DEVELOPMENT ASSESSMENT REPORT

PORT ACCESS - TOWNSVILLE

DEVELOPMENT APPLICATION FOR MATERIAL CHANGE OF USE (MEDIUM IMPACT INDUSTRY, SERVICE STATION, TRANSPORT DEPORT, OFFICE)

TFA Project Group

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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

DEVELOPMENT ASSESSMENT REPORT

Port Access - Townsville

Development Application for Material Change of Use (Medium Impact Industry, Service Station, Transport Depot, Office)

CLIENT: Port Access Pty Ltd (Port Access)

ADDRESS: 1 Colinta Road, Stuart QLD 5320

TFA REFERENCE: 21279

TFA CONTACT: Jacob McRae

Document Control

REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
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TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

EXECUTIVE SUMMARY

Applicant

Applicant Details	Port Access Pty Ltd
Contact Details	C/- Jacob McRae (Town Planner) TFA Project Group PO Box 2339 FORTITUDE VALLEY QLD 4006

Site

Address	1 Colinta Road, Stuart QLD 5320
Site Details	21 SP341874
Site Area	30,000m^2 (3ha)
Current Land Use	Vacant Land

Proposal

Proposal Description	Material Change of Use – Medium Impact Industry, Service Station, Transport Depot, Office
Application Type	Development Application - Code Assessable

Assessment Matters

Determining Authority	Office of the Coordinator General
Planning Scheme	*Townsville State Development Area Development Scheme*
Zone	Medium Impact Industry Precinct
Regional Plan	North Queensland Regional Plan 2020
Referral Agencies	Townsville City Council (Early Referral Response received)

1.0 INTRODUCTION

This Development Assessment Report has been prepared by TfA Project Group on behalf of Port Access Pty Ltd (the Applicant).

The application is made over land located at 1 Colinta Road, Stuart QLD 5320, formally described as Lot 21 SP341874.

The application seeks a development permit for a Material Change of Use, comprising Medium Impact Industry, Service Station, Transport Depot and Office, as described below:

- Warehouse / Workshop building, comprising a total GFA of approximately 2,953m^2 and the following individual components:
    - Oil Shed / Warehouse, with associated DG Store, comprising a GFA of approximately 1,488m^2;
    - Fabrication Workshop, comprising a GFA of approximately 504m^2;
    - Truck workshop, with associated wash bay, comprising a GFA of approximately 960m^2;
- Office Building comprising a GFA of approximately 588m^2;
- Truckstop, comprising:
    - Retail Building, comprising a GFA of approximately 252m^2;
    - Truck Refuelling Canopy, comprising 5 bowsers, with 4 refuelling bays;
- 68 Light vehicle spaces and 22 Heavy vehicle spaces;

This report, which is submitted in support of the application, provides details of the proposed development and addresses relevant planning, design, engineering and environmental matters associated with the proposal. The application is accompanied by the following consultant reports / documentation:

- **Appendix A** Title Search;
- **Appendix B** Development Application Drawings, prepared by TfA Project Group;
- **Appendix C** Site Based Stormwater Management Plan, prepared by TfA Project Group
- **Appendix D** Townsville City Plan – Code Response, prepared by TfA Project Group;
- **Appendix E** Townsville City Council – Early Referral Response.

To assist in the Coordinator General's determination of the development application, this Report covers the following matters:

- **Section 2:** a background summary of prelodgement works undertaken for the proposed development;
- **Section 3:** a site description including site characteristics and the context of the surrounding area;
- **Section 4:** a description of the proposed development;
- **Section 5:** an assessment of the proposed development against the relevant planning provisions; and
- **Section 6:** an assessment of the proposed development against the Townsville SDA Development Scheme.

2.0 BACKGROUND

2.1 Prelodgement

An informal prelodgement meeting was held with representatives of the Office of the Coordinator General on 7 June 2023.

In summary of the meeting, the following matters were discussed with the Coordinator General:

- The most consistent land use definitions are:
    - Medium Impact Industry;
    - Transport Depot;
    - Office; and
    - Service Station.
- The ancillary nature of the office was generally acknowledged in the context of on-site operations, and was determined to be supportable on the grounds that office is only utilised by the operator of the balance of the industrial functions on the subject premises;
- The only referral entity identified for the purpose of the application was Townsville City Council, of which it was recommended to seek an early referral agency response prior to lodgement of the formal Material Change of Use with the Coordinator General;
- It was determined that the only necessary supporting documents for the application included:
    - Town Planning Report
    - Architectural Drawings
    - Stormwater Management Plan

2.2 Early Referral Response

An early referral response was received from Townsville City Council on 12 February 2024. In summary of this response, Townville City Council have made the following development specific recommendations:

- The office maintains an ancillary component of the overall development, being occupied by the same operator of the balance of the site uses;
- Stormwater quality associate with the development is to be managed in accordance with the supplied stormwater management plan, as provided in **Appendix C**;
- The storage and handling of dangerous goods should be managed in accordance with AS1940.

A copy of the formal response has been provided in **Appendix E** for the Coordinator Generals benefit.

3.0 THE SITE

3.1 Site Description

The subject site is located at 1 Colinta Road, Stuart QLD 5320 – described as Lot 21 SP341874, with the parent lot comprising an area of approximately 30,000m^2 (3ha). The site is currently vacant and was subject to a subdivision associated with the overall master planning of the locality.

The current features of the site are illustrated within figure 1 below.

Figure 1: *Aerial View of Subject Site (NearMap, accessed October 2023)*

3.2 Surrounding Uses

The site forms part stage 2 of the Townsville State Development Area (Cleveland Bay Industrial Park), which is currently in the process of being formally established. The locality directly surrounding the subject premises is largely vacant in its current state, with the exception of land directly to the west of the site, which is currently occupied by an electrical transmission line.

4.0 PROPOSED DEVELOPMENT

4.1 Description of the Proposal

The proposed development comprises a mixed use facility which will comprise service station, industrial, truck stop and office functionalities. The service station component is to be for public access, while the balance of the site is to be for the sole use of the applicant.

In summary, the proposed development is to comprise of the following components:

- Warehouse / Workshop building, comprising a total GFA of approximately 2,953m^2 and the following individual components:
    - Oil Shed / Warehouse, with associated DG Store, comprising a GFA of approximately 1,488m^2;
    - Fabrication Workshop, comprising a GFA of approximately 504m^2;
    - Truck workshop, with associated wash bay, comprising a GFA of approximately 960m^2;
- Office Building comprising a GFA of approximately 588m^2;
- Truckstop, comprising:
    - Retail Building, comprising a GFA of approximately 252m^2;
    - Truck Refuelling Canopy, comprising 5 bowsers, with 4 refuelling bays;
- 68 Light vehicle spaces and 22 Heavy vehicle spaces;

The proposed site layout has been provided in figure 2 below for reference.

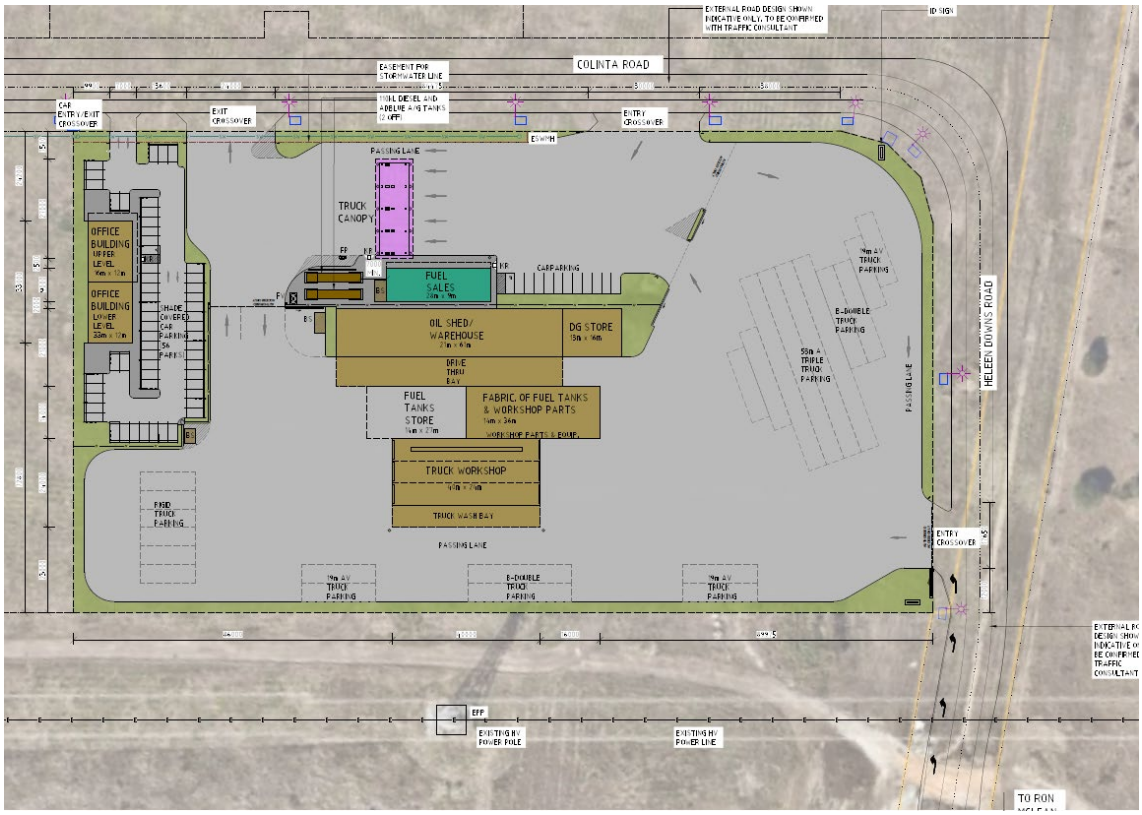

Figure 2: *Proposed Site Layout*

4.2 Built Form

The overall built form of the proposed development is to comprise of multiple separate building elements, including:

- Office Building;
- Fuel Retail Building
- Warehouse / workshop premises

The proposed office building comprises a total GFA of approximately 588m^2 and an overall height of approximately 7.4m above ground level. The building has been designed to be orientated towards the internals of the site (service station and industry / workshop areas) and comprises a stepped form, with the taller component within proximity to the Colinta Road site frontage. The buildings utilises a combination of materials, supporting Colorbond sheeting, glazing and timber cladding through to provide a visually interesting building form on the site.

The proposed service station building is to comprise an area of approximately 252m^2 and an overall height of approximately 5.9m above ground level. The building is orientated to provide direct overlooking the proposed refuelling area on-site. The building comprises a visually interesting design through use of varying roof forms as well as a mix of colours and material throughout.

The proposed workshop building is to comprise a total GFA of approximately 2,952m^2 and an overall height of approximately 13.3m above ground level. The building comprises a visually interesting built form, utilising variations is façade heights. Internally, the building comprises a mix of operations, comprising fabrication, warehousing, and truck maintenance. It is anticipated that the building will comprise a storage capacity of up to 130KL.

4.3 Landscaping

The proposed development is to be provided with landscaping that is predominately focussed around the perimeter of the site and the internal precincts of the premises. In particular, the landscaping buffer along the frontage of the premises is to be provided with a minimum width of 3m, with the exceptions of areas directly adjoining vehicle crossovers. Overall, the site is provided with approximately 3,147m^2 of landscaping, which is equivalent to approximately 10.4% of the total site area.

The landscaping intent for the site is to provide a mix of groundcovers and garden beds throughout the site, with larger feature trees within proximity to buildings and on prominent corners of the site.

4.4 Access and Parking

The proposed development provides a total of 4 crossovers, supporting access for both light vehicles and service vehicles up to A-triple in size. A description of the proposed crossovers are as follows:

- Heleen Downs Road Crossover: 18m wide crossover, supports access only for heavy vehicles;
- Colinta Road – Southern Crossover: 30m wide crossover, supports access only for heavy vehicles;
- Colinta Road – Central Crossover: 24m wide crossover, supports egress only for heavy vehicles;
- Colinta Road – Northern Crossover: 7m wide crossover, supports access and egress for light vehicles.

The internal access arrangement provides separation between all the components of the site, permitting direct access to:

- The industrial / truck stop component via Heleen downs road (and potential secondary access via the southern most crossover to Colinta Road);
- The service station / truck stop via the southern crossover to Colinta Road;
- The office via the northern crossover to Colinta Road.

This arrangement allows for each of the components to be navigated via vehicle with minimal interaction with other on-site operations. Overall, it is anticipated that once operational, the facility is to comprise the following daily movement:

- Service Station – approximately 60 movements per day

- Office – Approximately 120 movements per day
- Balance of site (industrial and truck depot) – approximately 45 movements per day

As specified previously, the proposed development is to be provided with a total of 64 light vehicle and 22 heavy vehicle parking spaces on the subject site. The proposed parking has been provided within its respective areas for which it predominately services, comprising:

- 56 light vehicle spaces associated with the office building
- 12 light vehicle spaces (including 1 PWD space);
- 6 rigid truck spaces, 7 AV spaces, 5 B-Double spaces and 4 A Triple Spaces associated with the warehouse and workshops.

4.5 Fuel Storage

The proposed fuel storage includes 2 x 110KL aboveground storage tanks. These tanks are intended to store both diesel and adblue to service the proposed truck refuelling canopy.

The new fuel storage system will be designed and installed in accordance with AS 4897, the Australian Standards for the design, installation and operation of underground petroleum storage systems. These standards will ensure greater environmental controls – such as double walled tanks, double walled pressure pipework, automatic tank gauging, and electronic leak monitoring. Furthermore, the tanks will be maintained to satisfy the requirements of AS1940-2004; the storage and handling of flammable and combustible liquids.

4.6 Stormwater

As outlined within the Conceptual Stormwater Management Plan, provided in **Appendix C**, the stormwater management of the subject site has been split into high risk (hydrocarbon generating) and low risk (balance of site) areas.

With respect to high risk areas, the stormwater / oily water generated within these areas are proposed to drain to an oily water separator unit before discharging to stormwater infrastructure running parallel to the Colinta Road frontage. The balance of the site is to be appropriately graded to allow stormwater to be captured via gully pits within the site allowing stormwater to flow to on-site stormwater improvement devises prior to discharge to the lawful point of discharge.

5.0 STATUTORY CONTEXT

5.1 Commonwealth Legislation

The SDA application is not considered to require an assessment against Commonwealth legislation. It is not anticipated that development over the subject site will trigger assessment against the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC), as it is not anticipated that the development will significantly impact upon a matter of national environmental significance and will not store over the ERA 8 – hazards chemical thresholds.

5.2 State Development and Public Works Organisation Act 1971

The *State Development and Public Works Organisation Act 1971 (*SDPWOA) regulates development within State Development Areas (SDA). All SDAs require a development scheme which overrides local government and State government planning instruments under section 79 of the SDPWOA.

Part 3 of the State Development and Public Works Organisation (State Development Areas) Regulation 2020 declares the Townsville SDA Development Scheme as being the relevant instrument for the assessment of development within the Townsville SDA. For the purpose of developments requiring assessment against the Townsville SDA Development Scheme, the Coordinator General is the Assessment Officer.

5.3 North Queensland Regional Plan 2020

Section 2.5.9 of the Townsville State Development Area Development scheme identifies that development should demonstrate consistency with the relevant regional plan. To this extent, the subject site forms part of the *North Queensland Regional Plan 2020*.

Under the regional plan, the subject site forms part of the Townsville Urban Area under the regional plan, which identifies land currently zoned for an urban purpose or is identified as part of the priority infrastructure area under the Local Government Infrastructure Plan.

As the proposed development is taken to be for an urban purpose, it is considered to appropriately forward the intent of the regional plan.

5.4 State Planning Policy

The State Planning Policy July 2017 (SPP) is a statutory instrument developed by the State government under the Planning Act, 2016 expressing matters of State interest in land use planning and development. Where a particular SPP provision is not incorporated within a local government planning scheme, and where the relevant trigger for the SPP applies, the proposed development must satisfy the relevant provisions of the SPP. In relation to development assessment, Part E of the SPP discusses 'assessment benchmarks'.

The table below provides a list of the state interest policies and assessment benchmarks which have been prepared under Part E of the SPP with a corresponding section providing justification as to whether the particular interest is applicable to the subject development application.

Table 1: State interest policies and assessment benchmarks

State Interest Policy	Applicability
Liveable communities and housing	
Housing supply and diversity	Not Applicable
Liveable communities	Not Applicable
Economic growth	

State Interest Policy	Applicability
Agriculture	Not Applicable
Development and construction	The proposed development forms part of a State Development Area, which has been considered as part of this assessment.
Mining and extractive resources	Not Applicable
Tourism	Not Applicable
Environment and heritage	
Biodiversity	Not Applicable
Coastal environment	Not Applicable
Cultural heritage	Not Applicable
Water quality	The proposed development comprises Material Change of Use on land in excess of 2,500m^2 and incorporates of 25% of the developable area as impervious. The water quality of the proposed development has been assessed in the Site Based Stormwater Management Plan in **Appendix C**.
Safety and resilience to hazards	
Emissions and hazardous activities	Not Applicable
Natural hazards Risk and Resilience	The subject site is identified to be potentially impacted by flood. As part of the establishment of the subject allotment, it is understood that the site has been appropriately filled as to mitigate the flood risk. As required, the site will be ensure to be established to achieve and appropriate level of flood immunity.
Infrastructure	
Energy and water supply	Not Applicable
Infrastructure integration	Not Applicable
transport infrastructure	Not Applicable
Strategic airports and aviation facilities	The subject site is identified to be within a height restriction zone (90m) and a wildlife hazard buffer zone (13km). The proposed development does not incorporate a built form in excess of 90m or a use that would attract wildlife.
Strategic ports	The subject premises forms part of a priority port area. The proposed development is determined to be of a type that is consistent with the intent of the port precinct of the site.

5.5 Referral Agencies

Under Section 10.3 of the Townsville SDA Development Scheme, the Coordinator-General may nominate additional referral agencies.

For the purpose of the subject application, and following a pre-lodgement meeting with the Coordinator General prior to lodgement of this application, the only relevant referral agency for the subject application is determined to be Townsville City Council. At the advice of the Coordinator General, an early referral response was sought from Townsville City Council, of which the assessment against the scheme and associated response has been provided in **Appendix D** and **Appendix E**.

6.0 TOWNSVILLE STATE DEVELOPMENT AREA DEVELOPMENT SCHEME 2019

The subject site is located on land within the Townsville State Development Area (SDA). As such, this SDA development application will be submitted in accordance with the Townsville SDA Development Scheme (the development scheme). The development scheme was first adopted by the Governor in Council in 2005 and has been amended numerous times. The current version was approved in May 2019 and sets out the relevant provisions which guide development on land within the boundaries of the SDA.

6.1 Vision and Structure Plan

Section 2.2 and 2.3 of the Townsville SDA Development Scheme establishes the Strategic Vision and Overall Objectives for development in the Townsville SDA.

The vision for the Townsville SDA is to:

> *(a) be the preferred location in North Queensland for the establishment of industrial development of regional. State and national significance, including supporting infrastructure, which is reliant on direct access to one or more of the Port of Townsville, national freight rail and major road networks;*
>
> *(b) ensure development of the Townsville SDA occurs in a logical sequence and is equally focused on the short- and long-term economic benefits to the region and the State;*
>
> *(c) facilitate the continued operation and future expansion of existing industrial operations and regionally significant extractive industries;*
>
> *(d) facilitate a coordinated approach to the delivery of infrastructure and maximise the efficient use of existing and future port, road, rail and ancillary infrastructure;*
>
> *(e) recognise and protect environmental, cultural heritage and community values; and*
>
> *(f) contribute to maintaining the outstanding universal value of the Great Barrier Reef World Heritage Area.*

The strategic vision is supported by the overall objectives for development and preferred development intents of development precincts within the Townsville SDA.

The overall objectives for development within the Townsville SDA, include:

> *(a) capitalises on the Townsville SDA's strategic location, supports the role and function of the Port of Townsville and stimulates economic growth;*
>
> *(b) ensures lots are appropriately sized to accommodate preferred development;*
>
> *(c) ensures the integrity and functionality of the Townsville SDA is maintained and protected from incompatible development;*
>
> *(d) avoids or minimises adverse impacts on sensitive land uses;*
>
> *(e) ensure design, construction and operation is consistent with current best practice;*
>
> *(f) avoids adverse impacts on environmental, cultural heritage and community values, or minimises, mitigates or offsets impacts where they cannot be avoided;*
>
> *(g) uses water and energy efficiently and minimises potential impacts on water quality and climate change;*
>
> *(h) manages impacts of air quality on the capacity of the Townsville airshed;*
>
> *(i) uses land and infrastructure efficiently and does not compromise or adversely impact on infrastructure, infrastructure corridors and future development opportunities;*

(j) is adequately serviced by infrastructure, generally in accordance with established infrastructure planning;

(k) manages the risks associated with natural hazards, to protect people and property;

(l) achieves appropriate levels of flood immunity consistent with current best practice; and

(m) ensures no net worsening of flood levels on land for existing and potential urban uses and on environmental values.

The proposed development will continue to provide an important service for transport and freight logistics operations within the Townsville SDA, specially the CBIP master planned industrial park.

6.2 Land Use Definition

The proposed development is considered to be defined as 'Medium Impact Industry', 'Transport Depot', 'Service Station' and 'Office', as defined below for reference.

medium impact industry *means the use of premises for industrial activities that include the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring, treating of products and have one or more of the following attributes:*

(a) potential for noticeable impacts on sensitive land uses due to offsite emissions including aerosol, fume, particle, smoke, odour and noise
(b) generates high traffic flows in the context of the locality or road network
(c) generates an elevated demand on local infrastructure network
(d) potential for noticeable offsite impacts in the event of fire, explosion or toxic release
(e) onsite controls are required for emissions and dangerous goods risks
(f) the use is primarily undertaken indoors
(g) evening or night activities are undertaken indoors and not outdoors.

transport depot *means the use of premises for:*

(a) storing vehicles, or machinery, that are used for a commercial or public purpose or
(b) cleaning, repairing or servicing vehicles or machinery, if the use is ancillary to the use in paragraph (a).

service station *means the use of premises for:*

(a) selling fuel, including, for example, petrol, liquid petroleum gas, automotive distillate or alternative fuels or
(b) a food and drink outlet, shop, trailer hire, or maintaining, repairing, servicing or washing of vehicles, if the use is ancillary to the use in paragraph (a).

office *means the use of premises for:*

(a) providing an administrative, financial, management or secretarial service or function
(b) the practice of a profession or
(c) providing business or professional advice or services but
(d) does not include the use of premises for making, selling or hiring goods.

6.3 Zone and Precinct

Under the Townsville SDA Development Scheme, the site is within the Medium Impact Industrial Precinct, as shown in Figure 3 below.

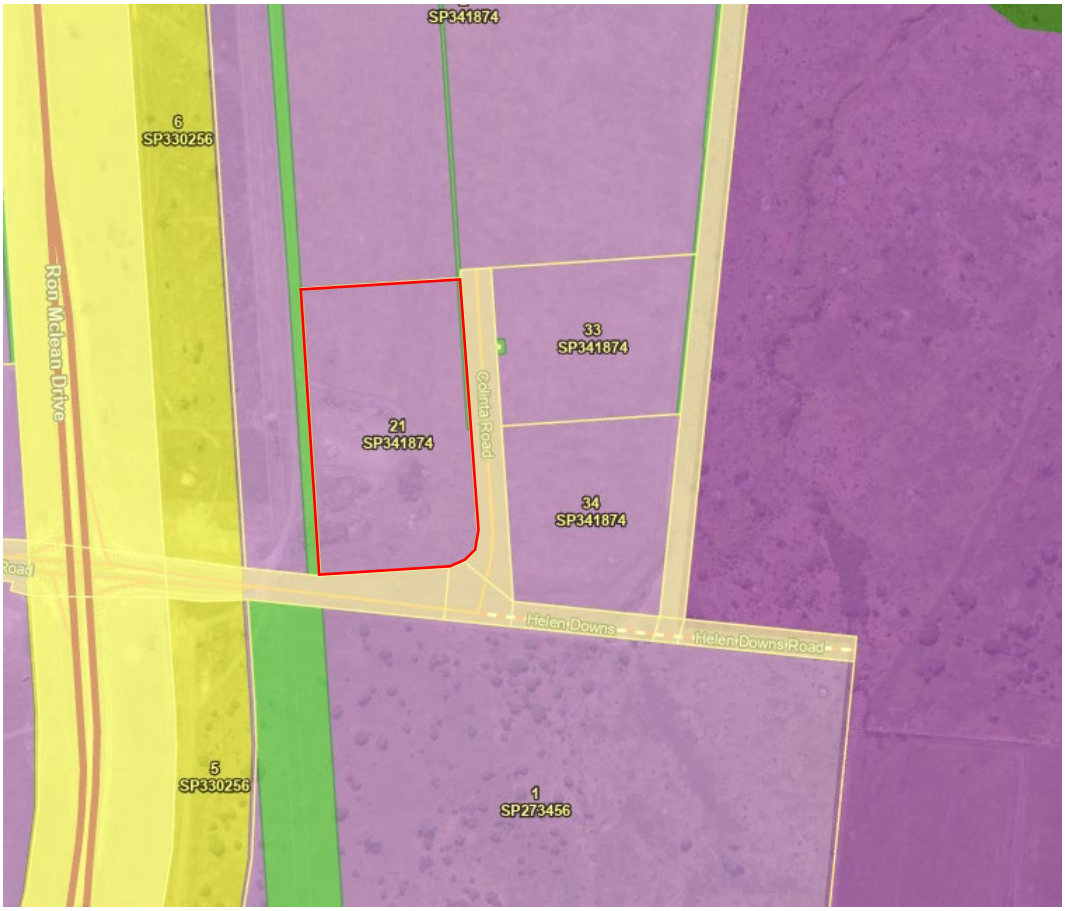

Figure 3: Zoning Map Extract (QLD Globe, accessed October 2023)

Within the Medium Impact Industry Precinct, the preferred development intent is summarised within Table 2, below. Additionally, a response to each of the items is provided as to illustrate consistency with the preferred development intent of the premises.

Table 2: Medium Impact Industry Precinct – Preferred Development Intent

Development Intent	Response
(a) This precinct is to accommodate medium impact industrial development that: *a. includes the manufacturing and processing of products that are associated with identifiable and measurable impacts* *b. requires buffers from sensitive land uses* *c. is reliant on and maximises the use of key transport and supply chain infrastructure.*	The proposal comprises the processing and manufacturing of products through the industrial function of the site, which due to the potential noise, some separation from sensitive receivers is considered to be necessary. Additionally, the proposed is anticipated to generate a high throughput of vehicles per day, which makes close proximity to key transport infrastructure ideal for the site.
(b) Transport, freight and logistics industries are accommodated in locations with key rail and road linkages, including the section of the precinct adjoining the existing intermodal facility south of Marrett Street.	The subject site utilises some transport freight and is located direct adjacent to the primary road into the industrial estate, maximises site efficiency.
(c) The scale, intensity and bulk of industrial development is appropriate for the location having regard to its proximity to adjacent sensitive land uses, e.g. the residential areas of Cluden and Wulguru.	The proposed uses, while semi industrial in nature, are predominately for the fabrication of fuel tanks and maintenance purposes. The impact to the closest sensitive receivers is therefore considered to be minimal.
(d) The expansion of existing uses within the precinct will be supported where appropriate.	The proposal is for a new development.

Development Intent	Response
(e) Only one intersection from the Townsville Port Access Road to this precinct will be supported.	No change to the existing intersections are proposed.

6.4 Level of Assessment

For the purpose of the Medium Impact Industry Precinct, the following uses are determined to

Table 3: Medium Impact Industry Precinct – Defined Uses

Defined uses that support the preferred development intent	Defined uses that may be supported where it can be demonstrated that they satisfy the preferred development intent
(i) freight terminal *(ii) infrastructure facility* *(iii) medium impact industry* *(iv) research and technology industry* *(v) transport depot* *(vi) utility installation* *(vii) warehouse.*	*(i) correctional facility* *(ii) food and drink outlet, where required to service the immediate employment catchment* *(iii) office, where ancillary to an industrial use* *(iv) renewable energy facility* *(v) service station* *(vi) substation* *(vii) telecommunications facility* *(viii) wholesale nursery.*

As above, all proposed uses are determined to defined uses, which as previously indicated under Table 2, is determined to achieve the preferred development intent of the Medium Impact Industry Precinct. Additionally, in relation to the proposed office, it is noted under the development scheme that this use must be ancillary to an industrial use. In this respect the following is noted in the context of the proposal:

- The proposed office is to be operated directly by the proponent to be used for administrative duties associated with the function of site, with no intention of separately leasing the space. The office space is anticipated to accommodate approximately 24 staff members, comprising the proponent's operations team, truck schedulers, depot admin, account managers and all other general admin and management roles. The offices will also provide functionality specifically for truck drivers predominately accessing the balance of the site, allowing them to carry out their daily paperwork, training, inductions, toolbox meetings etc.
- In the context of the overall site area and proposed GFA of the balance of the proposed buildings, the office is considered to be generally small in scale, noting that the office accounts for approximately 15% of the overall GFA of the site and approximately 2% of the total site area.
    - While the scale of an office space with respect to the balance of on-site uses is generally reflective of GFA, given the extent of occupiable space external to the proposed building, regard to the total site area is considered relevant in the context of the scale of the office.

