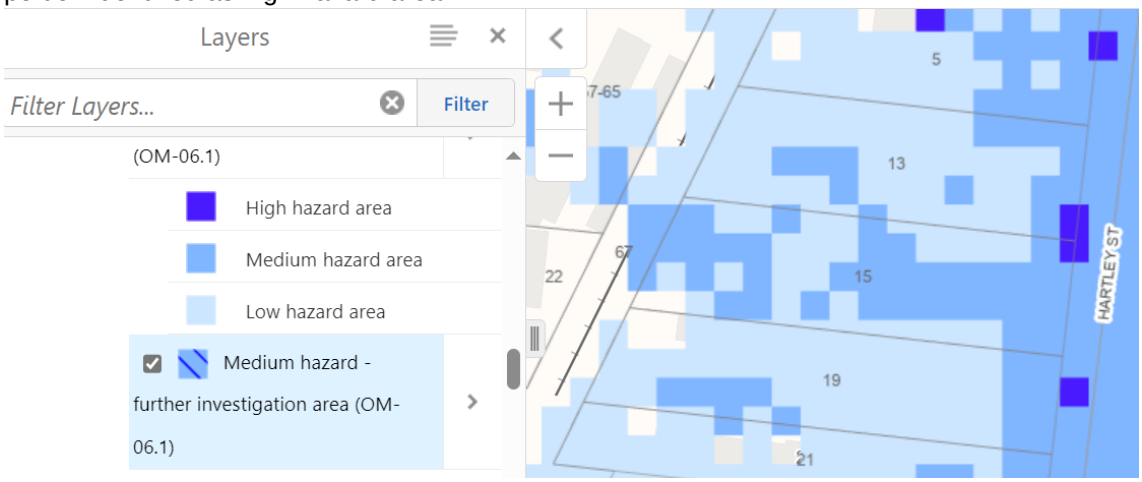


Figure 4-4-1: Townsville City Council flood mapping

The subject allotment is part of the Ross Creek Flood Study as indicated on the Townsville City Council flooding maps. The site is subject to minor inundation most likely a result of the land being developed when the design standards were less than the current Townsville City Council requirements. The inundation is from the local stormwater runoff in Hartley Street and not a result of Ross Creek flooding.

The Defined Flood Event level for the subject site in Hartley Street is RL4.88m AHD – 1% AEP flood event. In accordance with the Townsville City Council Development Manual the site is not subject to the Stormtide flooding level of 3.9m.

Below is an extract from Drawing 1564-DA A1-03 Elevations in Appendix 1 that shows that the main level (5.6m) is above the 1% AEP + 300m (5.18m)

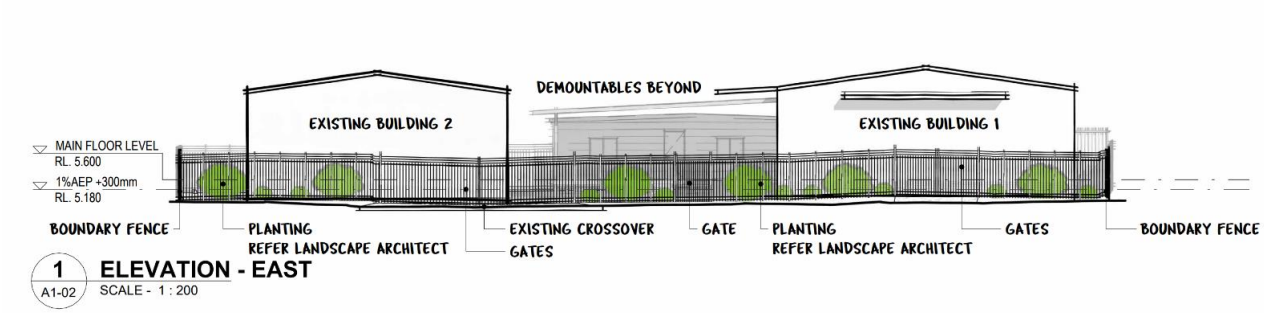


Figure 4-2: Site elevation

5 Pre-lodgement meeting

A pre-lodgement meeting (Council reference: PLM24/0074) was held with the council on the 14 May 2024. Topics discussed in this meeting include:

- Defined Use – Education Facility – Suggest including Ergon in the defined use
  - Temporary training facility whilst renovations occur over existing site at 4-28 Hartley Street.
  - 2-3 year process to be onsite
  - Intent is to remove the educational facilities once the redevelopment facility is bought online
- Level of assessment – Impact Assessable
  - Application will be assessed as a permanent Educational Facility, no sunset clauses can be included.
- Medium impact industry zone code
  - Need to discuss how the existing use of the site will continue to operate.
- Transport impact, access and parking code
  - Parking – Carpark to be sealed. Permeable pavers may be considered as an option to manage the increased runoff associated with the additional impervious area.
  - Traffic Impact Assessment may be required. Refer to Post Meeting Feedback.
- Works code
  - A DN150 sewer line extends through the site. A Building over or near relevant infrastructure referral application will be required if structures are proposed over or near this line as per the QDC MP1.4 document.
- Landscape code
  - Landscaping – along frontage of the property will be required
  - As the use is temporary, council may consider not having 3 shade trees in car park as it may affect future use of the site.
  - Temporary shade sails should be considered
- Flood hazard overlay code
  - TownsvilleMAPS shows that the subject site is affected by 1% AEP flooding. Providing elevated structures with open ground floors would avoid the need for a Flood Impact Assessment by ensuring that runoff can continue to flow through the site unimpeded. Elevated structures to achieve the prescribed immunity criteria i.e. non-habitable floors to achieve immunity in a defined flood event (1% AEP).
- Other Applicable Information
  - Upon lodgement of your development application, you will be required to pay assessment fees in accordance with Council's Planning Services Fees and Charges Schedule. For the most current schedule, please refer to: Fees & Charges - Townsville City Council
  - Furthermore, the development proposal will be subject to Infrastructure Charges. For a comprehensive review of Council's Infrastructure Charge Resolution, please view the following link: Infrastructure Charges - Townsville City Council.

Post-meeting feedback is as follows:

- Infrastructure Charges will apply in accordance with the Infrastructure Charges Resolution.
- Infrastructure Charges run with the land and are not transferable between properties.
- Table SC6.4.5.2 of the Townsville City Plan specifies that a “Moderate” level Traffic Impact Assessment (TIA) is required for developments involving a new peak hour trip generation rate of 20-300 trips and an increase or decrease in car parking of 10 spaces. A TIA report lodged in support of the development must be certified by an RPEQ.
- Stormwater management plan to be prepared for the development, addressing runoff quality and quantity.
- Further discussions were undertaken within Council regarding infrastructure charges. One of the outcomes that you may wish to consider is to submit one application that includes both properties, being 4-28 and 15 Hartley Street and stage the proposal. Stage 1 would be the temporary buildings located at 15 Hartley Street and Stage 2 would be the proposed new buildings at 4-28 and the demolition of 15 Hartley Street. This will allow one infrastructure charge notice to be issued for the development. However, to ensure no infrastructure credits remain with 15 Hartley Street, it is recommended that you obtain a letter of understanding from the land owners agreeing that the temporary use of their land will result in no land credits for an Educational Facility being applied to the property. This letter would need to be submitted to council upon lodgement of the application over both lots.

This planning report addresses all issues raised by Council in the prelodgment meeting.

5.1 Infrastructure charges

Ergon are seeking to redevelop the existing Training Facility at 4 Hartley St, Garbutt. The redevelopment will focus primarily on the classroom and facilities building on the Dalrymple Road frontage of the site. The rear of the site, which is used for practical training, will remain as is.

The works involve complete demolition and rebuild of the classroom and facilities building. In order to carry out the works and continue to provide a service in Townsville, a temporary facility is required. Ergon have entered into a lease at 15 Hartley Street for 3 yearsapproximately 2-3 years to use for the temporary facility. The site is directly across from the current training facility so will enable the use of the existing site for practical training.

Council advised at the pre-lodgement on the 14th May 2025 that 3 years would exceed Council’s planning scheme definition of a temporary use, resulting in the need to lodge this development application for a new Educational Facility.

Townsville City Council indicated that the full Infrastructure Charge Rate will be applied to the temporary use. This charge rate is $169.37 per m2 GFA (2025 charge). The proposed GFA is approximately 702m2 which equates to a charge of $118,898. Given the use is only temporarily Ergon have expressed their preference to have this credited towards the ultimate redevelopment of 4 Hartley Street, once the temporary use of 15 Hartley Street is discontinued. Council identified two options as outlined below:

- Option 1 - Inclusion of both 15 and 4 Hartley Street as a combined application to acquire land use approvals for both the temporary and permanent development option. The application would be required to be subject to a staging plan which would entitle allocation of infrastructure credits across stages.
- Option 2 - Inclusion of both 15 and 4 Hartley Street in a single application to support the Temporary facilities only.

Council have indicated that both options would require Ergon to enter into an infrastructure agreement to manage credit transfer. To facilitate this outcome, Council would require the landowner(s) of 15 Hartley Street to legally acknowledge that the infrastructure credit would not be relevant to 15 Hartley Street (lease land) but only 4 Hartley (Ergon land).

Since the pre-lodgement meeting, Ergon have decided to progress with Option 2 and are submitting this application including both 15 and 4 Hartley Street.

As part of this option, an infrastructure agreement will need to be conditioned as part of the Development Application. This will be submitted to Council during the Material Change of Use process. It is expected that the Infrastructure Agreement will cover the technicalities around transferring the infrastructure charges to 4 Hartley Street, once the Temporary use has ended and all training / educational activities are back to being carried out solely at 4 Hartley Street.

6 State planning instruments

6.1 Planning Act 2016

In accordance with section 45(5) of the *Planning Act 2016* ('the Act'), Impact assessable applications are required to be assessed against the benchmarks (including strategic outcomes) in a categorising instrument for the development and having regard to any matters prescribed in the Regulation. An impact assessable application may also be assessed against, or having regard to, any other relevant matter, other than a person's personal circumstance, financial or otherwise.

The assessment benchmarks are identified in the Townsville City Plan ('the city plan) (refer to section 7.0 of the report below) and in section 30 of the Regulation.

The assessment benchmarks in the Regulation are identified, to the extent relevant to the development, as being:

- Schedules 9 and 10 of the Regulation;
- North Queensland Regional Plan;
- the State Planning Policy, part E, to the extent part E is not identified in the planning scheme as being appropriately integrated into the planning scheme; and
- Townsville's Local Government Infrastructure Plan (LGIP).

The matters prescribed in the Regulation are set out in section 31 and are as follows, to the extent relevant to the development:

- The North Queensland Regional Plan 2020;
- the State Planning Policy 2017, to the extent the State Planning Policy is not identified in the planning scheme as being appropriately integrated in the planning schemeTownsville City Plan;
- any development approval for, and any lawful use of, the premises or adjacent premises; and
- the common material.

The assessment benchmarks and other matters, to the extent they are relevant to the development are discussed below.

6.2 Schedule 9 and 10

6.2.1 Schedule 9

Schedule 9 of the Regulation relates to building work under the Building Act and is not relevant to this application.

6.2.2 Schedule 10

Schedule 10 of the Regulation prescribes:

- What constitutes assessable development;
- Category of assessment for development;
- Assessment benchmarks for development;
- Referral agencies for assessment of applications; and

- Fees for referring the application.

6.2.3 Relevant planning triggers

As shown in Figure 6-1 below, the site is not affected by any State interests.

Figure 6-1: 15 Hartley Street - Development Assessment mapping system (Queensland Government, 2024)

As shown in Figure 6-1 above, the site is affected by the 'areas within 25m of a state transport corridor' Matter of Interest. As shown in the figure below, this layer applies only to a small area in the northwestern portion of the site and as we are only lodging over part of this lot where the current training centre sites, this will therefore not have an impact on the project.

Referral is not required as it is the premises, not the lot, that triggers the overlay. This has been confirmed with SARA via email.

The site is also affected by the 'areas within 100m of a substation' Matter of Interest. As shown in the figure above, this layer applies only to a small area in the southern portion of the existing site.

A pre- referral response from Ergon is attached in Appendix 7 of this application.

6.3 North Queensland Regional Plan

The North Queensland Regional Plan (NQ Regional Plan) is a 25-year strategic, statutory planning document for the local government areas of Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville. It has been prepared to support the established and emerging

industries in the region and to address changes expected to occur within the region. These changes include a growing and ageing population, shifting economic and employment patterns, impacts from climate change and continued technological advances.

The site is located within the Townsville Urban Area (NQ) This boundary was set up to manage future urban residential growth within the city. The purpose of this boundary is to contain future urban residential development within the mapped area.

This boundary does not impact the development of the site as a temporary education facility for Ergon Energy.

6.4 State Planning Policy

Pursuant to the Regulation, assessment of the application must have regard to the State Planning Policy (SPP), to the extent the SPP is not identified in the planning scheme as being appropriately integrated in the planning scheme.

Figure 6-2 below illustrates state interests which are shown on the Queensland Government SPP Mapping System.

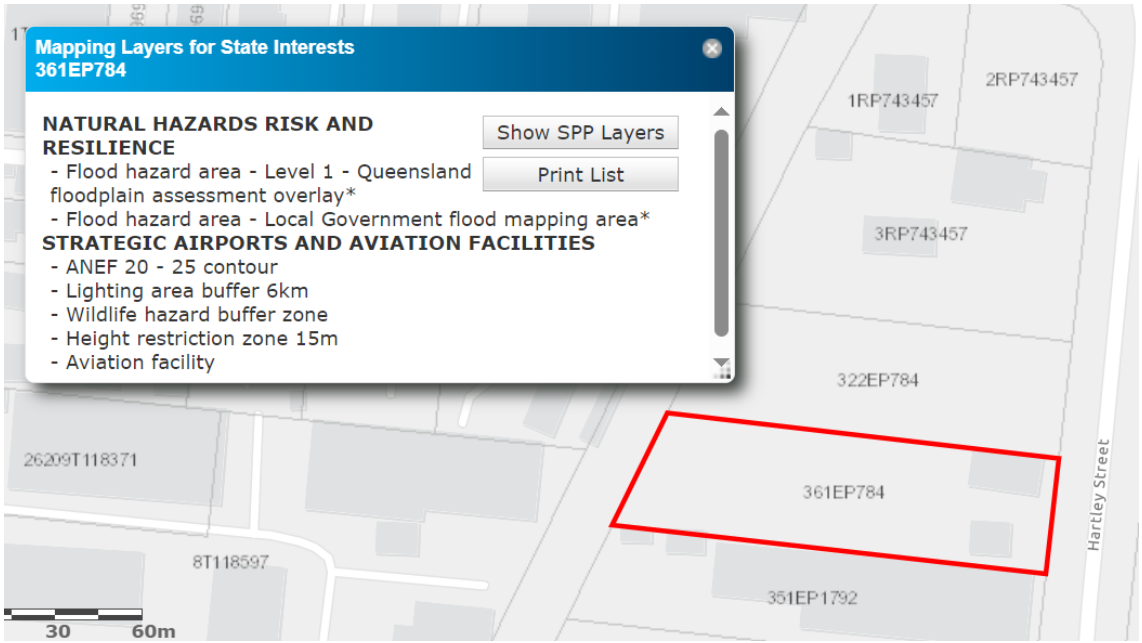


Figure 6-2: State Planning Policy triggers

Figure 6-3 below illustrates state interests which are shown on the Queensland Government SPP Mapping System.

Figure 6-3: State Planning Policy triggers

A summary of these state interests and consideration of Part E of the SPP is provided in Table 5.1 below.

Table 6-1: State Planning Policy interests and comments

State interest	Comment
Natural hazard risk and resilience	The site is affected by flood hazard area (Local Government flood mapping area) and Flood Hazard Area – Level 1 – Queensland floodplain assessment overlay. The reservoir is important community infrastructure, the bushfire risk is low because it is to be constructed from low combustible materials. The site is within a Local Government flood mapping area. Refer to Section 3.2 Flooding
Strategic Airports and Aviation Facilities	The site is affected by the following: - ANEF 20 - 25 contour - Lighting area buffer 6km - Wildlife hazard buffer zone - Height restriction zone 15m - Aviation facility. The site is located approximately 1km from the Townsville International Airport and the RAAF Base Townsville. Due to the nature of the development and the existing land uses, there will be no impact to airport and aviation facilities.

6.5 Development approvals and lawful use

Pursuant to section 27(1)(f), the assessment manager must, to the extent relevant, have regard to: “any development approval for, and any lawful use of, the premises or adjacent premises.”

As outlined within Section 2.4 above, the existing use of the site has been considered and there are no existing planning approvals relevant to the proposal.

6.6 Local Government Infrastructure Plan

Pursuant to part 4, division 4, subdivision 2, section 30(2)(c), the local government assessment manager must carry out an assessment against the local government’s Local Government Infrastructure Plan (LGIP) if they are an infrastructure provider.

A review of Council LGIP mapping on 23rd September 2024 demonstrated that the site is within the Medium Impact Industry zone and identified as Priority Infrastructure Area.

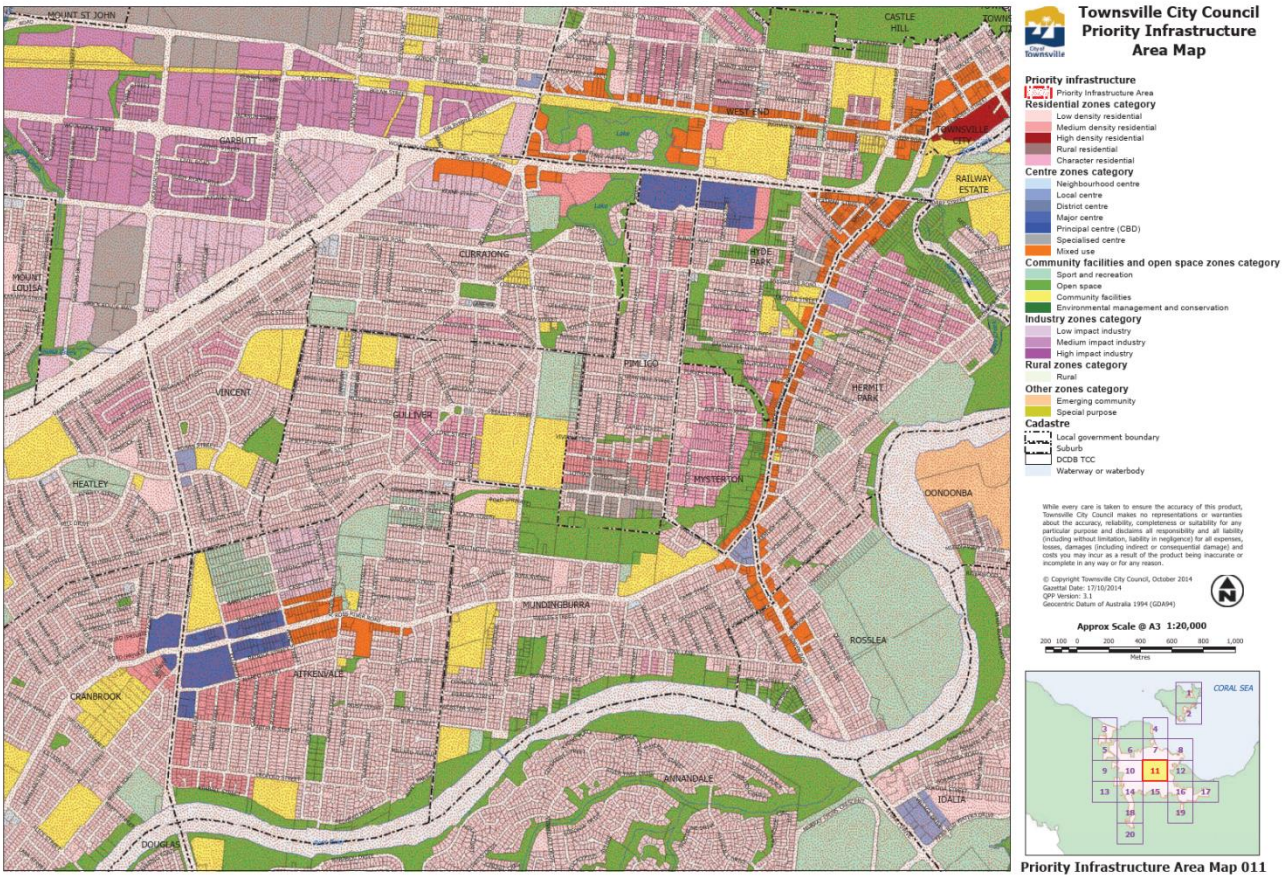


Figure 6-4: Townsville LGIP Priority Infrastructure

7 Local planning instrument

Under the provisions of the Townsville City Council Planning Scheme, 15 Hartley Street is within the Medium Impact Industry Zone and 4-28 Hartley Street is in the Community Facilities Zone. An excerpt of the relevant zoning map is provided below.

Figure 7-1: Townsville City Plan zoning

The Medium Impact Industry Zone accommodates a wide range of industrial uses, including manufacturing, transport, storage, and other uses which require larger sites in locations separated from sensitive land uses. Intended uses include Medium impact industry research and technology industry, service industry, transport depot and warehouses.

As an educational establishment for Ergon, the development meets the intent of the zoning as it facilitates training that feeds into the industry. The proposal is also only intended to be temporary at this location, while the site across the road is redeveloped.

The Community Facilities zone accommodates a range of industrial uses that are likely to have a greater potential for off-site impacts and uses that are of a similar nature or scale and are compatible with the impacts and risks associated with the zone. Intended development uses include medium impact industry, research and technology industry and warehouses. As the current land use of the site is an educational establishment for the existing Ergon training facility, the development meets the intent of the zoning.

7.1 Overlays

The site is affected by four overlays. Not all overlay codes are relevant to the proposal and may not trigger assessment under part 5 of the planning scheme. Table 6 identifies the overlay codes that must be considered in the assessment of the proposal.

Table 7-1: Applicable overlay codes

Overlay	Consideration of proposal
OM-01.1 Development Constraints Operational Airspace	The air space for than 15m above ground level layer applies to the Project Area at both 15 and 4 Hartley Street. Pursuant to table 8.2.1.3 of the Townsville City Plan – Version 2022/02, the code will apply to accepted development subject to requirements as well as assessable development. Further assessment against the overlay code is provided in Section 8.3 below.
OM-01.4 Development Constraints Airport Environs ANEF	The Australian noise exposure forecasts 20-25 applies to the Project Area at both 15 and 4 Hartley Street. Pursuant to table 8.2.1.3 of the Townsville City Plan – Version 2022/02, the code will apply to accepted development subject to requirements as well as assessable development. Further assessment against the overlay code is provided in Section 8.3 below.
OM-06.1 Development Constraints Flood Hazard	15 Hartley Street contains low, medium and high flood hazard areas. 4 Hartley Street contains low and medium glood hazard areas. Pursuant to table 8.2.6.3(a) of the Townsville City Plan – Version 2022/02, the code will apply to accepted development subject to requirements as well as assessable development. Further assessment against the overlay code is provided in Section 8.3 below.

7.2 Categories of development and assessment

According to Schedule 1 of the Townsville City Plan, the proposed development is defined as follows:

Educational Establishment:

'Premises used for training and instruction designed to impart knowledge and develop skills. The use may include outside hours school care for students or on-site student accommodation.'

The Medium Impact Industry Zone in the Townsville City Plan states that:

'The purpose of the Medium impact industry zone code is to provide for medium impact industry uses.

It may include non-industrial and business uses that support the industrial activities where they do not compromise the long-term use of the land for industrial purposes.
Activities considered appropriate in this zone are defined as Medium impact industry in the schedule of definitions.'

The Community Facilities Zone in the Townsville City Plan states that:

'The purpose of the Community facilities zone code is to provide for community-related activities and facilities whether under public or private ownership.

These may include the provision of municipal services, public utilities, government installations, hospitals and schools, transport and telecommunication networks and community infrastructure of an artistic, social or cultural nature.'

Table 7-2: Assessment benchmarks

Benchmark type	Benchmark or benchmark code
Strategic framework	N/A
Zone	Medium Impact Industry zone, Community Facilities zone
Overlays	OM-01.1 Development Constraints Operational Airspace OM-01.4 Development Constraints Airport Environs ANEF OM-06.1 Development Constraints Flood Hazard
Development codes	9.3.3 Landscape code 9.3.5 Transport impact, access and parking code 9.3.6 Works Code

8 Planning assessment

The balance of this report provides an overview of the proposal's assessment against the applicable provisions of the planning scheme.

8.1 Strategic framework

Townsville is the major economic and service centre for North Queensland. It is the primary port and freight hub, particularly for the agricultural areas of the surrounding region and for the North West minerals province. It provides the highest order community and commercial services for the region, including health and education facilities which serve the whole of North and North West Queensland. As a consequence of its strategic regional position, Townsville enjoys a diverse economic base, with strong projected growth.

There are no matters identified on the strategic framework mapping for the site.

8.2 Zone codes

8.2.1 Medium impact industry zone code

This code applies to development where the code is identified as applicable in the categories of development and assessment.

1. The purpose of the Medium impact industry zone code is to provide for medium impact industry uses.

It may include non-industrial and business uses that support the industrial activities where they do not compromise the long-term use of the land for industrial purposes.

While the application is for an Education Facility it will provide training for the electrical distribution industry. The facility is also proposed to be temporary, it will not compromise the long-term use of the land for industrial purposes.

2. The particular purpose of the code is to:
   a. facilitate the safe and efficient use of land for a range of industrial activities; and
   b. ensure development does not detract from the function and viability of centres, and minimises impacts on the amenity of nearby sensitive uses.
3. The purpose of the code will be achieved through the following overall outcomes:
   a. the zone accommodates a wide range of industrial uses that are likely to have some potential for off-site impacts, including manufacturing, transport, storage, outdoor sales and other uses which require larger sites in locations separated from sensitive land uses;
   b. other non-industrial uses are those which are ancillary to or directly support the industrial functions of the area, and are limited in extent;
   c. the zone does not accommodate uses which are primarily oriented to retail sales and which are more appropriately located in centres, such as shops, shopping centres, showrooms, or retail based hardware supplies;
   d. the intrusion of incompatible uses, or uses which may be more appropriately accommodated in other zones, is avoided to protect the availability of land

for industrial purposes and the viability and efficient operation of existing and future industry uses;

e. the impacts of development are managed to ensure public health and safety and achieve acceptable levels of amenity for nearby sensitive land uses;

f. development avoids significant adverse effects on water quality and the natural environment;

g. development does not adversely affect the safe and efficient operation of nearby Department of Defence landholdings;

h. development is safe and legible, and designed to establish safe and efficient movement systems;

i. lot sizes provide for a range of large format industrial uses and discourage take up of land for smaller scale activities better suited to the Low impact industry zone; and

j. development makes a positive contribution to the public domain, particularly along major roads.

Compliance is achieved with the applicable performance outcomes and acceptable outcomes of the code because:

- The proposal is temporary in nature and will not impact the long term use of the land for industrial purposes.
- The proposal is setback over 40m from the site's front boundary.
- The proposal will provide education for the electrical distribution industry.

A full assessment against the Medium Impact Industry code has been provided in **Appendix 6**.

8.2.2 Community facilities zone code

This code applies to development where the code is identified as applicable in the categories of development and assessment.
When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

1. The purpose of the Community facilities zone code is to provide for community-related activities and facilities whether under public or private ownership.

These may include the provision of municipal services, public utilities, government installations, hospitals and schools, transport and telecommunication networks and community infrastructure of an artistic, social or cultural nature.

2. The particular purpose of the code is to ensure:
   a. the effective location, design and operation of a wide variety of community-related activities and facilities so that these facilities adequately meet the needs of current and future users; and
   b. community-related activities and facilities are provided in a safe, accessible and attractive environment, and minimise impacts on surrounding land uses.
3. The purpose of the zone will be achieved through the following overall outcomes:
   a. the zone primarily accommodates a variety of community-related activities and facilities such as community uses, educational establishments, emergency services, places of worship and utility installations in a manner that best meets community needs;
   b. other complementary uses may occur within the zone, where community-related activities and facilities remain the dominant use and continue to effectively meet community needs;
   c. development does not prejudice the ongoing operation and expansion of community activities and facilities;

d. where appropriate, development enables the co-location of community-related activities and facilities;
e. development facilitates improved accessibility by walking, cycling and public transport, and facilitates easy access by all members of the community, including older and less mobile people and people with disabilities;
f. unless separation is required due to safety and operational requirements of the use, integration with surrounding areas is strengthened through built form and site layout;
g. buildings provide for an attractive, pedestrian friendly environment at street level;
h. design of built form and public spaces facilitates safe and secure environments and discourages antisocial behaviour; and
i. development is sited, designed and operated to minimise adverse impacts on surrounding land.