In addition to the above, as indicated withing the Referral Response from council provided in **Appendix E**, it has been agreed based on the above that the office would form an ancillary component of the site, as supported by their recommended conditions for the proposal.

6.5 SDA-Wide Development Criteria Assessment

The Development Scheme establishes SDA-wide development criteria to guide assessable development within the Townsville State Development Area which are structured under the following nine different sub-headings:

- Infrastructure and services;
- Emissions;
- Containment land;

- Acid sulfate soils;
- Climate change;
- Transport;
- Environmental, cultural heritage and community;
- Engineering and design standards;
- Other governmental matters:
    1. Energy and water efficiency/;
    2. Visual impacts;
    3. Built form;
    4. Reconfiguring a lot;
    5. Landscaping;
    6. Natural hazards – flood, including storm tide inundation;
    7. Natural hazards – other; and
    8. Water quality.

The following criteria referenced under the relevant headings are the main focus for assessment and are addressed in Table 4 below.

Table 4: Assessment of SDA-Wide Development Criteria

Development Criteria	**Development Response**
2.5.1 Infrastructure and services	
(1) Development maximises the use of and minimises the cost for infrastructure associated with telecommunications, transport, water, wastewater, recycled water and energy networks. *(2) Development plans for and manages impacts on existing and future known telecommunications, transport, water, wastewater, recycled water and energy networks.* *(3) Development is adequately serviced by telecommunications, transport, water, wastewater, recycled water and energy networks as relevant.* *(4) Development incorporates waste minimisation practices and considers refuse collection or disposal.* *(5) Development avoids or minimises adverse impacts on existing or proposed State or local government infrastructure and services.* (6) *Development provides for and protects the safety, functionality and efficiency of the Bruce Highway, North Coast rail line, TPAR and Flinders Highway (Stuart Bypass) and the Townsville Eastern Access Rail Corridor (TEARC).*	The proposed development will be provided with access to all essential infrastructure. The current design of the site is identified to be free from all identified infrastructure, as established by the principal developer of the industrial estate. As required, appropriate waste minimisation measures will be adopted on-site. As detailed on the provided drawings, waste is to be stored in dedicated storage bays, located adjacent to internal circulation areas, as to permit access by WCV's.
2.5.2 Emissions	
(1) Development is designed to avoid or minimise: *(a) adverse impacts from air, noise and other emissions that will affect the health and safety, wellbeing and amenity of communities and individuals.*	The proposed development is located within an industrial estate, which is currently separated from the nearest sensitive receiver by over 1km. The proposed development is therefore not anticipated to result in significant environmental impact.

Development Criteria	Development Response
(b) conflicts arising from (but not limited to), spray drift, odour, noise, dust, light spill, smoke or ash emissions with sensitive and/or incompatible land uses. *(2) Development supports the achievement of the relevant acoustic and air quality objectives of the Environmental Protection (Noise) Policy 2008 and the Environmental Protection (Air) Policy 2008.* *(3) Development with the potential to impact on the air quality of Townsville will be expected to conduct air shed modelling, in accordance with current best practice, to demonstrate compliance with air quality standards.*	
2.5.3 Contaminated land	
(1) Development on land likely to be contaminated or recorded on the Environmental Management Register or Contaminated Land Register does not adversely impact on human health or the environment by exposure, management, or movement of contaminants. (2) Where required, develop a strategy to manage any existing contamination and the potential for additional contamination such that human health and the environment are not adversely affected.	The development site is not identified to have been utilised for a contaminating land use. The potential for contamination is therefore considered to be low. To the extent that any contamination is discovered during construction, this will be appropriately managed in accordance with the recommended condition put forward in their provided response.
2.5.4 Acid sulfate soils	
(1) Development, in accordance with current best practice, is to: *(a) avoid the disturbance of acid sulfate soils (ASS) or* *(b) ensure that the disturbance of ASS avoids or minimises the mobilisation and release of acid and metal contaminants.*	Where acid sulfate soils are identified, it is proposed an Acid Sulfate Soil Management Plan will be developed prior to the commencement of earthworks.
2.5.5 Climate change	
(1) Development minimises its emission of greenhouse gases and demonstrates how it will adapt to projected climate change conditions.	The proposed development will comply where deemed necessary.
2.5.6 Transport	
(1) Increased traffic arising from development is either able to be accommodated within existing road networks or works are undertaken to minimise adverse impacts on existing and future uses and road networks. *(2) Local road networks within the Townsville SDA are to be designed to accommodate the proposed vehicle type and predicted traffic volumes associated with the development and the precinct/s.* *(3) Development is designed to facilitate safe and efficient vehicular ingress and egress and does not unduly impact on the safe and efficient operation of transport infrastructure.*	The proposed development will be accessed via a new access via Heleen Downs Road and Colinta Road, as established as part of the parent subdivision of the site. These road alignments are understood to have been designed and built taking into account the intended industrial nature of the site and surrounds. Further these road alignments directly connect to the Bruce Highway and Ron Mclean Drive, being higher order roads connecting the locality to the Port of Townsville and the greater region. The anticipated traffic generation is therefore expected to be appropriately accounted for by the road corridors surrounding the premises.

Development Criteria	Development Response
(4) Adequate car parking for the number and nature of vehicles expected are provided on site.	Further, the proposed development and associated crossovers have been appropriately designed to account for safe and efficient access for the largest anticipated vehicle (being an AB-Triple). All relevant swept path drawings are provided in **Appendix B**. Additionally, the provision of parking to service the premises has been assessed against the Townsville City Plan and determined to be suitable for the function of the site, as demonstrated by **Appendix D** and **Appendix E**.
2.5.7 Environment, cultural heritage and community	
(1) Environmental values, cultural heritage values, and community values of the premises on which the development is undertaken, and immediate surrounds, are identified and managed, consistent with current best practice. *Note: Duty of Care under Section 23 of the Aboriginal Cultural Heritage Act 2003 should be considered a minimum requirement for all development.* *(2) Development is designed and sited to:* *(a) avoid adverse impacts on environmental values including matters of local, State and national environmental significance, or where adverse impacts cannot be avoided, impacts are minimised, mitigated or offset* *(b) maintain ecological connectivity and processes* *(c) maintain the outstanding universal value of the Great Barrier Reef World Heritage Area* *(d) avoid adverse impacts on cultural heritage and community values, or where adverse impacts cannot be avoided, impacts are minimised, mitigated or offset.* *(3) Environmental offsets are provided in accordance with the relevant commonwealth or State environmental offset framework.* *(4) Environmental offsets should be accommodated within the Environmental Management Precinct before seeking solutions external to the Townsville SDA.* *(5) Where the development requires a buffer to mitigate the impacts of the development, that buffer must be accommodated within the development site.*	The subject site does not locate over or adjoin a heritage listed area or sensitive uses. The proposed development will be appropriately located within the Cleveland Bay Industrial Park area.
2.5.8 Engineering and design standards	
(1) Development is designed and constructed in accordance with the relevant engineering and design standards (and any subsequent revisions to the relevant standards) stated in Table 8below. Alternative innovative solutions that demonstrate compliance with the relevant standards are encouraged.	The proposed development will be designed in accordance with all relevant engineering standards. With respect to standards that are in relation to local government standards, please refer to the local code assessment and the early referral response from Townsville City Council, as provided in **Appendix D** and **Appendix E**.
2.5.9 Other government matters	

Development Criteria	Development Response
(1) Development is to demonstrate consistency with any other relevant legislative requirements for the development to proceed and operate. Development, to the extent practicable, is to be consistent with regional plans, the State Planning Policy, and the State Development Assessment Provisions where the State interests articulated by these instruments are likely to be affected by the development.	An assessment against the relevant State Planning Policy and regional plan has been provided in previous sections of this report.
2.5.10 Energy and water efficiency	
(1) Building, site design and layout maximises energy efficiency having regard to: *(a) building orientation and passive solar design* *(b) maximising opportunities for cross ventilation* *(c) appropriate shade treatments* *(d) landscaping treatments to the western side of the building.* *(2) Water efficiency is optimised through the use of alternative water supply sources, including:* *(a) rainwater harvesting systems* *(b) recycled water source.*	The proposed office building is to incorporate shade sale around the carparking area, providing appropriate shade treatments to the subject development site. As required, all other matters will be incorporated into the design of the buildings as necessary as part of detailed design / building certification.
2.5.11 Visual impacts	
(1) Visual impacts of buildings, retaining structures or other development are minimised through building design, landscaping or other mitigation measures when viewed from a publicly accessible view point such as major roads, public parks or Cleveland Bay. (2) *Development incorporates high quality urban design and landscape treatments particularly for those areas highly visible from public roads.*	The site has been cleared of vegetation including trees and plants. The proposal provides a landscape treatment which is considered to be an improvement upon the existing scenario, increasing the visual amenity of the site and surrounding locality.
2.5.12 Built form	
(1) The scale, character and built form of development contributes to a high standard of amenity. *(2) Development must incorporate crime prevention through environmental design (CPTED) principles.*	The building form is considered to contribute to the Cleveland Bay Industrial Park character given the proposal will be industrial in nature. The proposed development will incorporate building design and layout which will provide for non-graffiti friendly development, structures and layout through design within an absence of natural ladders, minimal unbroken vertical surface areas, CCTV surveillance, a layout which will promote passive surveillance over the site, be well illuminated and comprise minimal opportunities for concealment.
2.5.13 Reconfiguring a lot	
(1) Development provides lawful, safe and practical access.	Reconfiguration of the subject site is not proposed.

Development Criteria	Development Response
(2) Infrastructure is provided generally in accordance with established infrastructure planning. *(3) Lot sizes are adequate to accommodate a development footprint consistent with the preferred development intent of each precinct. A range of lot sizes is preferred to accommodate development in each precinct. Minimum lot sizes for development precincts are generally consistent with the following:* *(a) Low Impact Industry Precinct – 1 hectare (ha)* *(b) Medium Impact Industry Precinct – 2 ha* *(c) High Impact Industry Precinct – 25 ha* *(d) Port Industry Precinct – 2 ha.* *(4) Further subdivision of the Environmental Management, Infrastructure Corridors, and Resources Precincts is not supported, unless being undertaken for operational, management or regulatory purposes, or if there is an overriding need.*	
2.5.14 Landscaping	
(1) Development provides landscaping that: *(a) minimises the visual impacts of the development* *(b) incorporates at least 50% local species* *(c) maintains and enhances significant vegetation* *(d) is low maintenance.*	Proposed landscaping over the subject site is concentrated along the boundaries of the site. Landscaping will comprise a mulched garden beds, incorporating a mix of ground covers, shrubs and feature trees, as to promote a visually interesting site. The site will incorporate a mix of species, comprising at least 50% local species (as required), that will ensure to be low maintenance.
2.5.15 Natural hazards – flooding, including storm tide inundation	
(1) Development, in accordance with current best practice: *(a) achieves an appropriate level of flood immunity* *(b) does not adversely affect existing flow rates, flood heights or cause or contribute to other flooding impacts on upstream, downstream or adjacent properties or the State transport network. This includes potential impacts from changes to stormwater flows and local flooding* *(c) avoids, minimises or mitigates adverse impacts from flooding to protect people and property, and enhances the community's resilience to flooding* *(d) supports, and does not hinder disaster management capacity and capabilities* *(e) avoids risks to public safety and the environment from the location of the storage of hazardous materials and the release of these materials as a result of a natural hazard.* *(2) Where development includes flood mitigation works:* *(a) development may consider flood mitigation works within the Environmental Management Precinct where it cannot otherwise be accommodated within the development precinct. Development will demonstrate that the extent of*	The flooding extent on the subject land is shown in Council's flood mapping shown within he Site Based Stormwater Management Plan, as provided in **Appendix C.** It is understood the allotments within the Cleveland Bay Industrial Park will be raised up to the 1% AEP flood level to ensure the subject land can be afforded flood immunity under the overall subdivision approval. It is considered that the proposed development is compatible with the nature of the flood hazard given the development will not result in exposure or increased risk to people or property on the subject site or surrounding area.

Development Criteria	Development Response
such works must be proportional to the total flood balance and must not restrict the development of other land *(b) any flood mitigation works are to integrate environmental, cultural heritage and stormwater management outcomes.*	
2.5.16 Natural hazards – other	
(1) Development, in accordance with current best practice: *(a) identifies relevant natural hazards that may impact upon the development* *(b) appropriately manages risk associated with identified hazards* *(c) avoids increasing the severity of the natural hazard* *(d) for coastal hazards, avoid erosion prone areas wherever possible.*	The proposed development will not involve the loss of any significant vegetation on-site nor is it considered to have a significant impact on the environmental characteristics of the site. The proposed method of oily water treatment within the service station are in accordance with Australian standards will reduce any on-site or off-site impacts as a result of the proposal.
2.5.17 Water quality	
(1) Development is located, designed, constructed and operated to avoid or minimise adverse impacts on environmental values of receiving waters arising from: *(a) altered stormwater quality and hydrology* *(b) wastewater (other than contaminated stormwater and sewage)* *(c) the creation or expansion of non-tidal artificial waterways* *(d) the release and mobilisation of nutrients and sediments.* *(2) Development encourages a precinct-wide stormwater management approach that achieves an improved water quality outcome.*	The proposed development will provide for an oily-water treatment system for all stormwater captured over the refuelling / fuel unloading areas to ensure the release of materials as a result of natural hazards are mitigated. The balance of the site is to direct stormwater through a Gross Pollutant Trap, for the management of the general hardstand areas on the site. Refer **Appendix C** for the Site Based Stormwater Management Plan.

7.0 CONCLUSION

This Development Assessment Report has been prepared by TfA Project Group on behalf of Port Access Pty Ltd (the Applicant).

The application is made over land located at 1 Colinta Road, Stuart QLD 5320, formally described as Lot 21 SP341874.

The application seeks a development permit for a Material Change of Use, comprising Medium Impact Industry, Service Station, Transport Depot and Office, as described below:

- Warehouse / Workshop building, comprising a total GFA of approximately 2,953m^2 and the following individual components:
    - Oil Shed / Warehouse, with associated DG Store, comprising a GFA of approximately 1,488m^2;
    - Fabrication Workshop, comprising a GFA of approximately 504m^2;
    - Truck workshop, with associated wash bay, comprising a GFA of approximately 960m^2;
- Office Building comprising a GFA of approximately 588m^2;
- Truckstop, comprising:
    - Retail Building, comprising a GFA of approximately 252m^2;
    - Truck Refuelling Canopy, comprising 5 bowsers, with 4 refuelling bays;
- 68 Light vehicle spaces and 22 Heavy vehicle spaces;

The proposal has been assessed against the relevant provisions within *Townsville State Development Area Development Scheme*. From this assessment, the following conclusions are able to be drawn:

- The development is determined to comprise of defined land uses under the Development Scheme;
- The proposed development is supported by a positive referral response from Townsville City Council;
- The proposed development is suitably distanced from any areas of environmental value / sensitivity and any known hazard constraints;
- The office will comprise and ancillary component of the overall site;
- The proposed use will incorporate best practice environmental management principles to ensure all impacts are appropriately managed on-site; and

On the basis of the above, it is considered sufficient planning grounds exist to warrant the proposal and the application is recommended to the Coordinator General for approval.

APPENDIX A – TITLE SEARCH

APPENDIX B – DEVELOPMENT APPLICATION DRAWINGS

APPENDIX C – SITE BASED STORMWATER MANAGEMENT PLAN

APPENDIX D – TOWNSVILLE PLANNING SCHEME – CODE RESPONSE

APPENDIX E – TOWNSVILLE CITY COUNCIL – EARLY REFERRAL RESPONSE

PROPOSED PORT ACCESS FACILITY

PORT ACCESS PTY LTD.

TOWNSVILLE

LOT 21 CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE QLD 4811

Drg No.	Drawing Title
43942	SITE SURVEY PLAN
D00	COVER SHEET
D01	SITE VIEWS
D02	PROPOSED SITE LAYOUT
D03	PROPOSED SITE ELEVATIONS
D04	PROPOSED OFFICE BUILDING FLOOR PLAN
D05	PROPOSED OFFICE BUILDING ELEVATIONS
D06	PROPOSED WORKSHOP BUILDING FLOOR PLAN
D07	PROPOSED WORKSHOP BUILDING ELEVATIONS

Drg No.	Drawing Title
D08	PROPOSED RETAIL STORE FLOOR PLAN
D09	PROPOSED RETAIL STORE ELEVATIONS
D10	PROPOSED TRUCK CANOPY FLOOR PLAN
D12	PROPOSED SITE SIGNAGE PLAN
D13	CONCEPTUAL LANDSCAPE PLAN
D14	TRUCK TURNING PATH B-DOUBLE
D15	TRUCK TURNING PATH A-TRPLE
D16	TRUCK TURNING PATH AV TANKER & SITE CIRCULATION
D17	SITE PERSPECTIVES
D18	SITE PERSPECTIVES

TFA Project Group

CREATE · PLAN · DELIVER

DRAWING NO		REV
23043	D00	B

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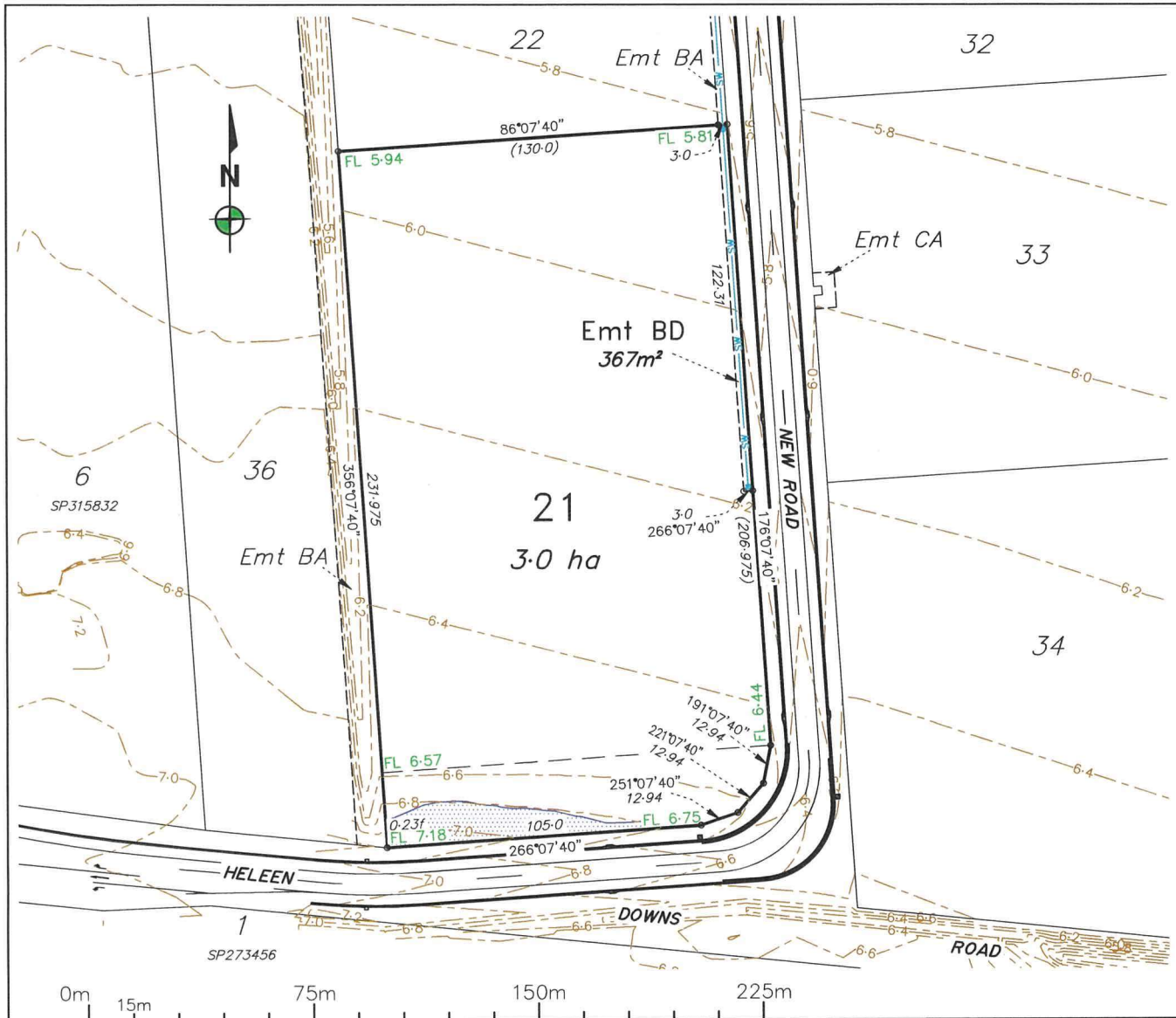
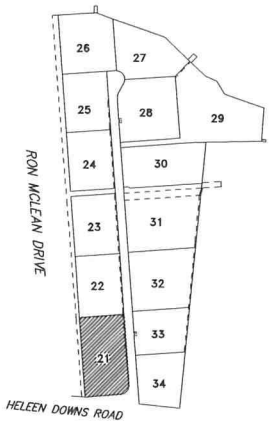


REV	BY	DATE	DESCRIPTION
B	RG	23/06/2023	Emt BD added.
A	RG	22/02/2022	Road name amended.
0	RG	18/02/2022	Original Issue.

Notes:

- *Fill shall be placed in accordance with Townsville City Council Town Plan, policy for earthworks (construction) SC6.4.6.10.8, to provide a relative compaction determined by AS1289.5.11 using AS1289.5.4.1 or AS1289.5.7.1 for standard compactive effort, of not less than 98% of standard maximum dry density*
- *Inspection and testing shall be carried out in compliance with SC6.4.6.10.8.*



Design Surface Level (0·2m Contours) — *Area of fill*

FL 7.14 — *Finished Design Level* — 0·17f — *Depth of fill (± 50mm)*

SW — *Drainage pipe*

Batter line

LOCAL AUTHORITY

TOWNSVILLE CITY COUNCIL

LEVEL DATUM: AHD(Der)
REF BM No: 53476
REDUCED LEVEL: 7·945
LOCATION: LOT 5 on SP273456

AZIMUTH: MGA'94 vide SP315832

SURVEYOR: RSPL
DRAWN: Romy Ghebosu
SIGNED BY: Laurie Nolan

ROWLANDS SURVEYS
22 Gorden Street Garbutt, Townsville.
Ph:(07) 47755077 surveyors@rowlands.net.au

cleveland bay industrial park TOWNSVILLE

SCALE 1:1500@A3

CLEVELAND BAY INDUSTRIAL PARK PTY LTD

– DISCLOSURE PLAN –

Proposed Lot 21

PASSED

DATE 23/06/2023

43942/ 21B

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

SITE LOCALITY PLAN
NTS

V1 - RON McCLEAN DRIVE LOOKING SOUTH-EAST
(ACROSS HIGH VOLTAGE POWER LINE CORRIDOR)

V2 - RON McCLEAN DRIVE LOOKING NORTH-EAST
(ACROSS HELEEN DOWNS ROAD)

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	26.07.23	DGC	PRELIMINARY ISSUE		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
LOCALITY PLAN &
SITE VIEWS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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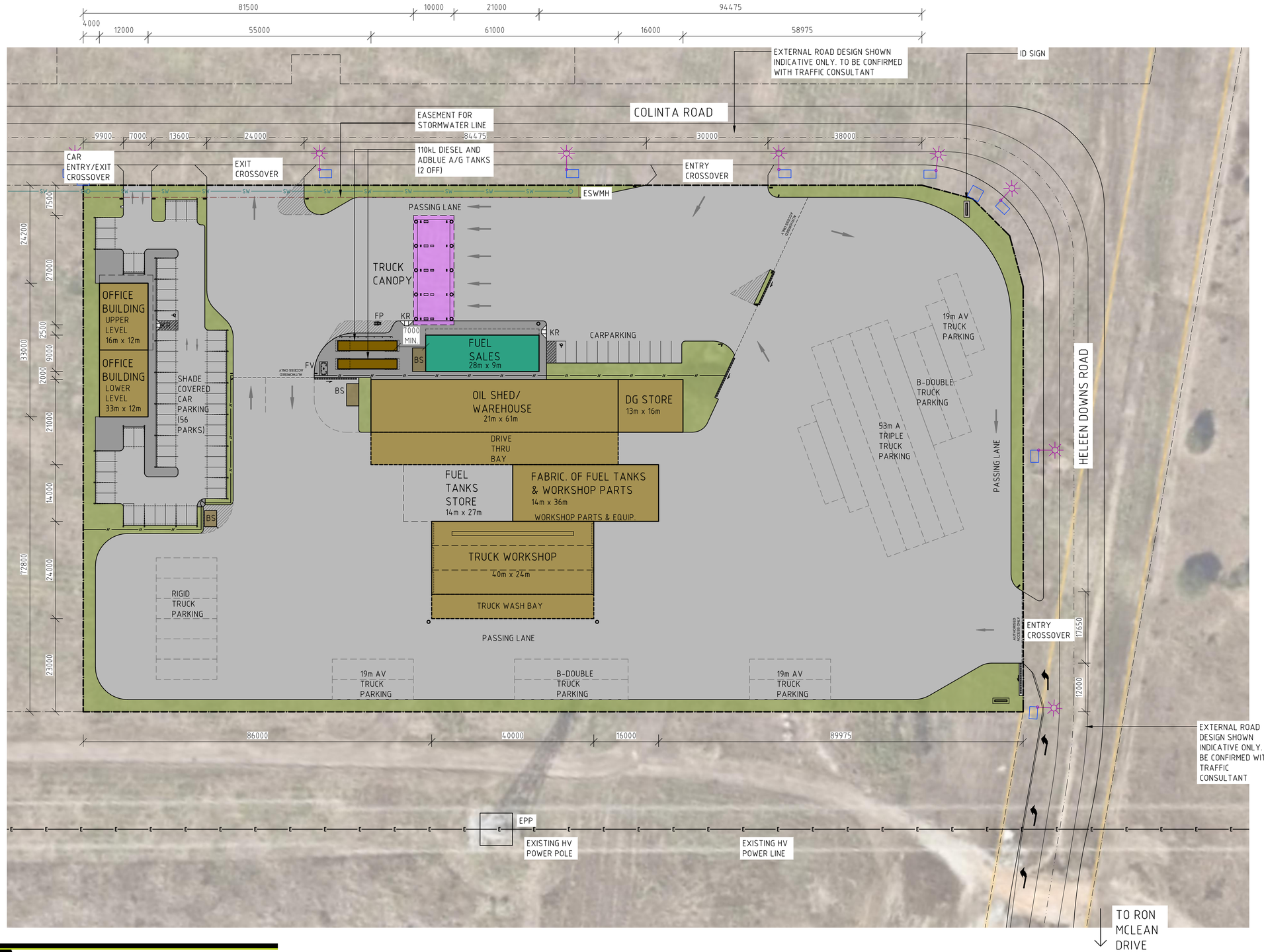
23043-D01	B



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

BS	BIN STORE - REFER DETAIL DWGS.
EPP	EXISTING POWER POLE - REFER SURVEY PLAN
ESWMH	EXISTING STORMWATER MAN HOLE
FL	FLOODLIGHT - REFER TO ELECTRICAL CONSULTANTS DWGS.
FP	REMOTE FUEL FILL POINT - REFER FUEL DWGS.
FV	FUEL VENT STACK - REFER FUEL DWGS.
KR	KERB RAMP - REFER TYPICAL DETAILS
	EXISTING ELECTRICAL PILLAR/PITS APPROXIMATELY
	EXISTING LIGHT POLES APPROXIMATELY

DEVELOPMENT ASSESSMENT

LANDSCAPE AREA: 3147m² (10%) APPROX.

BUILDING AREAS

FUEL SALES:	252m²
TRUCK CANOPY:	270m²
OFFICE LOWER:	396m²
OFFICE UPPER:	192m²
OIL SHED/ WAREHOUSE:	1280m²
DG STORE:	208m²
FABRIC. FUEL TANKS & WORKSHOP:	504m²
FUEL TANKS STORAGE:	378m²
TRUCK WORKSHOP & TRUCK WASH:	960m²
TOTAL AREA:	4,440m²

CARPARKING ASSESSMENT

FUEL SALES CAR PARKING PROVIDED: = 43 CARS

OFFICE CAR PARKING PROVIDED: = 56 CARS

0 10 20 30 40 50m

SCALE 1:500

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	AW	ISSUED FOR INFORMATION	DGC	
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	27.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
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DRAWING TITLE
PROPOSED SITE PLAN

STATUS
DA ISSUE

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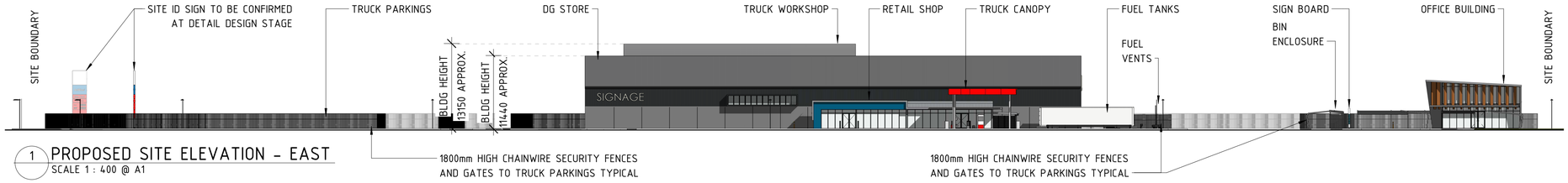

1 PROPOSED SITE ELEVATION - EAST
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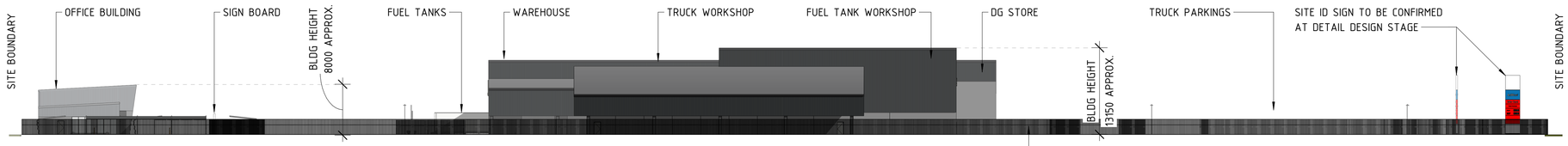

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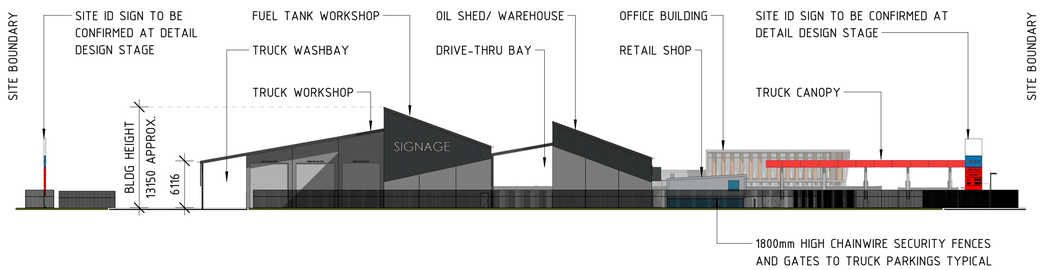

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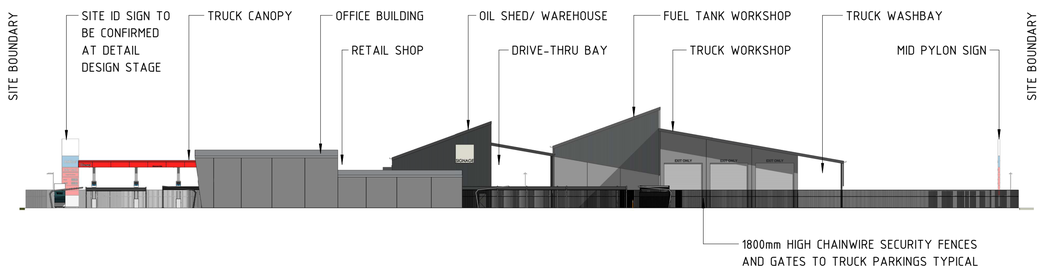

4 PROPOSED SITE ELEVATION - NORTH
SCALE 1 : 400 @ A1

NOTE:
COLOURS, FINISHES AND SIGNAGE SHOWN INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 8 16 24 32 40m
SCALE 1:400

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	03.11.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
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CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE
PROPOSED SITE ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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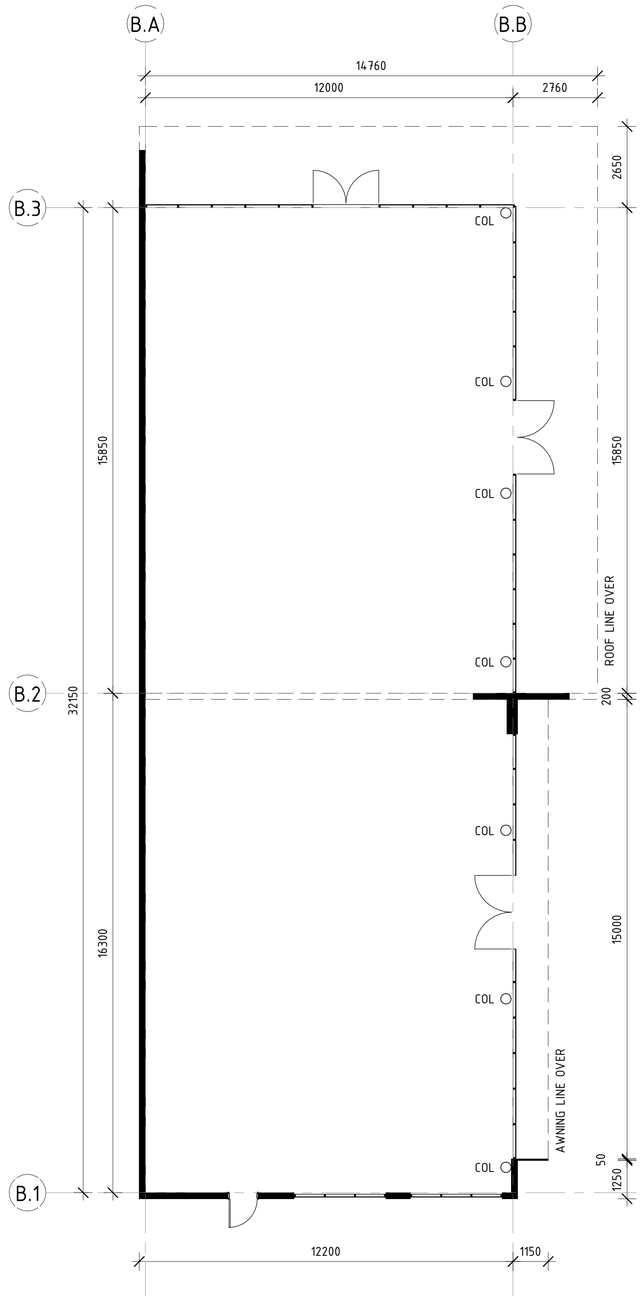

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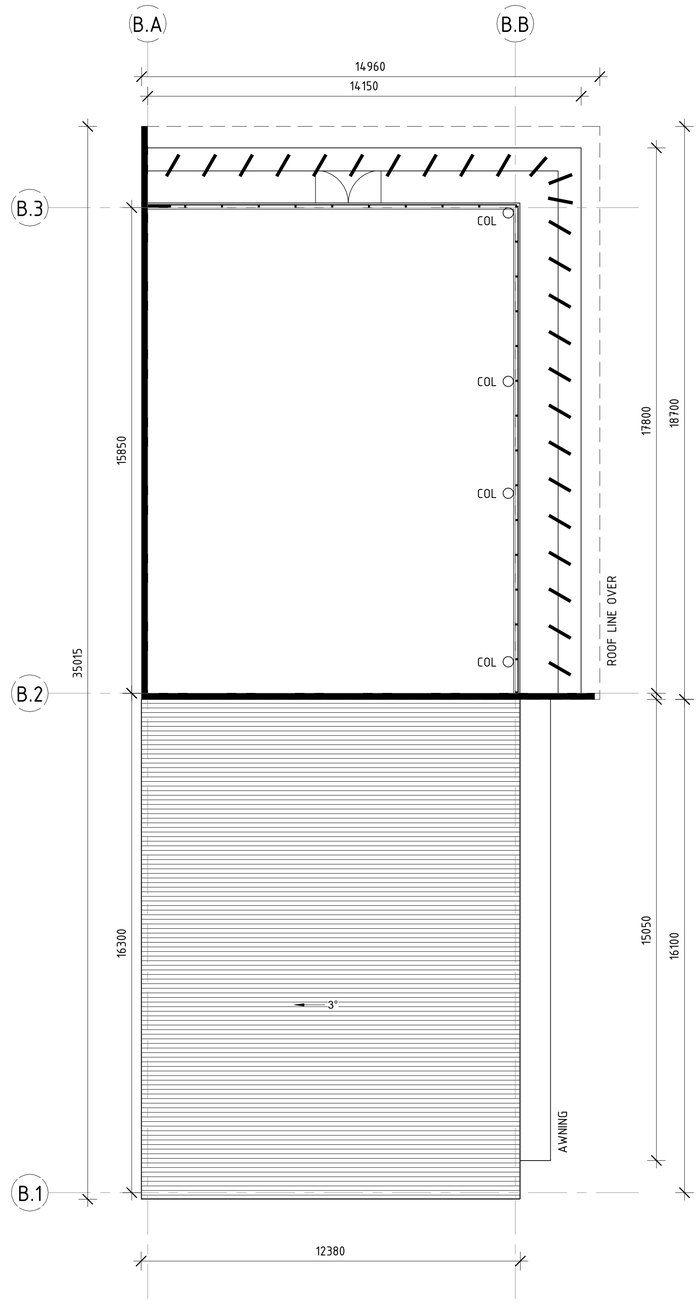

2 D05 OFFICE LEVEL 1
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SCALE 1:100

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B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED OFFICE BUILDING FLOOR PLAN

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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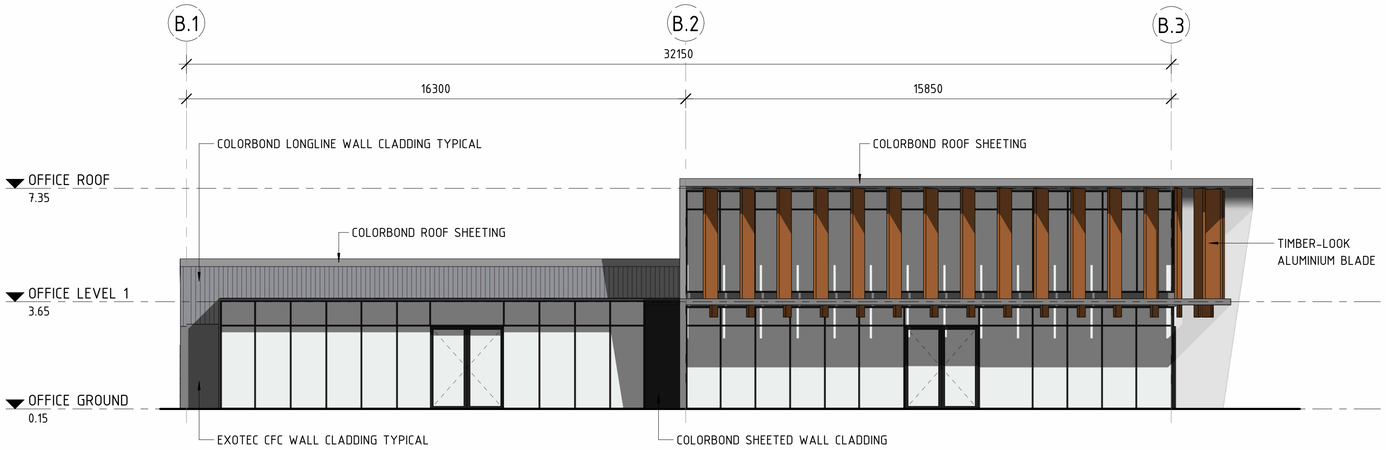
23043	D04	B



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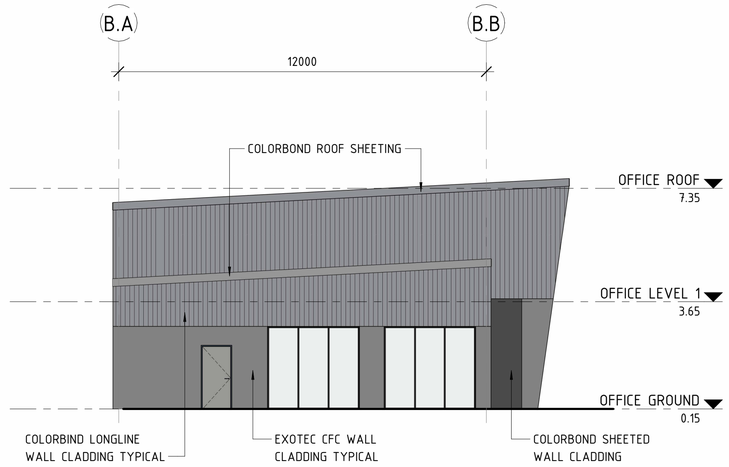

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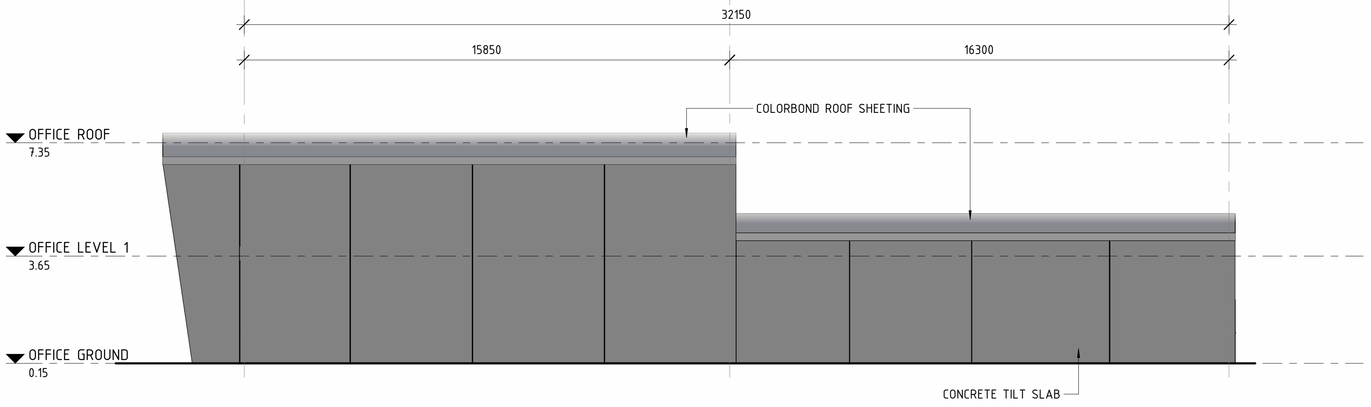

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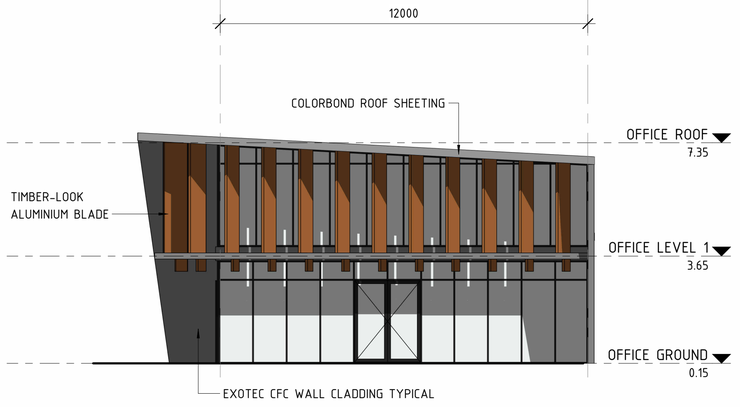

4 PROPOSED OFFICE BUILDING ELEVATION - EAST
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	03.11.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

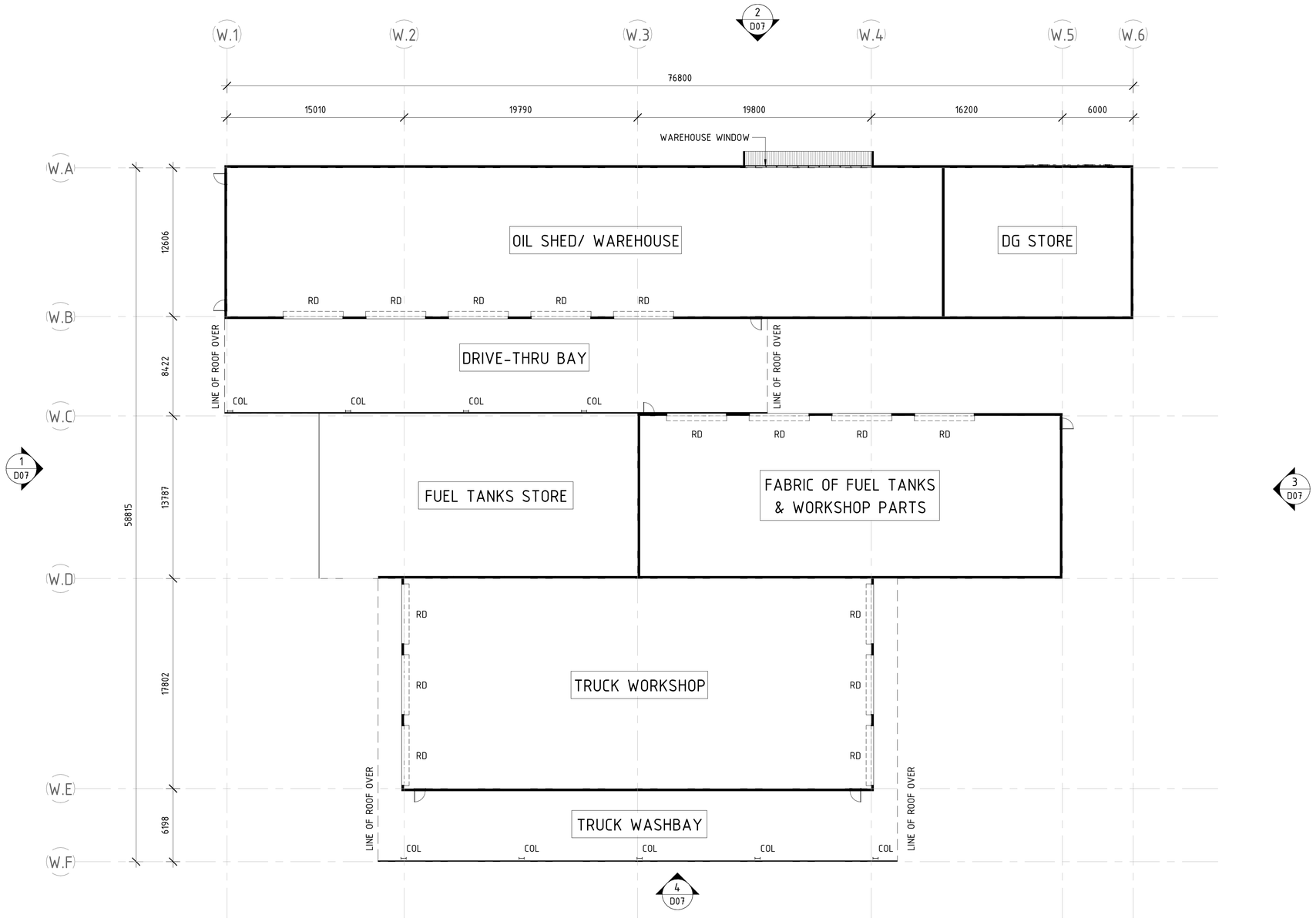
DRAWING TITLE
PROPOSED OFFICE BUILDING FLOOR PLAN ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
18.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043 D05	B



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NSW ARCHITECTS REGISTRATION BOARD: 10787

ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

0 4 8 12 16 20m

SCALE 1:200

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

ACN 612 132 233

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY

for:
PORT ACCESS PTY LTD.

at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED WORKSHOP FLOOR PLAN

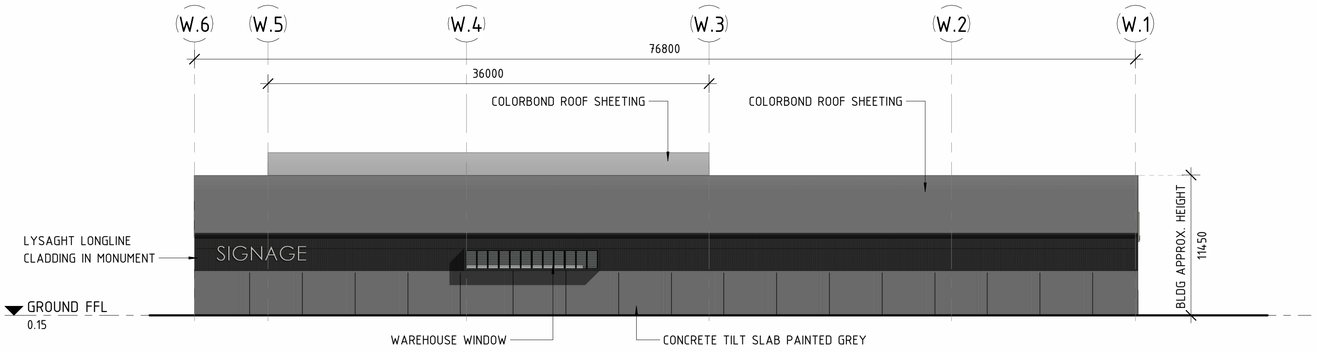
STATUS

DA ISSUE

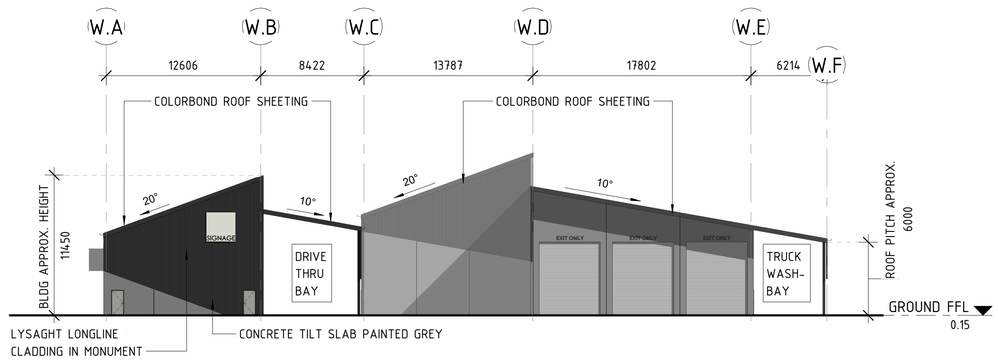
DATE CREATED	ORIGINAL SCALE	SHEET
18.10.23	1 : 200	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

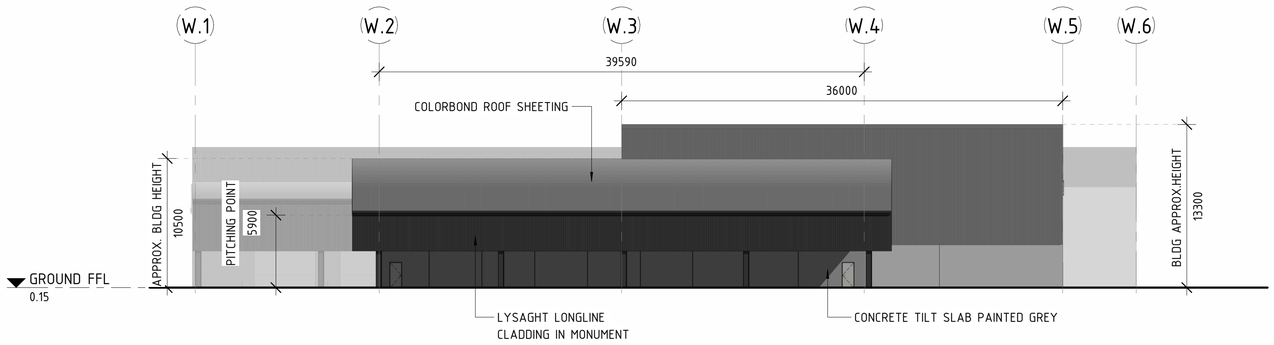
DRAWING NO	REV
23043 D06	B



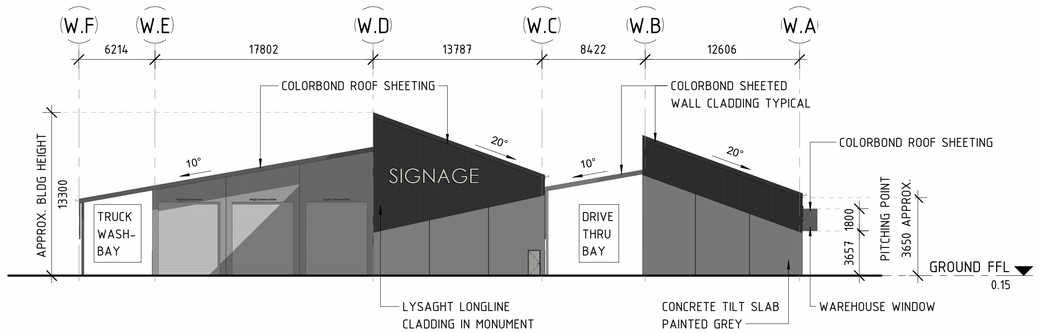
2 D06 WORKSHOP ELEVATION - EAST
SCALE 1 : 250 @ A1



1 D06 WORKSHOP ELEVATION - NORTH
SCALE 1 : 250 @ A1



4 D06 WORKSHOP ELEVATION - WEST
SCALE 1 : 250 @ A1



3 D06 WORKSHOP ELEVATION - SOUTH
SCALE 1 : 250 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 5 10 15 20 25m
SCALE 1:250

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PROFESSIONAL QUALIFICATION:
SIGNATURE:

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A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

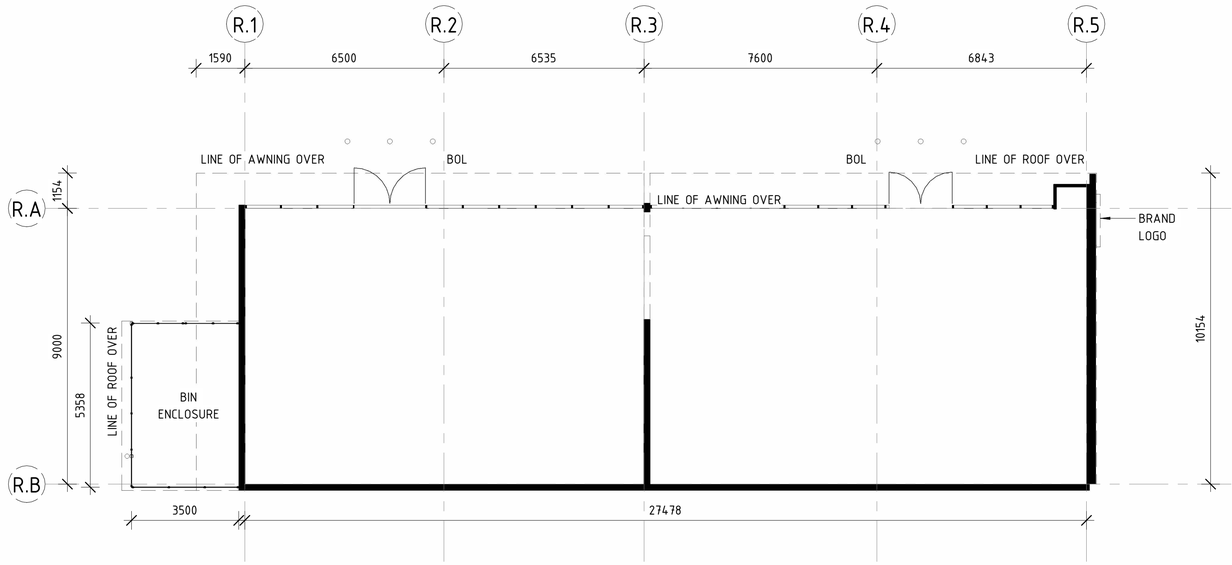
DRAWING TITLE
PROPOSED WORKSHOP BUILDING ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
18.10.23	1 : 250	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043 D07	B