Compliance is achieved with the applicable performance outcomes and acceptable outcomes of the code because:

- The proposal is temporary in nature and will not impact the long term use of the land. The community zoned parcel will continue to provide education for the electrical distribution industry.

8.3 Overlay codes

8.3.1 OM-01.1 Development Constraints Operational Airspace (8.2.1)

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Airport environs overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

1. The purpose of the Airport environs overlay code is to ensure the safe and efficient operations of the airport, RAAF base and aviation facilities are protected.
    - The purpose of the code will be achieved through the following overall outcomes: development avoids adversely affecting the safety and efficiency of an airport's operational airspace or the functioning of aviation facilities;
    - large increases in the numbers of people adversely affected by significant aircraft noise are avoided; and
    - development does not increase the risk to public safety near airport runways.

A full assessment against the code has been provided in Appendix C Code Assessment.

8.3.2 OM-01.4 Development Constraints Airport Environs Australian noise exposure forecast contours (ANEF) (8.2.1)

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Airport environs overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

2. The purpose of the Airport environs overlay code is to ensure the safe and efficient operations of the airport, RAAF base and aviation facilities are protected.
3. The purpose of the code will be achieved through the following overall outcomes:

- development avoids adversely affecting the safety and efficiency of an airport's operational airspace or the functioning of aviation facilities;

- large increases in the numbers of people adversely affected by significant aircraft noise are avoided; and
- development does not increase the risk to public safety near airport runways.

A full assessment against the code has been provided in Appendix C Code Assessment.

8.3.3 OM-06.1 Development Constraints Flood Hazard (8.2.6)

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Flood hazard overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

1. The purpose of the Flood hazard overlay code is to manage development outcomes in flood hazard areas so that risk to life, property, community, economic activity and the environment during future flood events is minimised, and to ensure that development does not increase the potential for flood damage on-site or to other property.
2. The purpose of the code will be achieved through the following overall outcomes:

- development is compatible with the nature of the flood hazard except where there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal;
- where development is not compatible with the nature of the flood hazard and there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal:
  - development minimises as far as practicable the adverse impacts from the hazard; and
  - does not result in unacceptable risk to people or property;
- wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after flood hazard event;
- development maintains the safety of people and minimises the potential damage to property from flood events on the development site; and
- development does not result in adverse impacts on people's safety, the environment or the capacity to use land within the floodplain.

A full assessment against the code has been provided in Appendix C Code Assessment.

8.4 Development Codes

8.4.1 Landscape code (9.3.3)

This code applies to development where the code is identified as applicable in the categories of development and assessment..

1. The purpose of the Landscape code is to ensure landscaping in both the private and public domains is designed and constructed to a high standard, provides a strong contribution to the city image, is responsive to the local character, site and climatic conditions and remains fit for purpose over the long-term.
2. The purpose of the code will be achieved by the following overall outcomes:
   a. a high quality streetscape and on-site landscape enhances the character of the city;
   b. landscape design is used to integrate the natural and built form elements of the site and the locality;

c. landscape elements create a legible and attractive street frontage, and enhance the continuity of the streetscape;
d. screening is used to soften built form, mitigate adverse aesthetic impacts and provide privacy and character;
e. plant species and landscaping materials are suited to the Dry Tropics' cyclone prone climate;
f. plant species, landscape materials and surface treatments are suited to their intended function and user requirements;
g. plant species, landscaping materials and surface treatments are designed to remain attractive, fit for purpose and be cost effective to maintain over the long-term;
h. landscape design facilitates an accessible, safe and comfortable environment for all users; and
i. significant on-site vegetation is retained, protected and integrated into the site design wherever practicable.

Compliance is achieved with the applicable performance outcomes of the Landscaping code because the proposal:

- Any planting used for landscaping purposes will consist of endemic species.
- Existing mature vegetation will be retained to the greatest extent possible.
- Existing fences will be retained to maintain existing character of the area.

A full assessment against the Landscape code has been provided in **Appendix 6**.

8.4.2 Transport impact, access and parking code (9.3.5)

This code applies to development where the code is identified as applicable in the categories of development and assessment.
When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

1. The purpose of the Transport impact, access and parking code is to ensure appropriate provision for transport and end of trip facilities, and to facilitate, as far as practicable, an environmentally sustainable transport network.
2. The purpose of the code will be achieved through the following overall outcomes:
   a. the function, safety and efficiency of the transport network are optimised;
   b. pedestrians (including people with a disability) and cyclists are provided with a high level of accessibility, safety, amenity and convenience within a development site and on-site facilities are integrated with external walking and cyclist networks and public transport nodes;
   c. the use of public transport is facilitated wherever appropriate;
   d. access, parking, servicing and associated manoeuvring areas are designed to be safe, functional and meet the reasonable demands generated by the development;
   e. access, parking, servicing and associated manoeuvring areas do not detract from streetscape character, and are designed to discourage crime and antisocial behaviour; and
   f. adverse impacts on the environment and the amenity of the locality are avoided.

The proposal achieves compliance with the applicable performance outcomes of the Transport impact, access and parking code because:

- Sufficient space is provided on site for parking and manoeuvring of vehicles.

- It will generate very low volumes of traffic, which will not impact on the amenity of adjoining uses.
- Safe and efficient access will be provided.

A full assessment against the Transport impact, access and parking code has been provided in **Appendix 6.**

8.4.3 Works Code (9.3.6)

This code applies to development where the code is identified as applicable in the categories of development and assessment.
When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

1. The purpose of the Works code is to ensure development is provided with a level of infrastructure which maintains or enhances community health, safety and amenity and which avoids or minimises impacts on the natural environment.
2. The purpose of the code will be achieved through the following overall outcomes:
   a. premises are provided with a level of service which is appropriate to the intended character and function of the zone;
   b. risk to life and property is avoided;
   c. development does not detract from environmental values, including the quality of receiving waters;
   d. development does not detract from the desired character and amenity of the locality;
   e. the integrity and quality of existing infrastructure is maintained;
   f. access, parking, streets and pedestrian and cycle paths are provided to standards that ensure safe, convenient and efficient operation of movement networks;
   g. development facilitates an efficient provision of infrastructure and use of resources; and
   h. whole of life cycle costs for infrastructure are minimised.

Compliance is achieved with the applicable performance outcomes of the Works code because:

- The proposal is appropriately connected to services.
- Works are proposed in previously cleared areas of the site, minimising vegetation clearing.
- Existing services in the area are protected.
- Stormwater will be appropriately managed on site through the implementation of a stormwater management plan.

A full assessment against the Works code has been provided in **Appendix 6.**

9 Conclusion

This report has been prepared in support of a DA seeking approval for a development permit for material change of use for an Education Facility (Ergon Temporary Training Centre) at 15 Hartley Road, Garbutt on land described as Lot 361 on EP784 and on the existing Ergon Training Facility at 4 Hartley Street described as part of Lot 581 on EP1760.

Based on the detailed assessment of the proposal, as outlined in the preceding sections of this report, the following conclusions have been drawn:

- The proposal complies with all relevant sections of the strategic framework, overlay codes and development codes of the planning scheme.
- The proposal is temporary in nature while the redevelopment of the training centre is completed across the road.
- The proposal is suitably located to minimise traffic movements between the outside training yard and the internal classroom training.
- The proposal will improve the visual amenity of the site with new landscaping along the Hartley Road frontage.

Approval of the proposal is therefore requested subject to reasonable and relevant conditions.

10 Appendices

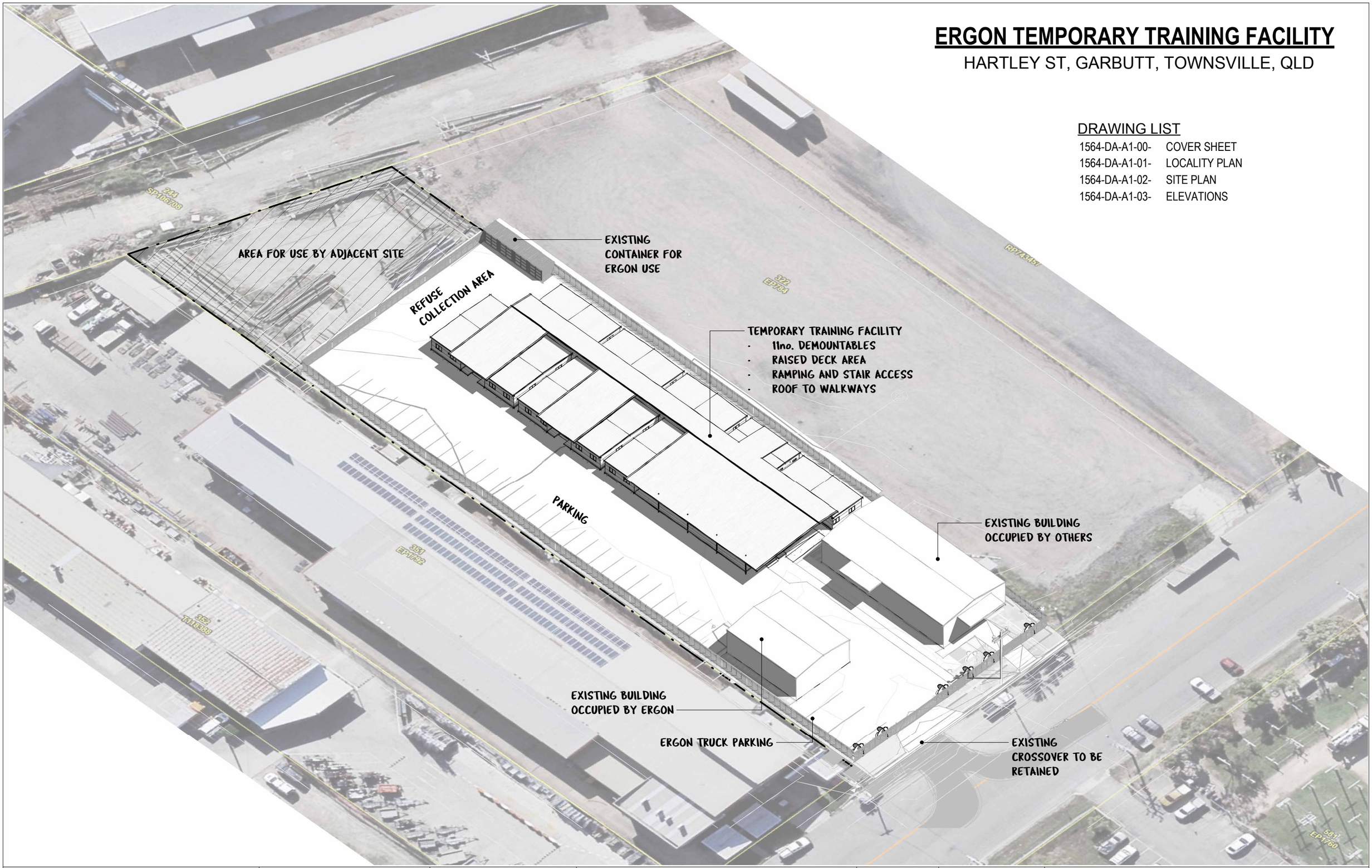
A.1 Final layout plans

ERGON TEMPORARY TRAINING FACILITY

HARTLEY ST, GARBUTT, TOWNSVILLE, QLD

DRAWING LIST

1564-DA-A1-00-	COVER SHEET
1564-DA-A1-01-	LOCALITY PLAN
1564-DA-A1-02-	SITE PLAN
1564-DA-A1-03-	ELEVATIONS



AMENDMENTS		DATE
P1	FOR CLIENT REVIEW	29/04/2024
P2	DA ISSUE	3/10/2024

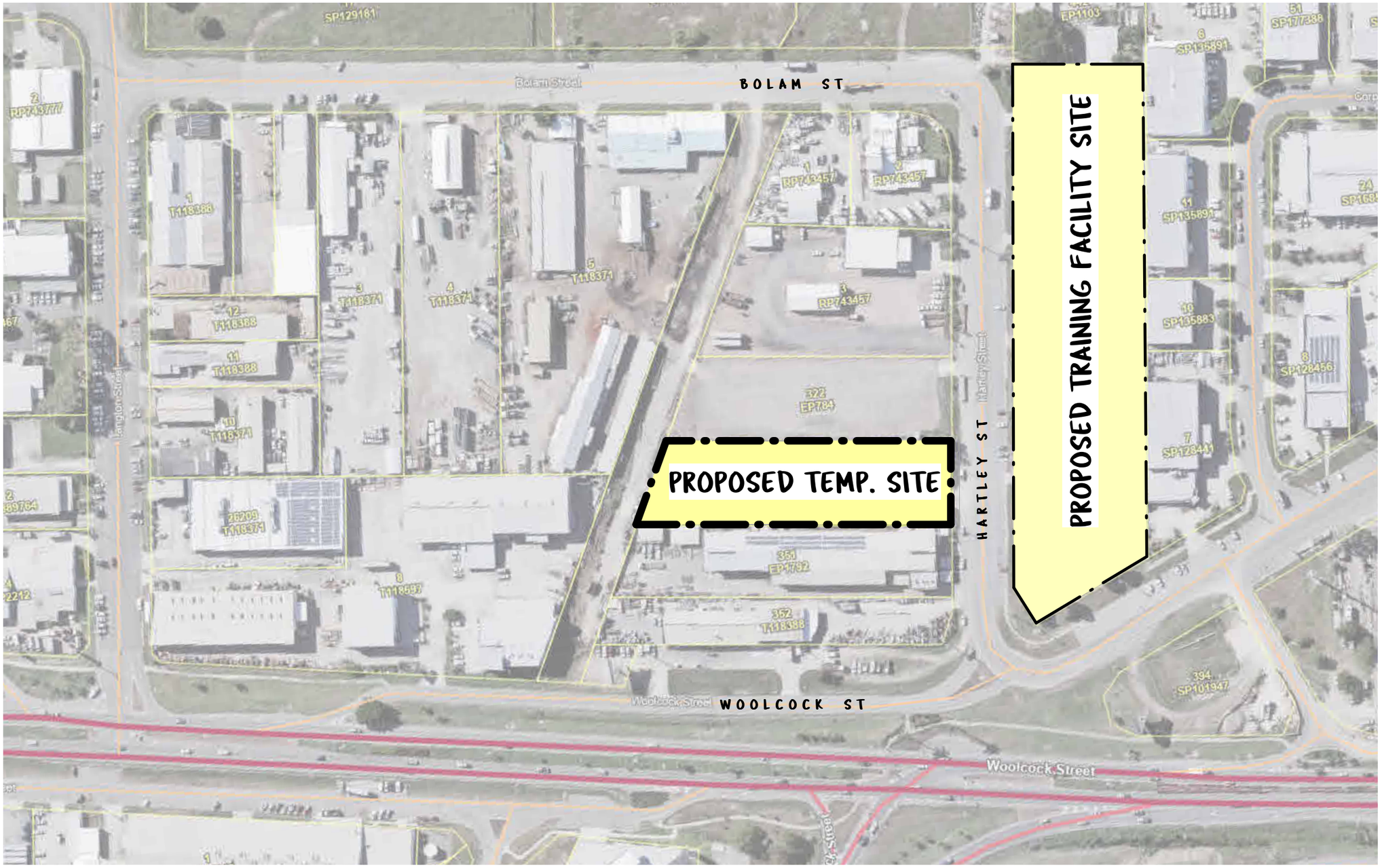
DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

ERGON ENERGY

clarke and prince |ARCHITECTS
3 Scott Street |CAIRNS| QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w.www.clarkeandprince.com.au

DRAWN	JB/BM	SCALE 1 : 500	SIZE A3
APPROVED	SC	DATE	APRIL 2024

PROJECT **TEMPORARY TRAINING FACILITY**
15-17 HARTLEY ST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **COVER SHEET**
DWG No. **1564-DA A1-00** | STAMP PRELIMINARY | ISSUE **P2**



PROPOSED TEMPORARY SITE PROPERTY INFORMATION

LOT NUMBER	361
PLAN NUMBER	EP784
PARISH	COONAMBELAH
COUNTY	ELPHINSTONE
SITE AREA	5,792 m2

ZONE

MEDIUM IMPACT INDUSTRY

PROPOSED TRAINING FACILITY SITE PROPERTY INFORMATION

LOT NUMBER	581
PLAN NUMBER	EP1760
PARISH	COONAMBELAH
COUNTY	ELPHINSTONE
SITE AREA	15,950 m2

ZONE

COMMUNITY FACILITIES

1 / A1-03 **LOCALITY PLAN**
SCALE - 1 : 2000

AMENDMENTS		DATE
P1	FOR CLIENT REVIEW	29/04/2024
P2	DA ISSUE	3/10/2024

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

ERGON ENERGY

clarke and prince |ARCHITECTS
3 Scott Street |CAIRNS| QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w. www.clarkeandprince.com.au

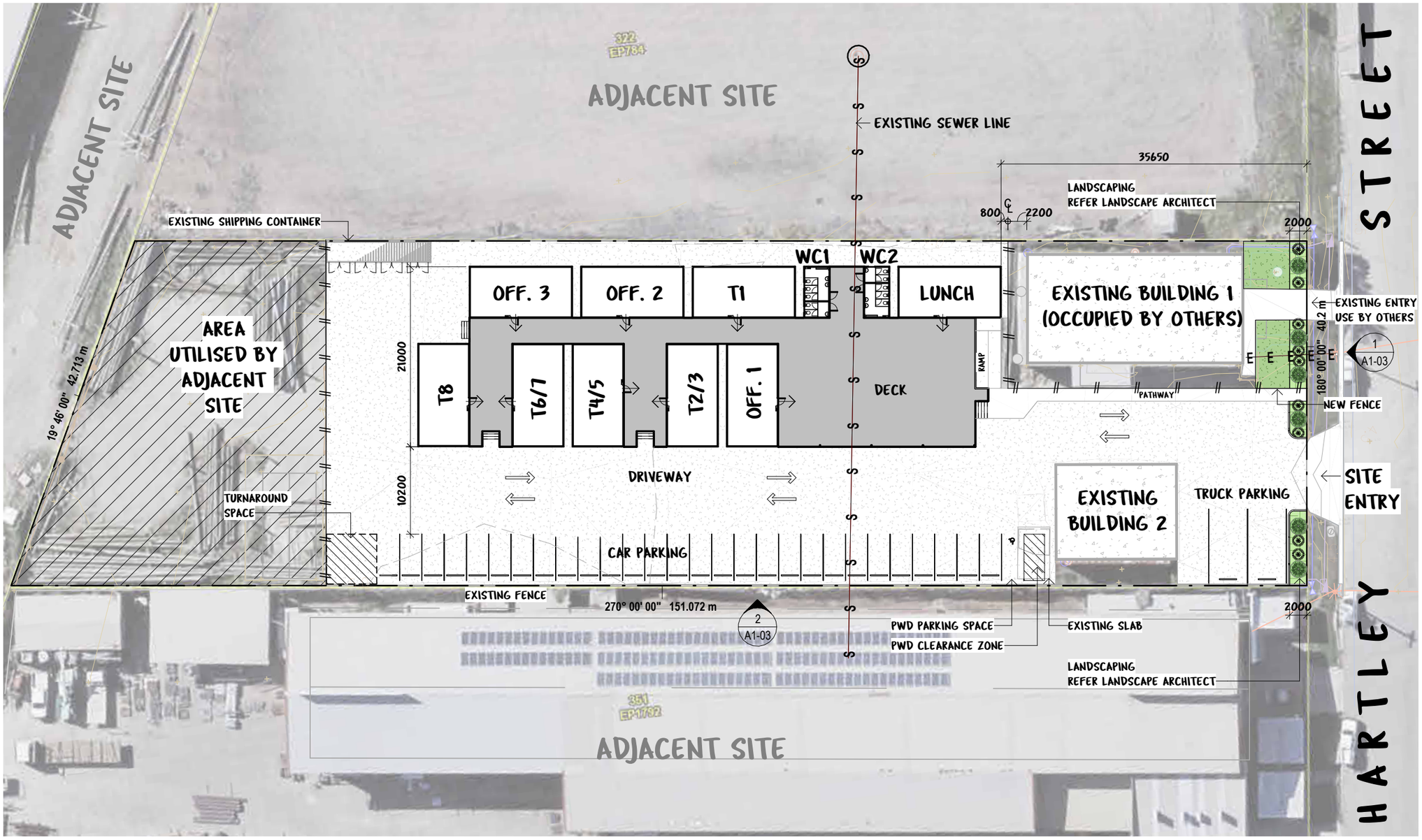
DRAWN	JB/BM	SCALE 1 : 2000	SIZE A3
APPROVED	SC	DATE	APRIL 2024

PROJECT **TEMPORARY TRAINING FACILITY**
15-17 HARTLEY ST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **LOCALITY PLAN**
DWG No. **1564-DA A1-01** | STAMP PRELIMINARY | ISSUE **P2**

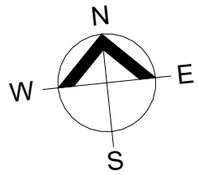
FLOOD INFORMATION	
AEP 1% FLOOD:	RL4.88m AHD
AEP 2% FLOOD:	RL4.85m AHD

SITE COVER		
EXISTING BUILDING	550 m²	9%
PROPOSED BUILDINGS	1284 m²	22%
TOTAL	1834 m²	32%

CAR PARKING	
PWD PARK	1
CAR PARK	28
TRUCK PARK	2



1 A1-03 SITE PLAN
SCALE - 1 : 500



GFA	
EXISTING GFA	
EXISTING BUILDING 1	323 m²
EXISTING BUILDING 2	159 m²
	482 m²

PROPOSED GFA	
LUNCH	74 m²
OFFICE 1	74 m²
OFFICE 2	74 m²
OFFICE 3	74 m²
T1	74 m²
T2 & 3	74 m²
T4 & 5	74 m²
T6 & 7	74 m²
T8	74 m²
WC 1	19 m²
WC 2	19 m²
	702 m²

SITE USAGE		
SHARED USE		
SHARED ACCESS	323 m²	6%
	323 m²	
USE BY ERGON		
TRAINING SPACE	1712 m²	30%
EXISTING BUILDING 2	248 m²	4%
TRUCK PARKING	129 m²	2%
PARKING AND ACCESS	1585 m²	27%
	3674 m²	
USE BY OTHERS		
AREA UTILISED BY ADJACENT SITE	1186 m²	20%
EXISTING BUILDING 1	600 m²	10%
	1786 m²	

PROPOSED LANDSCAPED AREA
115m²

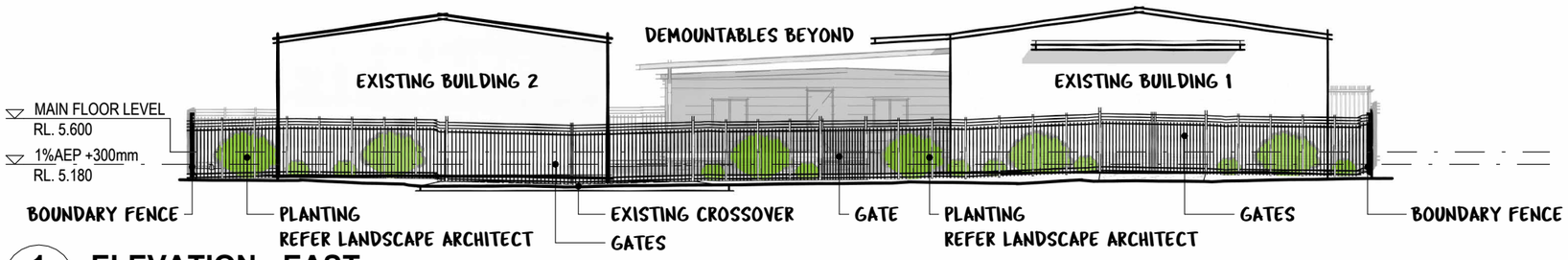
AMENDMENTS		DATE
P1	FOR CLIENT REVIEW	29/04/2024
P2	PRELIMINARY ISSUE	28/08/2024
P3	DA ISSUE	3/10/2024

ERGON ENERGY

clarke and prince |ARCHITECTS
3 Scott Street |CAIRNS| QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w. www.clarkeandprince.com.au

DRAWN	JB/BM	SCALE	1 : 500
APPROVED	SC	DATE	APRIL 2024
SIZE	A3		

PROJECT **TEMPORARY TRAINING FACILITY**
15-17 HARTLEY ST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **SITE PLAN**
DWG No. **1564-DA A1-02** | STAMP PRELIMINARY | ISSUE **P3**

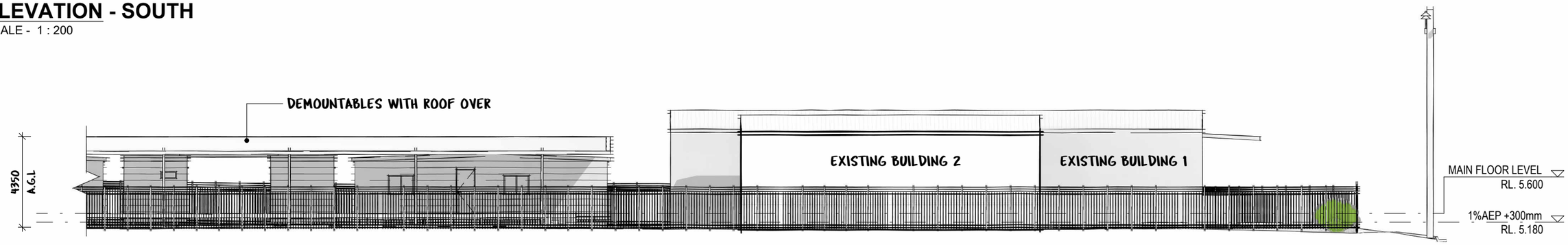


1 / A1-02 ELEVATION - EAST

SCALE - 1 : 200

2 / A1-02 ELEVATION - SOUTH

SCALE - 1 : 200



3 / A1-02 ELEVATION - SOUTH CONT.

SCALE - 1 : 200

AMENDMENTS		DATE
P1	FOR CLIENT REVIEW	29/04/2024
P2	DA ISSUE	3/10/2024

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

ERGON ENERGY

clarke and prince |ARCHITECTS
3 Scott Street |CAIRNS| QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w.www.clarkeandprince.com.au

DRAWN	JB/BM	SCALE	1 : 200 SIZE A3
APPROVED	SC	DATE	AUGUST 2024

PROJECT **TEMPORARY TRAINING FACILITY**
15-17 HARTLEY ST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **ELEVATIONS**
DWG No. **1564-DA A1-03** | STAMP PRELIMINARY | ISSUE **P2**

A.2 EPBC report

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 18-Oct-2024

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	28
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	24
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.		
Scientific Name	Threatened Category	Presence Text
BIRD		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Geophaps scripta scripta		
Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Neochmia ruficauda ruficauda		
Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Hipposideros semoni		
Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Dichanthium setosum		
bluegrass [14159]	Vulnerable	Species or species habitat may occur within area
Leichhardtia araujacea		
[91900]	Critically Endangered	Species or species habitat may occur within area
Leichhardtia brevifolia listed as Marsdenia brevifolia		
[91893]	Vulnerable	Species or species habitat may occur within area
Myrmecodia beccarii		
Ant Plant [11852]	Vulnerable	Species or species habitat may occur within area
Tephrosia leveillei		
[16946]	Vulnerable	Species or species habitat may occur within area
REPTILE		
Egernia rugosa		
Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Varanus mertensi		
Mertens' Water Monitor, Mertens's Water Monitor [1568]	Endangered	Species or species habitat may occur within area
SHARK		
Pristis pristis		
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		

Scientific Name	Threatened Category	Presence Text
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Defence	
Defence - TOWNSVILLE - RAAF BASE [31829]	QLD
Defence - TOWNSVILLE - RAAF BASE [31830]	QLD

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Reptile		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Talisman Saber 2005 Military Exercise	2004/1819	Controlled Action	Post-Approval
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Riverway project	2003/1152	Not Controlled Action	Completed

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

A.3 STP Consultants – Civil Engineering Services and A Site Based Stormwater Management Plan Report.