1 / D09 PROPOSED RETAIL STORE FLOOR PLAN

SCALE 1 : 100 @ A1

0 2 4 6 8 10m

SCALE 1:100

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY

for:
PORT ACCESS PTY LTD.

at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED RETAIL STORE FLOOR PLAN

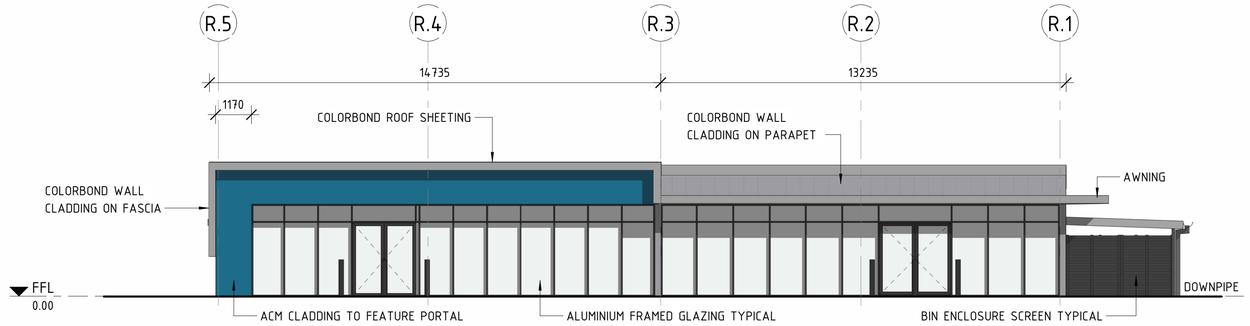
STATUS

DA ISSUE

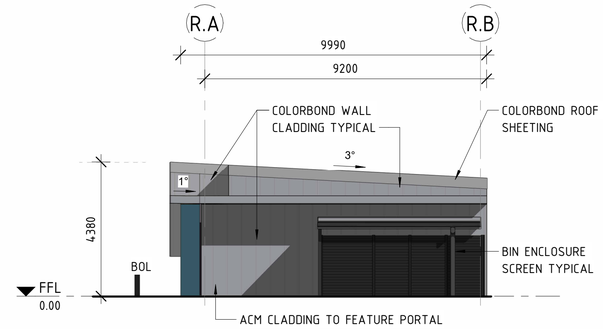
DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

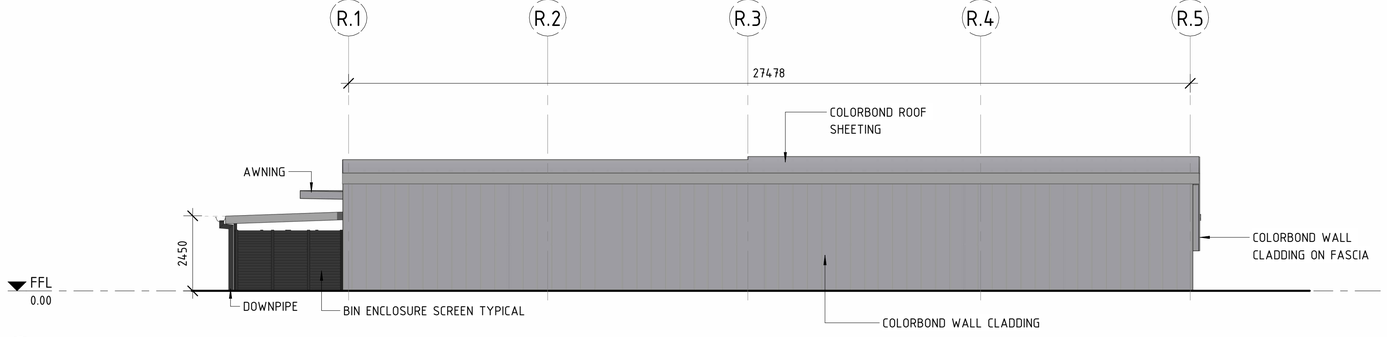
DRAWING NO		REV
23043	D08	B



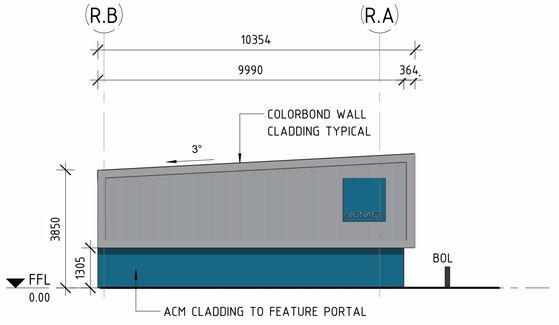
1 PROPOSED RETAIL STORE ELEVATION - EAST
SCALE 1 : 100 @ A1



2 PROPOSED RETAIL STORE ELEVATION - NORTH
SCALE 1 : 100 @ A1



3 PROPOSED RETAIL STORE ELEVATION - WEST
SCALE 1 : 100 @ A1



4 PROPOSED RETAIL STORE ELEVATION - SOUTH
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
PROPOSED RETAIL STORE ELEVATIONS

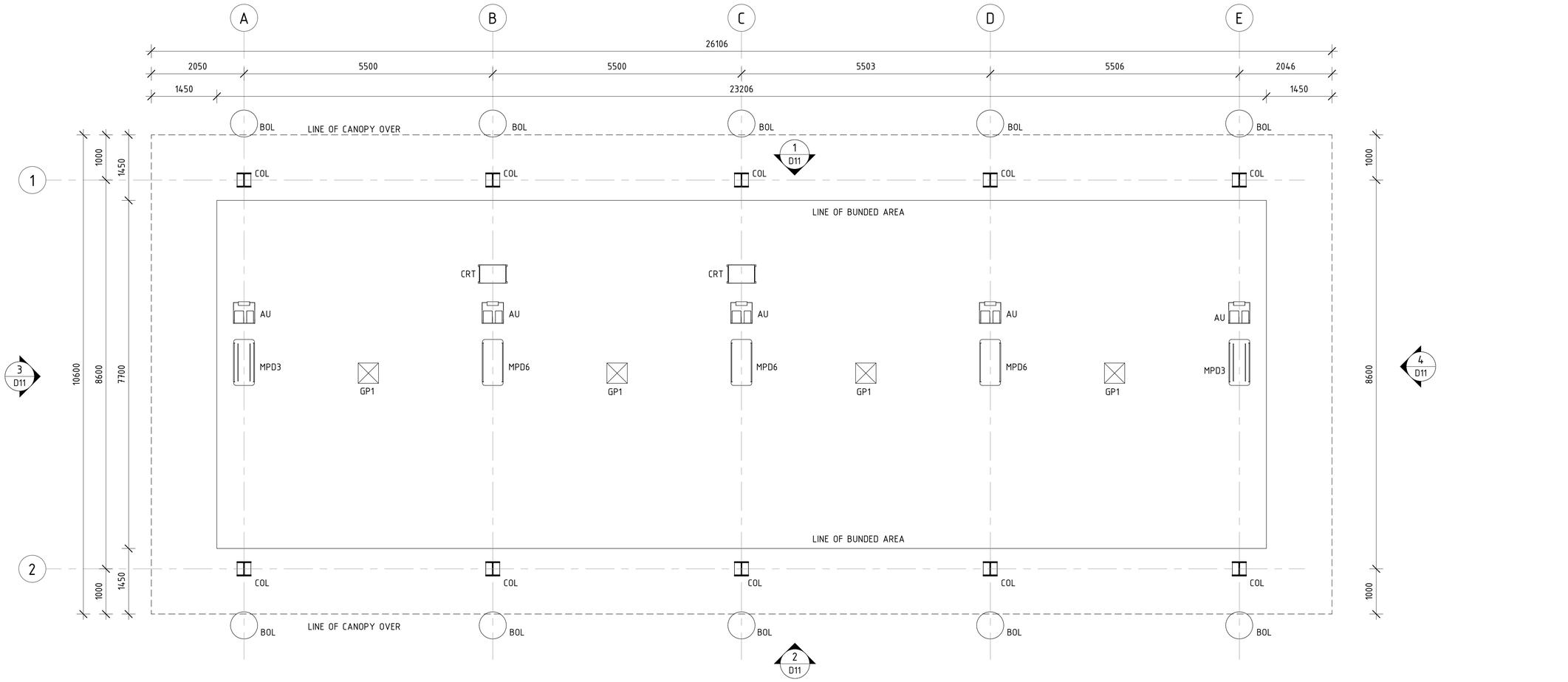
STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
23.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO		REV
23043	D09	B

LEGEND	
ID	DESCRIPTION
AU	AMENITIES UNIT
BOL	BOLLARD
COL	COLUMN TO ENGINEER'S DETAILS
GP1	GULLY PIT - OILY WATER
MPD3	DISPENSER - 3 HOSE
MPD6	DISPENSER - 6 HOSE



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DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	BF	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK CANOPY FLOOR PLAN

SCALE 1:50

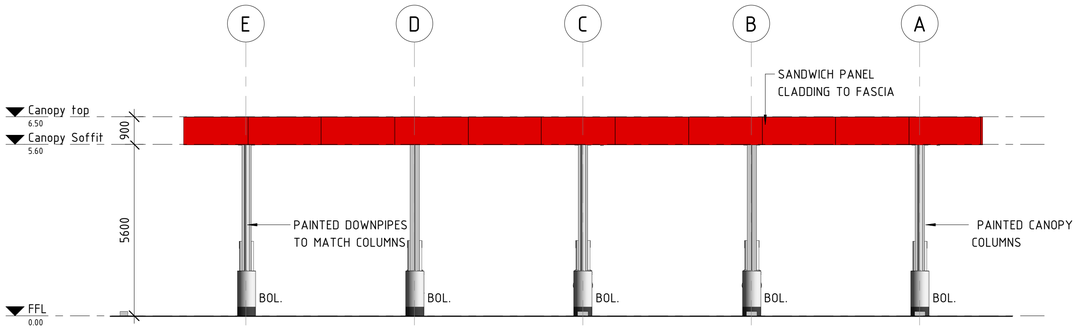
STATUS

DA ISSUE

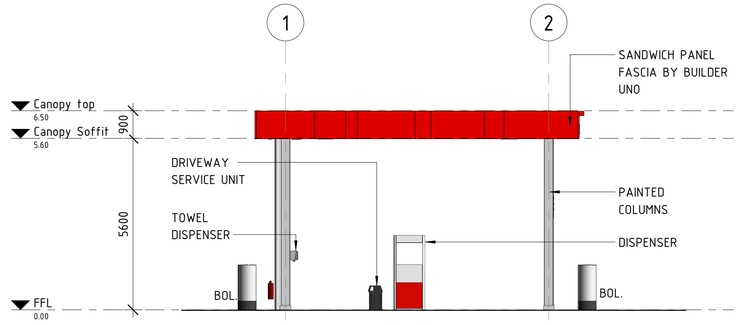
DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	As indicated	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

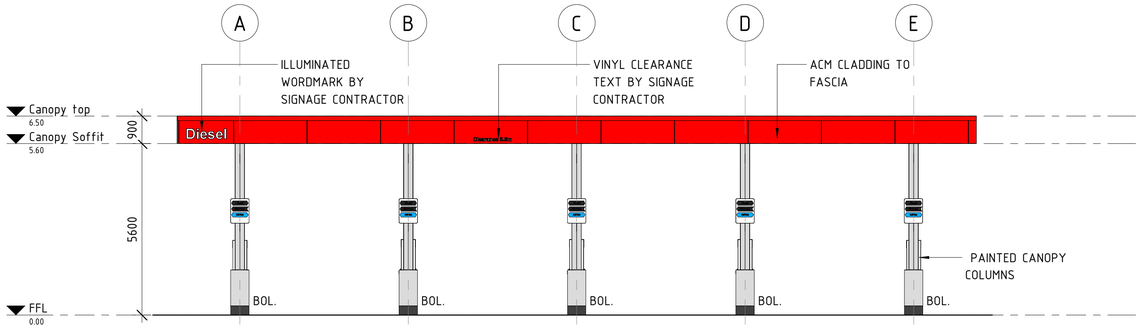
DRAWING NO		REV
23043	D10	C



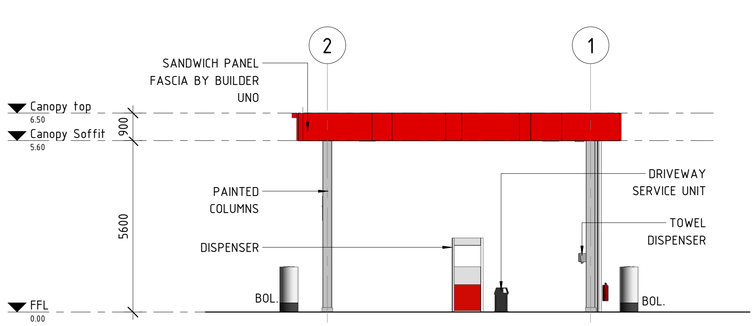
1 / D10 CANOPY ELEVATION - NORTH
SCALE 1 : 100 @ A1



3 / D10 CANOPY ELEVATION - WEST
SCALE 1 : 100 @ A1



2 / D10 CANOPY ELEVATION - SOUTH
SCALE 1 : 100 @ A1



4 / D10 CANOPY ELEVATION - EAST
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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NSW ARCHITECTS REGISTRATION BOARD: 10787
ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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TFA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
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A	27.10.23	BF	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
TRUCK CANOPY ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO		REV
23043	D11	C

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

SIGNAGE SCHEDULE

'S1'	PRIMARY 12m SITE ID PRICE SIGN
'S2'	SECONDARY 9m SITE ID PRICE SIGN
'S3'	GENERIC WALL SIGNAGE TO BE CONFIRMED
'S4'	FUEL SALES SHOP SIGNAGE TO BE CONFIRMED
'S5'	CANOPY DIESEL SIGNAGE
'S6'	PRODUCT LEADERBOARDS WITH BOLLARD SUPPORT
'S7'	ENTRY DIRECTIONAL SIGNAGE
'S8'	EXIT DIRECTIONAL SIGNAGE
'S9'	GIVEWAY SIGN TO LOCAL AUTHORITY REQUIREMENTS
'S10'	AUTHORISED ACCESS ONLY SIGNAGE
'S11'	'NO ENTRY' SIGANGE

COLINTA ROAD
HELEEN DOWNS ROAD
CAR ENTRY/EXIT CROSSOVER
EXIT CROSSOVER
ENTRY CROSSOVER
ENTRY CROSSOVER
TRUCK CANOPY
OFFICE BUILDING
OFFICE BUILDING
FUEL SALES
OIL SHED/ WAREHOUSE
DG STORE
FUEL TANKS STORE
FABRIC. OF FUEL TANKS & WORKSHOP PARTS
TRUCK WORKSHOP
TO RON MCLEAN DRIVE

0 10 20 30 40 50m
SCALE 1:500

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NSW ARCHITECTS REGISTRATION BOARD : 10787
ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS
TfA Project Group

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Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	30.10.23	DGC	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
SITE SIGNAGE PLAN

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10.10.23	1:500	A1

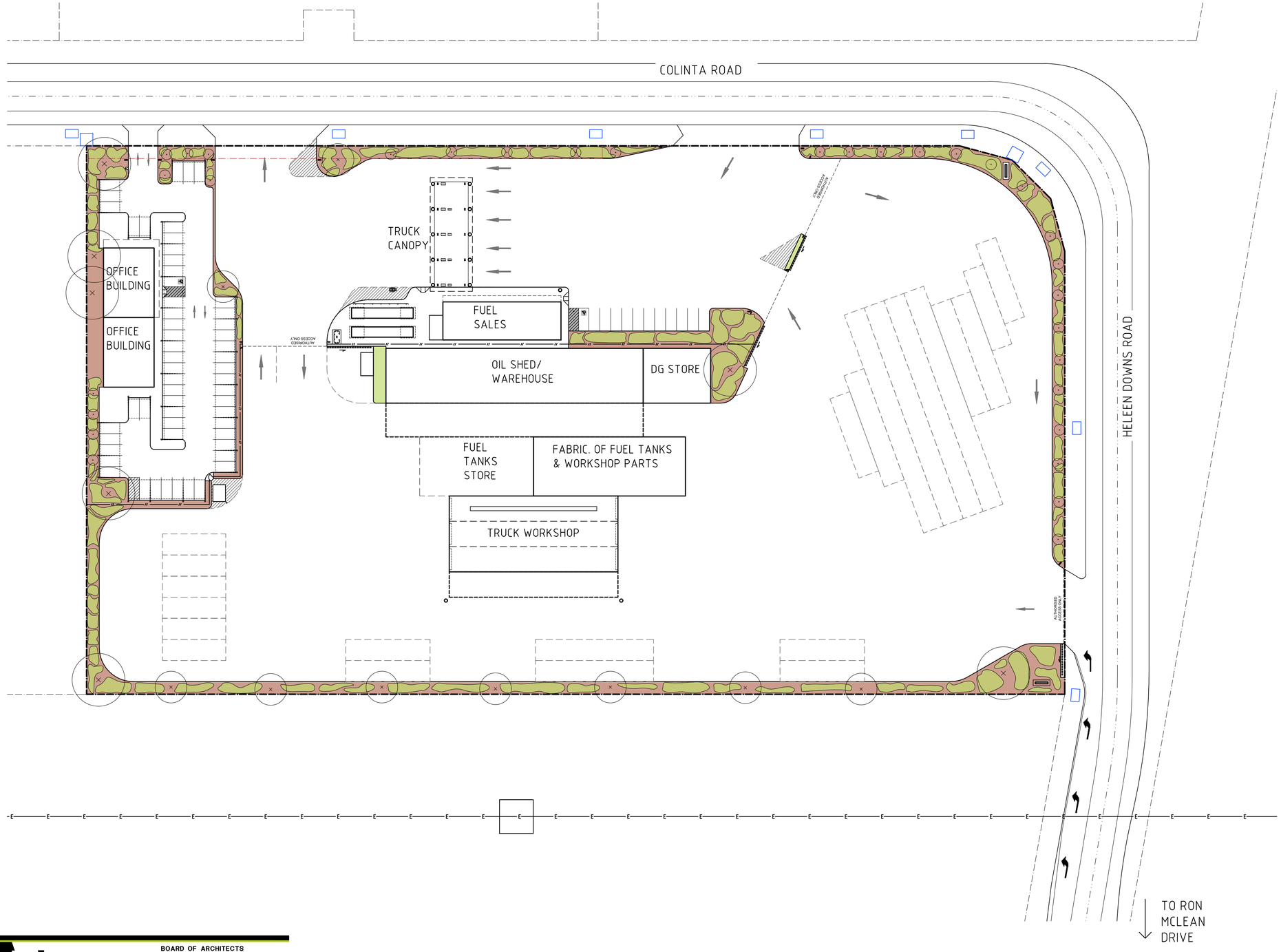
DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D12	B

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha



NOTES

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2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LANDSCAPING NOTES

1. NOT FOR TENDER OR CONSTRUCTION.
2. THE SITE CONTAINS NO SIGNIFICANT EXISTING VEGETATION WITHIN THE SITE.
3. THIS DRAWING IS INTENDED AS A CONCEPTUAL LANDSCAPE LAYOUT DRAWING ONLY.
4. AT THE OPERATIONAL WORKS STAGE, A FULLY DETAILED LANDSCAPE PLAN WILL BE SUBMITTED, ALONG WITH ALL RELEVANT DETAILS & SPECIES, WITH AN EMPHASIS ON DROUGHT HARDY & LOCALLY SIGNIFICANT SPECIES, IN COMPLIANCE WITH PLANNING SCHEME POLICIES
5. AREAS AROUND ENTRANCES, EXITS & PEDESTRIAN CROSSING POINTS ARE TO CONSIST OF LOW SHRUBS & GROUNDCOVERS TO ENABLE GOOD VISIBILITY & SAFE MOVEMENT OF VEHICLES & PEDESTRIANS.
6. LANDSCAPE PLANTINGS ARE TO BE VERIFIED WHEN DETAILED DESIGN LOCATES PROPOSED UNDERGROUND SERVICE LINES.
7. ALL PAVEMENT AREAS ARE TO HAVE A 150mm MAX CONTINUOUS CONCRETE KERB BARRIER TO LANDSCAPE AREAS.
8. LANDSCAPING MEANS THE TREATMENT OF PREMISES FOR THE PURPOSES OF ENHANCING OR PROTECTING THE AMENITY OF A SITE AND THE SURROUNDING LOCALITY, INCLUDING, BUT NOT LIMITED TO, THE USE OF SCREENING BY FENCES, PLANTING OF TREES, HEDGES, SHRUBS AND GRASS, LAND FORMATIONS, TERRACES, GARDENS, SEATING, RUBBISH BINS, SHADE STRUCTURES, LIGHTING & PLAYGROUNDS.

	GROUNDCOVER PLANTING FOR GOOD & SAFE VISIBILITY AROUND VEHICLE ENTRANCES, EXIT, PARKING AND PEDESTRIAN CROSSINGS
	GARDEN BEDS CONSISTING OF GROUNDCOVERS, SHRUBS & FEATURE TREES. HEDGE PLANTING TO BE USED TO RESTRICT PEDESTRIAN MOVEMENTS WHERE REQUIRED.
	FEATURE TREE PLANTING AMONGST GARDEN BEDS & GRASSED AREAS ARE INDICATIVE ONLY. FINAL SPECIES & SPACING TO BE DETERMINED AT DETAIL DESIGN.

SPECIES EXAMPLES

FINAL SPECIES TO BE CONFIRMED AT DETAIL DESIGN STAGE.

GROUNDCOVERS:
0-1m COMPACT HERBACEOUS PLANTS & SHRUBS THAT COVER THE SURFACE OF THE
GROUND HELPING TO PREVENT EROSION & WEED INVASION.
EG. KANGAROO PAW, DIANELLA, LOMANDRA, THEMEDA, TUSSOCK GRASS

VINES & CASCADING:
PLANTS WITH A GROWTH HABIT OF TRAILING OR CLIMBING STEMS, LIANAS OR RUNNERS.
EG. JASMINE, HIBBERTIA, PANDOREA, DICHONDRA, HEDERACEUM

SHRUBS:
1-5m MULTI-STEMMED WOODY PLANTS OF RELATIVELY LOW HEIGHT, VEGETATION CAN
BE TO THE GROUND, ABLE TO BE PRUNED WITHOUT ADVERSELY AFFECTING HEALTH.
EG. ACACIA, CALLISTEMON, GREVILLEA, WESTRINGIA, BANKSIA, CORDYLINE

TREES:
5m+ COMMONLY A SINGLE TRUNKED WOODY PLANT OF SIGNIFICANT SIZE WHEN FULLY
GROWN.
EG. CUPANIOPSIS, XANTHOSTEMON, BANKSIA, CASUARINA, MELALEUCA

0 10 20 30 40 50m

SCALE 1:500

Member Australian Institute of Architects

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NSW ARCHITECTS REGISTRATION BOARD : 10787

ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	24.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
CONCEPTUAL LANDSCAPE PLAN

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
24.10.23	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D13	B

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

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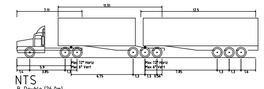
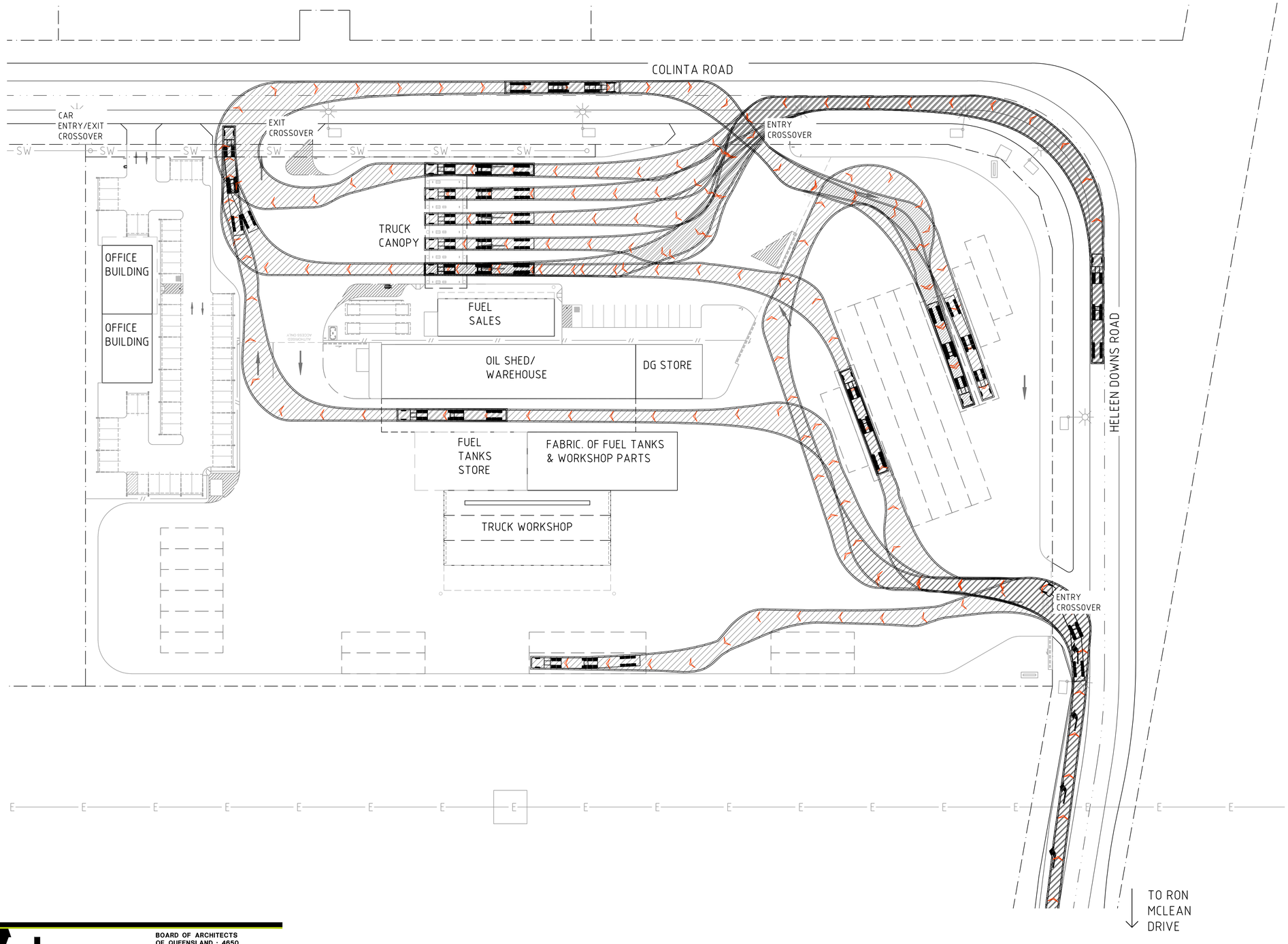
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.



NTS

B-Double (26.0m)	
Overall Length	26.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.420m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE B-DOUBLE (26m)



0 10 20 30 40 50m

SCALE 1:500

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PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH B-DOUBLE

STATUS

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23043-D14	B

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.
4. DEVELOPER TO CONFIRM ACCESS COMPLIANCE FOR A-TRIPLE TO SURROUNDING ROADS.