STRUCTURAL
CIVIL
ELECTRICAL
MECHANICAL
HYDRAULIC
FIRE
VERTICAL TRANSPORT
SEISMIC

STP CONSULTANTS

Ergon – Temporary Training Facility (Stage 1)

15 HARTLEY STREET, GARBUTT

CIVIL ENGINEERING SERVICES AND A SITE BASED STORMWATER MANAGEMENT PLAN REPORT

CP ARCHITECTS

CLARKE AND PRINCE PTY LTD

STP24-0958

DOCUMENT STATUS

Rev.	Issue	Project Consultant	Approved for Issue		
			Approved by	**Signature**	**Date**
A	Preliminary Issue	Paul Petersen	Paul Petersen RPEQ 13231		25 July 2024

CONTENTS

1. Introduction

Clarke and Prince Pty Ltd, on behalf of Ergon, has engaged STP Consultants to produce a Civil Engineering Services and a Site Based Stormwater Management Plan Report in support of a Development Application over the subject site. The site is proposed to be used by Ergon as a temporary Training Facility (Stage 1) while Ergon's existing training facility is demolished and reconstructed (Stage 2) at the corner of Hartley Street and Dalrymple Road.

This Civil Engineering Services Report will provide additional detail in the following areas:

- Earthworks
- Flood Impact Assessment
- Stormwater Management
- Water supply
- Sewerage connection
- Stormwater Quality Management Plan.

2. Site Description

The site is located at 15 Hartley Street, Garbutt and described as Lot 361 on EP784 with a land area of 5,796m2. The site is zoned Medium Impact Industry, with two existing occupied buildings, gravel hardstand areas utilised for storage and a 1.8m high chain wire security fence to the boundary.

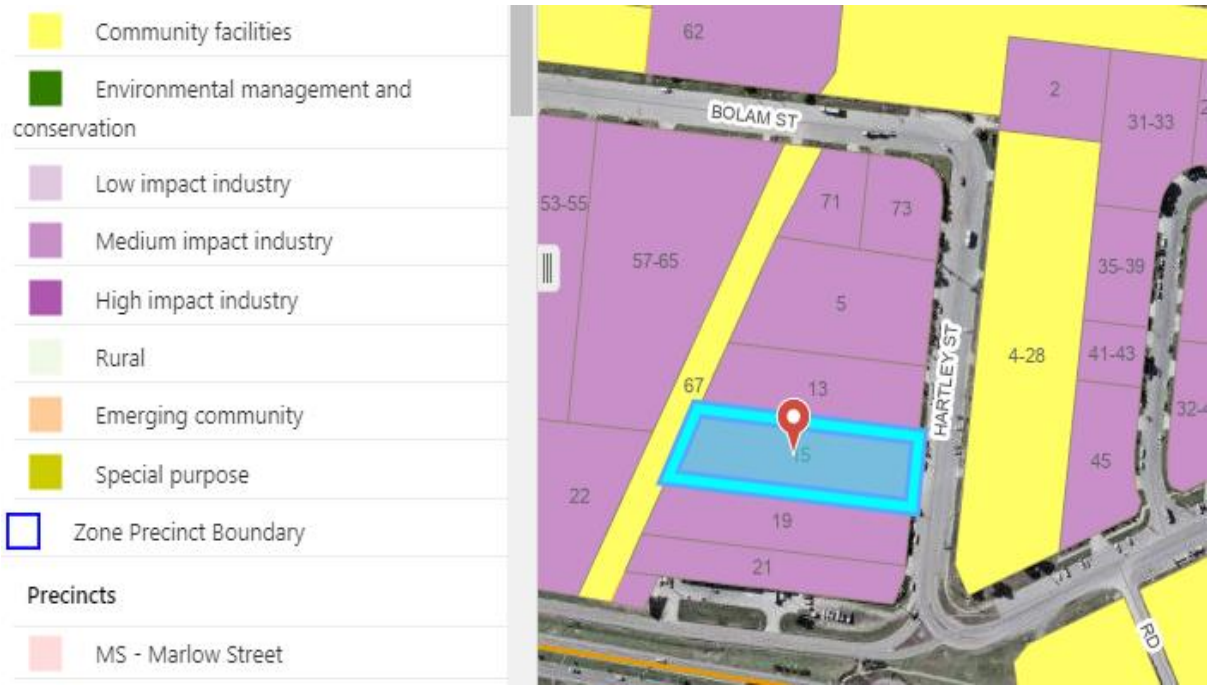


Figure 2.1 – Zoning and Locality Plan (TCC Planning Scheme)

2.1 Easements

There are currently no easements that encumber the subject allotment and there are no proposed road resumptions.

2.2 Proposed Development

A copy of the Clarke and Prince Architects drawings for the proposed development of the Temporary Training Facility is provided in Appendix A. The proposed temporary Training Facility consists of 10 demountable buildings with deck area, ramping and stairways, car parking and driveway. The facility will be utilised by Ergon until such time as the new permanent training facility is designed, approved, constructed and operational (Stage 2).

3. Earthworks

3.1 Existing Earthworks

The subject allotment's lowest level is approximately 4.5m AHD at the existing access onto the property from Hartley Street, the highest level is approximately 5.3m AHD along the rear boundary of the property. The land of the subject allotment generally slopes from front to back at an average grade of 1 in 200 or 0.5% which is typical for industrial zoned land in Garbutt.

The 20m wide strip of land, directly west of the subject site (formerly railway land) appears to drain easterly onto the subject property and this stormwater must be accepted by the subject property which ultimately discharges to Hartley Street.

The adjacent allotments north and south of the subject allotment grade directly to Hartley Street and no provisions are required to be made to accept their stormwater runoff.

Figure 3.1 – Existing contours on the subject site (TownsvilleMAPS)

3.2 Proposed Site Earthworks

A copy of the Preliminary Engineering Services drawing for the proposed development is provided in Appendix B.

A Geotechnical Report was not available at the time of preparing this document.

Preliminary earthworks are based on the existing contour levels and the preliminary finished surface levels shown on the Preliminary Engineering Services drawing. The proposed levels shown on the drawing, when compared to the existing surface contours, indicate that generally there will be no more than 250mm cut or fill on site for the proposed development of the temporary Training Facility, thereby negating the need for significant site earthworks.

The rear portion of the subject allotment (954m2) will be fenced off from the temporary Training facility and utilised by the adjacent allotment to the north. There will be no changes to the existing surface levels in this portion of the subject allotment.

The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits.

As the two existing buildings towards the front of the subject allotment are being retained, the proposed car parking and driveway levels will need to joint neatly to the existing levels of these buildings.

The balance of the subject allotment will be maintained as the existing gravel hardstand.

3.3 Minimum Floor Levels

As indicated on the Townsville City Council flooding maps, the site is subject to minor inundation from flooding in the defined flood event of 1% AEP. During the defined flood event the front of the allotment will have an approximate depth of water of 400mm and will taper to 0mm by approximately halfway into the allotment. The Defined Flood Event Levels for the subject site are as follows: -

- AEP 1% Flood – RL4.88m AHD
- AEP 2% Flood – RL4.85m AHD.

Floor levels should be set a minimum of 300mm above the Defined Flood Event (DFE).

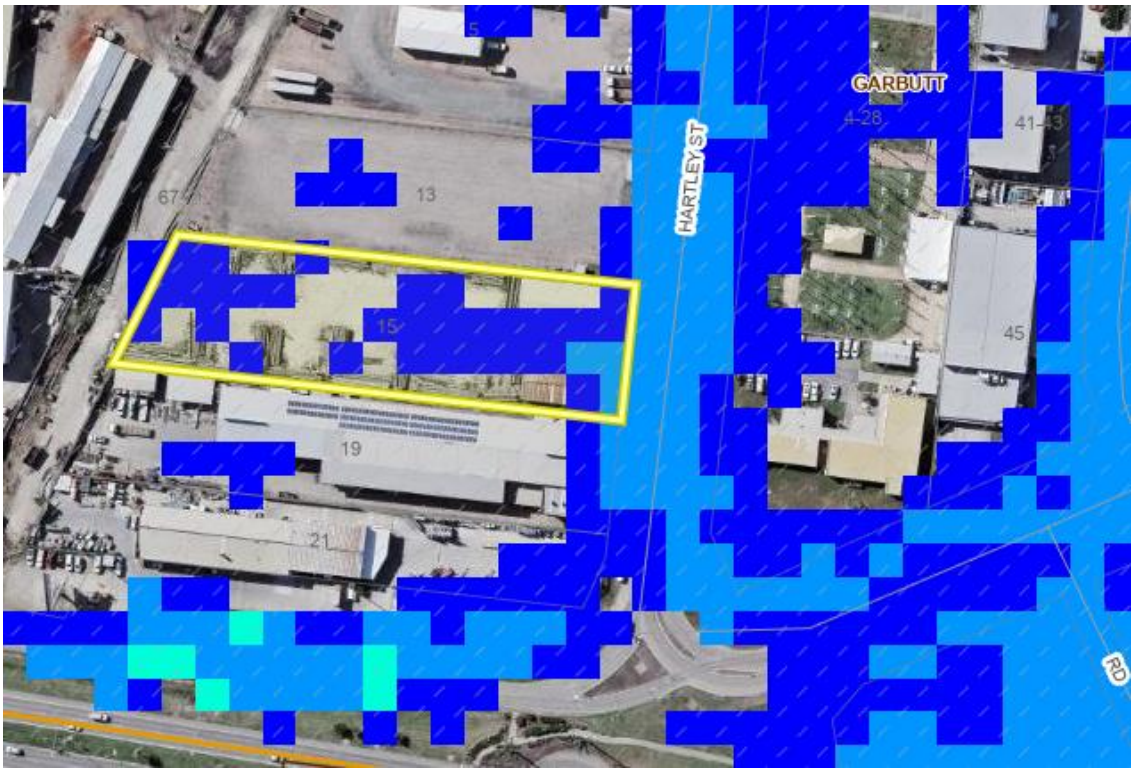


Figure 3.3 – AEP 1% flood affected areas (TownsvilleMAPS - Flooding)

4. Roadworks and Traffic Impacts

4.1 Traffic Impacts

A Traffic Impact Assessment report will be provided under separate cover for this Development Application.

4.2 Access and Parking

Access to the proposed temporary Training Facility will be gained from Hartley Street, utilising the existing 8.0m wide concrete driveway access located towards the southern side boundary of the subject allotment. The existing concrete driveway in generally compliant with Council's standard drawing for an industrial driveway and will be retained for this proposed development.

Another existing concrete driveway access towards the northern side of the subject allotment will be retained for direct access to the existing most northern building on the subject allotment.

Refer to the Preliminary Engineering Services drawing showing the proposed car parking and driveways provided in Appendix B.

Parking bays and aisles for the proposed development will be designed in accordance with AS/NZS 2890.1-2004 – Parking facilities – Off street car parking and in accordance with the Traffic Impact Assessment. The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.

The car parking and delivery vehicle loading and circulation layout, shows the proposed development allows vehicles to enter and exit the site in a forward direction as per the Townsville City Council requirements.

4.3 Pedestrians

The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps.

A timber deck is provided to link pedestrians between offices, training rooms and toilets.

As there is no high-level landscaping, buildings, fences or other obstructions proposed adjacent to the existing concrete access driveways, there will be no impediment to pedestrian sight distance for vehicles entering or leaving the proposed development.

5. Stormwater Management Plan

5.1 Flood Studies

The subject allotment is part of the Ross Creek Flood Study as indicated on the Townsville City Council flooding maps. The site is subject to minor inundation most likely a result of the land being developed when the design standards were less than the current Townsville City Council requirements. The inundation is due to the local stormwater runoff in Hartley Street and not a result of Ross Creek flooding.

The Defined Flood Event level for the subject site in Hartley Street is RL4.88m AHD – 1% AEP flood event.

In accordance with the Townsville City Council Development Manual the site is not subject to the Stormtide flooding level of 3.9m.

5.2 Existing Stormwater Infrastructure

The Lawful Point of Discharge for the site will be to the road reserve of Hartley Street.

There is an existing 1050mm RCP in the Hartley Street Parking lane with invert levels of USIL 2.9m and DSIL2.76m. There is also two 375mm RCP connections either side of the subject allotment for connection of stormwater runoff from the adjacent property but there is no such stormwater connection for the subject allotment. Therefore, stormwater drainage from the subject allotment will need to break into the existing 1050mm RCP and construct a manhole and appropriately sized stormwater connection to suit the proposed development of the Training Facility.

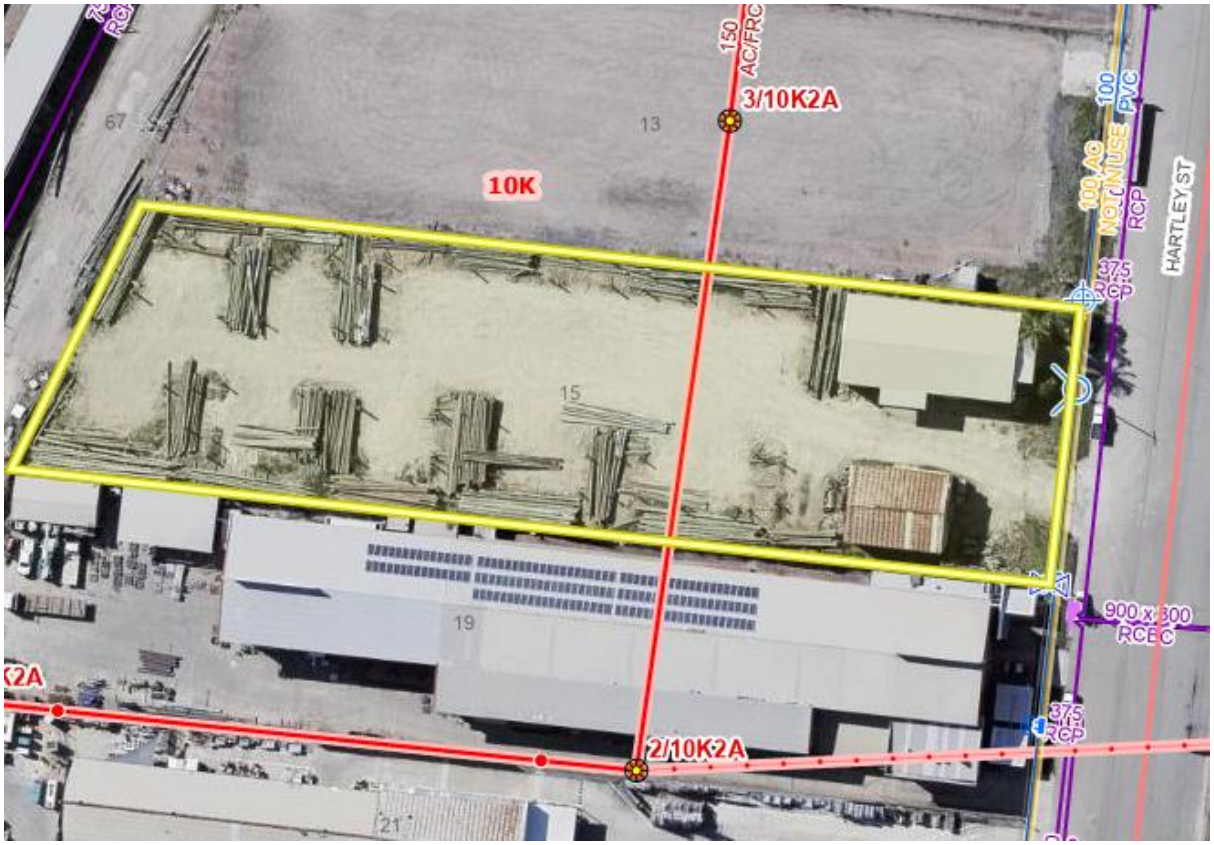


Figure 5.2 – Existing Infrastructure (TownsvilleMAPS - Community)

5.3 Site Stormwater Drainage

The preliminary stormwater drainage layout is illustrated on the Preliminary Engineering Services drawing provided in Appendix B. The roof, bitumen pavement, gravel hardstand, landscaped areas and the balance of the allotment are to be collected in grated stormwater inlet pits and carried to the AtlanFilter system prior to discharging into the existing 1050mm RCP in Hartley Street.

Full hydraulic design in accordance with QUDM will be undertaken during the detailed design phase for all the proposed stormwater infrastructure.

5.5 Stormwater Quality Management Plan

As the Training Facility development proposed involves an area greater than 2,500m^2, stormwater quality management will need to be implemented in accordance with State Planning Policy (July 2017). A stand-alone Stormwater Quality Management Plan is included as Appendix C of this report.

6. Water and Sewerage

6.1 Water Connection

In accordance with the information provided on TownsvilleMAPS – Community, the subject site is serviced by an existing DN20mm water service in the southeastern corner which in turn is connected to the existing DN100mm water reticulation main in Hartley Street.

The Hydraulic Consultant will determine if a larger water connection is required due to actual site water demands during the detailed design phase of the proposed development.

A fire hydrant exists on the 100mm reticulation water main in the verge of Hartley Street and is adjacent to the most northerly existing building on the site.

The location of the existing water connection and fire hydrant is provided on the Preliminary Engineering Services drawing provided in Appendix B.

6.2 Sewer Connection

In accordance with the as constructed sewer information provided by the Townsville City Council, the most northerly existing building is serviced by an existing DN100mm sewer with a Vertical Jump-Up (VJU) sewer connection to the existing DN150mm sewer which transverses the site at approximately halfway down the side boundaries. The as constructed drawing indicates that the VJU sewer connection is about 700mm off the northern side boundary of the subject site. This existing 100mm sewer VJU will be utilised as the sewer connection point for the sewage drainage pipes from the proposed temporary Training Facility buildings

The most southerly existing building on the subject site is serviced by a 100mm sewer which is offset approximately 1m off the southern side boundary and connects to the existing DN150mm sewer with a Vertical Jump-Up. No buildings of the proposed temporary Training Facility will have an impact on this existing sewer or the connection point.

The existing DN150mm sewer main has an upstream invert level of USIL 2.5m and a downstream invert level of DSIL 2.15m. Given that the proposed buildings will be raised on posts above the existing ground level of RL5.0m and the DFE level flood level of 4.88m, there is sufficient depth to grade the internal sewers to the existing sewer connection of the subject property.

The Hydraulic Consultant will determine the final layout of the internal sewers to service the proposed temporary Training Facility buildings during the detailed design phase of the proposed development.

A Building Over/Near Services application will be required for the proposed Training Facility buildings over the top of the existing DN150mm sewer that traverses the subject allotment. In accordance with Townsville City Council's Development Manual the proposed development would be considered 'Allowable Development' and the policy requirements for building over the sewer could be met with the detail design.

The location of the existing sewer and sewer connections are provided on the Preliminary Engineering Services drawing provided in Appendix B.

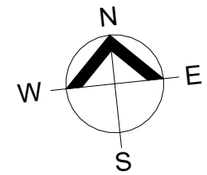
6.3 Infrastructure Capacity

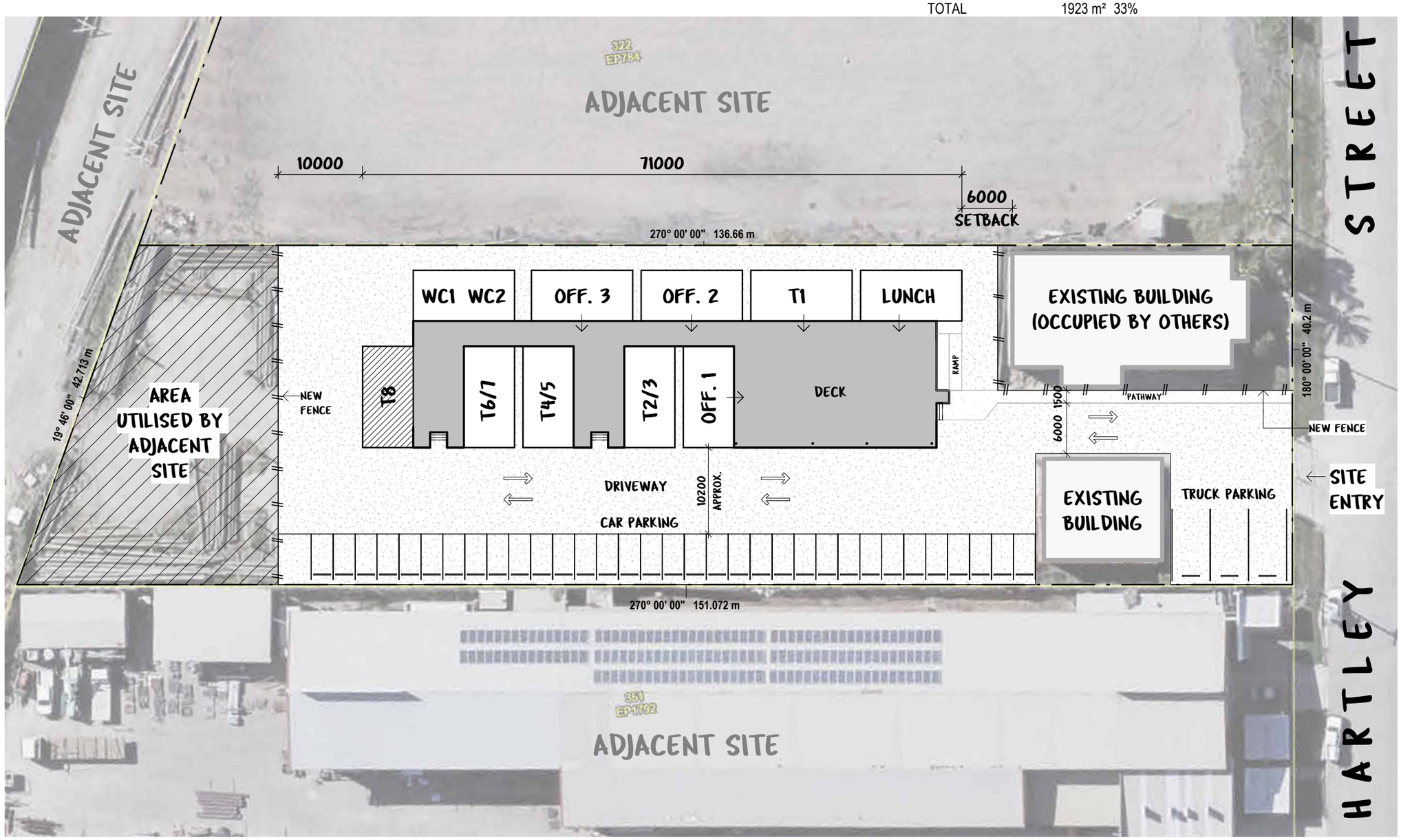
As the water and sewerage demands for the proposed development of the subject site will be within the design parameters allowed for this land, the existing adjoining water and sewerage infrastructure will have sufficient capacity to service the proposed development.

7. APPENDIX A – Clarke and Prince Architects - Proposed Development Layout

SITE COVER		
EXISTING BUILDINGS (APPROX.)	550 m²	9%
SITE COVER	1373 m²	24%
TOTAL	1923 m²	33%

CAR PARKING	
CAR PARK	33
TRUCK PARK	3





1 **SITE PLAN**
SCALE - 1 : 500

GFA	
DECK	611 m²
LUNCH	72 m²
OFFICE 1	72 m²
OFFICE 2	72 m²
OFFICE 3	72 m²
RAMP / STAIRS	42 m²
T1	72 m²
T8	72 m²
T 2 & 3	72 m²
T 4 & 5	72 m²
T 6 & 7	72 m²
WC 1 & 2	72 m²
TOTAL	1373 m²

SITE USAGE		
SHARED USE		
SHARED ACCESS	323 m²	6%
	323 m²	
USE BY ERGON		
TRAINING SPACE	2024 m²	35%
TRUCK PARKING	129 m²	2%
PARKING AND ACCESS	1506 m²	26%
	3659 m²	
USE BY OTHERS		
AREA UTILISED BY ADJACENT SITE	954 m²	16%
EXISTING BUILDING	600 m²	10%
EXISTING BUILDING	248 m²	4%
	1802 m²	

IMPERVIOUS AREAS		
EXISTING BUILDINGS	550 m²	9%
PATHWAYS	101 m²	2%
PROPOSED BUILDINGS	1392 m²	24%
TOTAL	2043 m²	35%

AMENDMENTS	DATE
P1 FOR CLIENT REVIEW	29/04/2024

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

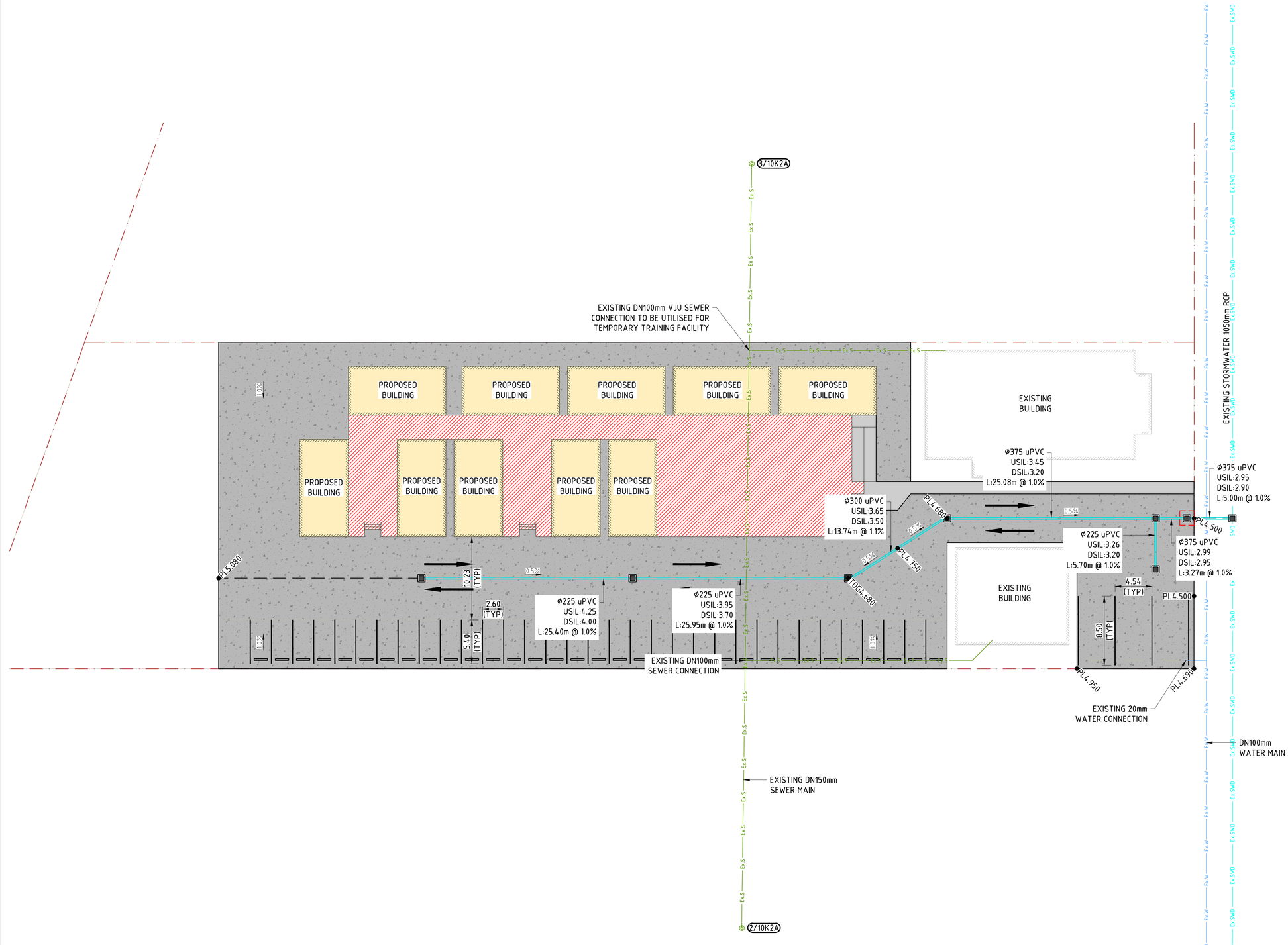
ERGON ENERGY

clarke and prince |ARCHITECTS
3 Scott Street |CAIRNS| QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w.www.clarkeandprince.com.au

DRAWN	JB/BM	SCALE	1 : 500 SIZE A3
APPROVED	SC	DATE	APRIL 2024

PROJECT **TEMPORARY TRAINING FACILITY**
4-28 HARTLEYST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **SITE PLAN**
DWG No. **1564-DA A1-02** STAMP PRELIMINARY ISSUE **P1**

8. APPENDIX B – Preliminary Engineering Services Drawing



LEGEND:

- EXISTING SEWER MAIN
- EXISTING WATERMAIN
- EXISTING STORMWATER MAIN
- EXISTING LOT BOUNDARY
- EXISTING BUILDING
- PROPOSED CHANGE OF GRADE
- PROPOSED BUILDING
- PROPOSED STORMWATER DRAINAGE
- PROPOSED SEWER MAIN
- PROPOSED STORMWATER PIT
- PROPOSED STORMWATER PIT WITH STORMWATER QUALITY IMPROVEMENT DEVICE

HATCHING LEGEND

- EXTENT OF BITUMEN SURFACING
- EXTENT OF CONCRETE PATHWAY
- EXTENT OF DECKING AREA
- EXTENT OF PROPOSED BUILDING

1:250 0 2.5 5 7.5 10 12.5m A1

STP CONSULTANTS
BRISBANE 07 3539 8300
MACKAY 07 3539 8390
TOWNSVILLE 07 3539 8350
ROCKHAMPTON 07 3539 8344
CAIRNS 07 3539 8380
WHITSUNDAYS 07 3539 8399
www.stpconsultants.com.au

Client
CLARKE & PRINCE PTY LTD

Project Details
STAGE 1 - TEMPORARY ERGON TRAINING FACILITY
17 HARTLEY STREET, GARBUTT QLD 4814
LOT 361 ON EP784

Drawing Title
PRELIMINARY ENGINEERING SERVICES

Job No.	Drawing No.
STP24-0958	SK-C101
Revision	**Date**
A	30/07/2024

CIVIL

9. APPENDIX C – Site Based Stormwater Quality Management Plan

9.1 Pollutants of Concern

The Townsville City Council Development Manual, SC6.4.10 Stormwater Quality, provides guidance on the types of pollutants likely to be generated from different developments. The pollutants most likely to be of concern for Commercial/Industrial developments are identified in the table below.

Pollutant	Development Phase	
	Construction	Operation
Litter	✓	✓
Sediment	✓	unlikely
Hydrocarbons (including oil and grease)	✓	✓
Toxic materials (e.g. cement slurry, asphalt primer, solvents)	✓	unlikely
pH altering substances (e.g. cement slurry and wash waters)	✓	unlikely
Oxygen demanding substances (organic and chemical matter)	possibly	unlikely
Nutrients (nitrogen and phosphorus)	✓	✓
Pathogens / Faecal coliforms (bacteria and viruses)	unlikely	unlikely
Heavy metals (often associated with fine sediment	unlikely	unlikely
Surfactants (e.g. detergents from car washing)	unlikely	possibly
Thermal pollution (heat)	unlikely	unlikely

Table 9.1 Pollutants likely to be of most concern

9.2 Design Objectives for Water Management

The Environmental Protection (Water) Policy 1997 provides a framework for identifying environmental values and associated water quality objectives; this framework is consistent with the efficient use of resources and best practice environmental management and involves the community through consultation and consideration of economic and social impact assessment. Environmental Values (EV) are a reflection of the qualities of a catchment that the community believes to be important. As such, environmental values are established through community consultation rather than through a scientific process. Once EV are established for a catchment, Water Quality Objectives (WQO) can be defined, which are meant to protect these values.

While load based reduction targets focus on performance of a stormwater quality management system within the urban footprint, concentration based WQO's are concerned with median flow concentrations as they enter downstream receiving water.

The Water Quality Objectives for the proposed development in Townsville are listed in the table below.

Parameter	Statistic	Load Based Reduction	Water Quality Objectives
Total Suspended Solids (TSS)	Mean Range	80%	Less than 5mg/L
Total Phosphorous (TP)	Mean Range	65%	Less than 0.01 to 0.05mg/L
Total Nitrogen (TN)	Mean Range	40%	Less than 0.2 to 0.5mg/L
Gross Pollutants	-	90%	Retention of litter greater than 50mm for flows up to the 3-month ARI peak flow
PH	Mean Range	-	Between 7 and 8

Table 9.2 Water Quality Objectives for Townsville City Council – Dry Tropics (TCC Development Manual SC6.4.10.2(3)

9.3 Proposed Stormwater Treatment Train analysis

The proposed Training Facility development site has sufficient area available to dedicate to stormwater quality improvement devices.

Roof water will discharge via downpipes either directly to the pavement surface of the driveway/car parks or directly into the adjacent field inlet pits contained in the driveway inverts.

The landscaped areas, bitumen driveways and carparks will drain overland into the proposed field inlet pits which will discharge into the proposed internal stormwater pipe system.

The field inlets are proposed to be fitted with Atlan Stormsacks for the removal of gross pollutants and the proposed stormwater pipes will discharge into the Atlan Vault containing the Atlan Filters (or equivalent) which further treat the stormwater runoff. The stormwater runoff from the subject site will then discharge into a manhole constructed over the existing 1050mm RCP in Hartley Street.

The proprietary stormwater treatment device included above in the design solution, has been independently verified by Stormwater Australia SQIDEP (Verification Certificate) and the certified performance metrics are reflected in the MUSIC modelling.

9.4 Music Model Parameters

9.4.1 Model Parameters

Input	Data Used
Rainfall Station	32040 TOWNSVILLE
Rainfall Period	01/01/1995 – 31/12/2005
Mean Annual Rainfall (mm)	976mm
Evapotranspiration	1201mm
Model Timestep	6 minutes
Rainfall Runoff Parameters*	Commercial
Pollutant Parameters*	Commercial (Split)

Table 9.4.1 - Basic MUSIC Model Parameters

9.4.2 Rainfall & Runoff Parameters

Parameter	Roof/ Road/Ground Level
Rainfall Threshold (mm/day)	1
Soil Storage Capacity (mm)	18
Soil Initial Storage (% of Capacity)	10
Field Capacity (mm)	80
Infiltration Capacity coefficient - a	243
Infiltration Capacity exponent - b	0.6
Initial Depth (mm)	50
Daily Recharge Rate (%)	0
Daily Baseflow Rate (%)	31
Daily Deep Seepage Rate (%)	0

Table 9.4.2 - Water by Design MUSIC Quantity Parameters for Townsville (Commercial/Industrial) from MUSIC Modelling Guidelines (Table A1.2)

9.4.3 Pollutant Generation

In MUSIC, stormwater quality is characterised by event mean concentrations (EMC) for storm flows and base flows. In this study, the EMC's were adopted from the Water by Design MUSIC Modelling Guidelines. The pollutants of concern that were assessed include total suspended solids (TSS), total phosphorous (TP) and total nitrogen (TN). The quality of stormwater runoff is characterised by inputting event mean concentrations (EMC) for storm flow and base flow conditions as well as the standard deviation of each EMC.

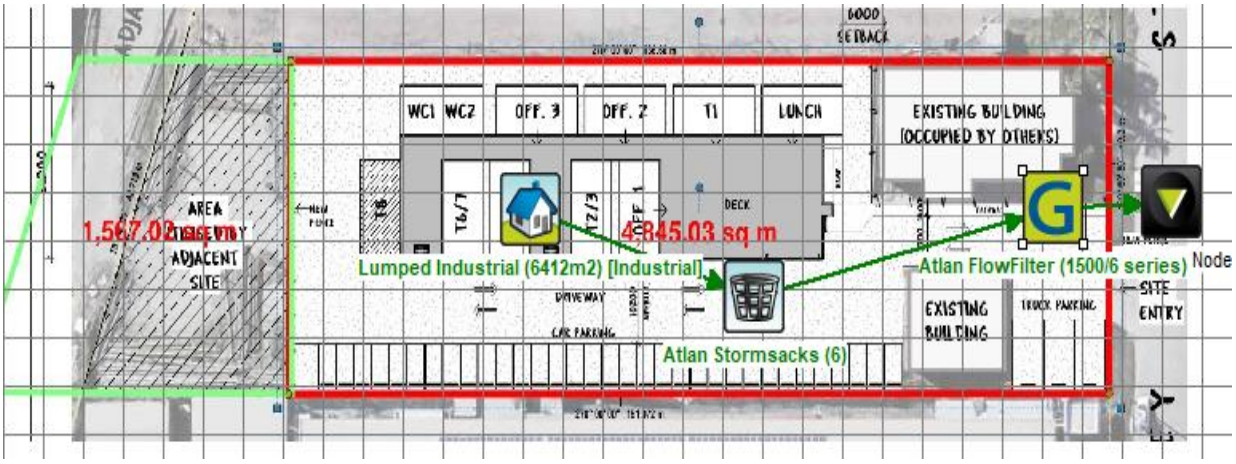
Pollutant concentrations are based on Industrial land use parameters.

Flow Type	Surface Type	TSS (log_{10} values)		TP (log_{10} values)		TN (log_{10} values)	
		Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.
Baseflow	Roof	0.00	0.00	0.00	0.00	0.00	0.00
	Roads	0.78	0.45	-1.11	0.48	0.14	0.20
	Ground level	0.78	0.45	-1.11	0.48	0.14	0.20
Stormflow	Roof	1.30	0..44	-0.89	0.36	0.25	0.32
	Roads	2.43	0.44	-0.30	0.36	0.25	0.32
	Ground level	1.92	0.44	-0.59	0.36	0.25	0.32
Industrial Lumped Catchment	Baseflow	0.78	0.45	-1.11	0.48	0.14	0.20
	Stormflow	1.92	0.44	-.59	0.36	0.25	0.32

Table 9.4.3 Water by Design MUSIC Modelling Pollutant Export Parameters – Industrial Split and lumped Catchment Land Use from MUSIC Modelling Guidelines Table 3.9

9.4.4 Results

The indicative layout of the MUSIC model, treatment train parameters and results are shown below.



	Sources	Residual Load	% Reduction
Flow (ML/yr)	5.46	5.46	0
Total Suspended Solids (kg/yr)	763	145	81
Total Phosphorus (kg/yr)	2.02	0.834	58.8
Total Nitrogen (kg/yr)	12.9	5.3	58.8
Gross Pollutants (kg/yr)	94.2	0.583	99.4

The proposed treatment train consist of 6 Atlan Stormsacks (one in each proposed pit) and an Atlan FlowFilter (1500/6) containing 6 Cartridges capable of processing 4l/s each or 24ll/s total. While this is the modelled treatment train indicating the stormwater quality outcomes for Brisbane City Council can generally be achieved for the proposed development, an equivalent alternative proprietary product may be investigated and adopted during detailed design, provided the required outcomes are achieved.

The proposed treatment train will reduce pollutant loadings to the general extent specified by the Townsville City Council Stormwater Quality Guidelines.

BRISBANE
Level 3, 451 St Pauls Terrace
Fortitude Valley QLD 4006
P. 07 3539 8300
E. trevor@stpconsultants.com.au

TOWNSVILLE
Level 3, 382 Sturt Street
Townsville QLD 4810
PO Box 1777
Townsville QLD 4810
P. 07 3539 8350
E. anthony@stpconsultants.com.au

CAIRNS
Suite 2, 111 Spence Street
Cairns City QLD 4870
P. 07 3539 8380
E. adrien@stpconsultants.com.au

MACKAY
Suite 2, 25 River Street
Mackay QLD 4740
P. 07 3539 8390
E. brian@stpconsultants.com.au

ROCKHAMPTON
Level 3, 36 East Street
Rockhampton QLD 4700
P. 07 3539 8344
E. cameron@stpconsultants.com.au

WHITSUNDAYS
230 Shute Harbour Road
Cannonvale QLD 4802
P. 07 3539 8399
E. brian@stpconsultants.com.au

STP CONSULTANTS

A.4 Traffic Engineering Report

Traffic Engineering Report

To	Clarke and Prince Pty Ltd	Date	16 October 2024
Prepared by	Giada Rendina, Modus Traffic Engineer	Approved by	Tetteh Anang, Modus Team Lead – Transport Advisory (RPEQ 28656)
Location	15 Hartley Street, Garbutt		
Subject	Garbutt Training Facility (Stage 1) Development - Traffic Engineering Report		
Status	Final	Attachments	**Appendix A**: Proposed Development Plans **Appendix B:** Swept Path Assessment

1 Introduction

1.1 Overview

Modus has been commissioned by Andreatta Developments Pty Ltd, care of Clarke and Prince Pty Ltd, to provide traffic and transport advice in relation to the proposed Garbutt Training Facility (Stage 1) development located at 15 Hartley Street, Garbutt.

This Traffic Engineering Report has been produced by Modus to assess the traffic and transport engineering items in support of the proposed development. A copy of the proposed development plans has been provided at **Appendix A**.

1.2 References

The following documents and guidelines have been referenced in the assessment herein:

- Proposed development plans prepared by Clarke and Prince, 2024
- Townsville City Council (TCC) Planning Scheme, 2023
- AS2890.1 Australian Standards Parking Facilities Part 1: Off-Street Car Parking, 2004
- AS2890.2 Australian Standards Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities
- RTA Guide to Traffic Generating Developments, 2002

1.3 Limitations

Modus has completed this traffic report in accordance with the usual care and thoroughness of the consulting profession. The assessment is based on accepted traffic engineering practises and standards applicable at the time of undertaking the assessment. Modus disclaims responsibility for any changes to project planning or road conditions that may occur after completion of the assessment.

2 Existing Conditions

2.1 Site Location

The development site is bounded by Hartley Street to the east, vacant land to the north and industrial developments to the south and west. The site is identified within the TCC Planning Scheme as a Medium Impact Industry zone and is surrounded by similar zones to the north, south and west, as well as Community Facilities to the east.

The proposed development site location is illustrated on Figure 2-1.

Figure 2-1 Site Location

Source: NearMap

2.2 Existing Site Use

The site is currently occupied by an industrial development where vehicle access is provided via one (1) existing crossover located along Hartley Street. Furthermore, the site comprises an existing building (occupied by others) providing vehicle access via the existing northernmost crossover located along Hartley Street.

2.3 Existing Road Network

Table 2-1 outlines characteristics of the existing road network in close proximity to the proposed development site.

Table 2-1 Key Road Characteristics

Road	Hierarchy	Speed Limit	Typical Form
Hartley Street	Trafficable Road	50km/h	Two lanes, undivided
Woolcock Street	Trafficable Road	50km/h	Two lanes, undivided
Dalrymple Road	Trafficable Road	50km/h	Two lanes, undivided

2.4 Active and Public Transport Facilities

The external road network does not provide pedestrian footpaths in the vicinity of the site to form connections between the surrounding developments in the area. However, on-road cycle lanes are accommodated along both verges of Ingham Road, located north of the development site.

Furthermore, the proposed development is not serviced by any public transport routes within a 400m radius (5 minute walk) of the site.

3 Proposed Development

3.1 Overview

The proposed development comprises of the Garbutt Training Facility development, planned to be delivered in two (2) stages.

This assessment will focus on Stage 1 of the Garbutt Training Facility development, located at Lot 361 Hartley Street in Garbutt. It has been advised by the client that the Stage 1 development is provided as a temporary training facility and is planned to be relocated for Stage 2 of the Garbutt Training Facility development.

The temporary Training Facility is comprised of three (3) office and eight (8) training spaces and provides ancillary areas for employee use. Furthermore, an on-site car parking arrangement has been proposed to accommodate a total of 29 car parking spaces, including one (1) PWD parking space.

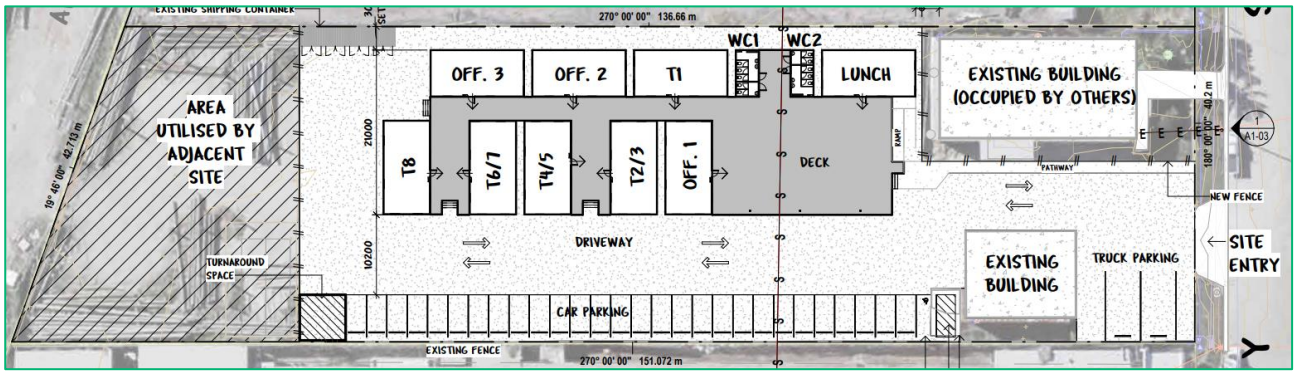
The proposed Gross Floor Area (GFA) is summarised below in Table 3-1.

Table 3-1 Proposed Development GFA

Training Facility Development	Proposed GFA
Office Spaces	216 sq.m
Training Spaces	360 sq.m
TOTAL	**576 sq.m**

The proposed development layout is illustrated on Figure 3-1. A copy of the proposed development plans can be found at **Appendix A**.

Figure 3-1 Proposed Development Layout



Source: Clarke and Prince Architects

3.2 Development Access

Vehicle access to the development site is proposed to be maintained as per the existing arrangements.

4 Traffic and Transport Assessment

4.1 Access Design

4.1.1 Crossover Design

In line with **Section 2.2** of this report, the development site comprises an existing building (occupied by others) which provides vehicle access via one (1) existing crossover located along Hartley Street. It is noted that the crossover of the existing building will be maintained and will not provide access to the proposed Training Facility development. On this basis, Modus has solely assessed the adequacy of the southernmost crossover which will cater for the operations of the proposed Garbutt Training Facility (Stage 1) development.

The TCC Planning Scheme states that the proposed development is required to provide a crossover design in accordance with the TCC Standard Drawing SD-031. Therefore, the design compliance for the existing crossover has been summarised below in Table 4-1.

Table 4-1 Crossover Design Compliance

Crossover Type	Design Criteria	Proposed Design	Compliant
Industrial	7.0m – 15.0m access width	~9.0m access width	✓

Therefore, the existing southernmost crossover complies with the design requirements of the TCC Standard Drawing SD-031.

4.1.2 Crossover Location

In accordance with *Australian Standards AS2890.1*, access crossovers should not be located within 6.0m of the tangent points from adjacent intersections. The southernmost crossover located along Hartley Street achieves the minimum separation requirement of *Australian Standards AS2890.1.*

Furthermore, sufficient separation distance is currently provided between the southernmost crossover and all adjacent crossovers, including the northernmost crossover of the existing building.

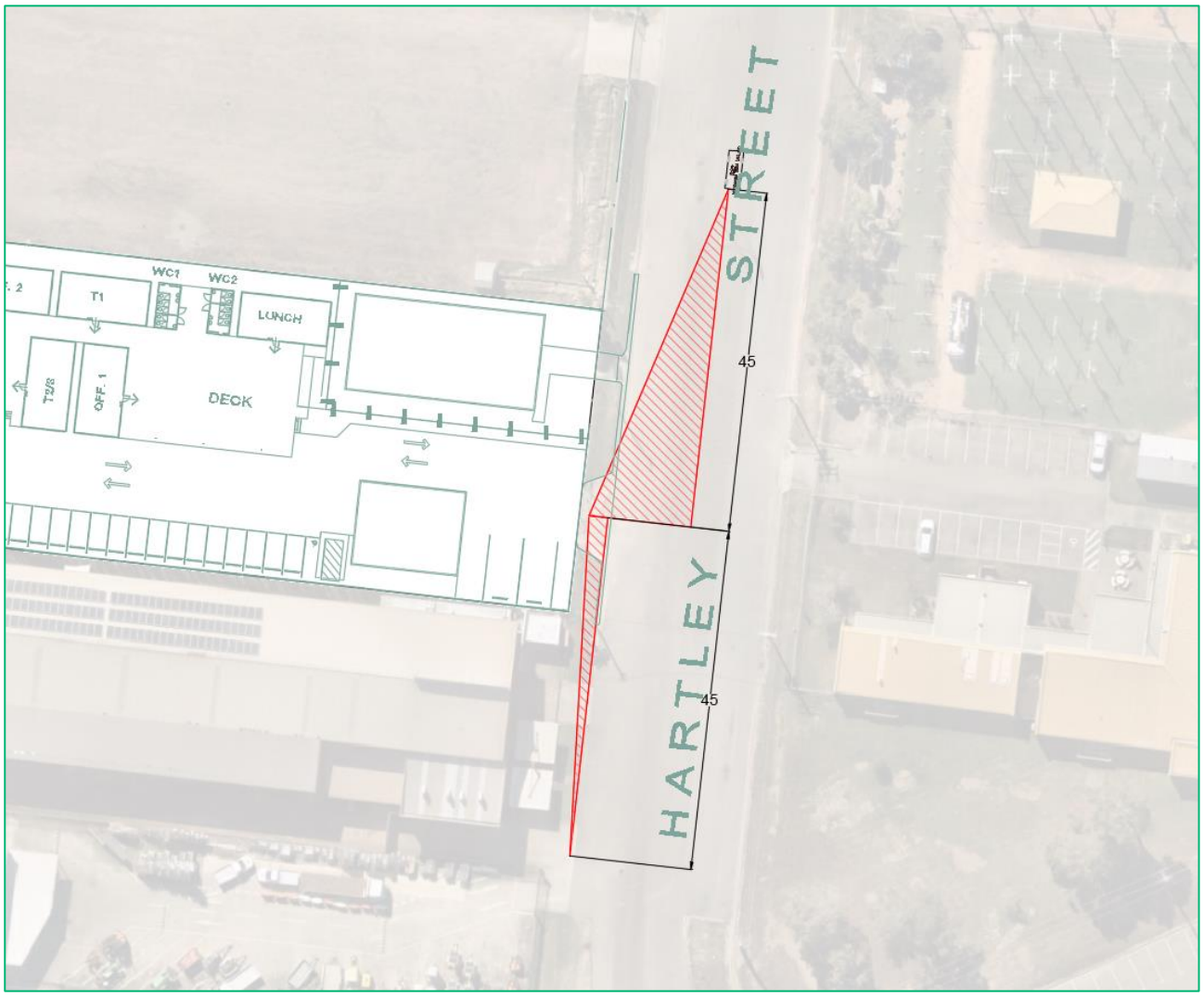
4.1.3 Vehicle Sight Distance

In accordance with *Australian Standards AS2890.1*, the minimum vehicle sight distance requirement is based on the posted speed limit along the frontage road. Provided that Hartley Street along the frontage of the site is anticipated to have a posted speed limit of 50 km/hr, the minimum sight distance of 45m is required.

The existing crossover location exceeds the minimum sight distance requirement of 45m to observe vehicles approaching from directions of traffic and therefore complies with *Australian Standards AS2890.1*.

The sight distance achievements along Hartley Street are illustrated below in Figure 4-1.

Figure 4-1 Sight Distance Achievements – Hartley Street



Source: NearMap, Clarke and Prince Architects

4.1.4 Pedestrian Sight Splays

In accordance with *Australian Standards AS2890.1*, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in length and 2.0m in width from the property boundary.

The existing southernmost crossover ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site and therefore achieves compliance with the requirements of *Australian Standards AS2890.1*.

4.2 Car Parking Layout

Modus has conducted a design review of the car parking layout against the design guidelines within *Australian Standards AS2890.1.* The compliance has been summarised below in Table 4-2.

Table 4-2 Car Parking Layout Compliance

Design Criteria	*Australian Standards AS2890.1*	Proposed Design	Compliant
Parking Bays			
Bay Length – General	5.4m	5.4m	✓
Bay Width – Employees (Class 1)	2.4m	2.6m	✓
Bay Width – Visitors (Class 2)	2.5m	2.6m	✓
Bay Length – PWD Space	5.4m	5.4m	✓
Bay Width – PWD Space	2.4m plus 2.4m adjacent zone	2.6m plus 2.4m adjacent zone	✓
Parking Aisles			
Parking Aisle Width	5.8m	> 5.8m	✓
Maximum Parking Aisle Length	100m	< 100m	✓
Parking Clearance	0.3m	> 0.3m	✓

Therefore, the proposed car parking layout is compliant with the design requirements of *Australian Standards AS2890.1*.

Furthermore, the proposed development provides a turnaround bay at the end of the car parking aisle for general vehicles to turn around on-site. The B99 swept path assessment has been provided at **Appendix B**.

4.2.1 Queueing Provision

In accordance with *Australian Standards AS2890.1*, a queuing provision of two (2) vehicles (equating to 12.0m distance) is required from the property boundary to the first available car parking space.

The first 12.0m from the property boundary at the access crossover is comprised of three (3) service vehicle parking bays. Whilst it is acknowledged that the development does not provide vehicle queueing compliant with *Australian Standards AS2890.1*, it is noted that the service vehicle parking bays will generate low movement turnover.

On this basis, the proposed queueing provisions are considered acceptable from a traffic engineering perspective.

4.3 Parking Provision

4.3.1 Car Parking Provision

The minimum car parking requirements for the proposed Training Facility (Stage 1) development have been assessed in accordance with SC6.10.2.1 of the TCC Planning Scheme. It is noted that in accordance with the proposed operations of the site, the development has been classified as an Educational Establishment (Tertiary) land use.

It is noted that the car parking requirements for an Educational Establishment (Tertiary) land use are based on the maximum number of employees and student attendance on-site. Therefore, the client has advised that the maximum anticipated attendance for the Training Facility (Stage 1) development is as follows:

- **Employee:** 17 trainers/employees
- **Student:** 32 students

It is further noted that in line with **Section 3** of this report, the proposed Training Facility provides ancillary areas for employees use. Therefore, the following development areas have not been included as part of the car parking assessment requirements:

- Deck (611 sq.m)
- Lunch room (72 sq.m)
- Ramp / Stairs (42 sq.m)
- WC 1 & 2 (72 sq.m)

On this basis, the on-site car parking provision compliance has been outlined below in Table 4-3.

Table 4-3 Proposed Car Parking Provision

Land Use	Yield	Car Parking Rate	Car Parking Required	Car Parking Proposed	Compliant
Educational Establishment (Tertiary)	576 sq.m	0.5 space / employee (FTE) + 1 space / 10 students (FTE)	12 spaces	29 spaces	✓

Therefore, the proposed on-site car parking provision of the Training Facility (Stage 1) development exceeds the minimum car parking requirements of the TCC Planning Scheme.

4.3.2 Bicycle Parking Provision

In accordance with the proposed operations of the Training Facility development, it is anticipated that bicycle trips to and from the site will not be generated.

4.4 Servicing Arrangements

4.4.1 Design Service Vehicle

It is anticipated that the largest design vehicle required to service the proposed Training Facility (Stage 1) development is a Medium Rigid Vehicle (MRV).

The proposed development provides a total of two (2) MRV service bays, located at the front of the site. It is noted the MRV service bays provide 4.5m in width and 8.8m in length and therefore achieve compliance with the design requirements of *Australian Standards AS2890.2.*

Furthermore, Modus has conducted a swept path assessment utilising an MRV design vehicle which determined that an MRV is able to access each service bay as well as ingress and egress the site in a forward gear. The MRV swept path assessment has been provided at **Appendix B.**

4.4.2 Refuse Collection

It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV).

Modus has conducted a swept path assessment utilising a 10.24m BCC Standard Rear Lift RCV which determined that the RCV is able to safely ingress and egress the site in a forward gear to conduct refuse collection. The RCV swept path assessment has been provided at **Appendix B**.

5 Traffic Generation

5.1 Proposed Development Traffic Generation

In line with **Section 3.1** of this report, the Stage 1 development is provided as a temporary training facility and planned to be relocated for Stage 2 of the Garbutt Training Facility development which will increase the attendance capacity.

However, the Stage 1 temporary facility will accommodate the operations of the current training facility and therefore maintaining the existing number of staff and students attendance on-site. This indicates that the temporary training facility will not generate additional vehicle trips along the external road network and solely re-direct the inbound and outbound vehicle movements at a different location along Hartley Street.

On this basis, the Stage 1 temporary facility is not anticipated to adversely impact the safety and operations of the external road network.

6 Summary

Modus has been commissioned by Andreatta Developments Pty Ltd, care of Clarke and Prince Pty Ltd, to provide traffic and transport advice in relation to the proposed Garbutt Training Facility (Stage 1) development located at 15 Hartley Street, Garbutt.