COLINTA ROAD

CAR ENTRY/EXIT CROSSOVER

EXIT CROSSOVER

ENTRY CROSSOVER

TRUCK CANOPY

OFFICE BUILDING

OFFICE BUILDING

FUEL SALES

OIL SHED/ WAREHOUSE

DG STORE

FUEL TANKS STORE

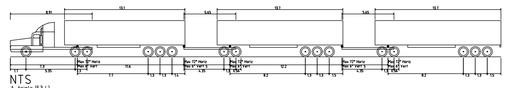
FABRIC. OF FUEL TANKS & WORKSHOP PARTS

TRUCK WORKSHOP

HELEEN DOWNS ROAD

ENTRY CROSSOVER

TO RON MCLEAN DRIVE



NTS

A-triple (53.4)	
Overall Length	53.400m
Overall Width	2.550m
Overall Body Height	3.963m
Min Body Ground Tlearance	0.563m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE A-TRIPLE (53m)

0 10 20 30 40 50m

SCALE 1:500

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PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH A-TRIPLE

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

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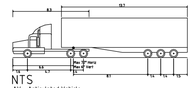
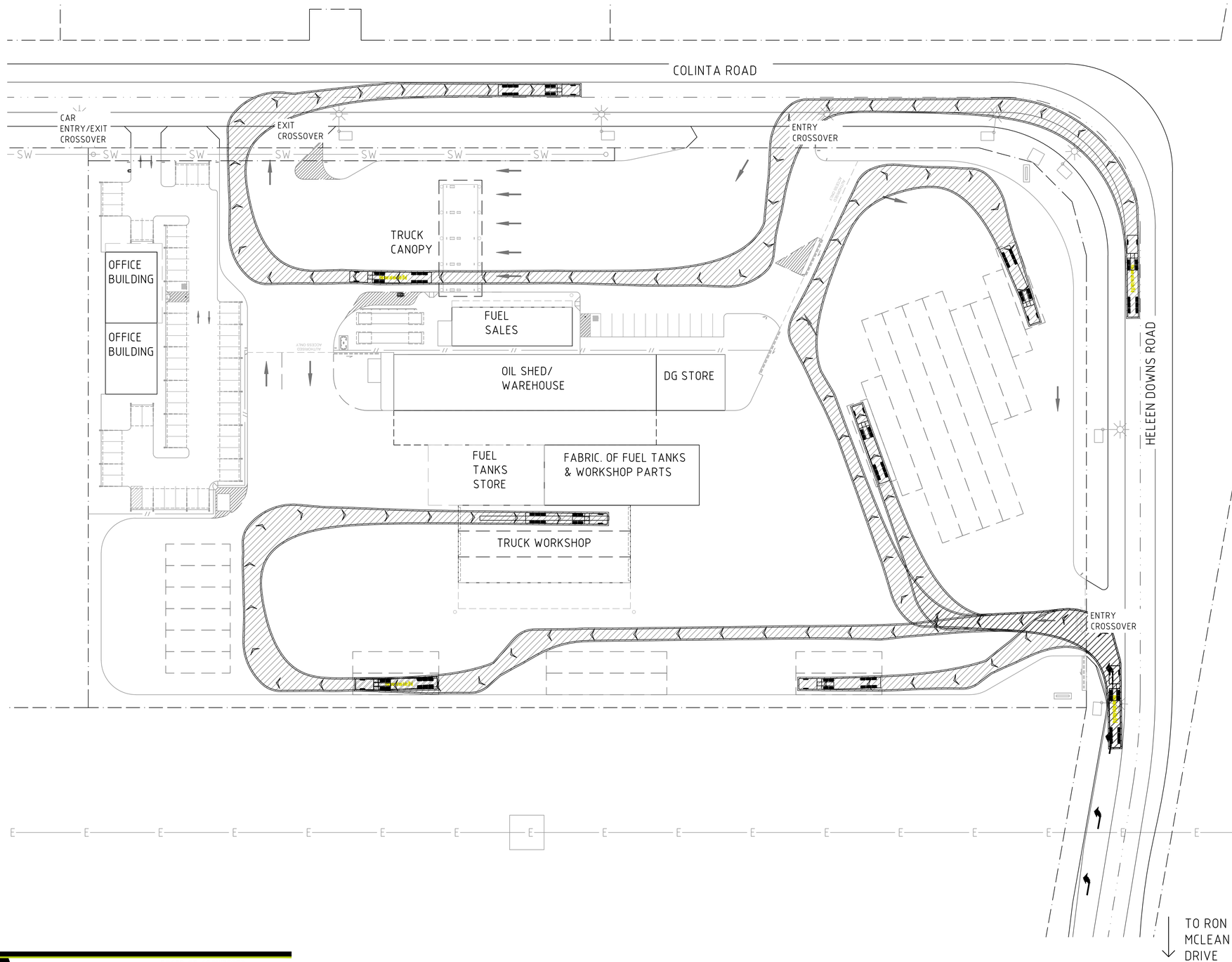


NTS

AV - Articulated Vehicle

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.438m
Track Width	2.500m
Lock-to-lock time	6.00s
Kerb to Kerb Turning Radius	12.500m

DESIGN VEHICLE AV (19m)



0 10 20 30 40 50m

SCALE 1:500

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PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH AV TANKER & SITE CIRCULATION

STATUS

DA ISSUE

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SITE VIEW 1

SITE VIEW 2

SITE VIEW 3

SITE VIEW 4

NOTE:
COLOURS, FINISHES AND SIGNAGE SHOWN INDICATIVE.
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C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE

SITE PERSPECTIVES

STATUS

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COLINTA ROAD ENTRY VIEW

HELEEN DOWNS ROAD ENTRY VIEW

SHOP & TRUCK CANOPY VIEW

OFFICE VIEW

NOTE:
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C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE
SITE PERSPECTIVES

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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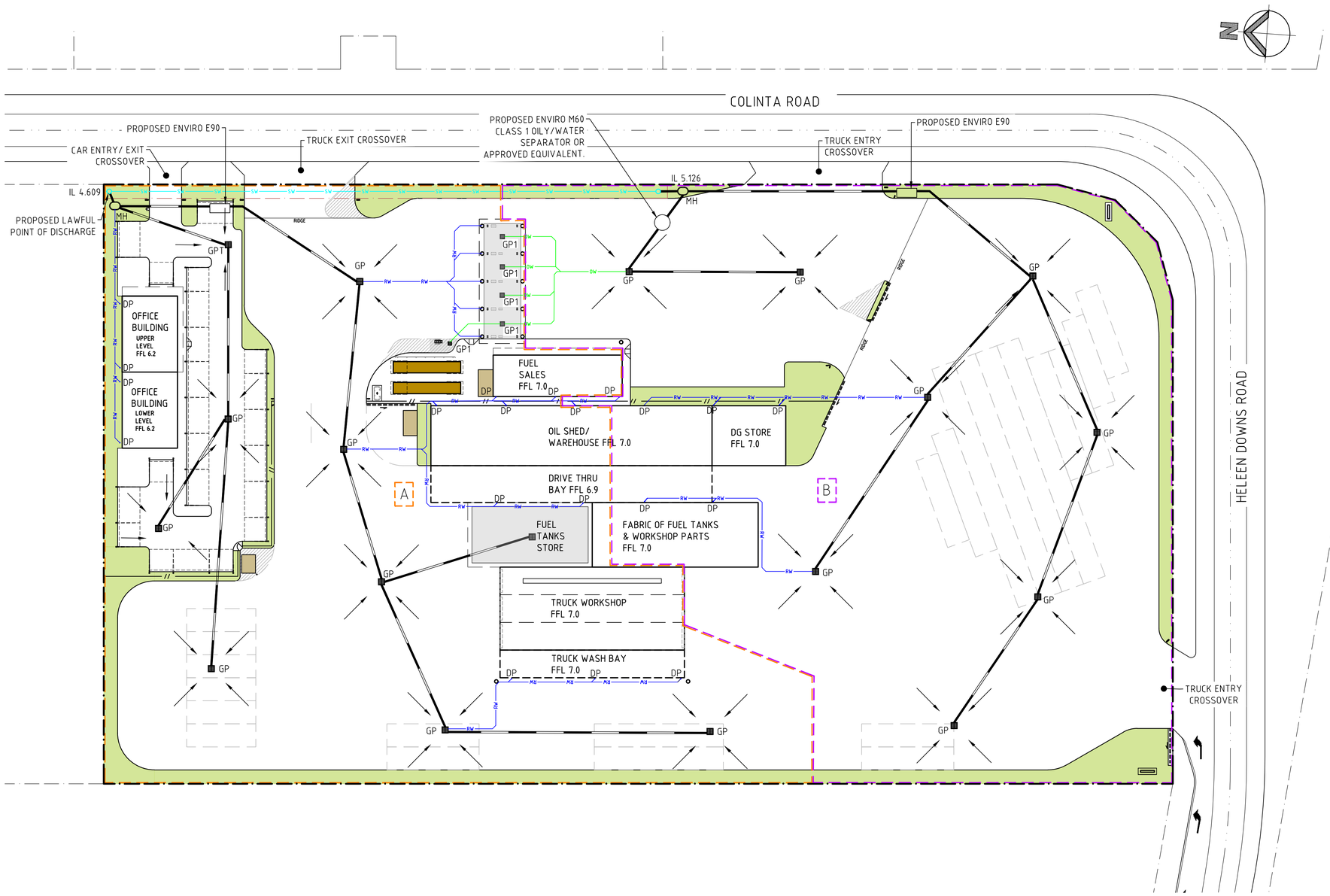

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

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2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
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LEGEND

	PROPERTY BOUNDARY
	PROPOSED STORMWATER PIPE
RW	PROPOSED ROOFWATER PIPE
OW	PROPOSED OILY WATER HDPE PIPE
SW	EXISTING STORMWATER LINE
MH	PROPOSED MANHOLE
	GENERAL DIRECTION OF SURFACE
DP	PROPOSED DOWN PIPE
GP/GP1	PROPOSED GULLY PIT/OILY WATER GULLY PIT
GPT	PROPOSED GULLY PIT FITTED WITH GROSS POLLUTANT TRAP (ATLAN STORMSACK OR APPROVED EQUIVALENT).
	REFUELING, LOADING AND STORAGE AREA
A B	CATCHMENT LABEL

0 10 20 30 40 50m

SCALE 1:500

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B	15.11.23	PM	ISSUED FOR INFORMATION	BM	JA

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN

STATUS
APPROVAL

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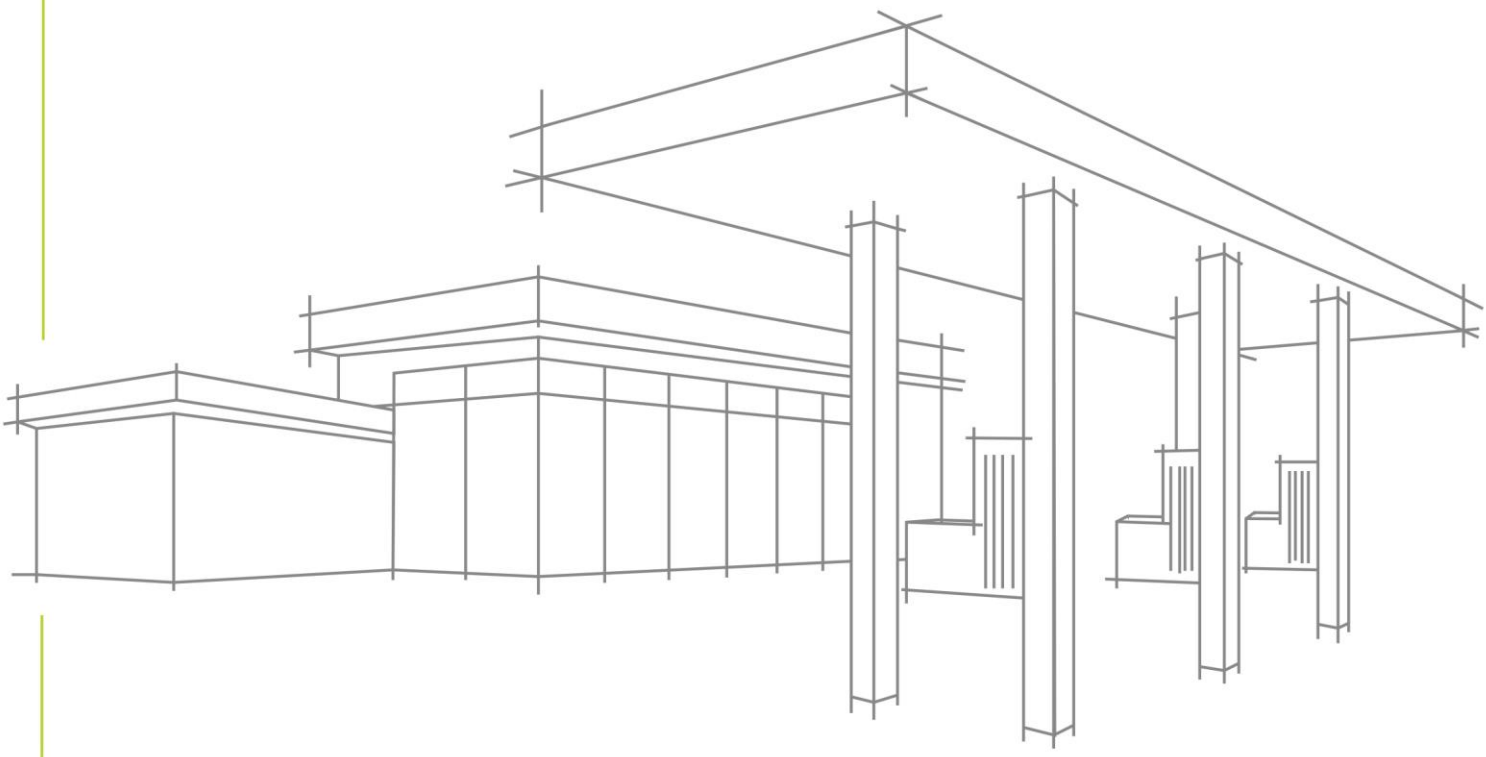
SITE BASED STORMWATER QUALITY MANAGEMENT PLAN

PORT ACCESS - CLEVELAND BAY



TTA Project Group

CREATE · PLAN · DELIVER

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

SITE BASED STORMWATER QUALITY MANAGEMENT PLAN

Port Access – Cleveland Bay

CLIENT: Port Access Pty Ltd

ADDRESS:

TFA REFERENCE: 23043

TFA CONTACT: Juan Avella

Document Control

REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
A	10 August 2023	P. Manickam	J. Avella	Approval
B	15 November 2023	P. Manickam	J. Avella	Approval

TFA Project Group

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TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

This Site Based Stormwater Management Plan (SBSMP) report has been prepared by TFA Project Group on behalf of Port Access Pty Ltd (the applicant) for the proposed Port Access Facility at Cleveland Bay Industrial Park, Townsville QLD 4811. The purpose of this document is to verify that stormwater quantity and quality have been considered as part of this development and do not have any adverse impact on the downstream environment as outlined in the State Planning Policy July 2017, the Townsville City Plan and Queensland Urban Drainage Manual 2016.

The proposed development will accommodate the proposed truck refuelling facility, office building, oil shed and warehouse, DG store, fuel tanks store, truck workshop facility, wash bay, car and truck parking areas with associated driveways, walkways, and landscape areas.

The SBSMP is part of the Development Approval process and addresses both the construction and operational phases of the development. Table 1 below shows additional details of the proposed development. The proposed site layout plan is shown in **Appendix A**.

Table 1: Details of Proposed Development

Developer	Port Access Pty Ltd
Address	1 Colinta Road, Cleveland Bay Industrial Park, Townsville, QLD 4811
Property Description	Lot 21 on SP341874
Area of Development	TOTAL: 30,000 m²
Stormwater Risk Classification	High Risk (due to the storage and transfer on site of petroleum products that have the potential to cause harm to the environment, if released)
Existing Land Use	Vacant Land

2.0 THE SITE

2.1 Site Description

The development site is located at 1 Colinta Road, Cleveland Bay Industrial Park, Townsville QLD 4811 within the Townsville City Council area, on Lot 21 SP315832. Currently, the land use of the entire site is vacant land, with a regular shape containing a total area of approximately 30,000 m^2. The site development is bound by Heleen Downs Road on the southern boundary and Colinta Road on the eastern boundary, both comprising access points for the site.

A geotechnical investigation will be completed to determine soil type and any specific treatment or management requirements to mitigate erosion or pollution of the environment will be undertaken, if necessary, prior to the commencement of works. The location of the site is shown on Figure 1.

Figure 1: Location of the proposed development site (Source: Queensland Globe)

3.0 SITE TOPOGRAPHY AND EXISTING DRAINAGE

3.1 Description of the Site Current Condition

Refer to **Appendix B** for the lot plans provided by Rowlands Survey dated 23/06/2023, which show the parcels of land in the area, with contour levels of the final surface. The proposed methodology for the development site is to be graded, where required to ensure positive drainage towards roadways or drainage reserves. The allotments will be built above the defined Q100 flood level. The proposed development site has surface levels approximately between RL 5.81m AHD to RL 7.18m AHD. The ground generally falls from south to north.

The survey plan indicates that there is a stormwater easement located within the site along the eastern boundary, providing two discharge points connected by a drainage pipe that drains from half way along the boundary to the north-east corner of the site. Consequently, it assumed that runoff generated from the site is captured and conveyed towards the two discharge points.

4.0 FLOODING

4.1 Flooding Information

Based on the Townsville City Council flood mapping, a portion of the development would be subject to flooding. Cleveland Bay Industrial Park Pty Ltd, provided the following works to minimise flooding in the development site:

- Filling works of the development site to be above the defined Q100 flood level
- Channel improvements works to compensate for the loss of floodplain storage (due to filling works) and drain runoff into Stuart Creek more efficiently.

An extract of the overlay map is shown in Figure 2 indicating the extent of flooding events near the site and **Appendix B** demonstrates proposed works to avoid the Q100 flood event.

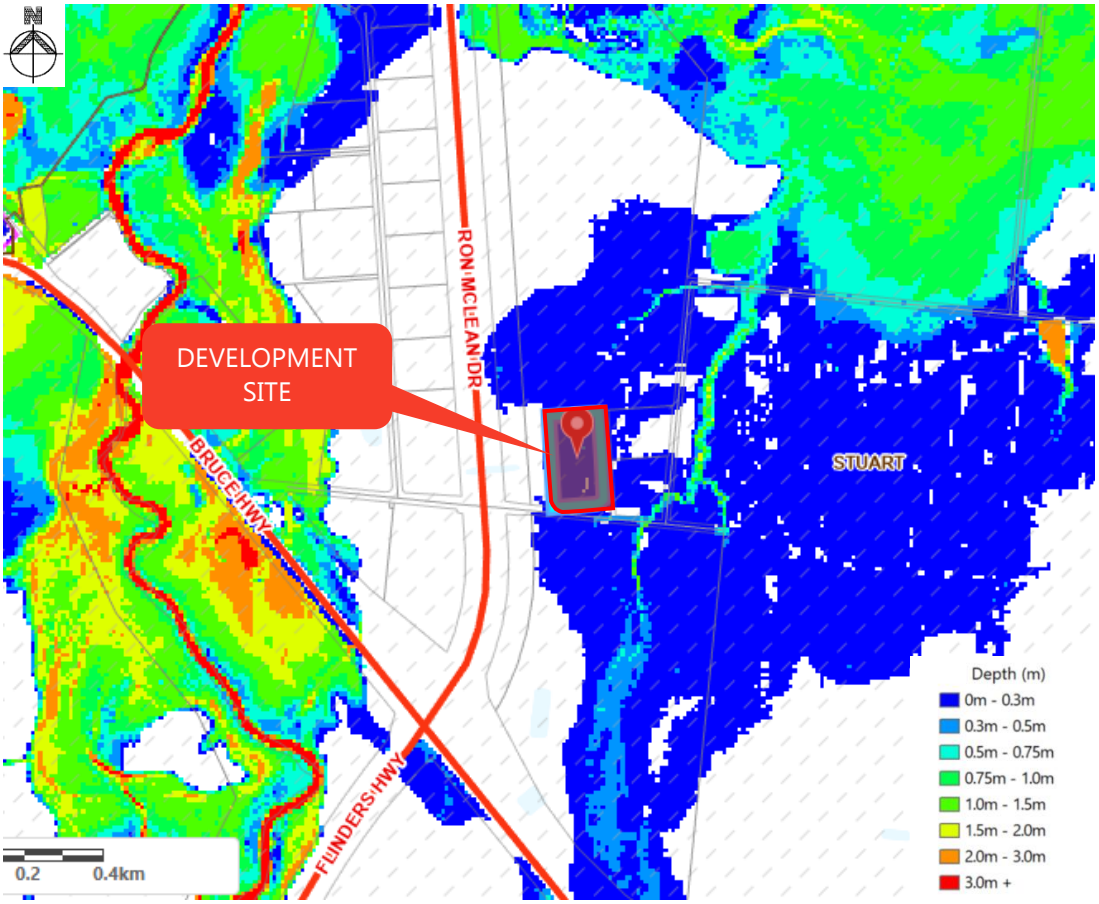


Figure 2: Development Flooding Information - 1% AEP Flood Depths (Source: TownsvilleMAPS)

5.0 PROPOSED DRAINAGE LAYOUT

5.1 Proposed Drainage

The post development stormwater drainage design generally maintains the overall catchment boundaries. The approach taken for the management of stormwater is based on isolating high-risk (hydrocarbon generating e.g. under the canopies) areas from the low-risk areas (the rest of the site).

Considering the high-risk nature of proposed activities, that is, dispensing and transfer of fuel under the canopy, the fuel dispensing/loading areas will be concreted, bunded and graded towards a collection pit which will capture and direct flows to an Enviro Australis M60 device (Class 1 Separator) for hydrocarbon removal at all times. Furthermore, the Enviro M60 unit will have sufficient capacity to treat a portion of runoff generated from low-risk areas in addition to the high-risk areas. Treated flows from the Enviro Australis Unit will be discharged to the stormwater network and a licensed contractor will remove the contents of the Enviro M60 when required.

It should be noted that the 2x50 kL above ground fuel tanks will be self-bunded. Consequently, any spillage or minor spills will not reach low risk areas (the rest of the site).

Stormwater runoff generated from the remaining low-risk areas (which is most of the site's surface area including roofing) will be split into two main catchments (Catchment A & Catchment B). Stormwater runoff will be captured via gully pits and underground pipes then directed to an Enviro Australis E90 series unit and proposed manhole as per each catchment, prior to the proposed lawful point of discharge (LPD). Treated stormwater runoff will result in significantly improved stormwater quality and a licensed contractor will remove the contents of the Enviro E90 devices when required. Refer to **Appendix C** for a detailed Conceptual Stormwater Management Plan.

6.0 WATER QUANTITY ASSESSMENT

The purpose of this part of the assessment is to investigate whether there is a need to attenuate stormwater flows to negate any adverse impacts on upstream or downstream environments.

Following conversations with the Industrial estate Developer, we understand that the provided LPD at each lot, would accommodate for a total flow composed of a 95% impervious area, at each lot accounting for proposed and future development works. This LPD would connect to a large basin north of the proposed development (built as part of the industrial estate), removing the requirement for onsite detention.

7.0 WATER QUALITY ASSESSMENT

7.1 Construction Phase

Impacts on receiving waters and surrounding areas will be minimised during the construction phase with measures as outlined in this SBSMP, and the Erosion and Sediment Control Plan (ESCP) to be developed for the operational works.

7.1.1 Pollutants

Typical pollutants generated during the construction phase of the development are shown below in Table 2.

Table 2: Pollutant Typically Generated During the Construction Phase

POLLUTANT	SOURCES
Litter	Paper, construction packaging, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building
Hydrocarbons	Fuel and oil spills, leaks from construction equipment
Toxic materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash-waters
pH altering substances	Acid sulphate soils, cement slurry and wash-waters

7.1.2 Performance Objectives

The objectives are:

- Minimise the amount of sediment entering waterways and stormwater drains;
- Minimise or prevent environmental harm to waterways and associated ecosystems;
- Minimise localised flooding caused by sediment runoff;
- Minimise exposure of soils.

Table 3: Construction Phase Performance Criteria

INDICATOR	WATER QUALITY OBJECTIVES
pH	6.5 – 8.5
Suspended Solids	Annual Mean < 10mg/L
Oils and Grease	No visible films or odour
Litter/ Gross pollutants	No anthropogenic (man-made) materials greater than 5mm in any dimension
Dissolved oxygen	80-100% saturation

7.1.3 Monitoring and Maintenance

The general requirement of monitoring during the construction phase will be:

- Work activities are restricted to designated construction areas;
- Earthworks and site clearing are undertaken in accordance with an Erosion and Sediment Control Plan;
- Erosion and sediment control devices are to be constructed/installed in accordance with an Erosion and Sediment Control Plan;
- Inspection of sediment fences, erosion and sediment control structures/devices on a weekly basis as well as after any rain event exceeding 25mm in 24hrs (major storm event);

- Stormwater discharges from the site are not having any adverse effect on the downstream environment;
- Monitoring and recording of the performance of the drainage control devices including water quality testing where required;
- Any failure in the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site;
- Any failure to the stormwater system causing damage to surroundings should implement immediate remedial work to the damaged area.

7.1.4 Responsibility and Reporting

- The contractor shall be responsible for monitoring the performance of all drainage control and erosion and sediment control devices;
- Records of any failures to devices should be kept and reported to the Construction Manager;
- Regular inspections of the devices shall be reported to the Construction Manager;
- Inspections of the devices after heavy rainfall shall be reported to the Construction Manager;

7.2 Operational Phase

7.2.1 Pollutants

The key pollutants typically generated during this phase for the entire catchment are shown in Table 4 below.

Table 4: Pollutant Typically Generated During the Operational Phase

POLLUTANT	POTENTIAL SOURCE
Litter / Gross Pollutants	Waste materials, food, food packaging etc.
Hydrocarbons	Fuel and oil spills, dispensing areas, car park
Nutrients (N & P)	Nitrogen, Phosphorus
Sediments	Aggregates bins, wind deposits and car trails
Surfactants	Detergents, cleaning agents

7.2.2 Water Quality Objectives

Based on Townsville City Council for Industrial Developments design objectives for stormwater treatments, the development is required to achieve the TN, TP and TSS pollutant reductions outlined in Table 5 below.

Table 5: Operational Phase Water Quality Objectives

POLLUTANT	REDUCTION*
Total Suspended Solids	80%
Total Phosphorus	65%
Total Nitrogen	40%
Gross Pollutants >5mm	90%

**These values represent the minimum required reductions in the average annual pollutant loads generated from an unmitigated development.*

7.3 Proposed Stormwater Treatment

7.3.1 Stormwater treatment philosophy

Waterways and other aquatic environments are valued by the community for their social, cultural, economic and environmental benefits. Urban runoff, contaminated with nutrients, sediment and other pollutants adversely impacts theses valued resources. Water Sensitive Urban Design (WSUD) is a holistic approach to the planning and design of urban landscapes that minimises theses negative impacts. This approach is used on this project to select the treatment options that considers the civil, landscape and ecological aspects of the site.

7.3.2 Source Controls

Rubbish bins can be an effective source control for litter and are appropriate for most developments. Bins will be placed in appropriate areas (such as buildings and staff amenity) to encourage thoughtful waste disposal.

7.3.3 At-source gross pollutant traps

A gross pollutant trap (GPT) is a treatment device designed to capture coarse sediment, trash and vegetation matter in stormwater runoff. GPTs are often used as the first treatment element in a treatment train. ATLAN Stormsack (or approved equivalent) will be installed in gully pits within this development. The Stormsack has the following removal efficiencies; Gross Pollutants (GP) 100%, Total Suspended Solids (TSS) 61%, Total Phosphorus (TP) 28%, Total Nitrogen (TN) 28%.

7.3.4 In Ground Proprietary Treatment Devices

In ground proprietary stormwater treatment devices are useful for treatment of stormwater on sites that are constrained by available area for stormwater treatment. These devices are installed underground and can remove a full range of pollutants from stormwater, including TSS, soluble heavy metals, oil, grease, and nutrients.

7.3.4.1 Stormwater Treatment Device

All the dispensing of fuel areas and remote fill point (high risk areas) will be bunded and runoff generated from these areas will be conveyed by grated pits and will discharge into the proposed Enviro M60 unit for treatment at all times. Additionally, a portion of runoff generated from low-risk areas will also discharge to the Enviro M60 unit which has a treatment capacity of 142 L/s.

Runoff generated from the majority of low-risk areas will discharge into the proposed Enviro E90 unit. The Enviro E90 is an in-line multi-chamber device designed to remove the broad spectrum of pollutants transported by run-off water from high impact catchments. Pollutant groups are separated and contained in separate zones for removal with a 419 L/s treatment capacity and achieves reduction of gross pollutants (GP) 100%, suspended solids (TSS) 86%, total phosphorus (TP) 97%, total nitrogen (TN) 85% and total hydrocarbons 90%. Refer to section 7.5 for the proposed development MUSIC modelling assessment.

7.4 Fuel Related Stormwater Treatment

The treatment train shown in Figure 3 uses the Best Management guidelines to treat stormwater runoff from the site.

7.4.1 Fuel Dispensing and Tanker Unloading Areas

The fuel dispensing areas will be concrete surfaced and covered by a canopy. Fuel dispensing areas will be bunded to prevent stormwater runoff from outside the canopy flowing into the dispensing area and to ensure that any spills are contained within these areas. The perimeter of the canopies will overhang the dispensing containment areas by 10 degrees to reduce windblown rain into the area. Any flows/spills in the containment area will drain to gully pits which will discharge to an appropriately sized Enviro M60 unit.

Bulk fuel transfers from a road tanker will take place outside the canopy in a concrete bunded area, and therefore any runoff or spills from the tanker delivery stand will drain to the proposed Enviro M60 unit.

7.4.1.1 Enviro M60 Device

The Enviro M60 device is a fully integrated in-line device capable of removing pollutants including oils from run-off. The device does not require any power, utilising the energy of the water flow to separate and contain pollutants for periodical removal by evacuation equipment. Internal surface can be inspected and washed as required, whilst screens can be removed and cleaned if and as required.