Based on our assessment, Modus has the following findings:

Existing Conditions

- The development site is bounded by Hartley Street to the east, vacant land to the north and industrial developments to the south and west.
- The site is identified within the TCC Planning Scheme as a Medium Impact Industry zone.

Proposed Development

- The proposed development is part of Stage 1 of the Garbutt Training Facility development located at Lot 361 Hartley Street in Garbutt.
- The Training Facility is comprised of three (3) office and eight (8) training spaces and provides ancillary areas for employees use.
- An on-site car parking arrangement has been proposed to accommodate a total of 29 car parking spaces, including one (1) PWD parking space.

Traffic Compliance Assessment

- The existing crossover complies with the design requirements of the TCC Standard Drawing SD-031.
- The existing crossover located along Hartley Street achieves the minimum 6.0m separation requirement of Australian Standards AS2890.1.
- The existing crossover exceeds the minimum vehicle sight distance requirements and ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site in accordance with Australian Standards AS2890.1.
- The proposed car parking layout is compliant with the design requirements of Australian Standards AS2890.1 and provides turnaround provisions on-site for general vehicles.
- The general vehicle queueing provisions are considered acceptable from a traffic engineering perspective.
- The proposed on-site car parking provision exceeds the minimum car parking requirements of the TCC Planning Scheme.
- It is anticipated that the largest design vehicle to service the site is an MRV design vehicle.

- The refuse collection arrangements for the proposed development are anticipated to occur on-site via a rear-loading RCV.
- The swept path assessment determined that the largest design vehicles to service the site are able to safely ingress and egress in a forward gear, demonstrated at **Appendix B**.

Traffic Generation

- The proposed Stage 1 development will not generate additional vehicle trips along the external road network.

Should there be any issue with the above, please contact the undersigned.

Yours sincerely,

MODUS TRANSPORT AND TRAFFIC ENGINEERING

Tetteh Anang
Team Lead – Transport Advisory
RPEQ 28656

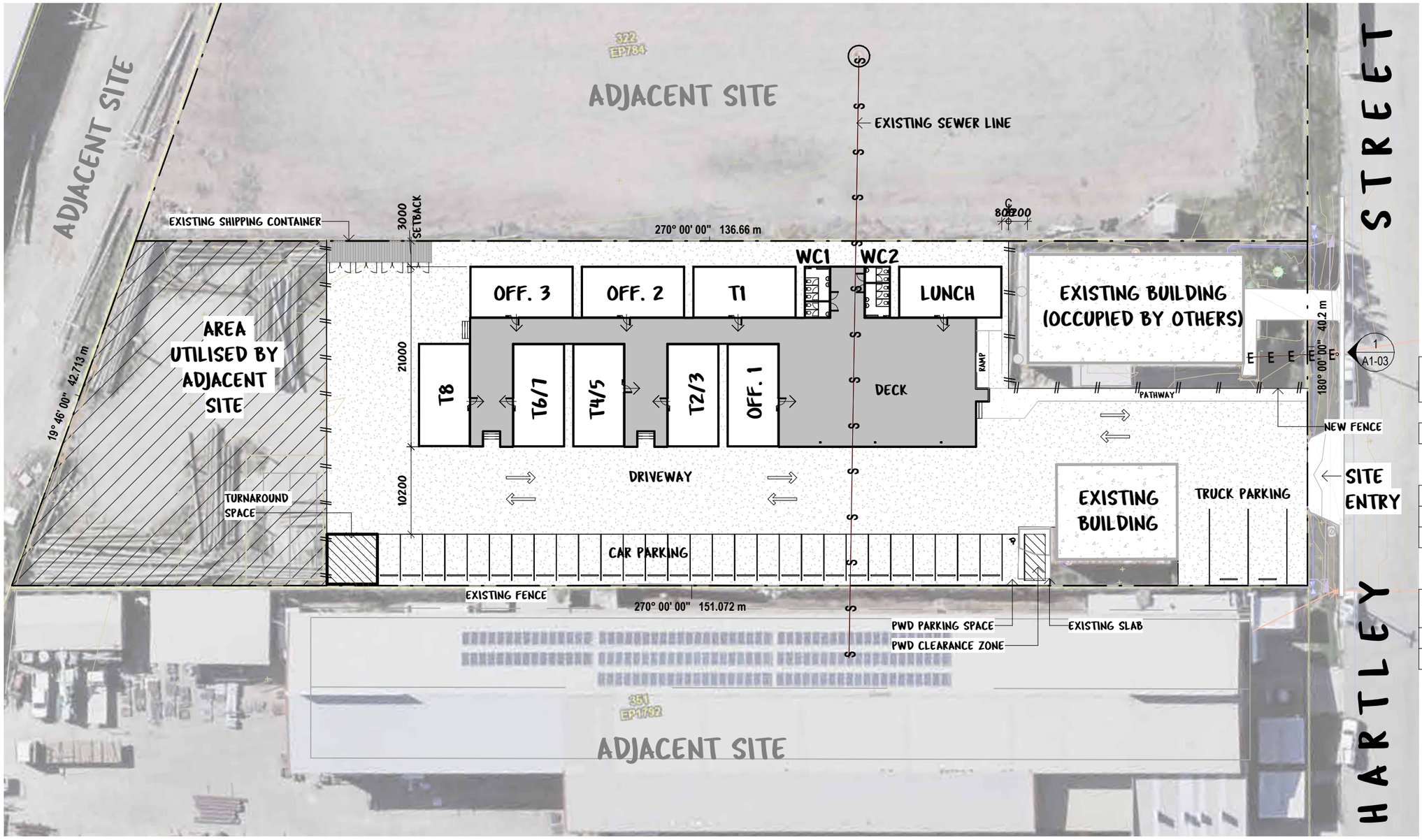
APPENDIX A

Proposed Development Plans

SITE COVER		
EXISTING BUILDINGS (APPROX.)	550 m²	9%
SITE COVER	1373 m²	24%
TOTAL	1923 m²	33%

CAR PARKING	
	1
CAR PARK	28
TRUCK PARK	2

N
W E
S



1 A1-03 **SITE PLAN**
SCALE - 1 : 500

GFA	
DECK	611 m²
LUNCH	72 m²
OFFICE 1	72 m²
OFFICE 2	72 m²
OFFICE 3	72 m²
RAMP / STAIRS	42 m²
T1	72 m²
T8	72 m²
T 2 & 3	72 m²
T 4 & 5	72 m²
T 6 & 7	72 m²
WC 1 & 2	72 m²
TOTAL	1373 m²

SITE USAGE		
SHARED USE		
SHARED ACCESS	323 m²	6%
	323 m²	
USE BY ERGON		
TRAINING SPACE	2024 m²	35%
TRUCK PARKING	129 m²	2%
PARKING AND ACCESS	1506 m²	26%
	3659 m²	
USE BY OTHERS		
AREA UTILISED BY ADJACENT SITE	954 m²	16%
EXISTING BUILDING	600 m²	10%
EXISTING BUILDING	248 m²	4%
	1802 m²	

IMPERVIOUS AREAS		
EXISTING BUILDINGS	550 m²	9%
PATHWAYS	101 m²	2%
PROPOSED BUILDINGS	1392 m²	24%
TOTAL	2043 m²	35%

AMENDMENTS		DATE
P1	FOR CLIENT REVIEW	29/04/2024
P2	PRELIMINARY ISSUE	28/08/2024

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF CLARKE AND PRINCE PTY LTD. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

ERGON ENERGY

clarke and prince | ARCHITECTS
3 Scott Street | CAIRNS | QLD 4870
p. 07 4051 4088 | f. 07 4051 1080
e. cp@clarkeandprince.com.au
w. www.clarkeandprince.com.au

DRAWN	JB/BM	SCALE	1 : 500
APPROVED	SC	DATE	APRIL 2024
SIZE	A3		

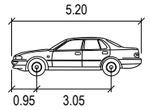
PROJECT **TEMPORARY TRAINING FACILITY**
4-28 HARTLEYST, GARBUTT
FOR **ENERGY QUEENSLAND LIMITED**
DWG **SITE PLAN**
DWG No. **1564-DA A1-02**
STAMP PRELIMINARY
ISSUE **P2**

APPENDIX B

Swept Path Assessment

VEHICLE USED IN SIMULATION

B99



Meters

Width	:	1.94
Track	:	1.84
Lock to Lock Time	:	6.0
Steering Angle	:	33.5

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE
- 5KM/H DESIGN SPEED
- 10KM/H DESIGN SPEED

N

1 0.5 0 1 2 3 4 5m

SCALE 1:100

PROJECT

GARBUTT TRAINING FACILITY (STAGE 1)

CLIENT

CLARKE AND PRINCE PTY LTD

DRAWING TITLE

B99 SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD24087QLD - SK06

DATE	REVISION
11 OCT 2024	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS
A	G.R	T.A	15/08/24	DESIGN REVIEW
B	G.R	T.A	11/10/24	DESIGN REVIEW

MODUS
Transport and Traffic Engineering

ABN 49 668 863 269
310 Edward Street, BRISBANE CITY QLD 4000

T: 1300 606 408 E: marketing@moduseng.com.au
W: www.modusengineering.com.au

PRELIMINARY ADVICE ONLY

NOT TO BE USED FOR CONSTRUCTION

GENERAL NOTES:

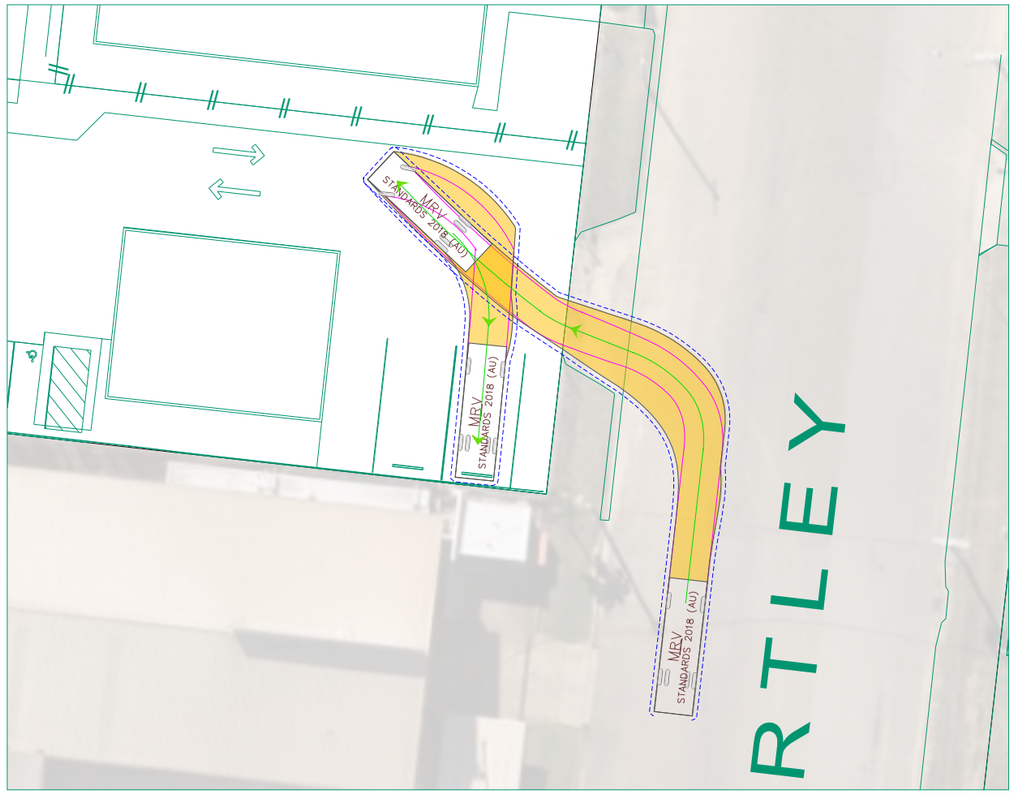
1.PRELIMINARY DESIGN ISSUED FOR COMMENT ONLY.

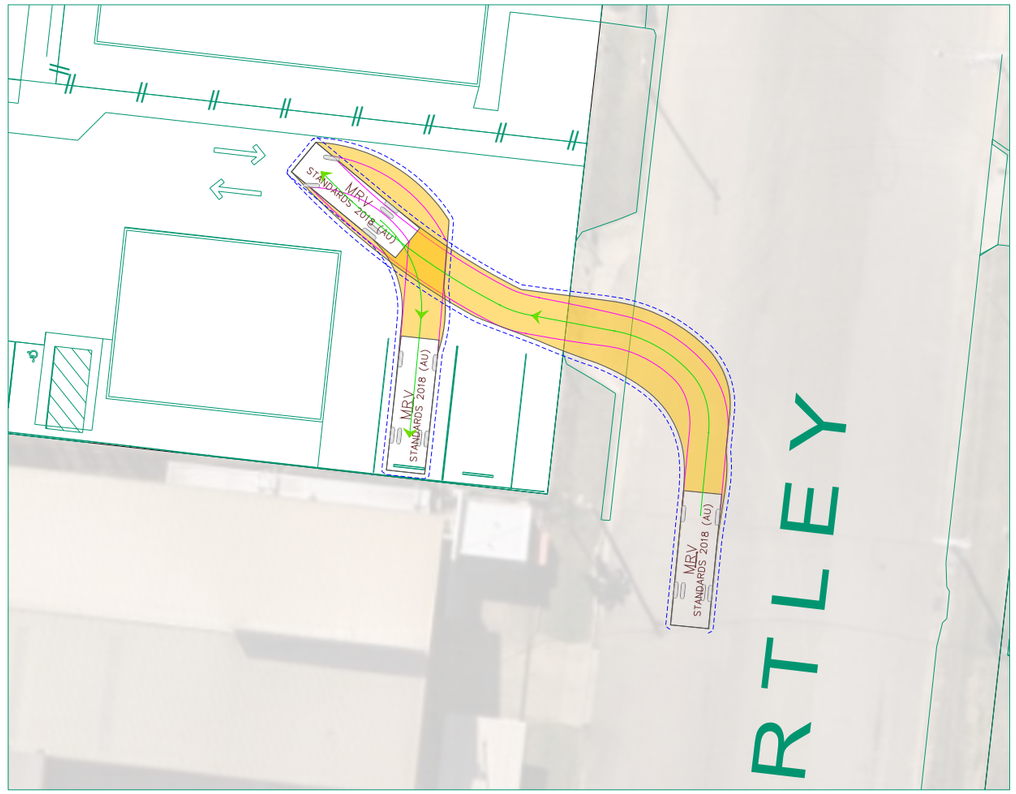
2.ALL DIMENSIONS ARE PROVIDED IN METERS UNLESS NOTED OTHERWISE.

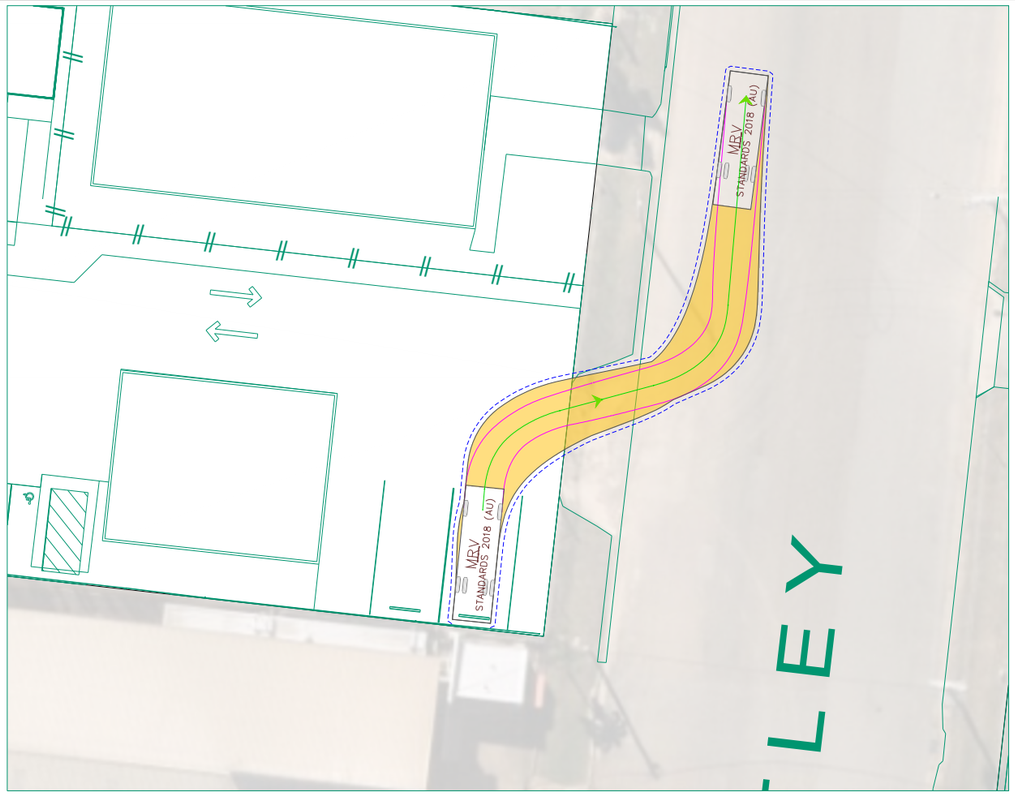
Tetteh Anang

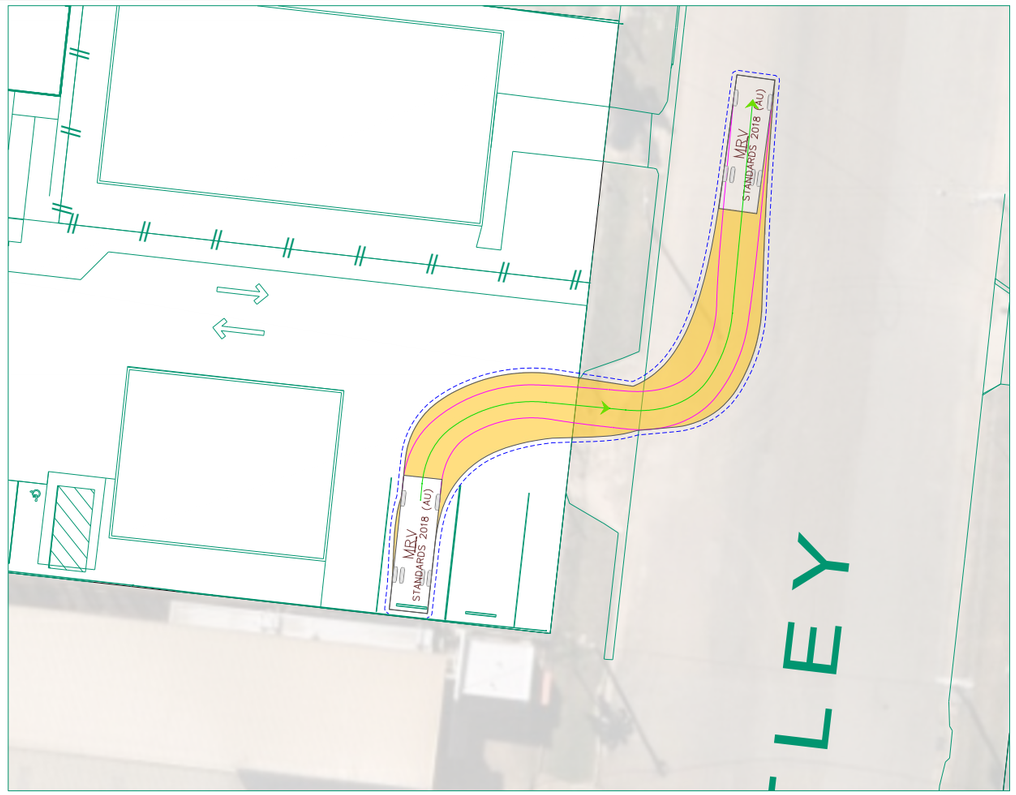
Team Lead - Transport Advisory

RPEQ 28656

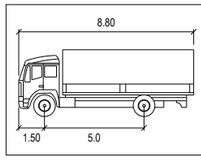








VEHICLE USED IN SIMULATION



MRV

	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE
- 5KM/H DESIGN SPEED
- 10KM/H DESIGN SPEED

N

0 2 4 6 8 10 12 14 16 18 20m

4 3 2 1

SCALE 1:400

PROJECT

GARBUTT TRAINING FACILITY (STAGE 1)

CLIENT

CLARKE AND PRINCE PTY LTD

DRAWING TITLE

MRV SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD24087QLD - SK07

DATE	REVISION
11 OCT 2024	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS
A	G.R	T.A	15/08/24	DESIGN REVIEW
B	G.R	T.A	11/10/24	DESIGN REVIEW

PRELIMINARY ADVICE ONLY

NOT TO BE USED FOR CONSTRUCTION

GENERAL NOTES:

1.PRELIMINARY DESIGN ISSUED FOR COMMENT ONLY.

2.ALL DIMENSIONS ARE PROVIDED IN METERS UNLESS NOTED OTHERWISE.

Tetteh Anang

Team Lead - Transport Advisory

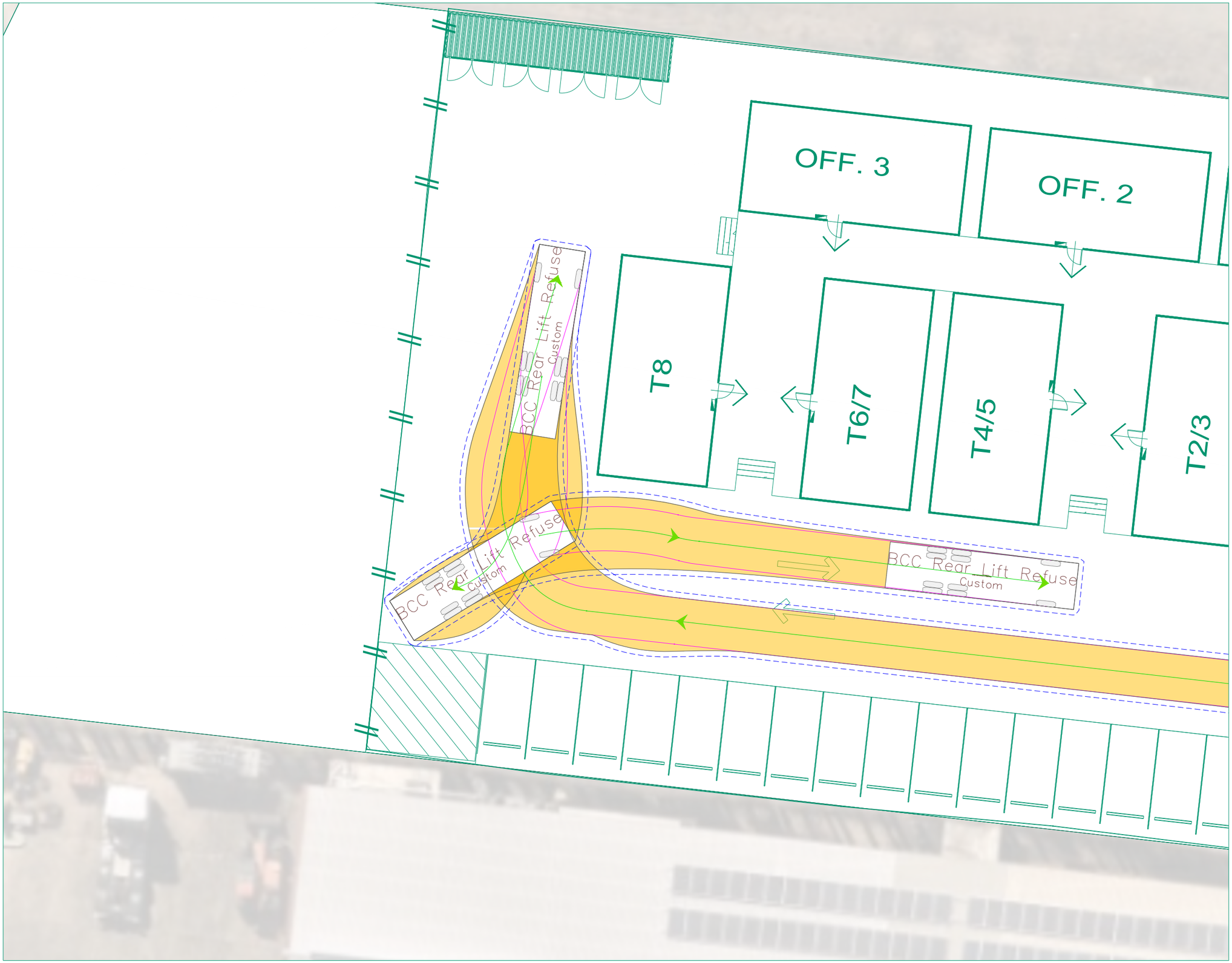
RPEQ 28656

MODUS

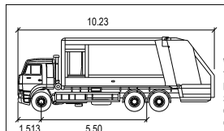
Transport and Traffic Engineering

ABN 49 668 863 269
310 Edward Street, BRISBANE CITY QLD 4000

T: 1300 606 408 E: marketing@moduseng.com.au
W: www.modusengineering.com.au



VEHICLE USED IN SIMULATION



BCC Standard Rear Lift

	Meters
Width	2.50
Track	2.50
Lock to Lock Time	6.0
Steering Angle	39.2
Clearance Height	3.4
Operating Height	3.4

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE
- 5KM/H DESIGN SPEED
- 10KM/H DESIGN SPEED

N

2 1.5 1 0.5 0 1 2 3 4 5 6 7 8 9 10m

SCALE 1:200

PROJECT

GARBUTT TRAINING FACILITY (STAGE 1)

CLIENT

CLARKE AND PRINCE PTY LTD

DRAWING TITLE

RCV SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD24087QLD - SK08

DATE	REVISION
11 OCT 2024	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS
A	G.R	T.A	15/08/24	DESIGN REVIEW
B	G.R	T.A	11/10/24	DESIGN REVIEW

MODUS
Transport and Traffic Engineering

ABN 49 668 863 269
310 Edward Street, BRISBANE CITY QLD 4000

T: 1300 606 408 E: marketing@moduseng.com.au
W: www.modusengineering.com.au

PRELIMINARY ADVICE ONLY

NOT TO BE USED FOR CONSTRUCTION

GENERAL NOTES:

1.PRELIMINARY DESIGN ISSUED FOR COMMENT ONLY.

2.ALL DIMENSIONS ARE PROVIDED IN METERS UNLESS NOTED OTHERWISE.

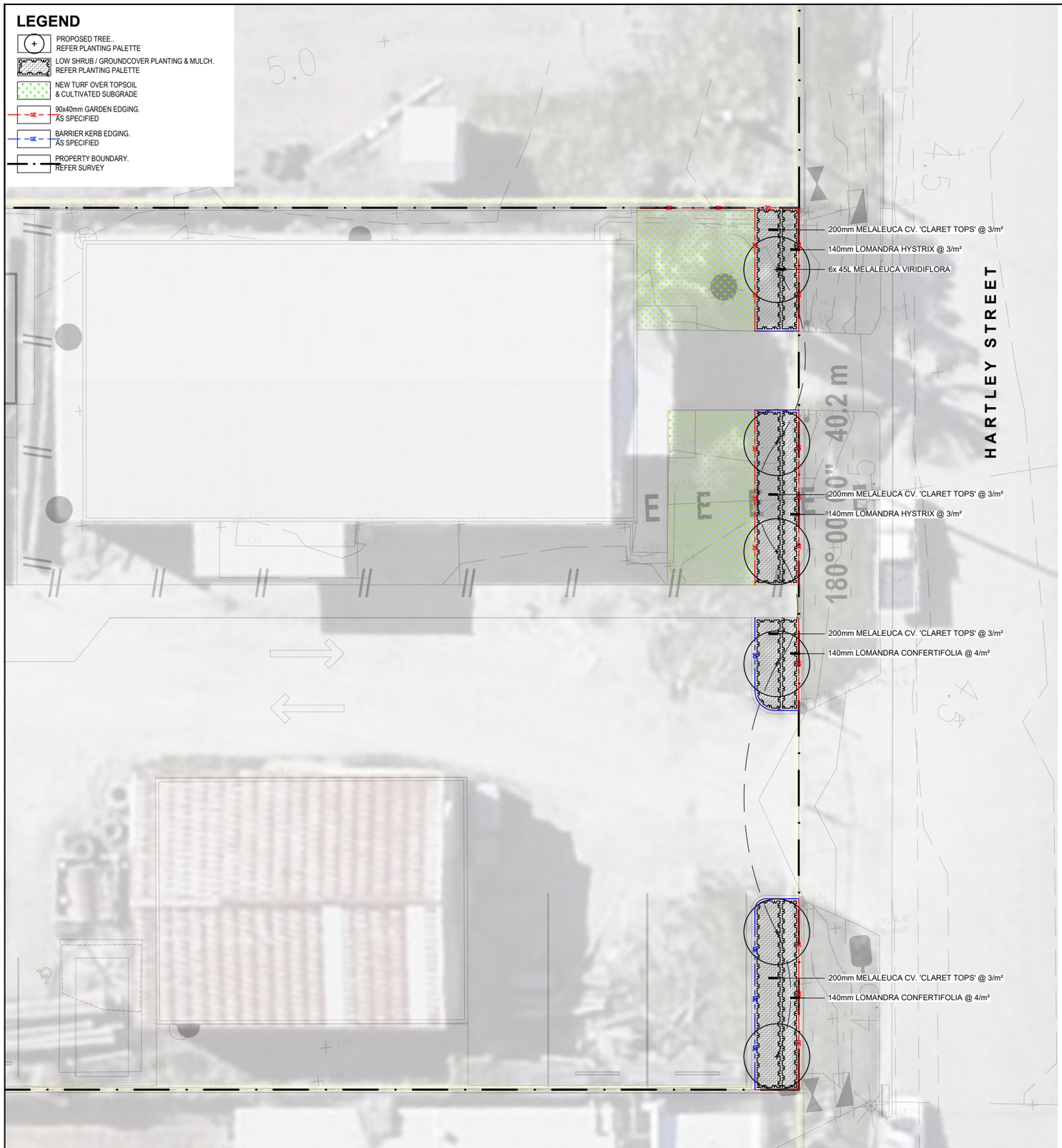
Tetteh Anang
Team Lead - Transport Advisory
RPEQ 28656

Document Set ID: 26403832
Version: 1, Version Date: 21/10/2024

A.5 Landscaping Plan

LEGEND

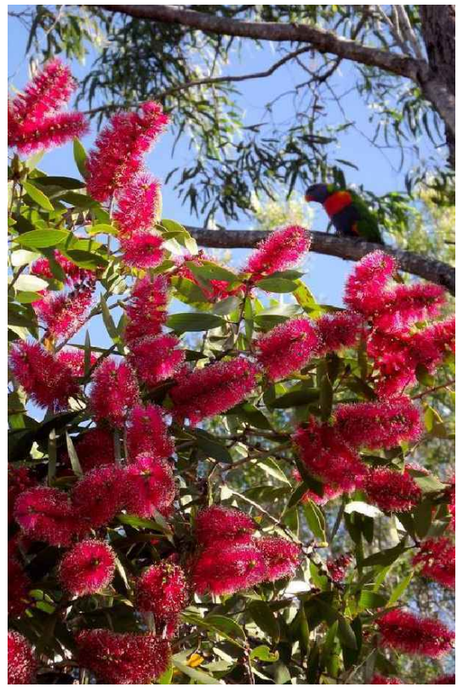
- PROPOSED TREE.. REFER PLANTING PALETTE
- LOW SHRUB / GROUNDCOVER PLANTING & MULCH. REFER PLANTING PALETTE
- NEW TURF OVER TOPSOIL & CULTIVATED SUBGRADE
- 90x40mm GARDEN EDGING. AS SPECIFIED
- BARRIER KERB EDGING. AS SPECIFIED
- PROPERTY BOUNDARY. REFER SURVEY



DRY NATIVE PLANTING PALETTE

SHADE TREES


MELALEUCA VIRIDIFLORA Broad Leaf Paperbark



LOW SHRUBS


MELALEUCA CV. 'CLARET TOPS' Honey Myrtle

GROUNDCOVERS


LOMANDRA CONFERTIFOLIA Fine Mat Rush


LOMANDRA HYSTRIX Mat Rush

rev. no	description	date	drawn
01	FOR APPROVAL	06/08/2024	C.M.
02	REVISED FOR APPROVAL	11/10/2024	C.M.

DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.
DIMENSIONS SHOWN ARE NOMINAL. ALLOWANCE TO BE MADE FOR FINISHED SIZES. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING WORK. THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF **LANDPLAN**. UNAUTHORISED USE OF THIS DOCUMENT IN ANY WAY IS PROHIBITED.

ERGON ENERGY

LANDPLAN
LANDSCAPE ARCHITECTURE
p 0439 005 294 | e simon@landplanla.com.au | PO Box 781 Bungalow 4870

drawn	approved	date
C.M.	S.M.	11/10/2024

scale 1:100 (AT A1 SIZE SHEET)

0 1m 2m 3m 4m 5m

client: ENERGY QUEENSLAND LIMITED
project: TEMPORARY TRAINING FACILITY. 4-28 HARTLEY STREET, GARBUTT
title: LANDSCAPE CONCEPT PLAN
project number: 2405-039-SD
drawing number: L1.01
rev: 02
northpoint

A.6 Code Assessment

A.6.1 Zones

Table 10-1: Medium impact industry zone code overall outcome and response

Performance outcomes	Acceptable outcomes	Response
Built form		
PO1 Development is consistent with the scale of surrounding buildings.	**AO1.1** Site cover does not exceed 80%.	**Complies.** Site cover is 32%. The proposed relocated facility is setback behind the existing building, which is more than a 6m setback from Hartley Street. (See drawing 564-DA A1-02 Site Plan in Appendix 1).
	AO1.2 Buildings are set back from street and road frontages: 1. within 20% of the average front setback of adjoining buildings; or 2. where there are no adjoining buildings, 6m	
PO2 Building entrances are legible and safe.	**AO2.1** Pedestrian entries are visible from the primary street frontage and visitor car parking areas, and are separate to vehicle access points.	**Complies.** The entrance to the site will be from the existing entry on the eastern border of the site off Hartley Street. The site entry is a shared access point for existing buildings. There is an additional existing entry between the street frontage and Existing Building 1 (See drawing 564-DA A1-02 Site Plan in Appendix 1) which is for other users of the plot and will not be used for the development. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps. (See drawing 1564-DA A1-00 Cover Sheet in Appendix 1). The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits.
	AO2.2 Doorway recesses in building facades are not of a size or configuration that would conceal a person, unless lighting, mirrors, transparent materials or angled approaches are included to offset the potential for impacts on safety.	
	AO2.3 Each building or tenancy is provided with a highly visible street and unit number respectively.	
	AO2.4 Premises are provided with external lighting sufficient to provide safe ingress and egress for site users.	
Amenity		
PO3 Utility elements (including refuse areas, outdoor storage, plant and equipment, loading and unloading areas) are screened from view from the street and sensitive land uses.	**AO3** Utility elements are: a. located within or behind the building; or b. screened by a 1.8m high solid wall or fence; or c. behind landscaping having the same screening effect as a 1.8m screen fence.	**Complies** The development consists of a training facility and will not have utility elements on site. Two separate existing buildings screen the northern and southern sections of the area.

PO4 Landscaping is provided to create streetscapes which contribute positively to the city image, particularly along major roads and streets.	**AO4** Landscaping is provided for a minimum depth of: a. 4m along an arterial or sub-arterial road; or b. 2m along any other road or street frontage.	**Complies.** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).
General		
PO5 Development minimises impacts on sensitive land uses having regard to noise, vibration, odour, dust, light or other emissions. Adverse impacts on the health, safety or amenity of nearby residential zoned land or other sensitive land uses are minimised.	**AO5.1** Development achieves the noise generation levels set out in the Environmental Protection (Noise) Policy 2008.	**Complies.** There are no sensitive land uses located nearby the project area.
	AO5.2 Development achieves the air quality objectives set out in the Environmental Protection (Air) Policy 2008.	
	AO5.3 Materials that are capable of generating air contaminants are wholly enclosed in storage bins.	
	AO5.4 All external areas are sealed, turfed or landscaped.	
	AO5.5 Light emanating from any source complies with Australian Standard AS4282 Control of the Obtrusive Effects of Outdoor Lighting.	
	AO5.6 Outdoor lighting is provided in accordance with Australian Standard AS 1158.1.1 — Road Lighting — Vehicular Traffic (Category V) Lighting — Performance and Installation Design Requirements.	
PO6 Development provides for the collection, treatment and disposal of liquid wastes or sources of contamination such that off-site releases of contaminants do not occur.	**AO6.1** Areas where potentially contaminating substances are stored or used, are roofed and sealed with concrete, asphalt or similar impervious substance and bunded.	**Complies.** There will be no more than 250mm cut or fill on site for the proposed development of the temporary Training Facility, thereby negating the need for significant site earthworks. As such, the contamination risk for the project is low.
	AO6.2 Roof water is piped away from areas of potential contamination.	
PO7 The site layout and design: 1. minimises earthworks; 2. maximises retention of natural drainage patterns; and 3. ensures existing drainage capacity is not reduced.	**AO7** Development does not involve earthworks involving more than 100m3.	**Complies.** Preliminary earthworks are based on the existing contour levels and the preliminary finished surface levels outlined in the attached Civil Engineering Services and A Site Based Stormwater Management Plan Report in Appendix 3. The proposed levels shown on the drawing, when compared to the existing surface contours, indicate that generally

		there will be no more than 250mm cut or fill on site for the proposed development of the temporary Training Facility, thereby negating the need for significant site earthworks.
Defence land		
PO8 Development does not adversely affect the safe and efficient operation of nearby Department of Defence land.	**AO8** All buildings and operational components of a use are setback not less than 100m from the closest boundary of land in the control of or used by the Department of Defence.	**N/A** No Defence land in or nearby the site.
Caretaker's accommodation		
PO9 Development does not compromise the viability of the primary use of the site.	AO9.1 No more than one (1) caretaker's accommodation dwelling is established on the site.	**N/A** No caretaker's accommodation dwelling proposed.
	AO9.2 The caretaker's accommodation dwelling has a gross floor area of no more than 70m2.	
Ancillary office uses		
PO10 Offices are accommodated where they are ancillary to the primary industrial use on the site.	**AO10** The area used for an office use does not exceed 250m2 or 10% of the gross floor area, whichever is the lesser.	**Complies** The GFA for the three proposed office is 216m^2 as shown in Drawing 564-DA A1-02 Site Plan in Appendix 1.
Uses		
PO11 Development within the zone facilitates: c. industrial activities whose impacts on sensitive land uses and the natural environment can be appropriately managed; or d. uses which require larger sites in locations that are separated from sensitive land uses, and are not more appropriately accommodated in other zones; or e. non-industrial uses which are small in scale and ancillary to or directly support the industrial functions of the area**.**	No acceptable outcome is nominated.	**Complies** The development does not have an impact on sensitive and uses as the surrounding land is used for similar industrial activities. The closest residents are over 400m away from the site.
PO12 Development is not primarily oriented to retail sales, other than where involving an outdoor sales activity.	No acceptable outcome is nominated.	**Complies** Development is not primarily oriented to retail sales.
PO13 Development does not significantly detract from the availability or utility of land for industry purposes.	No acceptable outcome is nominated.	**Complies** Development is consistent with the existing land uses in the area and is a temporary relocation of the facility across the road from the site.
Crime prevention through environmental design		
PO14 Site layout facilitates the security of people and property having regard to:	No acceptable outcome is nominated.	**Complies** The proposal is for a temporary Ergon Training facility the site will not be accessible to the general public. The site

a. opportunities for casual surveillance and sight lines; b. exterior building designs which promote safety and deter graffiti; c. adequate definition of uses and ownership; d. adequate lighting; e. appropriate signage and wayfinding; f. minimisation of entrapment locations; and g. building entrances, loading and storage areas being well lit and lockable after hours.		will have adequate lighting and appropriate signage. The existing fencing is to be maintained.
Community and environmental risk		
PO15 Development is designed and managed so that it provides appropriate protection for community health and safety, and avoids unacceptable risk to life and property.	No acceptable outcome is nominated.	**Complies** The proposal is for a temporary Ergon Training facility the site will not be accessible to the general public.
PO16 The site layout and design responds sensitively to on-site and surrounding drainage patterns and ecological values by: a. **maximising retention of natural drainage patterns;** b. ensuring existing drainage capacity is not reduced; c. maximising the retention or enhancement of existing vegetation and ecological corridors; and d. providing buffers to protect the ecological functions of waterways.	No acceptable outcome is nominated.	**Complies** The preliminary stormwater drainage layout is illustrated on the Preliminary Engineering Services drawing provided in the attached Civil Engineering Services and A Site Based Stormwater Management Plan Report in Appendix 3. The roof, bitumen pavement, gravel hardstand, landscaped areas and the balance of the allotment are to be collected in grated stormwater inlet pits and carried to the AtlanFilter system prior to discharging into the existing 1050mm RCP in Hartley Street.
Roseneath medium impact industry precinct		
PO17 Development is supported by adequate infrastructure, including: a. connection to reticulated water and sewage networks; b. connection to a stormwater drainage system; and c. constructed roads.	No acceptable outcome is nominated.	**Complies** The preliminary stormwater drainage layout is illustrated in the Civil Engineering Services and A Site Based Stormwater Management Plan Report the provided in Appendix 3. The roof, bitumen pavement, gravel hardstand, landscaped areas and the balance of the allotment are to be collected in grated stormwater inlet pits and carried to the AtlanFilter system prior to discharging into the existing 1050mm RCP in Hartley Street.
PO18 Development protects the environmental quality, existing riparian vegetation and hydraulic capacity of waterways including Stuart and Stoney Creeks.	No acceptable outcome is nominated.	**Complies** The stormwater drainage system for the site as outlines above will mitigate environmental impact to the surrounding vegetation and waterways.

PO19 Development does not compromise the safe use of the nearby magazine reserve.		**Complies** The development will not cause any impact to the magazine reserve due to its proximity from the site.
PO20 Impacts on nearby residential uses are minimised as far as practicable.	No acceptable outcome is nominated.	**Complies** The nearest residential dwellings are over 400m from the site. There will be no impact to their land use due to the nature of the development as a temporary relocation of the training facility.

Table 10-2: Community Facilities zone code

Performance outcomes	Acceptable outcomes	Response
Built form		
PO1 Development does not substantially exceed the height of existing buildings in the area.	**AO1** Building height does not exceed 3 storeys.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
PO2 Building setbacks and orientation provide for an attractive streetscape that is compatible with existing characteristics of the local area.	**AO2** Buildings have their main face to the street and are set back from that frontage: a. within 20% of the average front setback of adjoining buildings; or b. where there are no adjoining buildings, 6m.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
PO3 Development minimises the bulk of buildings to assist integration with surrounding development.	**AO3** Walls are articulated so that they do not exceed in length of 15m without a change in plane of at least 0.75m depth.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Amenity		
PO4 Development provides adequate separation, buffering and screening from residential uses and land within a residential zone so that adverse impacts on privacy and amenity are minimised.	**AO4.1** Buildings are set back 6m or half the height of that part of the building, whichever is the greater, from any boundary shared with a residential use or land within a residential zone. **AO4.2.1** A 1.8m high solid screen fence is provided along all boundaries shared with a residential use or land within a residential zone. OR **AO4.2.2** A landscaped buffer with a minimum width of 3m and consisting of dense screen planting is provided along all	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.

	boundaries shared with a residential use or land within a residential zone.	
	AO4.3 Windows that have a direct view into an adjoining residential use are provided with fixed screening that is a maximum of 50% transparent to obscure views and maintain privacy for residents.	
General		
PO5 Where provided, outdoor lighting does not adversely affect the amenity of adjoining properties or create a traffic hazard on adjacent roads.	**AO5.1** Light emanating from any source complies with Australian Standard AS 4282 Control of the Obtrusive Effects of Outdoor Lighting.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
	O5.2 Outdoor lighting is provided in accordance with Australian Standard AS1158.1.1 – Road Lighting – Vehicular Traffic (Category V) Lighting – Performance and Installation Design Requirements.	
PO6 Refuse storage areas and storage of goods or materials in open areas is presented in a manner that does not detract from the visual amenity of the local area.	**O6** The open area used for the storage of refuse, vehicles, machinery, goods and materials used on the site is: a. located no closer than 3m from any boundary; and b. are screened from view by a 1.8m high solid screen fence.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Caretaker's accommodation		
PO7 Development does not compromise the effective operation of the primary use.	**AO7.1** No more than one (1) caretaker's accommodation unit is provided on the site.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
	AO7.2 The caretaker's accommodation unit has a gross floor area of no more than 70m2.	
Community uses and clubs		
PO8 Adequate lockable storage space is provided on-site to meet the needs of users.	**O8** At least one (1) lockable storage space of a minimum of 4m2 is provided for each room or area that can be hired out or used by community organisations or the public.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Uses		
PO9 The site accommodates community-related activities or facilities in a manner that safely and efficiently meet community needs.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.

PO10 Other uses occur on a site where they: a. support or are otherwise complementary to the community-related activities or facilities on the site; and b. are subordinate to those activities or facilities.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
PO11 Development does not prejudice the ongoing operation and expansion of existing uses on the site.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
PO12 Development facilitates opportunities for appropriate co-location of community-related activities or facilities.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Amenity		
PO13 Development maintains a level of amenity appropriate to the use and minimises impacts on surrounding land, having regard to: a. noise; b. hours of operation; c. traffic; d. visual impact; e. signage; f. odour and emissions; g. lighting; h. access to sunlight; i. privacy; and j. outlook.	No acceptable outcome is nominated**.**	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
PO14 Landscaping is provided to enhance the appearance of the development, screen unsightly components, create an attractive on-site environment and provide shading.	No acceptable outcome is nominated**.**	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Crime prevention through environmental design		
PO15 Development facilitates the security of people and property having regard to: a. opportunities for casual surveillance and sight lines; b. exterior building design that promotes safety;	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.

c. adequate lighting; d. appropriate signage and wayfinding; e. minimisation of entrapment locations; and f. building entrances, loading and storage areas that are well lit and lockable after hours.		
Accessibility		
PO16 Convenient and legible connections are provided for pedestrians and cyclists to and from the site, particularly having regard to linkages with existing and proposed public transport infrastructure, the open space network, centres and other community-related activities.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Protection of natural values		
PO17 The site layout and design responds sensitively to on-site and surrounding topography, drainage patterns, ecological values by: a. minimising earthworks; b. maximising retention of natural drainage patterns; c. ensuring existing drainage capacity is not reduced; d. maximising the retention or enhancement of existing vegetation and ecological corridors; and e. providing buffers to protect the ecological functions of waterways.	No acceptable outcome is nominated.	**N/A** This zone code relates to 4 Hartley Street which is the site for the Ultimate Training Facility. No development works at this address will be taking place at this stage of the project.
Picnic Bay community facilities precinct		
PO18 Development in this precinct supports a transition from the existing use as a waste facility to uses which present as a gateway feature and key community node for Picnic Bay.	No acceptable outcome is nominated.	**N/A** The development area is not within the Picnic Bay community facilities precinct.
PO19 The existing land fill site is rehabilitated to a standard that is suitable to accommodate a range of community activities.	No acceptable outcome is nominated.	**N/A** The development area is not within the Picnic Bay community facilities precinct.
PO20 Building height and massing is consistent with the low density scale of the Magnetic Island character and articulates individual buildings.	AO20 Building height does not exceed 2 storeys.	**N/A** The development area is not within the Picnic Bay community facilities precinct.
PO21 Design of buildings contribute to the creation of the local Magnetic Island character through: a. **climate-responsive design;**	No acceptable outcome is nominated.	**N/A** The development area is not within the Picnic Bay community facilities precinct.

b. the natural setting of buildings within the landscape; and-Accepted development subject to requirements c. maximising views to the bay.		
PO22 Built form, landscape and streetscape treatment at the intersection of Birt Street and Nelly Bay Road reinforces a gateway statement.	No acceptable outcome is nominated.	**N/A** The development area is not within the Picnic Bay community facilities precinct.
PO23 Vehicle access points along Birt Street are minimised.	AO23 Access points are limited to only one either side of Birt Street within this precinct.	**N/A** The development area is not within the Picnic Bay community facilities precinct.

A.6.2 Overlays

Table 10-3: OM-01.1 Operational Airspace (8.2.1)

Performance outcomes	Acceptable outcomes	Response
PO1 Development does not involve permanent or temporary physical obstructions that will adversely affect the airport's operational airspace area identified on overlay map OM-01.1.	**AO1.1** Development involving a permanent or temporary building, structure or landscaping does not enter operational airspace areas identified on overlay map OM-01.1.	**Complies** The proposed site is located in an operational airspace more than 15m above ground level. The proposed development will not exceed 15m in height and will therefore not enter operational airspace.
	AO1.2 Development on land within the area identified on overlay map OM-01.1 as operational airspace areas does not involve transient intrusions within the operational airspace.	
PO2 Emissions do not significantly affect air turbulence, visibility or aircraft engine operation in the airport's operational airspace area identified on overlay map OM-01.1.	**AO2** Development does not generate: a. a gaseous plume with a velocity exceeding 4.3m per second; or b. smoke, dust, ash or steam that will penetrate operational airspace areas identified on overlay map OM-01.1.	**Complies** The development is an Ergon Training facility. The development will not generate emissions.

Table 10-4: OM-01.4 Australian noise exposure forecast contours (8.2.1)

Performance outcomes	Acceptable outcomes	Response
PO6 Development within the area identified on overlay map OM-01.4 is compatible with forecast levels of aircraft noise unless there is an overriding need in the public	**AO6.1** Above the 25 ANEF contour (as depicted on overlay map OM-01.4), development does not involve the following: a. child care centre;	**Complies** The development is an educational facility. The 20-25 ANEF contour applies to the site. This is not above the 25 ANEF contour, therefore, the development complies.

interest and there is no reasonable alternative site available for the use.	b. educational establishment; or c. hospital.	
	AO6.2 Above the 30 ANEF contour (as depicted on overlay map OM-01.4), development does not involve a community use or community care centre.	
	AO6.3 Above the 35 ANEF contour areas (as depicted on overlay map OM-01.4), development does not involve residential uses.	
	AO6.4 The siting and design of any building is in accordance with Australian Standard AS2021 and Australian Standard AS/NZS2107.	

Table 10-5: OM-06.1 Flood Hazard (8.2.6)

Performance outcomes	Acceptable outcomes	Response
Accepted development subject to requirements and assessable development		
PO1 Development in medium and high hazard areas is designed and located to minimise susceptibility to and potential impacts of flooding.	**AO1.1** Where the development is located within an area shown on overlay map OM-06.1 or 06.2 as medium hazard — further investigation area, new buildings containing habitable rooms: a. are sited on a part of the site which is outside the medium hazard — further investigation area; or b. are sited on the highest part of the site. OR **AO1.2** Where development is located within another hazard area shown on overlay map OM-06.1 or 06.2: a. floor levels of all habitable rooms are a minimum of 300mm above the defined flood level; b. floor levels of all non-habitable rooms (other than class 10 buildings) are above the defined flood event; c. parking spaces associated with non-residential development are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2; and d. underground parking is designed to prevent the	**Complies** Drawing 1564-DA A1-03 Elevations shows that the main floor level is 5.6m which is above the 1% AEP + 300mm level of 5.18m.

	intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.	
PO2 Development in high hazard areas does not significantly impede the flow of flood waters through the site or worsen flood flows external to the site.	**AO2.1** Development in high hazard areas do not involve: a. filling with a height greater than 150mm; or b. block or solid walls or solid fences; or c. garden beds or other structures with a height more than 150mm; or d. the planting of dense shrub hedges.	**Complies** There is high hazard area in a small region in the northeast if the lot. This region of the lot contains the existing building, and no further development will be taking place in this area.
Self-assessable and assessable development		
PO3 Development does not intensify use in high hazard areas, in order to avoid risks to people and property.	**AO3.1** New buildings are located outside high hazard areas identified on overlay map OM-06.1 or 06.2.	**Complies** There is high hazard area in a small region in the northeast if the lot. This region of the lot contains the existing building, and no further development will be taking place in this area.
	AO3.2 New lots or roads are not created within high hazard areas identified on overlay map OM-06.1 or 06.2.	
	AO3.3 Sites for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2.	
PO4 Siting and layout of development maintains the safety of people and property in medium hazard areas.	On existing lots **AO4.1** Floor levels for residential buildings are 300mm above the defined flood level.	**Complies** The proposed buildings will be raised above the DFE level flood level of 4.88m. Drawing 1564-DA A1-03 Elevations shows that the main floor level is 5.6m which is above the 1% AEP + 300mm level of 5.18m. The development does not involve underground parking, non-permanent accommodation, or lot reconfiguration.
	AO4.2 Floor levels of non-residential buildings (other than class 10 buildings) are above the defined flood level.	
	AO4.3 Underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.	
	AO4.4 Development for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the medium hazard areas identified on overlay map OM-06.1 or 06.2.	

	Where reconfiguring a lot **AO4.5** Where reconfiguring a lot, new lots contain designated building envelopes (whether or not for residential purposes) outside the medium hazard areas identified on overlay map OM-06.1 or 06.2 and those building envelopes are of a sufficient size to accommodate buildings associated with the development. **AO4.6** In new subdivisions, arterial, sub-arterial or major collector roads are located above the 2% AEP flood level. **AO4.7** Reconfiguration of lots does not involve cul-de-sacs or dead end streets within medium hazard areas identified on overlay map OM-06.1 or 06.2.	
PO5 Signage is provided within high and medium hazard areas to alert residents and visitors to the flood hazard.	**AO5** Signage is provided on-site (regardless of whether land will be public or private ownership) to indicate depth at key hazard points, such as at floodway crossings, entrances to low-lying reserves or parking areas.	**Will comply** Signage will provided where applicable.
PO6 Development within high and medium hazard areas ensures any changes to the depth, duration, velocity of flood waters are contained within the site.	No acceptable outcome is nominated.	**Complies** There will be no changes to depth duration or velocity of flood waters. The site does not increase impervious area and will be not constrained by the proposed demountable buildings. The proposed buildings will be raised above the DFE level flood level of 4.88m. Drawing 1564-DA A1-03 Elevations shows that the main floor level is 5.6m which is above the 1% AEP + 300mm level of 5.16m.
PO7 Development within high and medium hazard areas does not directly, indirectly or cumulatively worsen flood characteristics outside the development site, having regard to: a. **increased scour and erosion; or** b. loss of flood storage; or c. loss of or changes to flow paths; or d. flow acceleration or retardation; or e. reduction in flood warning times.	No acceptable outcome is nominated.	**Complies** There will be no changes to depth duration or velocity of flood waters. The site does not increase impervious area and will be not constrained by the proposed demountable buildings. The proposed buildings will be raised above the DFE level flood level of 4.88m. Drawing 1564-DA A1-03 Elevations shows that the main floor level is 5.6m which is above the 1% AEP + 300mm level of 5.16m.
PO8 Facilities with a role in emergency management and vulnerable community services are able to function effectively during and immediately after flood events.	**AO8** The development is provided with the level of flood immunity set out in Table 8.2.6.3(b).	**Complies** Flood events will not disrupt the function of the intended use.
PO9 Public safety and the environment are not adversely affected by the detrimental impacts of flooding on	**AO9.1** Development does not involve the manufacture or storage of hazardous materials within a high flood hazard area identified on overlay map OM-06.1 or 06.2.	**Complies** The site does not involve the storage of hazardous materials.

hazardous materials manufactured or stored in bulk.	**AO9.2** Within the low or medium flood hazard area identified on overlay map OM-06.1 or 06.2, structures used for the manufacture or storage of hazardous materials in bulk are designed to prevent the intrusion of flood waters up to at least a 0.2% AEP flood event.	

A.6.3 Development codes

Table 10-6: Landscape code

Performance outcomes	Acceptable outcomes	Response
Landscape design and character		
PO1 The overall landscape design of both public and private spaces: a. **creates a sense of place that is consistent with the intended character of the streetscape, city or locality; and** b. is functional and designed to be visually appealing in the long-term as well as when first constructed.	**AO1** When the development is in an identified locality in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space, landscape design is in accordance with the requirements for that area. Otherwise, no acceptable outcome is nominated.	**Complies** **Complies.** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1)..
PO2 Tree and plant selection ensures: a. **climatically appropriate landscaping;** b. creation of a diverse palette: in form, texture and seasonal colour; c. longevity of plants and the form and function of landscaped areas; and d. cost effective and convenient maintenance over the long-term.	AO2.1 Species are selected from those listed in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space. AO2.2 Plant species do not include undesirable species as listed in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan provides a visual of the landscape plan for the temporary facility. The Plan shows a diverse range of colours and species that provide different purposes such as shade and ground cover.
PO3 Where appropriate, provision is made for on-street planting that: a. **complements the local streetscape;** b. ensures visibility is maintained from entrances and exits to properties and at intersections; c. establishes healthy vegetation of suitable species; d. minimises the potential for vegetation to cause damage to persons, property or infrastructure; and e. does not limit or hinder pedestrian or vehicular flow and movement.	AO3 Street planting is provided that is consistent with the standards set out in the Development manual planning scheme policy no. SC6.4	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site and maintains visibility and pedestrian and vehicle flow through the shared access area.