The Enviro MR60 unit has a spill containment volume of 18,000 liters, which allows for spills from an 8,000 litres tanker compartment plus allowance for wind-blown rain. The MR60 will remove hydrocarbons, gross pollutants, and total suspended solids.

The device has a design service life of 100 years for fixed parts and 25 years for replacement parts. The Enviro M60 unit claims a performance which can reach reductions of 95% for Gross Pollutants (GP), a 90% of Suspended Solids (TSS), a 97% of Total Phosphorous (TP), an 85% of total Nitrogen (TN), a 99.95% of total hydrocarbons. Hydrocarbon retention occurs in a separate chamber which operates as a best practice oil and grease arrestor. The Enviro M60 will remove hydrocarbons, gross pollutants, total suspended solids, total phosphorous and total nitrogen. Refer to **Appendix D** for the Enviro M60.20 unit details.

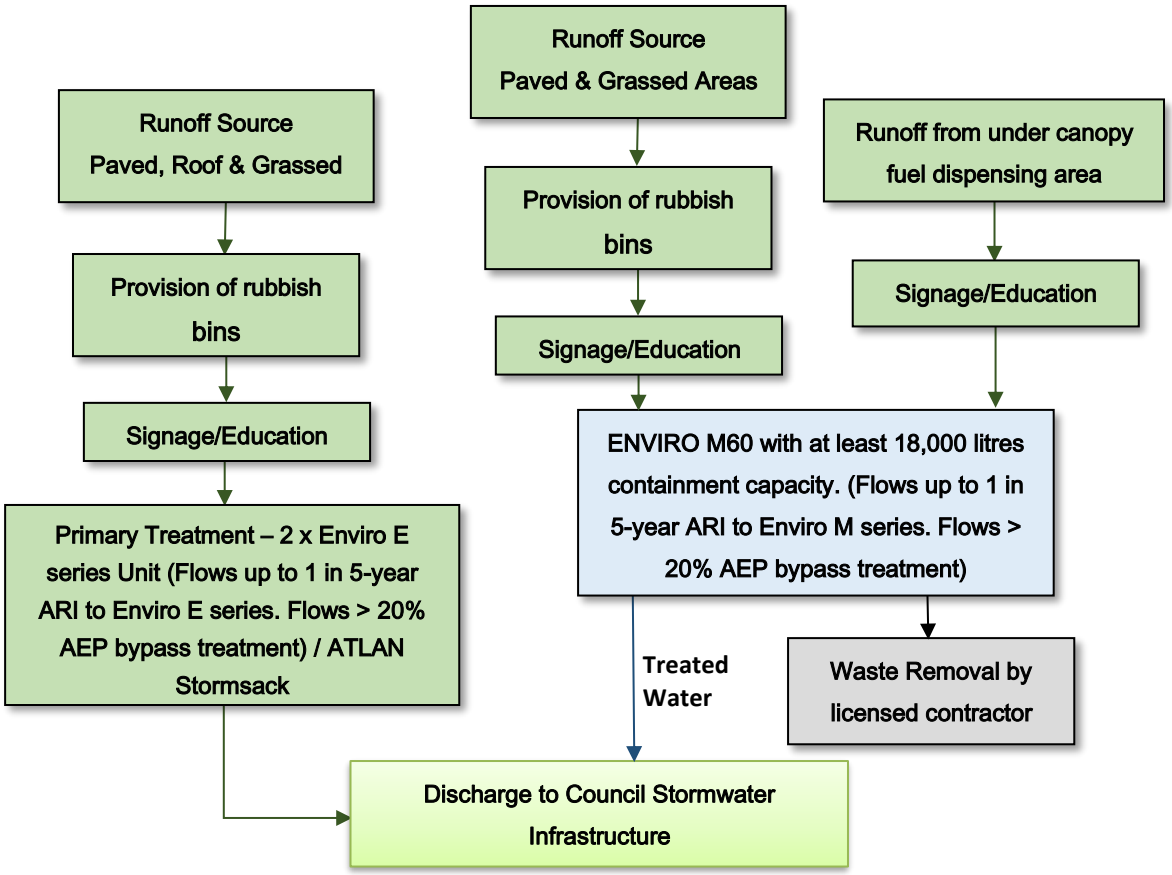


Figure 3: Fuel Related Stormwater Treatment Philosophy

7.4.2 Above Ground Fuel Storage Tanks

The above ground self-bunded fuel storage tanks, piping and fuel dispensers will be installed in accordance with the Australian Institute of Petroleum (AIP) standards.

7.5 MUSIC Modelling

7.5.1 Introduction

The Model for Urban Stormwater Improvement Conceptualisation (MUSIC - Version 6.3) was used to assess the performance of the proposed stormwater treatment measures required to achieve statutory pollutant reduction targets for the operational phase of the project.

7.5.2 Music Model Setup

The input parameters for source node, soil behaviour and pollutant generation characteristics are based on Table A1.2 and 3.9 of MUSIC Modelling Guidelines Version 3.0 - 2018, WaterbyDesign (2018). The following inputs were used:

- MUSIC Modelling Guidelines Version 3.0 - 2018, Waterbydesign
- Queensland Urban Drainage Manual (QUDM), Second Edition 2016

The details of the catchments/source nodes used in the MUSIC model and the proposed treatment train modelled are shown in Table 6 below.

Table 6: MUSIC catchment parameters

CATCHMENT	TOTAL AREA (m^2)	SPLIT CATCHMENT AREA (m^2)	LAND USE	% IMPERVIOUS	PROPOSED TREATMENT TRAIN
Catchment A	15,713	3,404	Roof areas	100	1 x ATLAN Stormsack 1 x Enviro E90
		10,857	Paved areas	100	
		1,452	Landscaped areas	0	
Catchment B	14,287	558	Roof areas	100	1 x Enviro M60 Unit 1 x Enviro E90
		12,308	Paved areas	100	
		1,421	Landscaped areas	0	
TOTAL	**30,000**	**30,000**			

The proposed stormwater treatment train modelled in MUSIC consists of an Enviro M60 for high risk areas (refuelling and loading/unloading areas) and 2 x Enviro E90 and 1 x ATLAN Stormsack for low risk areas. Figure 4 below shows a schematic representation of the models analysed and Table 8 demonstrates that the pollutant load reduction objectives for the site have been achieved, i.e. the treatment methods proposed are adequate.

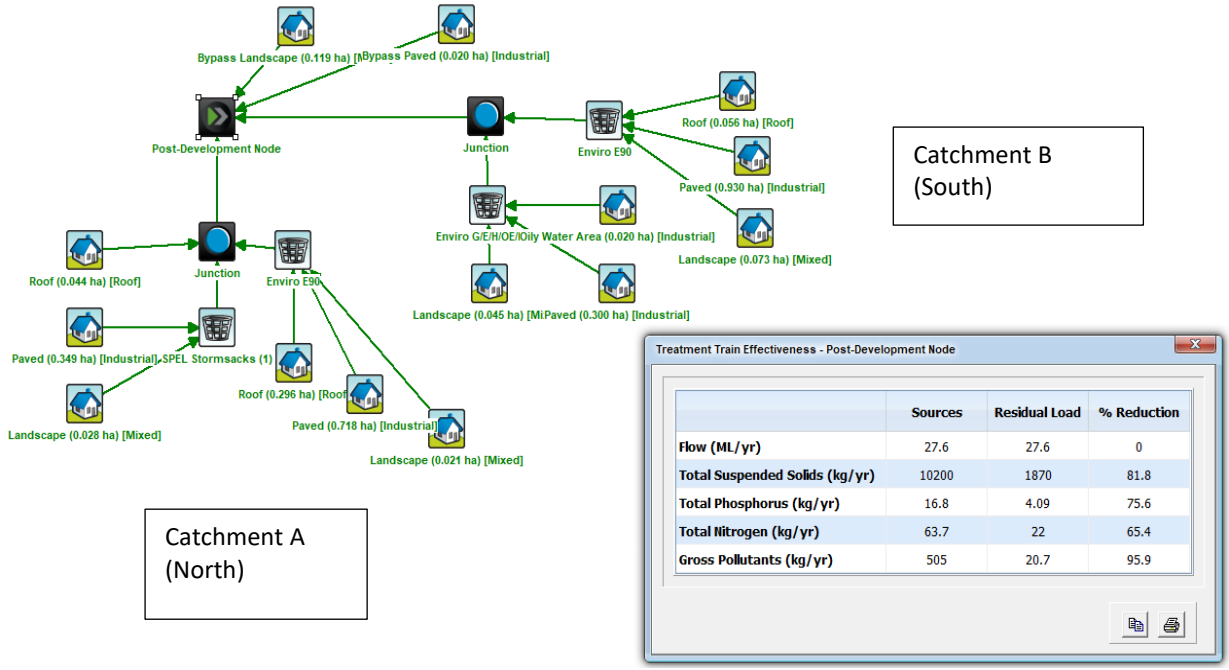


Figure 4: MUSIC Model Schematic – Lot 21 Ron Mclean Drive, Cleveland Bay Industrial Park, Townsville QLD 4811

7.5.3 Music Modelling Results

The proposed stormwater treatment measures were modelled in MUSIC as a treatment train. Table 7 below show details of proprietary products modelled in MUSIC.

Table 7: Details of Proprietary Treatment Systems as Modelled in MUSIC

Catchments	System Used	Number of units
A	ATLAN Stormsack (600 x 600)	1
	Enviro E90	1
B	Enviro Australis M60	1
	Enviro E90	1

Table 8 below, demonstrates that the pollutant load reduction objectives for the site have been achieved, i.e. the treatment methods proposed are adequate.

Table 8: MUSIC Model Treatment Effectiveness

PARAMETER	REQUIRED LOAD REDUCTION	MUSIC RESULTS ACHIEVED	OBJECTIVE ACHIEVED
Total Suspended Solids	80.0%	81.6%	Yes
Total Phosphorus	65.0%	75.5%	Yes
Total Nitrogen	40.0%	65.3%	Yes
Gross Pollutants	90.0%	95.9%	Yes

8.0 SITE MAINTENANCE AND MANAGEMENT PROCEDURES

8.1 Petrol Station Maintenance and Management Procedure

The service station operator will have a Petrol Handling Manual that will set out all requirements for the safe handling of combustible and flammable materials. This manual will dictate weekly, monthly and annual checking procedures with checklists, which will be completed, and the records stored.

The manual will also set out dry cleaning methods to be employed within the fuel dispensing area in lieu of washing down to reduce possible contaminated runoff. Emergency procedures will be also clearly set out detailing actions to be taken by site personnel in the case of varying possible emergencies such as spills, fire or risk of fire, vehicle accidents, etc.

In addition, a regular cleaning, maintenance program/contract is to be established for emptying of rubbish bins located around the site, removal of general litter from the site, inspection of gully pits and removal of any sediment or captured litter from pit's grates. The Enviro Australis unit will be inspected and maintained in accordance with the manufacturer's instructions. Refer to **Appendix E** for maintenance plans.

The maintenance plan will address the following:

- Inspection frequency;
- Maintenance frequency;
- Data collection/storage requirements;
- Detailed cleanout procedures.

The plan will include inspection procedures covering aspects such as equipment needs, maintenance techniques, occupational health and safety, public safety, environmental management considerations, disposal requirements of pollutants collected and access issues.

8.2 Maintenance Plans for Stormwater treatment devices

All stormwater quality improvement systems require regular maintenance in order to function adequately. Table 9 details the basic maintenance requirements for each type of stormwater quality improvements systems. A detailed maintenance schedule will be developed as part of the detailed design of the site.

Table 9: Maintenance Requirements

Control	Maintenance Requirement	Maintenance Period
ATLAN Stormsack	Remove sediment and captured litter	4 months (inspect after major storm)
Enviro M60	Generally, comprehensive maintenance is performed from the surface via vacuum truck. No personnel access required to enter the device for service and maintenance. All surfaces inside the units are visible from the service covers, negating the need for personnel to enter the device. If required, screens can be removed manually to wash them down if required without entering the device.	Design service intervals are 12 months. Service by evacuation trucks is typically completed in less than one hour.
Enviro E90	Generally, comprehensive maintenance is performed from the surface via vacuum truck. No personnel access required to enter the device for service and maintenance. All surfaces inside the units are visible from the service covers, negating the need for personnel to enter the device. If required, screens can be removed manually to wash them down if required without entering the device.	Design service intervals are 12 months. Service by evacuation trucks is typically completed in less than one hour.

For operational and maintenance guidelines refer to **Appendix E** and relevant manufacturer's documentation.

9.0 LIFECYCLE COSTS

A lifecycle cost analysis is not part of the scope of this report. All the recommended water quality treatment infrastructure lies within the development site, and it shall be maintained and serviced by the owners of the development at no cost to Council.

10.0 CONCLUSION

A Site Based Stormwater Management Plan has been prepared with respect to the proposed Cleveland Industrial Park Main Facility. The location of the site is shown on Figure 1 and the proposed development site layout is shown in **Appendix A**.

- Stormwater Quality- Construction Phase

  An Erosion and Sediment Control Plan aimed at minimising unacceptable impacts during the construction phase will be developed at the Operational Works stage, in accordance with Council Guidelines and Standards aiming to minimise unacceptable impacts to occur during the construction phase.

- Stormwater Quality- Operational Phase

  Conceptual MUSIC models for the site's catchment indicated that the proposed treatment measures will achieve the statutory water quality objectives for the site. Refer section 7.5 of this report for details. The proposed treatment is shown in **Appendix C**.

This Site Based Stormwater Management Plan has demonstrated that adequate stormwater quantity and quality management principles and techniques will be employed during the construction and operational of this development to comply with the Queensland State Planning Policy 2017, the Townsville City Plan and Queensland Urban Drainage Manual 2016. The methods proposed are considered current best management practice for a development of this type, on this site.

Yours faithfully

Pradeep Manickam

Cadet Engineer

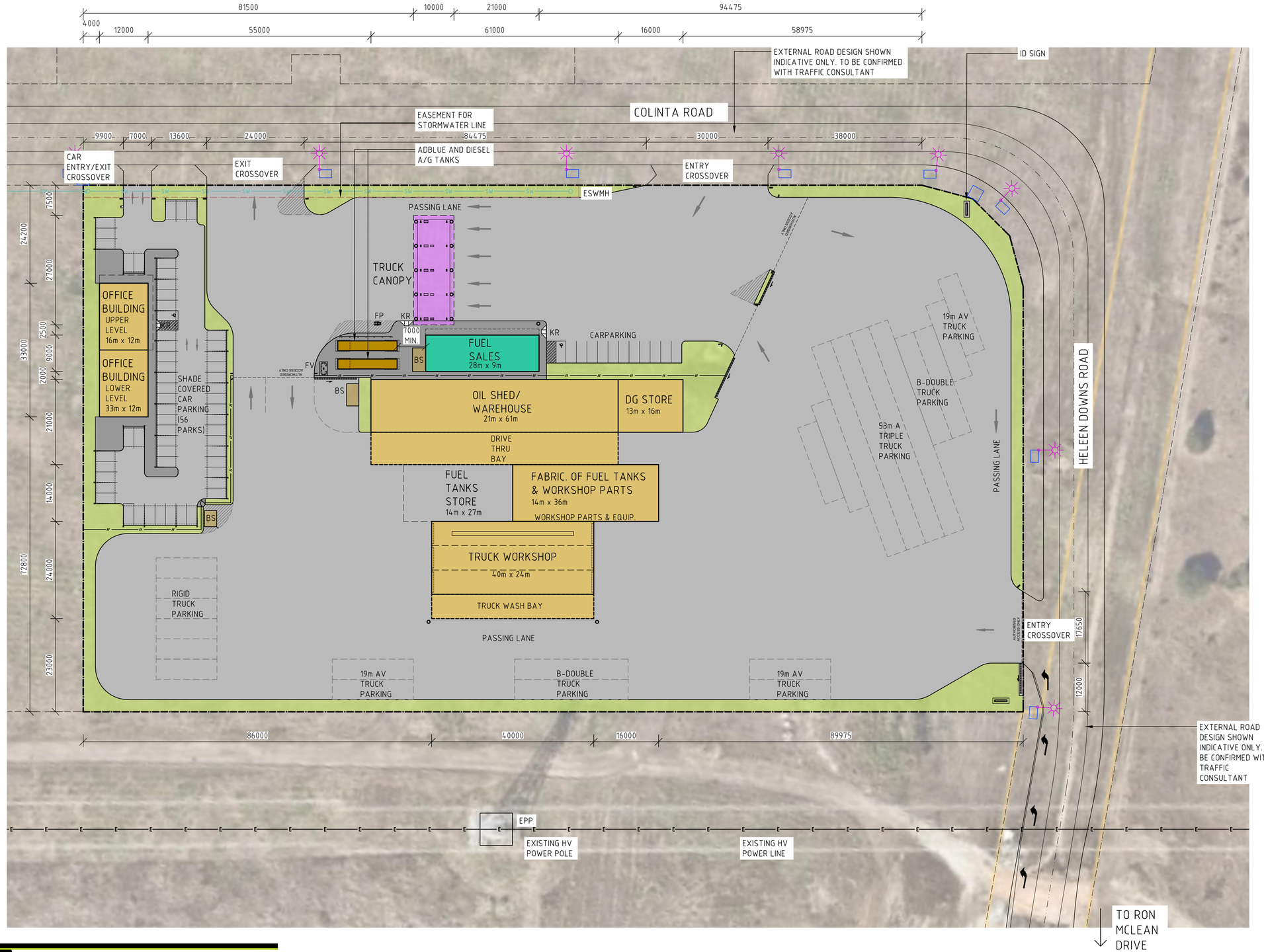
For and on behalf of TfA Group

Reviewed by

Juan Avella (RPEQ 11899)
BEng, MIEAust, CPEng, RPEQ, NER
Director Civil/Structural Engineering

For and on behalf of TfA Group

APPENDIX A – PROPOSED SITE LAYOUT PLAN



RPD

PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

BS	BIN STORE - REFER DETAIL DWGS.
EPP	EXISTING POWER POLE - REFER SURVEY PLAN
ESWMH	EXISTING STORMWATER MAN HOLE
FL	FLOODLIGHT - REFER TO ELECTRICAL CONSULTANTS DWGS.
FP	REMOTE FUEL FILL POINT - REFER FUEL DWGS.
FV	FUEL VENT STACK - REFER FUEL DWGS.
KR	KERB RAMP - REFER TYPICAL DETAILS
	EXISTING ELECTRICAL PILLAR/PITS APPROXIMATELY
	EXISTING LIGHT POLES APPROXIMATELY

DEVELOPMENT ASSESSMENT

LANDSCAPE AREA: 3147m² (10%) APPROX.

BUILDING AREAS

FUEL SALES:	252m²
TRUCK CANOPY:	270m²
OFFICE LOWER:	396m²
OFFICE UPPER:	192m²
OIL SHED/ WAREHOUSE:	1280m²
DG STORE:	208m²
FABRIC. FUEL TANKS & WORKSHOP:	504m²
FUEL TANKS STORAGE:	378m²
TRUCK WORKSHOP & TRUCK WASH:	960m²
TOTAL AREA:	4,440m²

CARPARKING ASSESSMENT

FUEL SALES CAR PARKING PROVIDED: = 43 CARS

OFFICE CAR PARKING PROVIDED: = 56 CARS

0 10 20 30 40 50m

SCALE 1:500

Member Australian Institute of Architects

BOARD OF ARCHITECTS OF QUEENSLAND : 4650

NSW ARCHITECTS REGISTRATION BOARD : 10787

ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	AW	ISSUED FOR INFORMATION	DGC	
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED SITE PLAN

STATUS

DA ISSUE

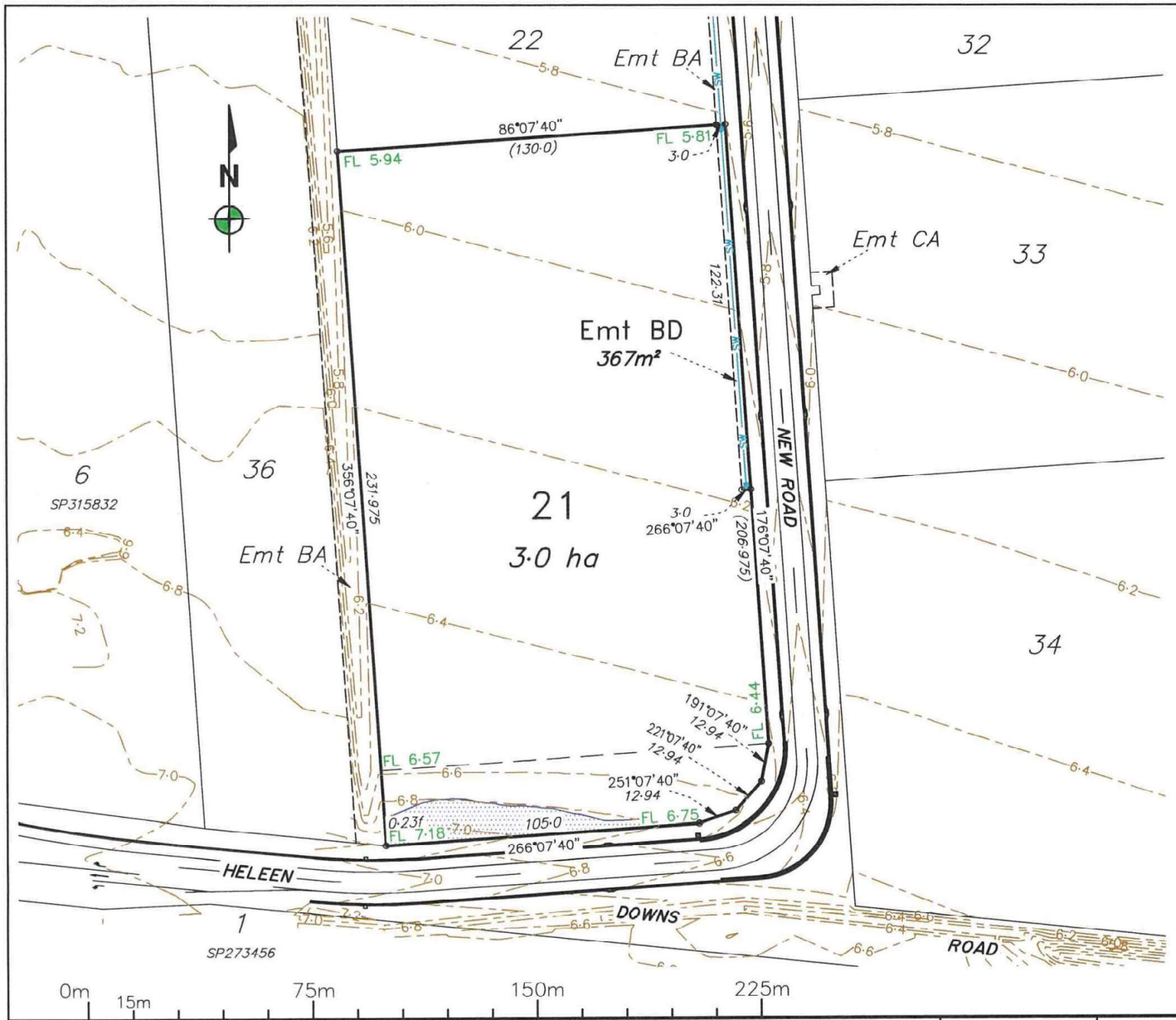
DATE CREATED	ORIGINAL SCALE	SHEET
10.10.23	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D02	B

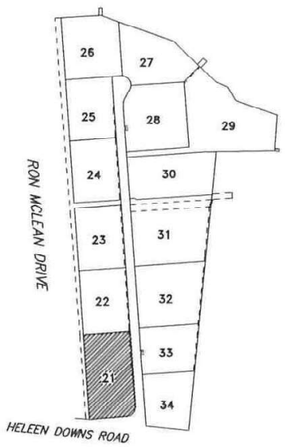
APPENDIX B – SITE SURVEY PLAN

REV	BY	DATE	DESCRIPTION
B	RG	23/06/2023	Emt BD added.
A	RG	22/02/2022	Road name amended.
0	RG	18/02/2022	Original Issue.



Notes:

- *Fill shall be placed in accordance with Townsville City Council Town Plan, policy for earthworks (construction) SC6.4.6.10.8, to provide a relative compaction determined by AS1289.5.11 using AS1289.5.4.1 or AS1289.5.7.1 for standard compactive effort, of not less than 98% of standard maximum dry density*
- *inspection and testing shall be carried out in compliance with SC6.4.6.10.8.*



6·8 — Design Surface Level (0·2m Contours)

Area of fill

FL 7·14 — Finished Design Level

0·17f — Depth of fill (± 50mm)

—SW— Drainage pipe

— — — — Batter line

LOCAL AUTHORITY

TOWNSVILLE CITY COUNCIL

LEVEL DATUM: AHD(Der)
REF BM No: 53476
REDUCED LEVEL: 7·945
LOCATION: LOT 5 on SP273456

AZIMUTH: MGA'94 vide SP315832

SURVEYOR: RSPL
DRAWN: Romy Ghebosu
SIGNED BY: Laurie Nolan

ROWLANDS SURVEYS
22 Gorden Street Garbutt, Townsville.
Ph:(07) 47755077 surveyors@rowlands.net.au

cleveland bay industrial park TOWNSVILLE

CLEVELAND BAY INDUSTRIAL PARK PTY LTD

– DISCLOSURE PLAN –

Proposed Lot 21

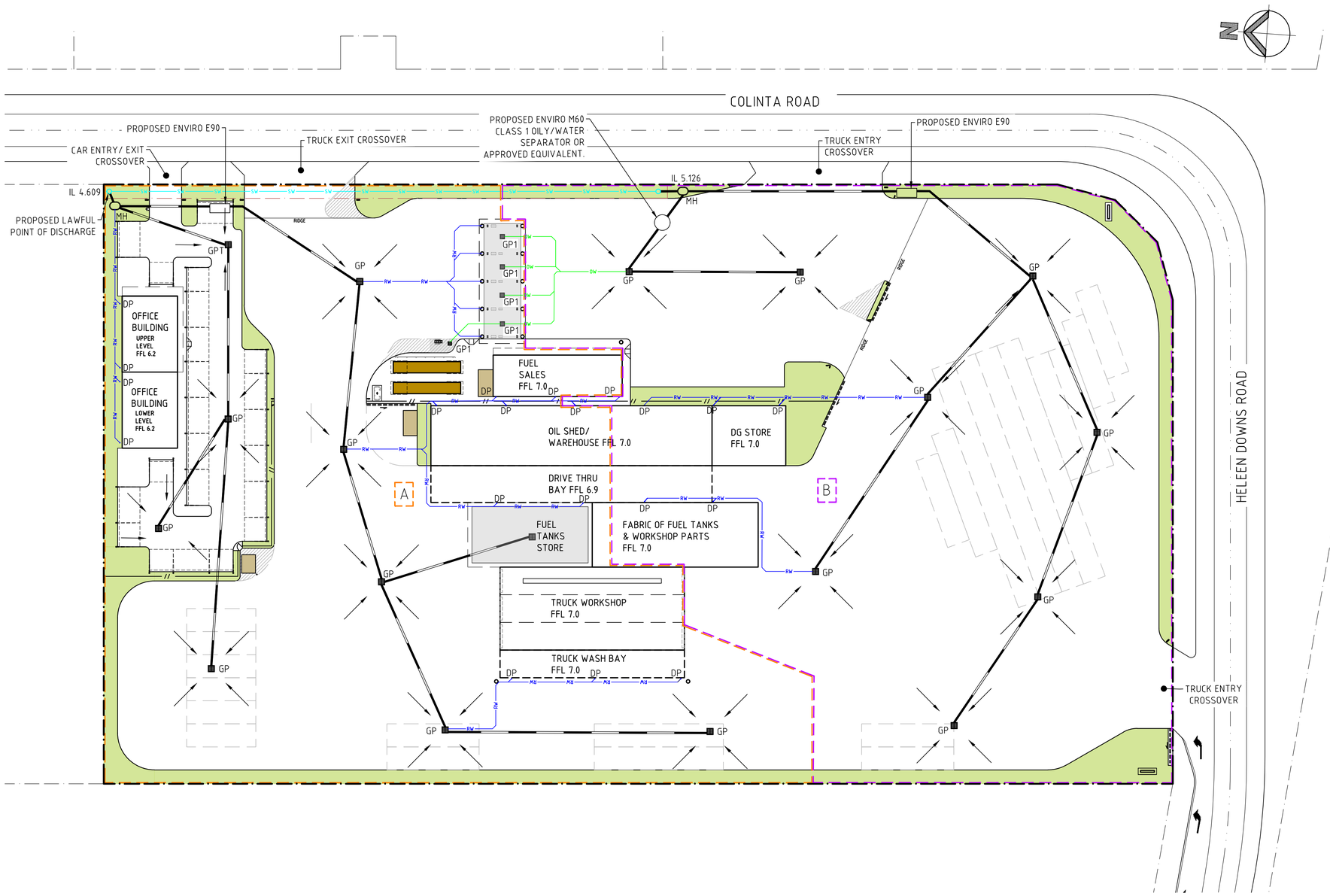
SCALE 1:1500@A3

PASSED

DATE 23/06/2023

43942/21B

APPENDIX C – CONCEPTUAL STORMWATER MANAGEMENT PLAN



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43811/21B REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

	PROPERTY BOUNDARY
	PROPOSED STORMWATER PIPE
RW	PROPOSED ROOFWATER PIPE
OW	PROPOSED OILY WATER HDPE PIPE
SW	EXISTING STORMWATER LINE
MH	PROPOSED MANHOLE
	GENERAL DIRECTION OF SURFACE
DP	PROPOSED DOWN PIPE
GP/GP1	PROPOSED GULLY PIT/OILY WATER GULLY PIT
GPT	PROPOSED GULLY PIT FITTED WITH GROSS POLLUTANT TRAP (ATLAN STORMSACK OR APPROVED EQUIVALENT).
	REFUELING, LOADING AND STORAGE AREA
A B	CATCHMENT LABEL

0 10 20 30 40 50m

SCALE 1:500

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	08.11.23	PM	PRELIMINARY ISSUE	BM	JA
B	15.11.23	PM	ISSUED FOR INFORMATION	BM	JA

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN

STATUS
APPROVAL

DATE CREATED	ORIGINAL SCALE	SHEET
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DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D19	B

APPENDIX D – STORMWATER & OILY WATER TREATMENT SYSTEMS

Flow rates based at 1% pipe gradient:-
Treated Flow.....142 L/sec

Enviro 'M60.20' is a oily water separator compliant with EN 858-1 and includes emergency spill protection to 18,000 litres

MASS:
(Based on "D" Class Covers)

Total mass for delivery based on minimum invert is 13.1 **tonnes**

Enviro M60

General Notes

The Enviro 'M60' is an Australia Designed and Manufactured Device for the removal of pollutants including oils from run-off water. The Enviro 'M60' is normally installed in-line within new or existing drainage pipes and can be adapted to be installed in an open channel if required. The device does not require any power, utilising the energy in the water flow to separate and contain pollutants for periodical removal by evacuation equipment. Internal surface can be inspected and washed as required, whilst screens can be removed and also cleaned if and as required.