PO4 Streetscape treatments and paving form a functional and attractive component of the overall landscape scheme.	AO4.1 All general streetscape elements are provided in accordance with the standards set out in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).
	AO4.2 Streetscape pavements are provided in accordance with the standards set out in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	
	AO4.3 Streetscape furniture is provided in accordance with the standards set out in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	
PO5 Landscaping within on-site open space areas is well-designed, having regard to its purpose and the provision of shading, climatic response, and the proportion of soft and hard elements.	AO5.1 Selected tree species within communal recreation areas are to provide at least 30% shade coverage within 5 — 10 years of planting.	**Complies** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).
	AO5.2 A minimum of 50% of landscaped areas are to be covered in soft landscaping (turf areas and planting beds), with at least 25% of that area being planting.	
PO6 Landscaping and embellishments in local recreational parks is fit for purpose and well-designed, having regard to shading, climatic response, and the proportion of soft and hard elements. Landscaping softens edges and creates an attractive interface with adjoining land.	**AO6** Landscaping and embellishments are provided that are consistent with the standards set out in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).

PO7 The use of hard surface treatments within private and public spaces do not detract from a high standard of amenity, and large unbroken areas of hardstand material is avoided.	**AO7** Surface treatments are provided that are consistent with the standards set out in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Hard surface treatments will be consistent with the existing land use for the site.
Edge treatments		
PO8 Where provided, landscape design along site frontages is used to mitigate adverse aesthetic elements, provide privacy and reduce illumination impacts, while maintaining a safe environment for users.	**AO8** Landscaped areas along the frontage of a site consists of: a. shade or rounded canopy trees that will provide a minimum of 50% shade to the frontage of the site within 5 years of planting; b. shrubs that provide screening to blank walls and privacy as required; and c. low shrubs and ground covers that reach a maximum height of 750mm at maturity.	**Complies** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).
PO9 Where appropriate, acoustic barriers and long fences along road frontages and within the development are screened or softened by landscaping or architectural embellishment to improve visual amenity of the development.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage.
PO10 Where provided, landscaping along a side or rear boundary assists in maintaining privacy, screening unsightly or service elements and enhancing the appearance of the development from nearby premises.	**AO10.1** Screen planting is provided along the side or rear boundary of a site, which consists of: a. either trees with a maximum spacing of 3m (measured from centres) and capable of providing a dense screen within 3 years of planting or screening shrubs capable of growing to a height of 3m within 2 years of planting; and b. low shrubs and ground covers, where appropriate, to allow for complete covering of planting area.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage.
PO11 Landscaped areas along or near retaining walls, long unbroken walls, service areas and parking areas consist of an appropriate combination and species of trees, shrubs and groundcovers to minimise the visual impact of these elements.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be

		located either side of the entry point to the site, in front of the existing buildings along the street frontage.
PO12 Screening trees, shrubs, low shrubs, ground covers and vertical accent plants are appropriate for the space available, orientation and functional requirements of the area.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage.
Maintenance, drainage, utilities, services and construction		
PO13 Plant selection and location protects the integrity and function of overhead and underground services.	**AO13** Plant selection and location complies with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies.** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).
PO14 Landscape elements do not adversely affect stormwater quantity or quality by ensuring: a. **the flow of water along overland flow paths is not restricted;** b. opportunities for water infiltration are maximised; and c. areas of pavement, turf and mulched garden beds are appropriately located and adequately drained.	No acceptable outcome is nominated.	**Complies.** The roof, bitumen pavement, gravel hardstand, landscaped areas and the balance of the allotment are to be collected in grated stormwater inlet pits and carried to the AtlanFilter system prior to discharging into the existing 1050mm RCP in Hartley Street. The landscape elements will not impact stormwater.
PO15 Landscaping works, design and materials used minimise maintenance costs and whole of life cycle costs.	No acceptable outcome is nominated.	**Complies.** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot. (See drawing number L1.01 Landscape Concept Plan in Appendix 1).

PO16 All turf areas on-site are accessible externally by standard lawn maintenance equipment and receive adequate sunlight for the turf species used.	No acceptable outcome is nominated.	**Complies** Turf areas are accessible externally through the site entry point as well as the existing entry to the site for other occupants of existing buildings as shown on Drawing L1.01 Landscape Concept Plan. Turf is located between Existing Building 1 and the new fence along the street frontage.
PO17 Drainage of podium planters allows for flush out in future and are adequately drained.	No acceptable outcome is nominated.	**N/A** No podium planters are proposed.
PO18 Irrigation is installed within private and public spaces to ensure the long-term viability and integrity of landscaped areas. Where provided, irrigation is designed to facilitate the efficient supply of water in accordance with micro-climatic conditions.	**AO18** Irrigation is provided accordance with the Development manual planning scheme policy no. SC6.4 including - SC6.4.12 Landscaping and Open Space.	**N/A** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. **Complies.** Landscaping will be provided along the street frontage of the site on either side of the entry point. This will consist of dry native plants such as shade trees, low shrubs and groundcovers. The species were selected to minimise the need for irrigation.
PO19 Limited on-site maintenance is achieved for private and public landscaping, by selecting plant species having regard to long life expectancy and minimal leaf litter drop, pruning, watering and fertilising requirements.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These species were selected to minimise maintenance and cost.
PO20 Container sizes and planting stock maturity is consistent with the intended role of the landscaping.	**AO20** Landscaping is undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers.
PO21 Planting stocks are of a quality to ensure vigorous growth.	**AO21** Landscaping is undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space and SC6.4.12.6 Landscaping Construction Standards.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers.

PO22 Plants are protected and maintained to facilitate in-situ growth, vigour and quality form.	**AO22** Landscaping is undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space and SC6.4.12.6 Landscaping Construction Standards.	**Complies** The vegetation has garden edging, barrier kerb ending and concrete edging.
PO23 Site preparation works ensure a stable and enhanced landscape form.	**AO23** Landscaping is undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space and SC6.4.12.6 Landscaping Construction Standards.	**Complies** The balance of the subject allotment will be maintained as the existing gravel hardstand.
Sustainability		
PO24 Wherever possible, landscape design facilitates the retention of significant existing vegetation, both within and external to the site.	AO24.1 Site design integrates and incorporates retained and significant trees and vegetation within and external to the site.	**Complies** At present, there is minimal vegetation on the site. There are a couple of palm trees located in front of the existing buildings. These are not significant trees and if removed, they will be replaced with turf or other landscaping as shown in Drawing L1.01 Landscape Concept Plan in Appendix 1.
	AO24.2 Removed or damaged significant vegetation is replaced with mature vegetation of a comparable quantity and species.	
PO25 Appropriate site planning and construction management is undertaken to ensure the longevity and health of retained and significant trees and vegetation.	AO25.1 Retained trees are protected by a tree protection zone (TPZ) and fenced along the canopy/drip line to comply with AS4970- 2009 Protection of Trees on Development Sites.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These species were selected to minimise maintenance and cost. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.
	AO25.2 Any required pruning or trimming work is undertaken in accordance with AS4373 — Pruning of Amenity Trees and is carried out by a qualified aborist.	
	AO25.3 Retained and significant vegetation damaged during development or construction is treated to repair any damage to the extent practicable by a qualified arborist.	
	AO25.4 Protective measures and practices are employed for work adjacent to trees in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.23.1 Construction management.	
PO26 Landscape design optimises water and energy efficiency and responds appropriately to local conditions, by: a. maximising the exposure to the prevailing summer breezes and the north-east winter morning sun;	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. Turf will also be provided between the street frontage and Existing Building 1

b. minimising exposure to the prevailing winter winds and western summer sun; and c. optimising shade to create useable and comfortable areas; d. hydro-zoning planting**.**		on either side of the access point for other users of the lot.
PO27 Planting bed profiles and edging encourage plant viability, reduce erosion, control weed invasion, provide adequate water infiltration and ease of maintenance to support long-term plant viability and vigorous growth.	AO27 Planting beds are designed in accordance with the Development manual planning scheme policy no. 6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.
PO28 Landscape buffering and species selection is consistent and compatible with any ecological values on or adjoining the site.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.
PO29 Landscaping elements are provided within parking areas, along driveways and internal roadways to provide adequate shading, and safe and legible parking areas.	AO29 Landscaping is provided in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage to maintain visibility and pedestrian and vehicle flow. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.
Safety		
PO30 Landscape design enhances community safety and reduces the potential for crime and antisocial behaviour.	AO30.1 Access to a site, parking area, buildings or public open space is well lit, free from obstructions and clearly defined by landscape treatments. AO30.2 Trees with a minimum 1.8m of clear trunk (at maturity) are located along pathways, at building entries, within parking areas, on street corners, adjacent to street lighting and along	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage to

	driveways. Garden beds within the aforementioned areas consist of low shrubs and groundcovers that do not exceed 750mm in height.	maintain visibility and pedestrian and vehicle flow. Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.
	AO30.3 Any solid wall or semi permeable fence is protected from graffiti through means of vertical landscaping or vandal resistant paint or artwork.	
PO31 Where appropriate and practicable, all elements of the landscape design are safe and provide accessibility for all abilities.	AO31.1 Paving material, tactile indicators and construction complies with AS1428 - Design for Access and Mobility.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage to maintain visibility and pedestrian and vehicle flow.
	AO31.2 Pavement material or treatment clearly delineates between pedestrian and vehicular movement systems through contrasting materials, colours or level changes.	
	AO31.3 Hard landscaping materials are not highly reflective, or likely to create glare, slipperiness or other hazardous conditions.	

Table 10-7: Transport impact, access and parking code

Performance outcomes	Acceptable outcomes	Response
Transport impact		
PO1 The development is located on roads that are appropriate for the nature of traffic generated, having regard to the safety and efficiency of the transport network, and the functions and characteristics identified of the road hierarchy. The road hierarchy is shown on Figure 9.5 — Road hierarchy existing and Figure 9.6 Road Hierarchy Future	No acceptable outcome is nominated.	**Complies** Hartley Street is an Industrial Access Road as part of the road hierarchy. The land use and proposed temporary use of the site is consistent with this classification. As advised in Section 5.4.1 of the Traffic Engineering Report, a maximum of one (1) trip for both employees and students in the AM and PM peaks for the proposed temporary facility. Therefore, the proposed development is anticipated to generate a total net increase of 60 vehicles per hour (vph) during the AM and PM peak hour periods, inclusive of both inbound and outbound vehicle movements. Nonetheless, it is not expected that the temporary facility will significantly impact the external road network given the industrial nature of the area and the lower traffic generation associated with these uses.
PO2 Development does not compromise the orderly provision or upgrading of the transport network.	No acceptable outcome is nominated.	**Complies** Hartley Road is an Industrial Access Road. The development and relevant traffic generation as stated in PO1 above will not compromise the provision or upgrading of the transport network.

PO3 On-site transport network infrastructure (including roads, parking, access and public transport, pedestrian and cyclist facilities) appropriately integrates and connects with surrounding networks.	No acceptable outcome is nominated.	**Complies** The external road network does not provide pedestrian footpaths in the vicinity of the site to form connections between the surrounding developments in the area. However, on-road cycle lanes are accommodated along both verges of Ingham Road, located north of the development site. Furthermore, the proposed development is not serviced by any public transport routes within a 400m radius (5 minute walk) of the site. The entrance to the site will be from the existing entry on the eastern border of the site off of Hartley Street. The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. Details of the site access point can be found in the Traffic Impact Assessment in Appendix 4.
PO4 As far as practicable, development is designed to encourage travel by public transport, walking and cycling.	No acceptable outcome is nominated.	**Complies** See answer for PO3 above.
Site access		
PO5 Access arrangements are appropriate for: a. the capacity of the parking area; b. the volume, frequency and type of vehicle usage; c. the function and characteristics of the access road and adjoining road network; and d. the safety and efficiency of the road network.	**AO5** Access is provided in accordance with the standards identified in the Development manual planning scheme policy SC6.4 — SC6.4.5.5 Driveways, SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	**Complies** Access to the proposed temporary Training Facility will be gained from Hartley Street, utilising the existing 8.0m wide concrete driveway access located towards the southern side boundary of the subject allotment. The existing concrete driveway in generally compliant with Council's standard drawing for an industrial driveway and will be retained for this proposed development. The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. In accordance with Australian Standards AS2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in length and 2.0m in width from the property boundary. The existing crossover ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site and therefore achieves compliance with the requirements of Australian Standards AS2890.1. As there is no high-level landscaping, buildings, fences or other obstructions proposed adjacent to the existing concrete access driveways, there will be no impediment to pedestrian sight distance for vehicles entering or leaving the proposed development.

		Details of the site access point can be found in the Section 4 of the Traffic Impact Assessment in Appendix 4.
PO6 Where practical, access for cyclists and pedestrians is clearly distinguished from vehicle access.	No acceptable outcome is nominated.	**Complies** The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. Drawing 1564-DA A1-02 Site Plan in Appendix 1 shows the Pedestrian Pathway adjacent to the vehicle access point.
PO7 Access is located and designed to provide safe and easy access to the site, having regard to its position, width and gradient.	AO7 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways and SC6.4.3 Standard Drawings	**Complies** In accordance with Australian Standards AS2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in length and 2.0m in width from the property boundary. The existing crossover ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site and therefore achieves compliance with the requirements of Australian Standards AS2890.1. In accordance with Australian Standards AS2890.1, the minimum vehicle sight distance requirement is based on the posted speed limit along the frontage road. Provided that Hartley Street along the frontage of the site is anticipated to have a posted speed limit of 50 km/hr, the minimum sight distance of 45m is required. The existing crossover location exceeds the minimum sight distance requirement of 45m to observe vehicles approaching from directions of traffic and therefore complies with Australian Standards AS2890.1. The sight distance achievements along Hartley Street are illustrated in Section 4.1.3 of the Traffic Engineering Report in Appendix 4.
PO8 All vehicles reasonably expected to use the site are able to travel the length of the driveway or driveway access without damage to vehicle or the driveway surface.	AO8 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways, SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	**Complies** The proposed development provides a total of two (2) medium rigid vehicle (MRV) service bays, located at the front of the site. It is noted the MRV service bays provide 4.5m in width and 8.8m in length and therefore achieve compliance with the design requirements of Australian Standards AS2890.2. Furthermore, Modus has conducted a swept path assessment utilising an MRV design vehicle which determined that an MRV is able to access each service bay as well as ingress and egress the site in a forward gear.

PO9 A driveway does not cause change in the level of a footpath that is unsafe or inaccessible for people with mobility difficulties.	AO9 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways and SC6.4.3 Standard Drawings.	**Complies** The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. A timber deck is provided to link pedestrians between offices, training rooms and toilets.
PO10 Driveways are designed to withstand loadings from all vehicles reasonably expected to use the site.	AO10 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways.	**Complies** The TCC Planning Scheme states that the proposed development is required to provide a crossover design in accordance with the TCC Standard Drawing SD-031. The proposed design is approximately 9m access width. A swept path assessment utilising an MRV design vehicle which determined that an MRV can access each service bay as well as ingress and egress the site in a forward gear.
PO11 A driveway does not allow water to pond on adjacent properties or adjacent buildings and does not allow water to enter a building or property.	AO11 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways.	**Complies** The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits.
PO12 Construction of a driveway does not damage or interfere with the location, function of or access to any services and infrastructure.	AO12 Access is provided in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.5 Driveways, SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking and SC6.4.3 Standard Drawings.	**Complies** In accordance with Australian Standards AS2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in length and 2.0m in width from the property boundary. The existing crossover ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site and therefore achieves compliance with the requirements of Australian Standards AS2890.1. In accordance with Australian Standards AS2890.1, the minimum vehicle sight distance requirement is based on the posted speed limit along the frontage road. Provided that Hartley Street along the frontage of the site is anticipated to have a posted speed limit of 50 km/hr, the minimum sight distance of 45m is required. The existing crossover location exceeds the minimum sight distance requirement of 45m to observe vehicles approaching from directions of traffic and therefore complies with Australian Standards AS2890.1.
PO13 All vehicles reasonably expected to access the site can safely manoeuvre to allow vehicles to exit and enter in a forward motion.	AO13 Access is provided in accordance with the standards identified in Development manual planning scheme policy no. SC6.4 - SC6.4.5.5 Driveways, SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking and SC6.4.3 Standard Drawings such that all vehicles reasonably expected to access the site, can exit and enter in a	**Complies** A swept path assessment utilising an MRV design vehicle which determined that an MRV is able to access each service bay as well as ingress and egress the site in a forward gear.

	forward motion with no more than a three-point turn.	
Pedestrian and cyclist facilities		
PO14 Provision is made for the safe and convenient movement of pedestrians on-site and connecting to the external network, having regard to desire lines, legibility, safety, topographical constraints, shading and other weather protection and equitable access arrangements.	No acceptable outcome is nominated.	**Complies** The entrance to the site will be from the existing entry on the eastern border of the site off of Hartley Street. The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps. (See drawing 1564-DA A1-00 Cover Sheet in Appendix 1). In accordance with Australian Standards AS2890.1, the minimum vehicle sight distance requirement is based on the posted speed limit along the frontage road. Provided that Hartley Street along the frontage of the site is anticipated to have a posted speed limit of 50 km/hr, the minimum sight distance of 45m is required. The existing crossover location exceeds the minimum sight distance requirement of 45m to observe vehicles approaching from directions of traffic and therefore complies with Australian Standards AS2890.1. As there is no high-level landscaping, buildings, fences or other obstructions proposed adjacent to the existing concrete access driveways, there will be no impediment to pedestrian sight distance for vehicles entering or leaving the proposed development.
PO15 Provision is made for safe and convenient cycle movement to the site and within the site and connecting to the external network having regard to desire lines, users' needs, safety, topographical constraints and legibility.	No acceptable outcome is nominated.	**Complies** In accordance with the proposed operations of the Training Facility development, it is anticipated that bicycle trips to and from the site will not be generated.
PO16 Parking areas, pathways and other elements of transport network infrastructure are designed to enhance public safety by discouraging crime and antisocial behaviour, having regard to: a. **provision of opportunities for casual surveillance;** b. provision of lighting; c. the use of fencing to define public and private spaces,	No acceptable outcome is nominated.	**Complies** Parking bays and aisles for the proposed development will be designed in accordance with AS/NZS 2890.1-2004 – Parking facilities – Off street car parking and in accordance with the Traffic Impact Assessment. The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps.

<table>
<tr><td>whilst allowing for appropriate sight lines;
d. minimising potential concealment points and assault locations;
e. minimising opportunities for graffiti and other vandalism; and
f. restricting unlawful access to buildings and between buildings.</td><td></td><td>As there is no high-level landscaping, buildings, fences or other obstructions proposed adjacent to the existing concrete access driveways, there will be no impediment to pedestrian sight distance for vehicles entering or leaving the proposed development.</td></tr>
<tr><td colspan="3">Parking</td></tr>
<tr><td>PO17
Provision is made for on-site vehicle parking to:

a. meet the demand likely to be generated by the development; and
b. avoid on street parking that would adversely impact on the safety or capacity of the road network or unduly impact on local amenity.</td><td>AO17
Parking is provided in accordance with the standards identified in Parking rates planning scheme policy no. SC6.10.</td><td>Complies
The minimum car parking requirements for the proposed Training Facility (Stage 1) development have been assessed in accordance with SC6.10.2.1 of the TCC Planning Scheme. It is noted that in accordance with the proposed operations of the site, the development has been classified as an Educational Establishment (Tertiary) land use.
It is noted that the car parking requirements for an Educational Establishment (Tertiary) land use are based on the maximum number of employees and student attendance on-site. Therefore, the client has advised that the maximum anticipated attendance for the Training Facility (Stage 1) development is as follows:
- Employee: 17 trainers/employees
- Student: 48 students

The proposed Training Facility provides ancillary areas for employee use. Therefore, the following development areas have not been included as part of the car parking assessment requirements.
The proposed car parking provision is as follows:
<table>
<tr><th>Yield</th><th>Parking rate</th><th>Parks required</th><th>Parks proposed</th><th>Compliant</th></tr>
<tr><td>576m^2</td><td>0.5 space / employee (FTE)
+ 1 space / 10 students (FTE)</td><td>12</td><td>29</td><td>Yes</td></tr>
</table>

The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.
The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits.</td></tr>
</table>

PO18 Parking ensures access is provided for people with disabilities.	AO18 Parking areas are designed in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.4 Car Parking.	**Complies** See parking details in PO17 above.
PO19 Where the nature of the proposed development creates a demand, provision is made for set-down and pick-up facilities by bus, taxis or private vehicle, which: a. **are safe for pedestrians and vehicles;** b. are conveniently connected to the main component of the development by pedestrian pathway; and c. provide for pedestrian priority and clear sight lines.	No acceptable outcome is nominated.	**Complies** It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV). Modus has conducted a swept path assessment utilising a 10.23m BCC Standard Rear Lift RCV which determined that the RCV is able to safely ingress and egress the site in a forward gear to conduct refuse collection.
PO20 Parking and servicing areas are designed to: a. **be clearly defined, marked and signed;** b. be convenient and accessible; c. minimise large unbroken areas of hardstand to the extent practicable; d. be safe for vehicles, pedestrians and cyclists; e. provide shading; f. be located to encourage multi-purpose trip ends and minimise vehicle movements within the site; and g. minimise any adverse impacts on the amenity of surrounding land.	No acceptable outcome is nominated.	**Complies** See parking details in PO17 above.
PO21 Vehicle spaces have adequate dimensions to meet user requirements.	AO21 Parking areas are designed in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 — SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	**Complies** The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.

PO22 Pavement is constructed to an appropriate standard.	No acceptable outcome is nominated.	**Complies** The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits.
PO23 Parking and servicing areas are kept accessible and available for use as a parking area at all times during the normal business hours of the activity.	No acceptable outcome is nominated.	**Complies** Drawing 1564-DA A1-02 Site Plan in Appendix 1 shows that the car parking facilities are separated from other elements of the development and will be available at all times during business hours.
PO24 Visitor parking for accommodation activities remains accessible and useable to visitors at all times.	No acceptable outcome is nominated.	**Complies** See parking details in PO17 above. The parking provisions show that there are more car parks proposed than what is required for the training facility, therefore, there will be visitor parking available.
PO25 Multi-level parking areas are designed, articulated and finished to make a positive contribution to the local external streetscape character, as well as the internal user experience of the facility ensuring way finding technologies and aesthetic treatments are provided.	No acceptable outcome is nominated.	**N/A** Multi-level car parking is not proposed.
Servicing		
PO26 Provision is made for the on-site loading, unloading, manoeuvring and access by service vehicles that: a. **are adequate to meet the demands generated by the development;** b. are able to accommodate the design service vehicle requirements; and c. does not unduly impede vehicular, cyclist and pedestrian safety and convenience both within the site and external to the site.	AO26 Servicing areas are provided and designed in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 – SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	**Complies** The proposed development provides a total of two (2) MRV service bays, located at the front of the site. It is noted the MRV service bays provide 4.5m in width and 8.8m in length and therefore achieve compliance with the design requirements of Australian Standards AS2890.2. Furthermore, Modus has conducted a swept path assessment utilising an MRV design vehicle which determined that an MRV is able to access each service bay as well as ingress and egress the site in a forward gear.
PO27 Refuse collection vehicles are able to safely access on-site refuse collection facilities.	AO27 Refuse collection areas are provided and designed in accordance with the standards identified in the Development manual planning scheme policy no. SC6.4 – SC6.4.22 Waste Management, SC6.4.5.3 Public	**Complies** It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV). Modus has conducted a swept path assessment utilising a 10.23m BCC Standard Rear Lift RCV which determined that the RCV is able to safely

	Transport Facilities and SC6.4.5.4 Car Parking.	ingress and egress the site in a forward gear to conduct refuse collection.
PO28 Servicing arrangements minimise any adverse impact on the amenity of premises in the vicinity, having regard to operating hours, noise generation, proximity to sensitive uses, odour generation and dust.	No acceptable outcome is nominated.	**Complies** Servicing arrangement will not have adverse impacts on amenity of the area due to the surrounding Industrial land use.

Table 10-8: Works code

<table>
<tr><th>Performance outcomes</th><th>Acceptable outcomes</th><th>Response</th></tr>
<tr><td colspan="3">Access and parking</td></tr>
<tr><td>PO1
Access arrangements are appropriate for:
a. the capacity of the parking area;
b. the volume, frequency and type of vehicle usage; and
c. the function and characteristics of the access road and adjoining road network.</td><td>AO1
Access is provided in accordance with Australian Standard AS2890.1.</td><td>Complies
The minimum car parking requirements for the proposed Training Facility (Stage 1) development have been assessed in accordance with SC6.10.2.1 of the TCC Planning Scheme. It is noted that in accordance with the proposed operations of the site, the development has been classified as an Educational Establishment (Tertiary) land use.
It is noted that the car parking requirements for an Educational Establishment (Tertiary) land use are based on the maximum number of employees and student attendance on-site. Therefore, the client has advised that the maximum anticipated attendance for the Training Facility (Stage 1) development is as follows:
- Employee: 17 trainers/employees
- Student: 32 students

The proposed Training Facility provides ancillary areas for employee use. Therefore, the following development areas have not been included as part of the car parking assessment requirements.
The proposed car parking provision is as follows:
<table>
<tr><th>Yield</th><th>Parking rate</th><th>Parks required</th><th>Parks proposed</th><th>Compliant</th></tr>
<tr><td>576m^2</td><td>0.5 space / employee (FTE)
+ 1 space / 10 students (FTE)</td><td>12</td><td>29</td><td>Yes</td></tr>
</table>

Parking bays and aisles for the proposed development will be designed in accordance with AS/NZS 2890.1-2004– Parking facilities – Off street car parking and in accordance with the</td></tr>
</table>

		Traffic Impact Assessment. The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.
PO2 Provision is made for on--site vehicle parking to meet the demand likely to be generated by the development and to avoid on street parking where that would adversely impact on the safety or capacity of the road network or unduly impact on local amenity.	**AO2.1** Parking is provided at the rates set out in Parking rates planning scheme policy no. SC6.10. OR **AO2.2** Where an existing lawful premises and involves not more than 5% or 50m2 (whichever is the greater) of additional gross floor area, the existing number of on-site parking is retained or increased.	**Complies** See answer for PO1 above. Parking bays and aisles for the proposed development will be designed in accordance with AS/NZS 2890.1-2004– Parking facilities – Off street car parking and in accordance with the Traffic Impact Assessment. The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.
PO3 Parking areas are designed to: a. be clearly defined, marked and signed; b. be convenient and accessible; c. be safe for vehicles, pedestrians and cyclists; and d. provide spaces which meet the needs of people with disabilities.	**AO3.1** Parking areas are designed in accordance with Australian Standard AS2890.1. OR **AO3.2** Where an existing lawful premises and involves not more than 5% or 50m2 (whichever is the greater) of additional gross floor area, the existing standard of on-site parking is maintained or improved.	**Complies** See answer for PO1 above.
PO4 Landscaping is provided to soften the visual impact of parking areas and to provide shading.	**AO4.1** Shade trees within parking areas are provided at the following rate: a. in single sided, angle or parallel bays - 1 tree per 3 parking spaces; and b. in double sided, angle or parallel bays - 1 tree per 6 parking spaces. OR **AO4.2** Where an existing lawful premises and involves not more than 5% or 50m2 (whichever is the greater) of additional gross floor area, the existing standard of landscaping is maintained or improved.	**Complies** Drawing L1.01 Landscape Concept Plan provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage. This will shield the car parking area, specifically the truck parking located at the front of the site in front of the existing building.

PO5 Provision is made for the onsite loading, unloading, manoeuvring and access by service vehicles that: a. is adequate to meet the demands generated by the development; b. is able to accommodate the design service vehicle requirements; c. is wholly contained within the site; and d. does not unduly impede vehicular, cyclist and pedestrian safety and convenience within the site.	**AO5.1** Servicing areas are provided and designed in accordance with Australian Standard AS2890.2. OR **AO5.2** Where an existing lawful premises and involves not more than 5% or 50m2 (whichever is the greater) of additional gross floor area, the existing provision for service vehicles is maintained or improved.	**Complies** The proposed development provides a total of two (2) MRV service bays, located at the front of the site. It is noted the MRV service bays provide 4.5m in width and 8.8m in length and therefore achieve compliance with the design requirements of Australian Standards AS2890.2. Furthermore, Modus has conducted a swept path assessment utilising an MRV design vehicle which determined that an MRV is able to access each service bay as well as ingress and egress the site in a forward gear. It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV). Modus has conducted a swept path assessment utilising a 10.23m BCC Standard Rear Lift RCV which determined that the RCV is able to safely ingress and egress the site in a forward gear to conduct refuse collection.
Services and utilities		
PO6 A potable water supply is provided that is adequate for the needs of the intended use.	**AO6.1** The development is connected to council's reticulated water supply system in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines and SC6.4.3 Standard Drawings. **AO6.2** Water supply systems and connections are designed and constructed in accordance with Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines and SC6.4.3 Standard Drawings.	**Complies** In accordance with the information provided on TownsvilleMAPS – Community, the subject site is serviced by an existing DN20mm water service in the southeastern corner which in turn is connected to the existing DN100mm water reticulation main in Hartley Street.
PO7 Wastewater treatment and disposal is provided that is appropriate for the level of demand generated, protects public health and avoids environmental harm.	**AO7.1** The development is connected to council's reticulated sewerage system via an existing sewer connection to the site. **AO7.2** Waste water systems and connections are designed and constructed in accordance with Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines, SC6.4.11.4 Sewerage Planning and Design Guidelines and SC6.4.3 Standard Drawings.	**Complies** In accordance with the as constructed sewer information provided by the Townsville City Council, the most northerly existing building is serviced by an existing DN100mm sewer with a Vertical Jump-Up (VJU) sewer connection to the existing DN150mm sewer which transverses the site at approximately halfway down the side boundaries. The as constructed drawing indicates that the VJU sewer connection is about 700mm off the northern side boundary of the subject site. This existing 100mm sewer VJU will be utilised as the sewer connection point for the sewage drainage pipes from the proposed temporary Training Facility buildings The most southerly existing building on the subject site is serviced by a 100mm sewer which is offset approximately1m off the southern side boundary and connects to the existing DN150mm sewer with a Vertical Jump-Up. No buildings of the proposed temporary Training Facility will have an impact on this existing sewer or the connection point. The existing DN150mm sewer main has an upstream invert level of USIL 2.5m and a downstream invert level of DSIL 2.15m. Given that the proposed buildings will be raised on

		posts above the existing ground level of RL5.0m and the DFE level flood level of 4.88m, there is sufficient depth to grade the internal sewers to the existing sewer connection of the subject property.
PO8 Provision is made for waste management that is appropriate to the use, protects the health and safety of people and the environment.	**AO8.1** The development provides a bin container storage area that has an imperviously sealed pad and is screened to the height of the bins.	**Complies** It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV). Modus has conducted a swept path assessment utilising a 10.23m BCC Standard Rear Lift RCV which determined that the RCV is able to safely ingress and egress the site in a forward gear to conduct refuse collection.
	AO8.2 On sites in an industrial zone that are greater than 2,000m^2 in area, provision is made for refuse collection vehicles to access the collection area, undertake the collection activity and to enter and leave the site in a forward direction without having to make more than a 3 point turn.	
PO9 The proposed stormwater management system or site works does not adversely affect flooding or drainage characteristics of properties that are upstream, downstream or adjacent to the development site.	**AO9.1** The development does not result in an increase in flood level or flood duration on upstream, downstream or adjacent properties.	**Complies** The proposed Training Facility development site has sufficient area available to dedicate to stormwater quality improvement devices. Roof water will discharge via downpipes either directly to the pavement surface of the driveway/car parks or directly into the adjacent field inlet pits contained in the driveway inverts. The landscaped areas, bitumen driveways and carparks will drain overland into the proposed field inlet pits which will discharge into the proposed internal stormwater pipe system. The field inlets are proposed to be fitted with Atlan Stormsacks for the removal of gross pollutants and the proposed stormwater pipes will discharge into the Atlan Vault containing the Atlan Filters (or equivalent) which further treat the stormwater runoff. The stormwater runoff from the subject site will then discharge into a manhole constructed over the existing 1050mm RCP in Hartley Street. The proprietary stormwater treatment device included above in the design solution, has been independently verified by Stormwater Australia SQIDEP (Verification Certificate) and the certified performance metrics are reflected in the MUSIC modelling.
	AO9.2 Roof and surface water is conveyed to the kerb and channel or an inter-allotment drainage system in accordance with Australian Standard AS/NZS3500.3:2003.	
PO10 The drainage network has sufficient capacity to safely convey stormwater run--off from the site and development does not cause a drainage nuisance to a downstream or adjoining property.	AO10 Post development discharge of stormwater from the subject land does not exceed predevelopment peak flows and no change to flows across a downstream or adjoining property is created.	**Complies** See details for stormwater and drainage in PO9 above.
Services and utilities		

PO11 A potable water supply is provided that is adequate for the needs of the intended use.	**AO11.1** Where within an area designated for urban or rural residential development, the development is connected to council's reticulated water supply system in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines. OR **AO11.2** Otherwise, the development is provided with an on-site water supply in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.7 On-Site Water Supply.	**Complies** In accordance with the information provided on TownsvilleMAPS – Community, the subject site is serviced by an existing DN20mm water service in the southeastern corner which in turn is connected to the existing DN100mm water reticulation main in Hartley Street. As the water demands for the proposed development of the subject site will be within the design parameters allowed for this land, the existing adjoining water and sewerage infrastructure will have sufficient capacity to service the proposed development.
	AO11.3 Water supply systems and connections are designed and constructed in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines, SC6.4.11.3 Water Supply Construction andSC6.4.3 Standard Drawings.	
PO12 Wastewater treatment and disposal is provided that is appropriate for the level of demand generated, protects public health and avoids adverse impacts on environmental values.	**AO12.1** Where within an area designated for urban development, the development is connected to the council's reticulated sewerage system in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.2 Water Supply Planning and Design Guidelines. OR **AO12.2** Otherwise, on-site waste water treatment and disposal is provided which complies with the Development manual planning scheme policy no. SC6.4 - SC6.4.11.8 On-Site Sewerage Facilities.	**Complies** In accordance with the as constructed sewer information provided by the Townsville City Council, the most northerly existing building is serviced by an existing DN100mm sewer with a Vertical Jump-Up (VJU) sewer connection to the existing DN150mm sewer which transverses the site at approximately halfway down the side boundaries. The as constructed drawing indicates that the VJU sewer connection is about 700mm off the northern side boundary of the subject site. This existing 100mm sewer VJU will be utilised as the sewer connection point for the sewage drainage pipes from the proposed temporary Training Facility buildings. The most southerly existing building on the subject site is serviced by a 100mm sewer which is offset approximately 1m off the southern side boundary and connects to the existing DN150mm sewer with a Vertical Jump-Up. No buildings of the proposed temporary Training Facility will have an impact on this existing sewer or the connection point. The existing DN150mm sewer main has an upstream invert level of USIL 2.5m and a downstream invert level of DSIL 2.15m. Given that the proposed buildings will be raised on posts above the existing ground level of RL5.0m and the DFE level flood level of 4.88m, there is sufficient depth to grade the internal sewers to the existing sewer connection of the subject property.
	AO12.3 Waste water systems and connections are designed and constructed in accordance with the Development manual planning scheme policy no. SC6.4-SC6.4.11.2 Water Supply Planning and Design Guidelines, SC6.4.11.3 Water and Sewerage Infrastructure,SC6.4.11.5 Sewerage System Constructions and SC6.4.3 Standard Drawings.	

PO13 The design and management of the development integrates water cycle elements having regard to: a. **reducing potable water demand;** b. minimising wastewater production; c. minimising stormwater peak discharges and run-off volumes; d. maintaining natural drainage lines and hydrological regimes as far as possible; e. reusing stormwater and greywater is encouraged where public safety and amenity will not be compromised; and f. efficient use of water.	**AO13** Integrated water management practices and infrastructure are implemented in accordance with Development manual planning scheme policy no. SC6.4 - SC6.4.10 Stormwater Quality and SC6.4.10.2 Water Sensitive Urban Design.	**Complies** As the water demands for the proposed development of the subject site will be within the design parameters allowed for this land, the existing adjoining water and sewerage infrastructure will have sufficient capacity to service the proposed development.
PO14 The development is provided with an adequate energy supply which maintains acceptable standards of public health, safety, environmental quality and amenity.	**AO14** For other than the Rural zone, premises are serviced by: a. an underground electricity supply approved by the relevant energy authority; or b. an overhead supply approved by the relevant energy authority where in the Rural residential zone, Special purpose zone or High impact industry zone or where on a lot of less than 2,500m2 within an area where the existing supply is overhead.	**Complies** Connections to electricity infrastructure already exists via overhead mains
PO15 Premises are connected to a telecommunications service approved by the relevant authority.	**AO15** The development is connected to telecommunications infrastructure in accordance with the standards of the relevant regulatory authority.	**Complies** Connections to telecommunications infrastructure already exist.
PO16 Provision is made for future telecommunications services (for example fibre optic cable).	No acceptable outcome is nominated.	**Complies** Connections to infrastructure already exist.
PO17 Where available, provision is made for reticulated gas.	**AO17** Design and provision of reticulated gas is undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.14.2 Public Lighting (Urban, Urban Residential and Rural) and SC6.4.14.3 Utility Services.	**N/A** The site is already connected to electricity. A gas connection is not required.

PO18 Adequate access is provided to public services and utilities for future maintenance.	No acceptable outcome is nominated.	**Complies** Connections to utilities already exist.
Sustainability		
PO24 Wherever possible, landscape design facilitates the retention of significant existing vegetation, both within and external to the site.	**AO24.1** Site design integrates and incorporates retained and significant trees and vegetation within and external to the site.	**Complies** The site does not contain any significant vegetation. Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage.
	AO24.2 Removed or damaged significant vegetation is replaced with mature vegetation of a comparable quantity and species.	
PO25 Appropriate site planning and construction management is undertaken to ensure the longevity and health of retained and significant trees and vegetation.	**AO25.1** Retained trees are protected by a tree protection zone (TPZ) and fenced along the canopy/drip line to comply with AS4970- 2009 Protection of Trees on Development Sites.	**Complies** The site does not contain any significant vegetation. Drawing L1.01 Landscape Concept Plan Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These species were selected to minimise maintenance and associated costs.
	AO25.2 Any required pruning or trimming work is undertaken in accordance with AS4373 — Pruning of Amenity Trees and is carried out by a qualified arborist.	
	AO25.3 Retained and significant vegetation damaged during development or construction is treated to repair any damage to the extent practicable by a qualified arborist.	
	AO25.4 Protective measures and practices are employed for work adjacent to trees in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.23.1 Construction management.	
PO26 Landscape design optimises water and energy efficiency and responds appropriately to local conditions, by: a. **maximising the exposure to the prevailing summer breezes and the north-east winter morning sun;** b. minimising exposure to the prevailing winter winds and western summer sun; and	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage. This vegetation provides shade, groundcover and screening.

c. optimising shade to create useable and comfortable areas; d. hydro-zoning planting**.**		
PO27 Planting bed profiles and edging encourage plant viability, reduce erosion, control weed invasion, provide adequate water infiltration and ease of maintenance to support long-term plant viability and vigorous growth.	**AO27** Planting beds are designed in accordance with the Development manual planning scheme policy no. 6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These species were selected to minimise maintenance and associated costs.
PO28 Landscape buffering and species selection is consistent and compatible with any ecological values on or adjoining the site.	No acceptable outcome is nominated.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers.
PO29 Landscaping elements are provided within parking areas, along driveways and internal roadways to provide adequate shading, and safe and legible parking areas.	**AO29** Landscaping is provided in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage. This vegetation provides shade, groundcover and screening.
Safety		
PO30 Landscape design enhances community safety and reduces the potential for crime and antisocial behaviour.	**AO30.1** Access to a site, parking area, buildings or public open space is well lit, free from obstructions and clearly defined by landscape treatments.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage. This vegetation provides shade, groundcover and screening. Landscaping does not block or obstruct light.
	AO30.2 Trees with a minimum 1.8m of clear trunk (at maturity) are located along pathways, at building entries, within parking areas, on street corners, adjacent to street lighting and along driveways. Garden beds within the aforementioned areas consist of low shrubs and groundcovers that do not exceed 750mm in height.	
	AO30.3 Any solid wall or semi permeable fence is protected from graffiti through means of vertical landscaping or vandal resistant paint or artwork.	
PO31 Where appropriate and practicable, all elements of the landscape design are safe and provide accessibility for all abilities.	**AO31.1** Paving material, tactile indicators and construction complies with AS1428 - Design for Access and Mobility.	**Complies** Drawing L1.01 Landscape Concept Plan in Appendix 1 provides a visual of the landscape plan for the temporary facility. The Plan shows that there is turf provided along the northern edge

	AO31.2 Pavement material or treatment clearly delineates between pedestrian and vehicular movement systems through contrasting materials, colours or level changes.	of the pathway. This will therefore not impact the accessibility for pedestrians using this path.
	AO31.3 Hard landscaping materials are not highly reflective, or likely to create glare, slipperiness or other hazardous conditions.	
Earthworks		
PO19 Filling and excavation does not result in contamination of land or pose a health and safety risk.	**AO19** Filling and excavation does not: a. use contaminated materials as fill; b. excavate contaminated material; and c. use waste material as fill.	**Complies** Preliminary earthworks are based on the existing contour levels and the preliminary finished surface levels shown on the Preliminary Engineering Services drawing (in Appendix 1). The proposed levels shown on the drawing, when compared to the existing surface contours, indicate that generally there will be no more than 250mm cut or fill on site for the proposed development of the temporary Training Facility, thereby negating the need for significant site earthworks. The rear portion of the subject allotment (954m^2) will be fenced off from the temporary Training facility and utilised by the adjacent allotment to the north. There will be no changes to the existing surface levels in this portion of the subject allotment.
PO20 Earthworks result in stable landforms and structures.	**AO20** Earthworks and the construction of retaining walls and batters are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
PO21 Earthworks are undertaken in a manner that: a. **maintains natural landforms as far as possible; and** b. **minimises height of retaining walls and batter faces.**	**AO21.1** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
	AO21.2 Retaining walls are designed and constructed: 1. certified as stable by a Registered Professional Engineer of Queensland; and 2. have a combined height of retaining wall and fence of not more than 2 metres.	
PO22 Earthworks do not unduly impact on	No acceptable outcome is nominated.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.

amenity or privacy for occupants of the site or on adjoining land.		
PO23 Earthworks do not cause environmental harm.	No acceptable outcome is nominated.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
PO24 Filling or excavation does not worsen any flooding or drainage problems on the site or on neighbouring properties.	**AO24** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
PO25 Any structure used to restrain fill or excavation does not worsen drainage problems or cause surface water to be a nuisance to neighbouring properties.	**AO25** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. The subject allotments access and car parking will be developed with a minimum flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits. See answer for PO19 above.
PO26 Filling or excavation does not adversely affect sewer, stormwater or water utility infrastructure or access to them for maintenance purposes.	**AO26** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
PO27 Filling or excavation does not prevent or create difficult access to any property.	**AO27** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.3 Earthworks Design and SC6.4.7.4 Earthworks Construction.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
PO28 Earthworks do not cause significant impacts through truck movements, dust or noise on the amenity of the locality in which the works are undertaken or along routes taken to transport the material and the transportation of materials minimises adverse impacts on the road network.	**AO28** Earthworks are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.7.4 Earthworks Construction and SC6.4.23.1 Construction Management.	**Complies** Significant earthworks are not proposed. See answer for PO19 above.
Movement networks		
PO29 The following are provided along the full extent of the road frontage and to a standard that is appropriate to the function of the road or street and the character of the locality: a. **paved roadway;** b. appropriate pavement edging (including kerb and channel); c. pedestrian paths and cycleways; d. streetscaping and street tree planting; e. stormwater drainage; f. street lighting systems; and	**AO29** Design and construction of external road works are undertaken in accordance with the Development manual planning scheme policy no. SC6.4.	**Complies.** The entrance to the site will be from the existing entry on the eastern border of the site off Hartley Street. The site entry is a shared access point for existing buildings. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility's stairways and ramps. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps. (See drawing 1564-DA A1-00 Cover Sheet in Appendix 1). The subject allotments access and car parking will be developed with a minimum

<table>
<tr>
<td>g. conduits to facilitate the provision of and other utility services.</td>
<td></td>
<td>flexible gravel pavement with a two-coat bitumen seal that will generally be provided with 1% crossfalls and longitudinal grading at 0.5% to stormwater drainage pits. Drawing L1.01 Landscape Concept Plan provides a visual of the landscape plan for the temporary facility. The landscaping consists of a dry native planting palette with shade trees, low shrubs and ground covers. These will be located either side of the entry point to the site, in front of the existing buildings along the street frontage.Turf will also be provided between the street frontage and Existing Building 1 on either side of the access point for other users of the lot.</td>
</tr>
<tr>
<td>PO30
Provision is made in the road reserve for streetscaping, pedestrians and cyclists in a manner consistent with:
a. the current and projected level of usage;
b. the desired streetscape character; and
c. activities which are anticipated to occur within the verge.</td>
<td>AO30
Streetscaping works, footpaths and cycle paths are provided in accordance with Development manual planning scheme policy no. SC6.4.</td>
<td>Complies
The development is within a Medium Impact Industry area. The proposed development is consistent with the existing and surrounding land use. The existing verge on Hartley Street does not contain a concrete footpath catering for pedestrian traffic. An onsite concrete pedestrian pathway is proposed to provide a link between the existing verge and the proposed Training Facility’s stairways and ramps. The concrete paths will be at a similar level as the car park to avoid the need for kerb ramps. (See drawing 1564-DA A1-00 Cover Sheet in Appendix 1).</td>
</tr>
<tr>
<td>PO31
Parking areas are designed and constructed in a manner that is sufficiently durable for the intended function, maintains all weather access and ensures the safe passage of vehicles, pedestrians and cyclists.</td>
<td>AO31
Parking area design and construction is undertaken in accordance with
the Development manual planning scheme policy no. SC6.4
— SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.</td>
<td>Complies
The minimum car parking requirements for the proposed Training Facility (Stage 1) development have been assessed in accordance with SC6.10.2.1 of the TCC Planning Scheme. It is noted that in accordance with the proposed operations of the site, the development has been classified as an Educational Establishment (Tertiary) land use.
It is noted that the car parking requirements for an Educational Establishment (Tertiary) land use are based on the maximum number of employees and student attendance on-site. Therefore, the client has advised that the maximum anticipated attendance for the Training Facility (Stage 1) development is as follows:
- Employee: 17 trainers/employees
- Student: 32 students

The proposed Training Facility provides ancillary areas for employee use. Therefore, the following development areas have not been included as part of the car parking assessment requirements.
The proposed car parking provision is as follows:
<table>
<tr><th>Yield</th><th>Parking rate</th><th>Parks required</th><th>Parks proposed</th><th>Compliant</th></tr>
<tr><td>576m^2</td><td>0.5 space / employee (FTE)
+ 1 space / 10 students (FTE)</td><td>12</td><td>29</td><td>Yes</td></tr>
</table>
Parking bays and aisles for the proposed development will be designed in accordance with AS/NZS 2890.1-2004– Parking facilities – Off</td>
</tr>
</table>

		street car parking and in accordance with the Traffic Impact Assessment. The proposed car parks will be designed based on a minimum 5.4m long, a minimum 2.4m wide and an aisle width of 5.8m in accordance with User Class 1A.
PO32 Movement networks can be easily and efficiently maintained.	**AO32** Infrastructure is provided in accordance with the Development manual planning scheme policy no. SC6.4 — SC6.4.6.1 Geometric Road Design, SC6.4.5.1 Townsville Road Hierarchy and SC6.4.5.2 Traffic Impact Assessment (TIA).	**Complies** Hartley Street is an Industrial Access Road as part of the road hierarchy. The land use and proposed temporary use of the site is consistent with this classification. As advised in Section 5.4.1 of the Traffic Engineering Report, a maximum of one (1) trip for both employees and students in the AM and PM peaks for the proposed temporary facility. Therefore, the proposed development is anticipated to generate a total net increase of 60 vehicles per hour (vph) during the AM and PM peak hour periods, inclusive of both inbound and outbound vehicle movements. Nonetheless, it is not expected that the temporary facility will significantly impact the external road network given the industrial nature of the area and the lower traffic generation associated with these uses.
Waste management		
PO33 Development provides adequate waste management facilities on site for the storage of waste and recyclable material in a manner which: a. **is of adequate size to accommodate the expected amount of refuse to be generated by the use;** b. is in a position that is conveniently accessible for collection at all times; c. is able to be kept in a clean, safe and hygienic state at all times; and d. minimises the potential for environmental harm, environmental nuisance and adverse amenity impacts.	**AO33** Waste management facilities are provided in accordance with the Development manual planning scheme policy no. SC6.4 – SC6.4.22 Waste Management.	**Complies** It is anticipated that the refuse collection arrangements of the proposed Training Facility (Stage 1) development will occur on-site, via a rear-loading Refuse Collection Vehicle (RCV). Modus has conducted a swept path assessment utilising a 10.23m BCC Standard Rear Lift RCV which determined that the RCV is able to safely ingress and egress the site in a forward gear to conduct refuse collection.
Construction management		
PO34 Work is undertaken in a manner which does not cause unacceptable impacts on surrounding areas as a result of dust, odour, noise or lighting.	No acceptable outcome is nominated	**N/A** This can be conditioned and will be provided at operational works stage.
PO35 While undertaking development works, the site and adjoining road are maintained in a tidy, safe and hygienic manner.	No acceptable outcome is nominated	**N/A** This can be conditioned and will be provided at operational works stage.
PO36 Traffic and parking generated during construction are managed to minimise impact on the amenity of the surrounding area.	No acceptable outcome is nominated	**N/A** This can be conditioned and will be provided at operational works stage.

PO37 Council's infrastructure is not damaged by construction activities.	No acceptable outcome is nominated	**N/A** This can be conditioned and will be provided at operational works stage.
PO38 The integrity of new infrastructure is maintained.	No acceptable outcome is nominated	**N/A** This can be conditioned and will be provided at operational works stage.
PO39 Construction activities and works are carried out in a manner which avoids damage to the environment, retained vegetation and impacts on fauna.	**AO39** Construction activities and works are undertaken in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.23.1 Construction Management.	**N/A** This can be conditioned and will be provided at operational works stage.
PO40 Vegetation cleared from a site is disposed of in a manner that maximises reuse and recycling and minimises impacts on public health and safety.	**AO40** Construction activities and works are carried out in accordance with Development manual planning scheme policy no. SC6.4 - SC6.4.7.1 Clearing and Grubbing.	**N/A** This can be conditioned and will be provided at operational works stage.

A.7 Pre-referral response

420 Flinders Street, Townsville QLD 4810
PO Box 1090, Townsville QLD 4810
ergon.com.au

15 October 2024

Energy Queensland
PO Box 1090
Townsville QLD 4810

Attention: Scott Pearson
Via email: scott.pearson@energyq.com.au

Dear Sir/Madam,

Ergon Pre-Application Response
Our Ref: ECM 21247568-21251029

This referral agency response is given under section 56 of the *Planning Act 2016.*

Pursuant to section 54(4) of the *Planning Act 2016*, the Applicant is not required to refer to Ergon a future development application for the proposed development, providing the development application is:

a) the same, or not substantially different from the proposed development application detailed in this notice; and
b) made to the Assessment Manager within three months of the date of this notice.

Response

Outcome	Approved in full – no requirements
Assessment capacity	Advice
Matters referral assessment made against (s55(2))	The purpose of the *Electricity Act 1994* and *Electricity Safety Act 2002*
Reasons for decision (s56(7)(b))	The works do not conflict with: ▪ the objectives set out within Part 2, Section 3 of the *Electricity Act 1994* ▪ the purpose of the *Electricity Safety Act 2002* as set out within Part 1 Division 2 Section 4 & 5. The works do not adversely impact on the safe, efficient, and economically viable operation of the supply network.

Have you seen our fact sheets?
See the 'considerations when developing around electricity infrastructure' section of our website
www.ergon.com.au/referralagency

Development Details	
Applicant	Ergon Energy Corporation Limited
Assessment Manager	Townsville City Council
Street Address	4 & 15 Hartley Street, Garbutt
Real Property Description	Lot 581 on EP1760 & Lot 361 on EP784
Development Type	Development Permit for a Material Change of Use (Education Facility)
Referral Trigger	☒ Schedule 10, Part 9, Division 2, Table 2, Item 1 (10.9.2.2.1) – Material Change of use of premises within 100m of a substation site or subject to an easement for the benefit of a distribution entity under the Electricity Act and the easement is for a supply network
Impacted Electrical Infrastructure	Garbutt 132/66/11kV substation

Ergon provides the following response to the application in accordance with section 56(1) of the *Planning Act 2016:*

MCU	☒ s56(1)(a) – no requirements for the application

Ergon's response has been provided relevant to the following plans and supporting documents. Any alterations to the plans and/or documents identified below are to be resubmitted to Ergon for further review.

Table 1: Plans forming part of this response			
Title	**Plan No.**	**Issue**	**Date**
Locality Plan	1564-DA A1-01	P2	3/10/2024
Site Plan	1564-DA A1-02	P3	3/10/2024

General Advice:

- Compliance with the *Electrical Safety Act 2002*, including any Code of Practice under the Act and the *Electrical Safety Regulation 2013* including any safety exclusion zones defined in the Regulation is mandatory.

  Should any doubt exist in maintaining the prescribed clearance to the overhead conductors and electrical infrastructure then the applicant is obliged under the Act to seek advice from Ergon.

- Any costs or damages incurred by Ergon as a result of carrying out the development are to be met by the Developer/Owner.

- This response does not constitute an approval to commence any works within an easement to which Ergon is grantee. Consent to commence works relevant to the conditions of the easement is required. All works on easement (including

but not limited to earthworks, drainage and detention basins, road construction, underground and overhead services installation) require detailed submissions, assessment, and consent (or otherwise) by Ergon.

- All works proposed to be undertaken in close proximity to overhead or underground electrical lines are to be undertaken in accordance with Ergon's Works Practice Manual WP1323. This document refers to various standards, guidelines, calculations, legal requirements, technical details, and other information relevant to working near high voltage infrastructure. A copy of WP1323 can be found online via Ergon's document library (Document library | Ergon).

Should you require further information regarding this matter, please contact the undersigned on 0455 403 399 or townplanning@ergon.com.au.

Yours faithfully,

Benjamin Freese
Town Planner

Have you seen our fact sheets?
See the 'considerations when developing around electricity infrastructure' section of our website
www.ergon.com.au/referralagency

A.8 Title searches

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**21566076**	**Search Date:**	18/09/2024 19:07
Date Title Created:	14/01/1994	**Request No:**	49386141
Previous Title:	21085239, 21085240		

ESTATE AND LAND

Estate in Fee Simple

LOT 361 CROWN PLAN EP784
Local Government: TOWNSVILLE

REGISTERED OWNER

Dealing No: 723192776 15/04/2024

PINKER DEVELOPMENTS PTY LTD A.C.N. 670 395 721

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 21085239 (POR 361)
Deed of Grant No. 21085240 (POR 361)

2. MORTGAGE No 723192777 15/04/2024 at 16:22
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested by: D-ENQ CITEC CONFIRM

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**21540157**	**Search Date:**	18/09/2024 19:09
Date Title Created:	26/07/1993	**Request No:**	49386151
Creating Dealing:			

ESTATE AND LAND

Estate in Fee Simple

LOT 581 CROWN PLAN EP1760
Local Government: TOWNSVILLE

REGISTERED OWNER

Dealing No: 719281033 26/02/2019

ERGON ENERGY CORPORATION LIMITED A.C.N. 087 646 062

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 21540157 (Lot 581 on CP EP1760)

2. EASEMENT IN GROSS No 718819068 20/06/2018 at 12:10
burdening the land
ERGON ENERGY CORPORATION LIMITED A.C.N. 087 646 062
over
EASEMENT A ON SP304686

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested by: D-ENQ CITEC CONFIRM