The Enviro 'M60' are a unique oil/water Separator as well as a Stormwater Quality Improvement Devices (SQID's) which has undergone extensive performance stress testing by independent authorities. These tests indicate compliance with Environmental Protection Authority (EPA) Legislation and Guidelines which prohibit the discharge of pollutants into stormwater. The aim of the Enviro 'M60' is to restore water quality to a safe and environmentally sustainable state, which pre-existed urbanisation. The application is aimed at any catchment, where an oil spill risk may exist.

Recommendations made in the Australian Run-Off Quality Guideline 2007 (ARQ) are adhered to. The 'M' models also comply with EN-858-1, Class 1 oil/water separators.

Specifications: -

1. Design service life 100 years for fixed parts and 25 years for replacement parts
2. Hydraulic Resistance k factor = 0.425
3. Inlet to outlet differential = 25mm
4. Concrete chamber, risers and cover slabs are designed and manufactured in accordance with AS3600-2009 and under Quality Assurance 9001.
5. Covers are designed and tested in accordance with AS3996 – 2006 Access Covers and Grates
6. Internal components are manufactured from high grade, stainless steel to comply with International Corrosion Standards. There is no welding used. This complies with advice from both the American and Australian Institute of Engineers warning that welded stainless steel exposed to bacterial charged water can result in early corrosion and failure
7. 'M60' performance testing verifies the following pollutant removal rates. The testing was performed across a range of concentrations and flow rates which replicated various run-off water conditions and confirmed: -
   7.1. gross pollutants, reduction exceeds 95%
   7.2. suspended solids, reduction exceeds.....90%
   7.3. total phosphorous, (TP) retention 97%
   7.4. total nitrogen, (TN) retention.....85%
   7.5. total hydrocarbons.....99.95%
   7.6. Oil Containment.....18,000 litres
8. The lower storage chamber has the capacity to hold the annual load discharged from a catchment based on the ARQ Section 3.7 recommended allowance of 1m3/ha/ann.
9. An important feature of the Enviro 'M60' is that all in flow is treated in accordance with EPA requirements that fuel-dispensing zones cannot discharge oil contaminants particularly as a result of emergency oil spills into environmental flows. Provision has been allowed for the installation of alarms and automatic evacuation systems.
10. Particle size capture is set to retain all particles greater than 500µ and to then retain a majority of particles to less than 100µ.
11. Hydrocarbon retention occurs in a separate chamber which operates as a best practice oil and grease arrestor
12. Re-suspension of hydrocarbons and all retained materials is prevented by including separate chambers for separation from flow and retention.

REV.	DESCRIPTION	DATE	APPROVED
0	Technical Specification Created	20-Nov-21	LC
REVISIONS			

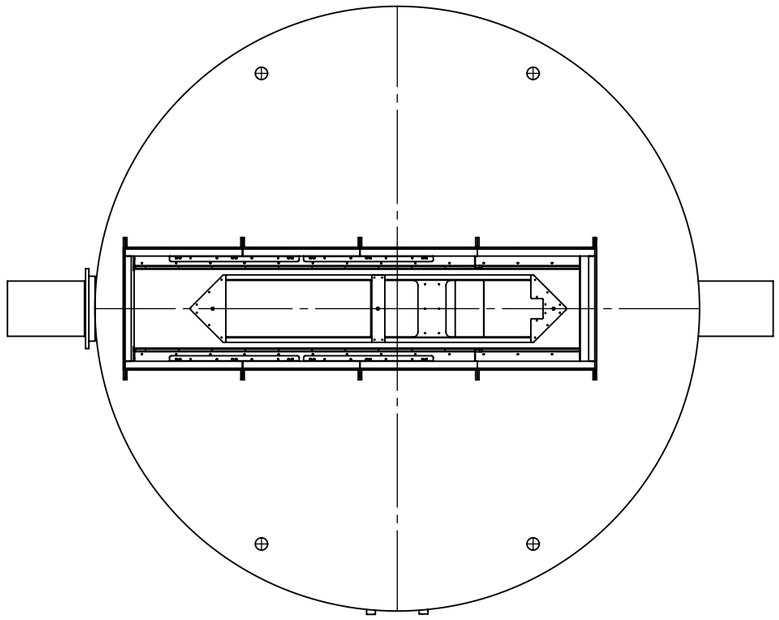
For further assistance: -
Technical Support Ph: .....+61 8 8564 2347
Email: info@enviroaustralis.com.au

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

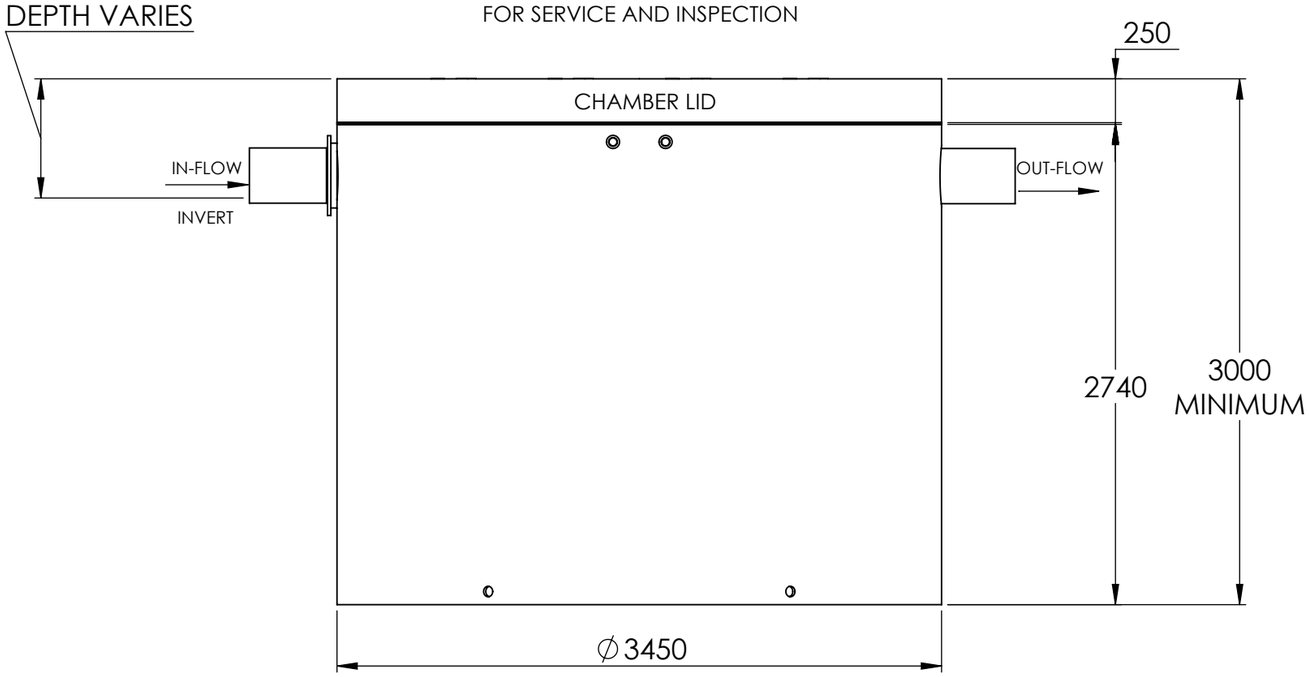
ENVIRO

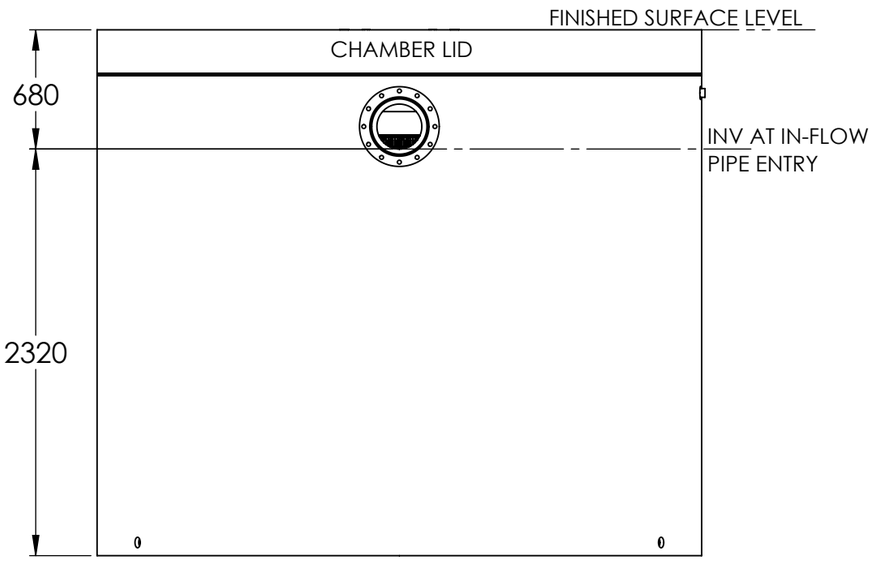
TITLE:
ENVIRO M60.20
SPECIFICATIONS AND TECHNICAL DATA

MATERIAL:	ASSEMBLY:	A3
CONCRETE & S/STEEL	M60.20	REV: 0
WEIGHT:	SCALE: NTS	SHEET 1 OF 5



VIEW AS SEEN THROUGH COVERS OPENING
FOR SERVICE AND INSPECTION





General Table		
CLASS	OVERALL HEIGHT	MIN. DEPTH TO INVERT
'D' CLASS	3000 mm	680 mm

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR

PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

MATERIAL: CONCRETE & STEEL

ENVIRO

TITLE:
ENVIRO M60.20
GENERAL ARRANGEMENT

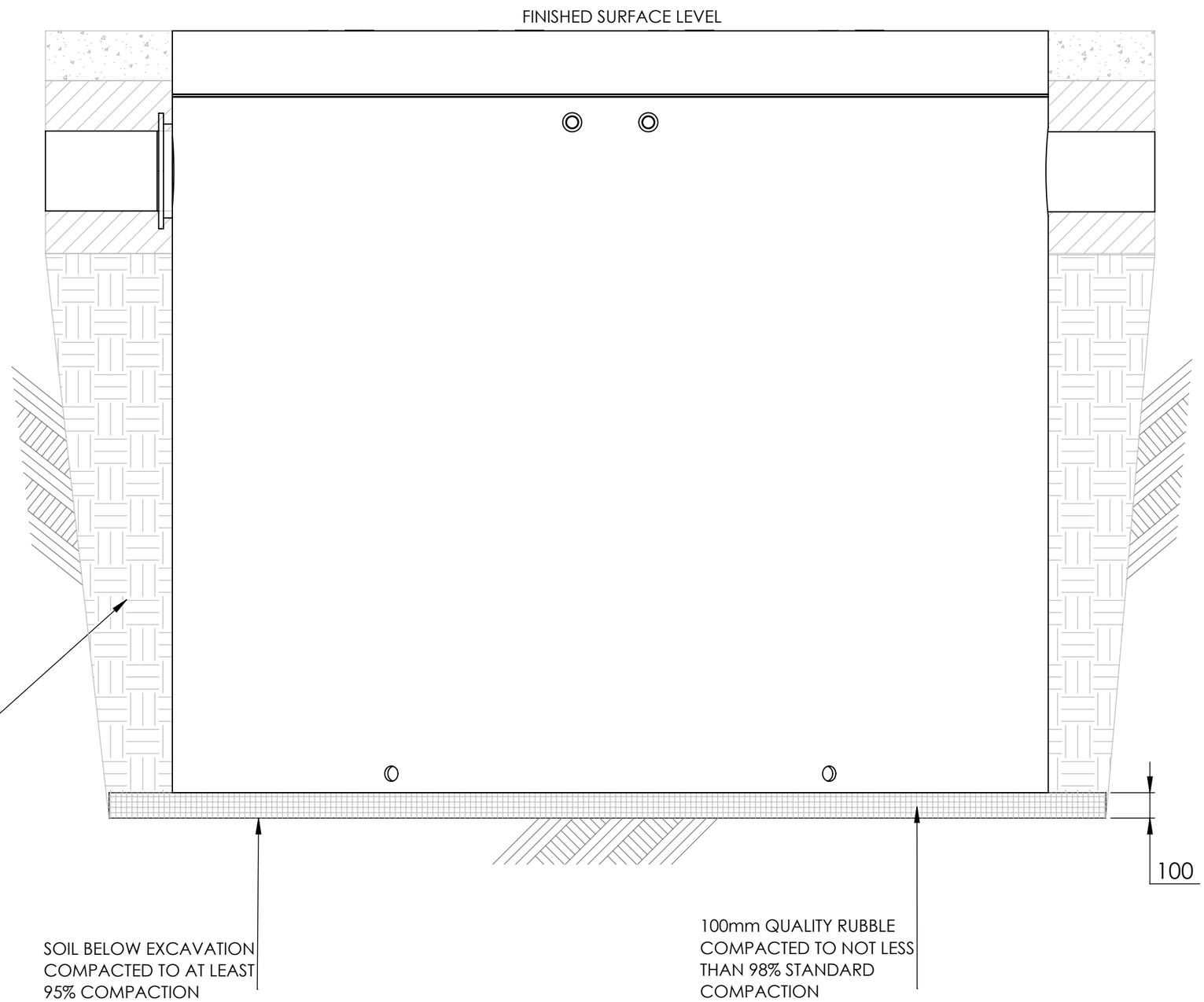
ASSEMBLY: M60.20

A3

REV: 0

SCALE: NTS

SHEET 2 OF 5



EXCAVATION VOLUME:

TOTAL EXCAVATION VOLUME - 67 m^3

BACKFILL VOLUME FROM CHAMBER BOTTOM
TO PIPE INVERT = 23 m^3

BACKFILL VOLUME FROM PIPE INVERT
TO SURFACE LEVEL = 15 m^3

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

ENVIRO

TITLE:
ENVIRO M60.20
SITE INSTALLATION

MATERIAL: CONCRETE & STEEL

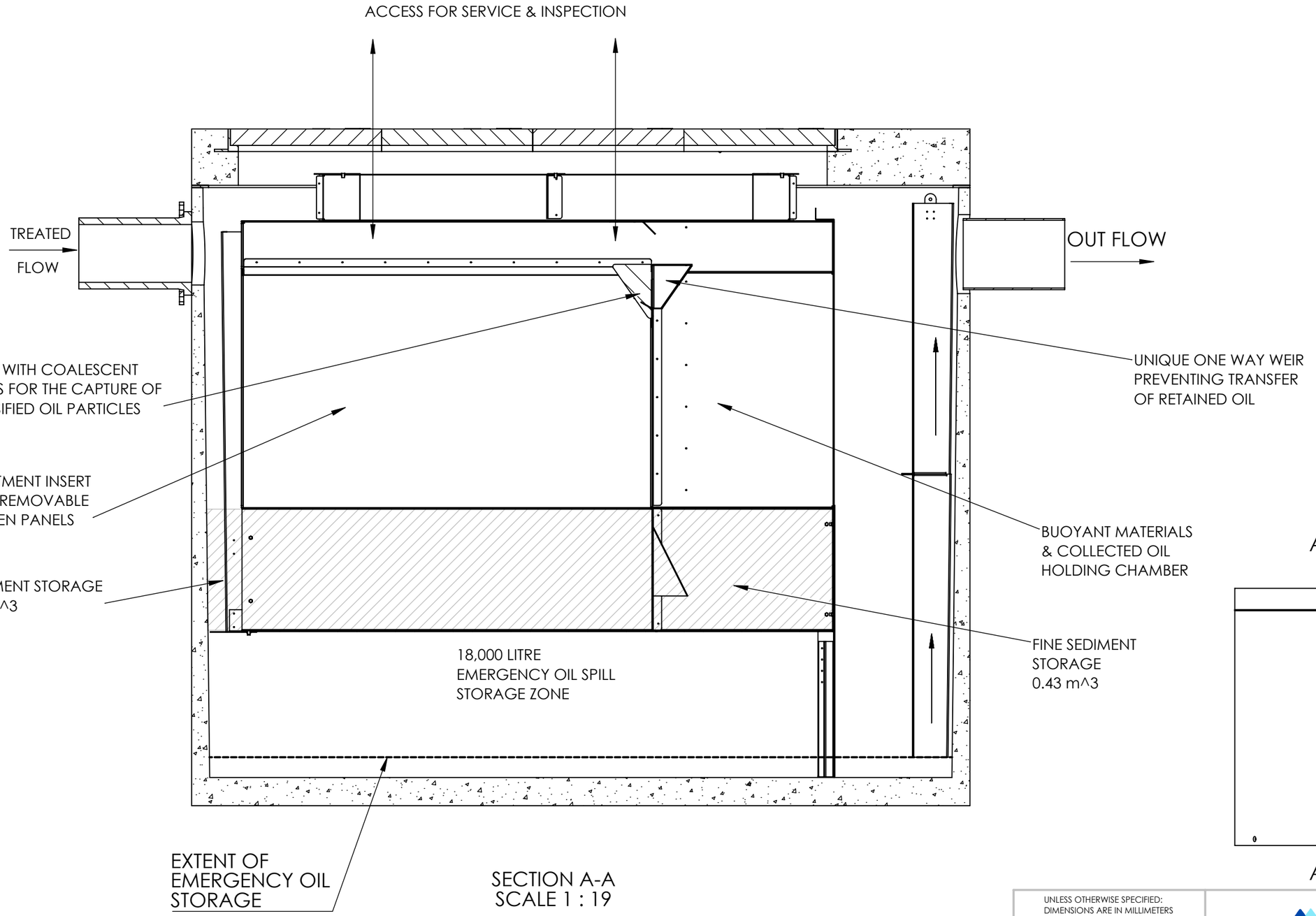
ASSEMBLY: M60.20

A3

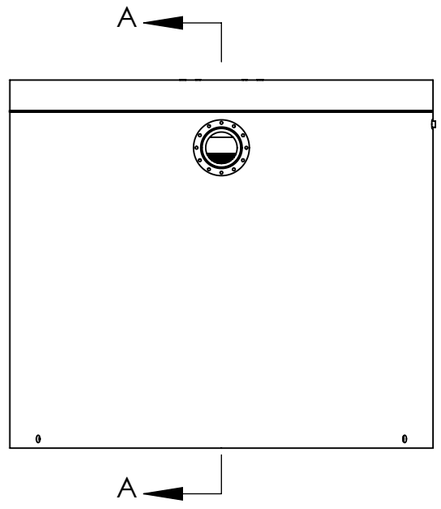
REV: 0

SCALE: NTS

SHEET 3 OF 5



SECTION A-A
SCALE 1 : 19



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

ENVIRO

TITLE:

ENVIRO M60.20
GENERAL OPERATION

MATERIAL: CONCRETE & STEEL

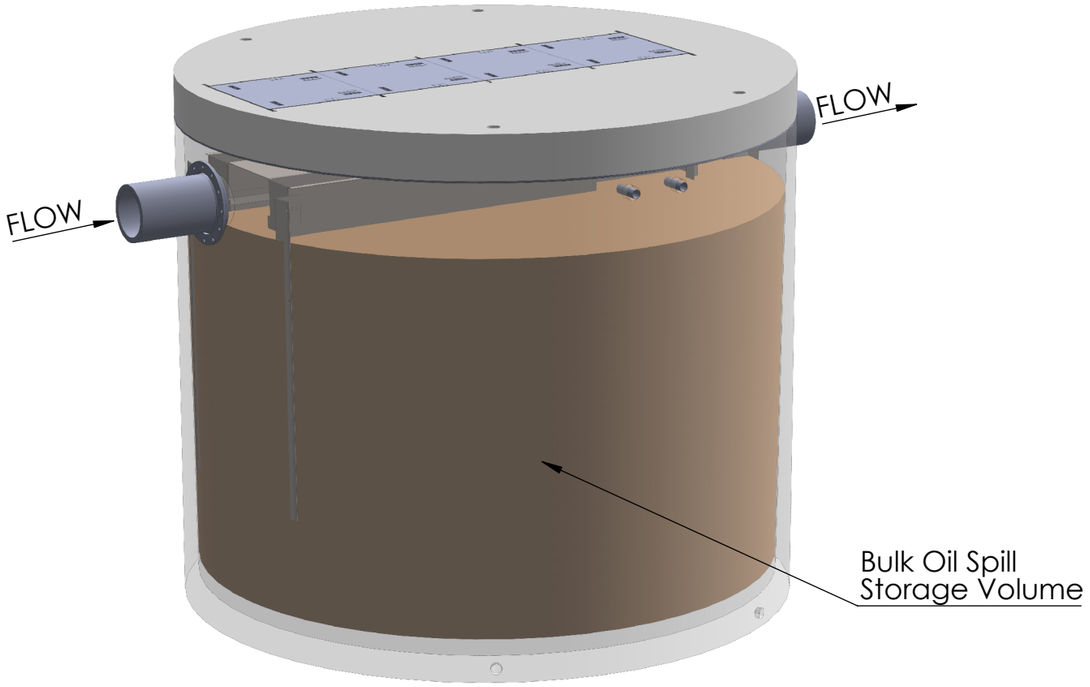
ASSEMBLY: M60.20

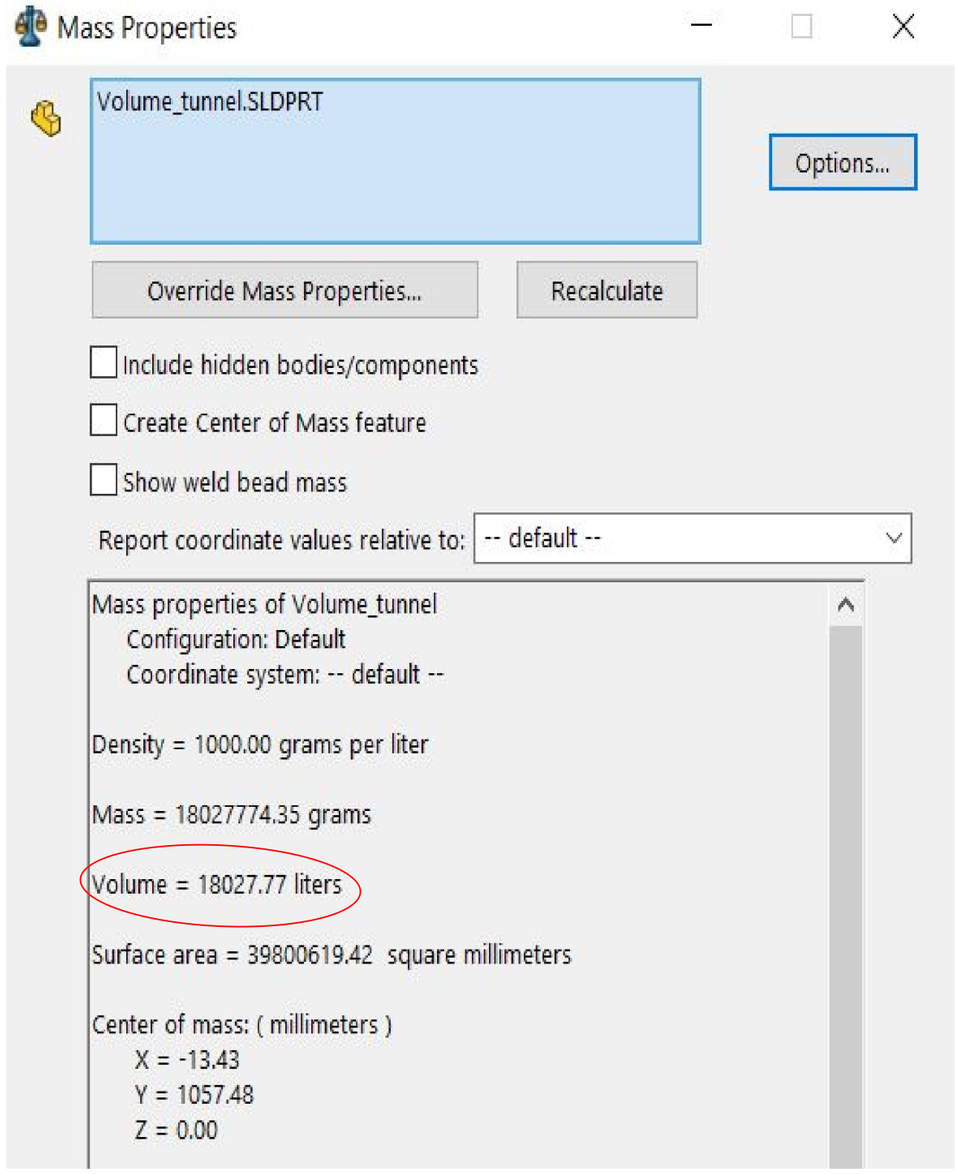
A3

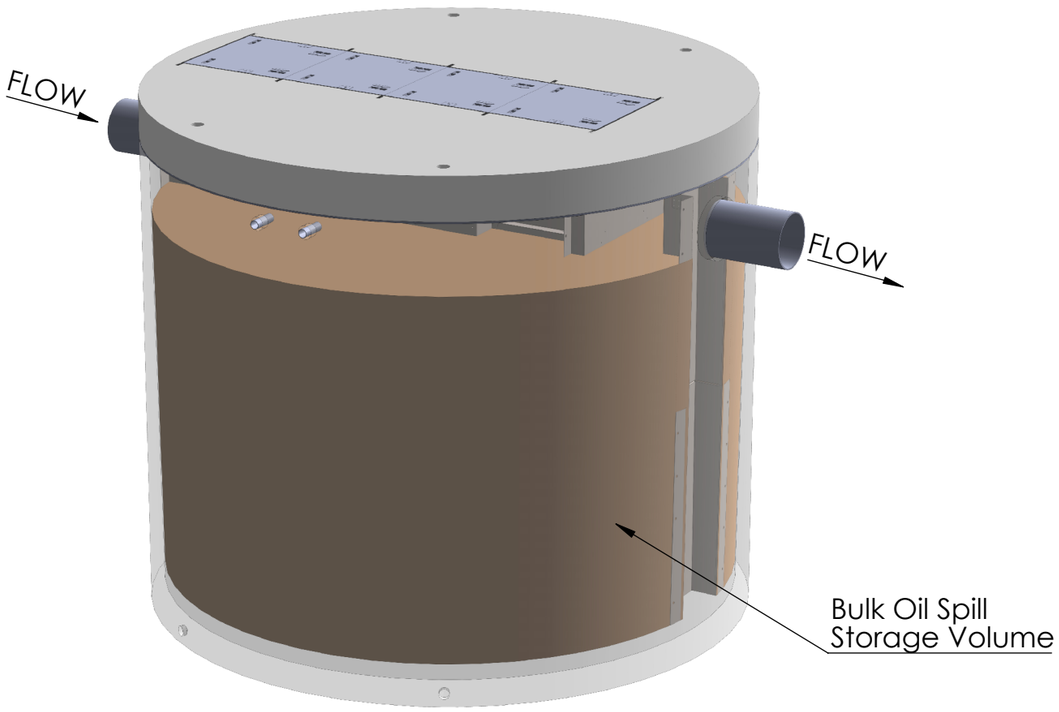
REV: 0

SCALE: NTS

SHEET 4 OF 5







UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR

PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

ENVIRO

TITLE:
ENVIRO M60.20
STORAGE VOLUME

MATERIAL: CONCRETE & STEEL

ASSEMBLY: M60.20

A3

REV: 0

SCALE: NTS

SHEET 5 OF 5

Enviro E Series

An in-line multi-chamber device with integrated separation zones for removal of broad spectrum pollutants generated by high impact catchments

The Enviro E series is an in-line multi-chamber device designed to remove the broad spectrum of pollutants transported by run-off water from high impact catchments. Pollutant groups are separated and contained in separate zone for removal.

All Enviro models are designed to match pipe size, treated flow and flow velocity.

All models offer the same performance. This has been established and certified by independent parties. The following removal rates were exceeded in full scale controlled testing and/or were verified by university analysis.

- Gross Pollutants 100%
- Suspended Solids 86%
- Total Nitrogen 85%
- Total Phosphorous 97%
- Hydrocarbon Removal 90%

Other factors include:

- Treated flow of pipe diameter[1] 30%
- Hydraulic Resistance, k factor.....0.425
- Nominal service intervals[2,3] .....1 year
- Max particle size by-pass .....500 μ
- Nominal particle size capture .....100 μ
- Design service life .....100 years
- Fully removable internal screens

Installation instructions are included with each unit at the time of delivery. Site supervision is also available if required.

Physical parameters:

- Enviro's models are designed so that the combined mass and size enable units to be legally transported without special conditions.
- Cover slab removable for ease of installation.
- Riser increments supplied to match invert and surface levels.
- Covers available for B and D duty applications
- Locked down covers supplied.
- More products are available - subject to custom design.

Note 1: Treatment continues after this level is exceeded enabling capture of higher density materials transported by increased energy in flow resulting from higher rainfall intensity.

Note 2: Additional storage of a further 1.4 m^3 is available before unit performance is compromised.

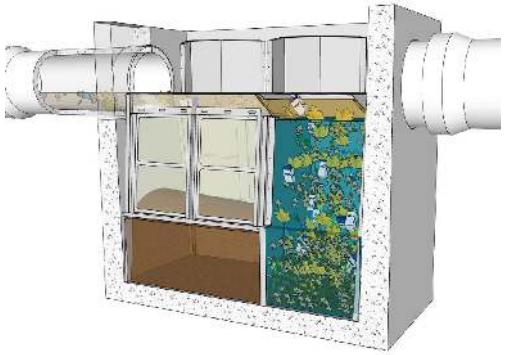
Note 3: Load volume allowance of 1m^3/ann based on ARQ section 3.7.

Enviro systems include:

- **H series oil/water separator**
- **E series for medium/high impact catchments**
- **G series for low impact applications**

Visit our website and use the selection guide, or contact our design engineers for advice.

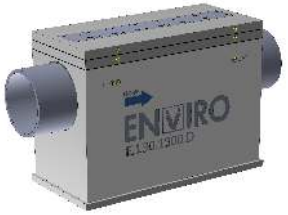
Similar to all Enviro systems, the E series system arrives complete and is ready for easy installation.



Simply, lift and place directly into final position. The E90 shown below.

Standard model features are as follows. Custom design features, such as dry sump, G cover duty and telemetry systems are available.

	Model	Pipe Size	Treated Flow and Storage Capacity	Plan Dimensions (external length x width)	Depth Below Invert	Mass	Excavation Volume
Enviro E30		Nominally 300 ID. Can be used for 375mm ID subject to gradient and velocity	22 litres/sec 0.23 m^3	1.5m x 0.9m	1.2m	3.2 tonnes	2.2 m^3
Enviro E45		450mm ID	66 litres/sec 0.45 m^3	2.2m x 1.2m	1.4m	6.1tonnes	4.9 m^3
Enviro E60		600mm ID	142 litres/sec 0.85 m^3	2.8m x 1.2m	1.8m	9.3 tonnes	7.9 m^3
Enviro E75		750mm ID	258 litres/sec 3.1 m^3	3.6m x 1.95m	2.2m	16.1 tonnes	20.1 m^3
Enviro E90		Nominally 900 ID. Can be used for 1,050mm pipe size subject to gradient and velocity	419 litres/sec 3.2 m^3	4.35m x 1.95m	2.0m	18.6 tonnes	22.1 m^3

Enviro E120		1200mm ID	902 litres/sec 5.2 m^3	4.35m x 2.1m	1.8m	19.2 tonnes	22.0 m^3
Enviro E130		1300 mm ID	1285 litres/sec 6.7 m^3	5.1m x 2.4m	1.7m	23.9 tonnes	25.0 m^3
Enviro E180		1800 mm ID	2570 litres/sec 13.4 m^3	9.5m x 5.1m	1.65m	87.3 tonnes	56.0 m^3

Notes: Mass excludes additional riser increments. Excavation volume is a guide with 30% over allowance. Storage volume includes floatable holding chamber.

Enviro H, E and G Range - Typical Service and Maintenance

All Enviro treatment devices are designed to minimise service and maintenance costs as a result of the following features:

1. The storage chamber located below the processing chamber is designed to be easily inspected and serviced. Based on the ARQ extrapolation of 1m^3/ann/ha from a typical urban catchment, the large storage volume provides for extended service intervals of at least 1 year, with 2 year intervals subject to site usage.
2. Service is by evacuation. (Refer Fig 1) The volume of water contained in the process chamber is minimised to reduce evacuation costs. Furthermore, this water can be pumped out as the first stage of service avoiding evacuation and the cost of disposal. A dry sump option is available on request.
3. All surfaces inside the Enviro EPS are visible from the service covers, negating the need for personnel to enter the device and perform longer term wash downs. (Refer Fig 2)
4. If required, screens can be removed manually without entering the device. This facilitates inspection, cleaning or replacement, without additional labour or equipment. (Refer Fig 3)
5. During the construction phase ie before hand over, screens can be removed enabling the device to act as a sediment trap. This enables the constructor to clean out the device and handover to the client an unused, clean unit eliminating disputes over condition of the device.

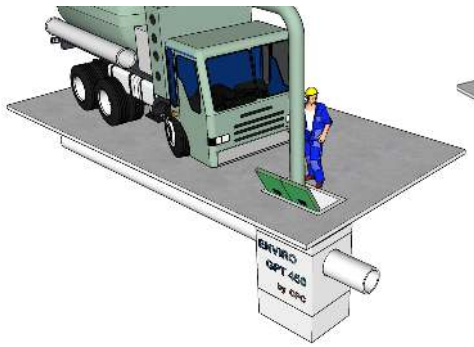


Fig 1 evacuation service

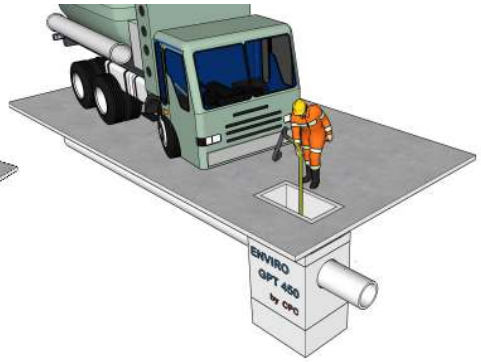
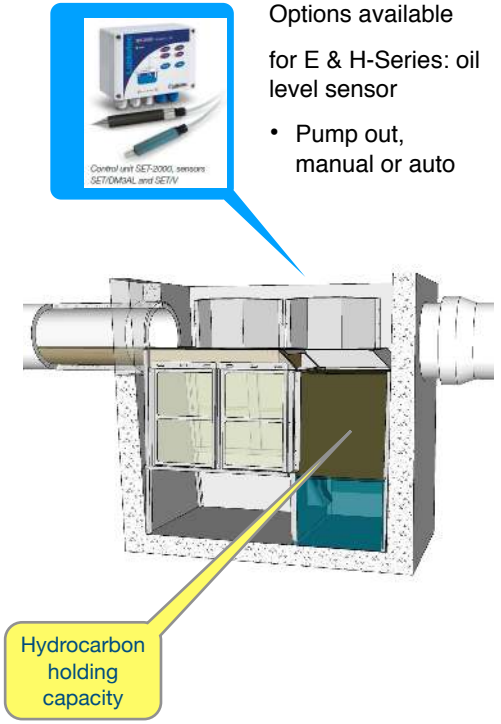


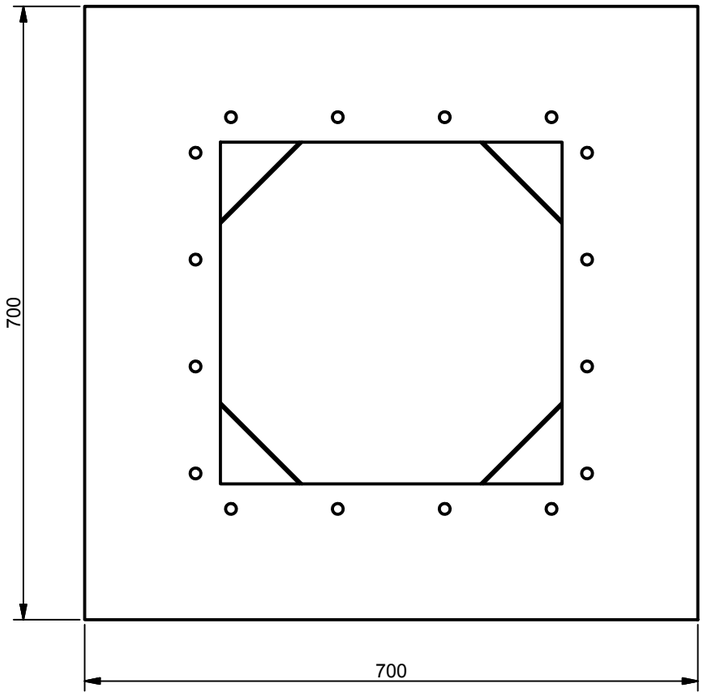
Fig 2 wash down as required

Fig 3 screen removal as required

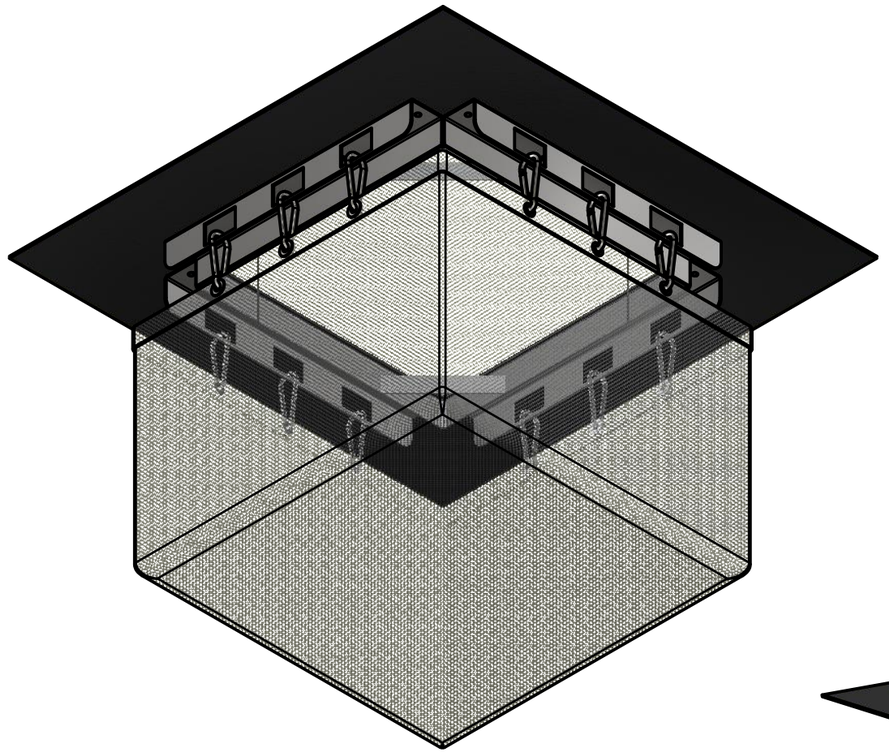


Technical: 08 8 564 2347
After Hours : 0419 555 514
www.enviroaustralis.com.au
info@enviroaustralis.com.au

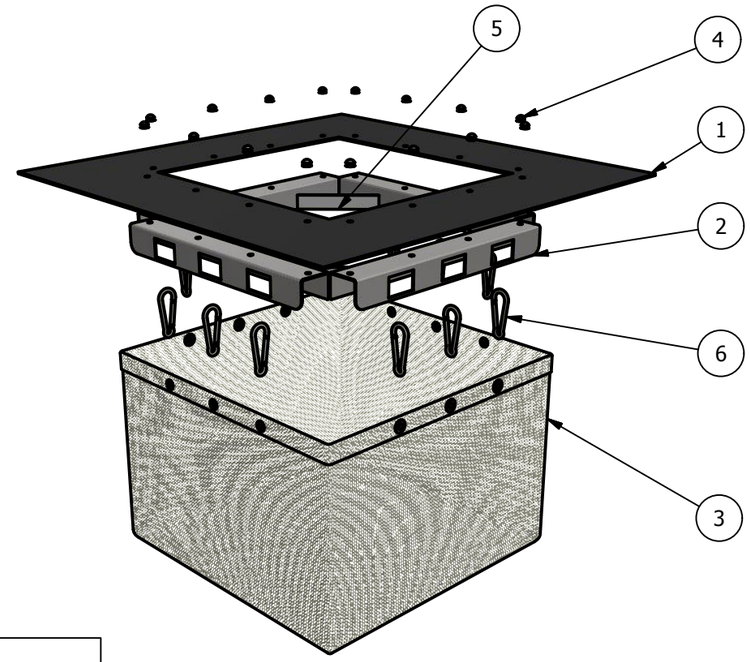
REVISION HISTORY				
REV	DESCRIPTION	DESIGNER	DATE	CHECKED BY
1	INITIAL RELEASE	M.M	25/03/2015	



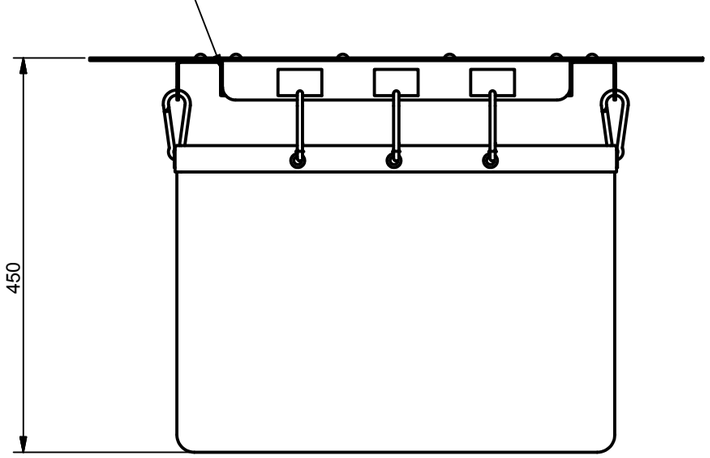
PLAN VIEW



ISOMETRIC VIEW
BOTTOM VIEW



ISOMETRIC VIEW
EXPLOSION



ELEVATION VIEW

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PLASTIC SHEETING	HDPE
2	4	SHEET METAL BENDING	STAINLESS STEEL 304
3	1	TEXTILE FABRIC & MESH LINER	HDPE
4	16	BLIND RIVIT 7 DIA.	STAINLESS STEEL 304
5	4	CORNER ESTIFFENER - FLAT BAR 25 x 2 - 141 LG	STAINLESS STEEL 304
6	12	CARABINER CLIP 6	ALUMINIUM

CLIENT:

DISTRIBUTOR

Drawn M.M	Date 25/03/2015
CHECKED BY	Date
Verified	Date
Approved	Date
Customer Code :	

SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS
100 Silverwater Road Silverwater NSW 2128
PH: 1300 773 500 | E: sales@spel.com.au
www.spel.com.au

TITLE
SPEL STOMSACK
FRAME 600 x 600
BASKET MOUNTING ASSEMBLY DRAWING

REQUEST No.	SIZE	SHEET	REV
D20194	A3	1	1

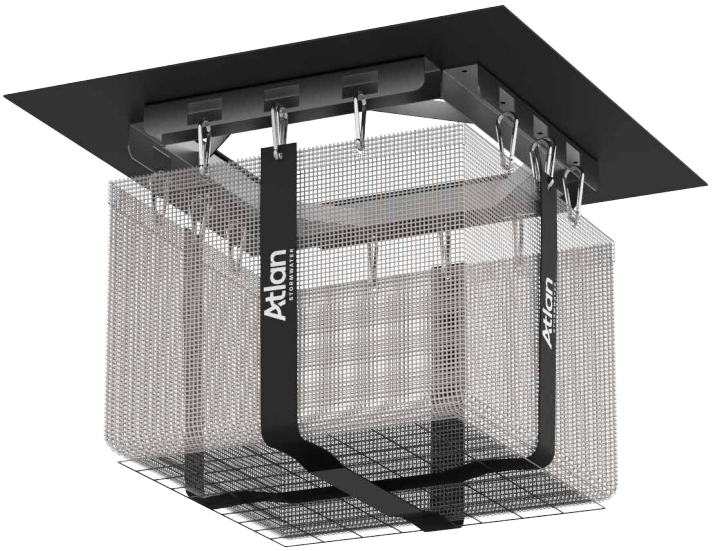
SCALE	DWG No.
N.T.S	SP15-BB4610-S

StormSack

At-Source Gross Pollutant Trap

atlan.com.au

Atlan STORMWATER



The Atlan StormSack is specifically designed for the capture of gross pollutants, sediment, litter, and oil and grease. Ideally suited for storm drain retrofits, the StormSack's unique design allows maintenance to be performed using conventional vacuum suction equipment.

StormSack filtration solutions are highly engineered water quality devices that are deployed directly in the stormwater system to capture contaminants close the surface for ease of maintenance. Easily retrofitted into new or existing structures, StormSack filtration technology is a decentralized approach to stormwater treatment that essentially repurposes traditional site infrastructure and customizes it to meet specific site water quality goals. In this way, it satisfies important objectives of today's LID (Low Impact Development) criteria.

From an operations perspective, catch basins with StormSack filters are also easier and quicker to clean out because pollutants are trapped just under the grate.

APPLICATIONS

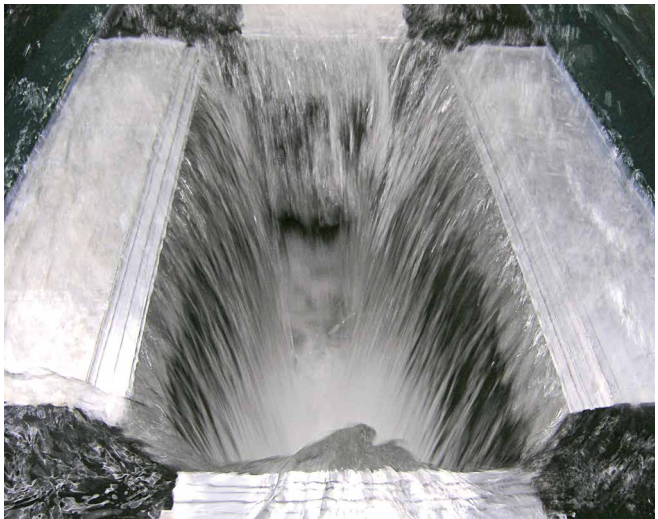
- Council storm drain retrofits
- Commercial / retail / residential
- Litter prone urban areas
- Scrap metal / solid waste / oil storage
- Part of treatment train
- Construction sediment / erosion

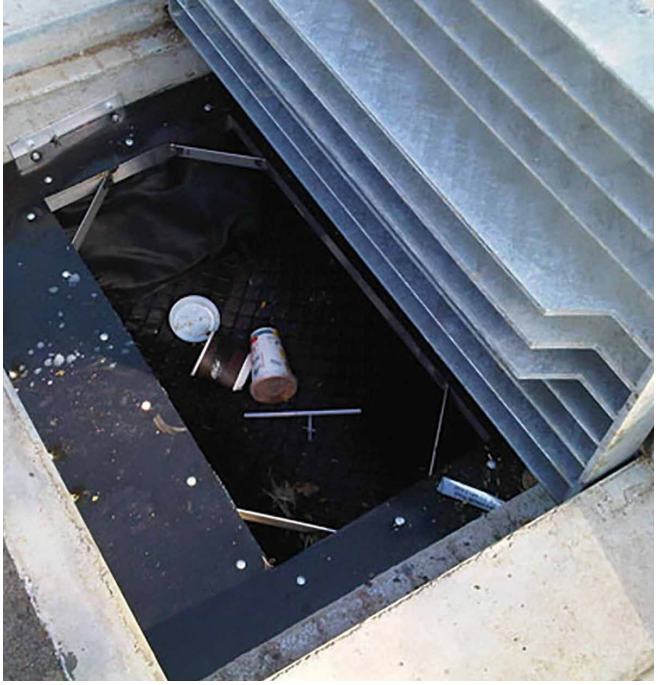
BENEFITS

- Can be modelled in MUSIC in conjunction with bio-retention
- Low cost gross pollutant capture
- Quick & easy installation
- Simple maintenance
- At-source capture
- Adjusts to custom pit sizes

The StormSack was introduced to the Australian market in 2012 and field testing is underway at several locations in South-east Queensland. Laboratory testing has shown capture of 99.99% of gross pollutants up to the bypass flow rate. Further results will be provided as they become available.

Recommended minimum clearance from bottom of StormSack to inside bottom of vault is 50mm. Typical frame adjustability range of 127mm in each direction.





HOW IT WORKS

This technology is a post developed stormwater treatment system. The StormSack provides effective filtration of solid pollutants and debris typical of urban runoff, while utilising existing or new storm drain infrastructure. The StormSack is designed to rest on the flanges of conventional catch basin frames and is engineered for most hydraulic and cold climate conditions.

Installation procedures shall include removing the storm grate, cleaning the ledge of debris and solids, measuring catch basin clear opening and adjusting flanges to rest on the grate support ledge. Install StormSack with splash guard under curb opening so the adjustable flanges are resting on the grate support ledge. Install corner filler pieces. Reinstall storm grate directly on support flanges rise shall be no more than 3mm.

FEATURES

POLLUTANT	EFFICIENCY
Gross Pollutants (GP)	100%
Total Suspended Solids (TSS)	61%
Total Phosphorus (TP)	28%
Total Nitrogen (TN)	45%

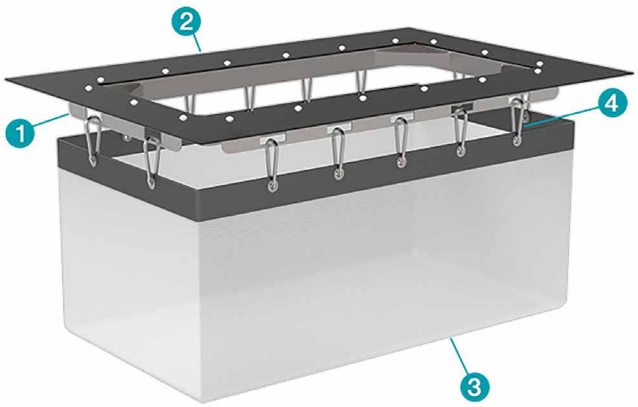
*Contact Atlan to confirm approved performance for the project LGA

MAINTENANCE

Typically the StormSack is serviceable from the street level, and therefore maintenance does not require confined space entry into the catch basin structure. The unit is designed to be maintained in place with a vacuum hose attached to a sweeper or a vactor truck. Use only Atlan replaceable parts.

Application	Regulatory Issue	Target Pollutants
Council Storm Drain Retrofits	At-source litter capture	Sediment, Litter, O&G
Commercial/Retail/Residential	Stormwater Compliance	Sediment, Litter, O&G
Litter Prone Urban Areas	Cost effective litter control	Litter ≥ 5 mm
Scrap Metal/Solid Waste/Oil Storage/Etc	Industrial Multi-Sector General Permit	Gross Pollutants, O&G
Part of Treatment Train	Council Stormwater Quality Improvement Targets	Sediment, Litter, O&G
Construction Sediment/Erosion	Sediment Control Plan	Sediment/Erosion Control

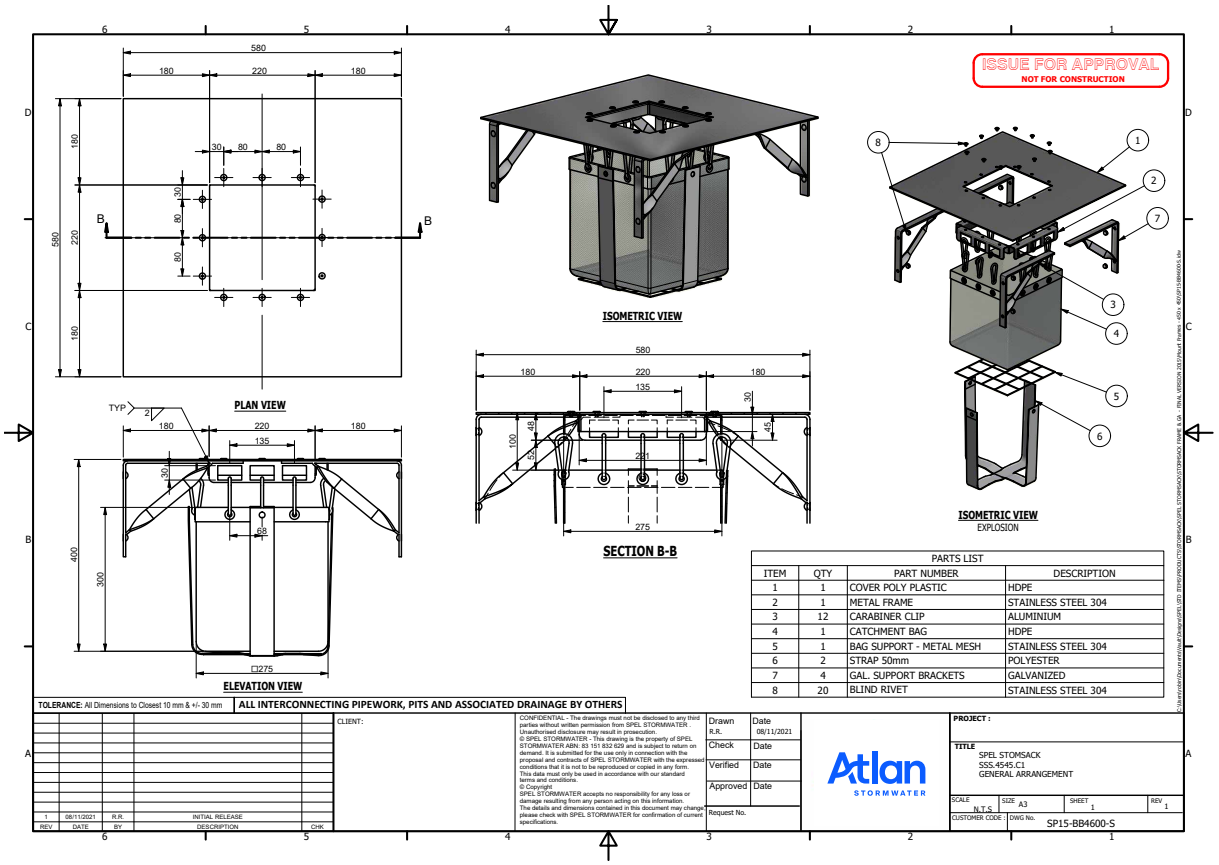
Features	
1.	1. Ultra-Durable Aluminium Frame • Available in 450x450mm, 600x600mm, 600x900mm and 900x900mm sizes • Custom pit arrangements upon request
2.	Black Poly Surround riveted to Frame • Can be cut to suit on site
3.	Reinforced Stormsack Bag • Bag has sewed eyelets • Square bottom design for even distribution
4.	Karabiners attach Bag to Frame for easy service & replacement
5.	5. Aluminium Support Angles & Fixings

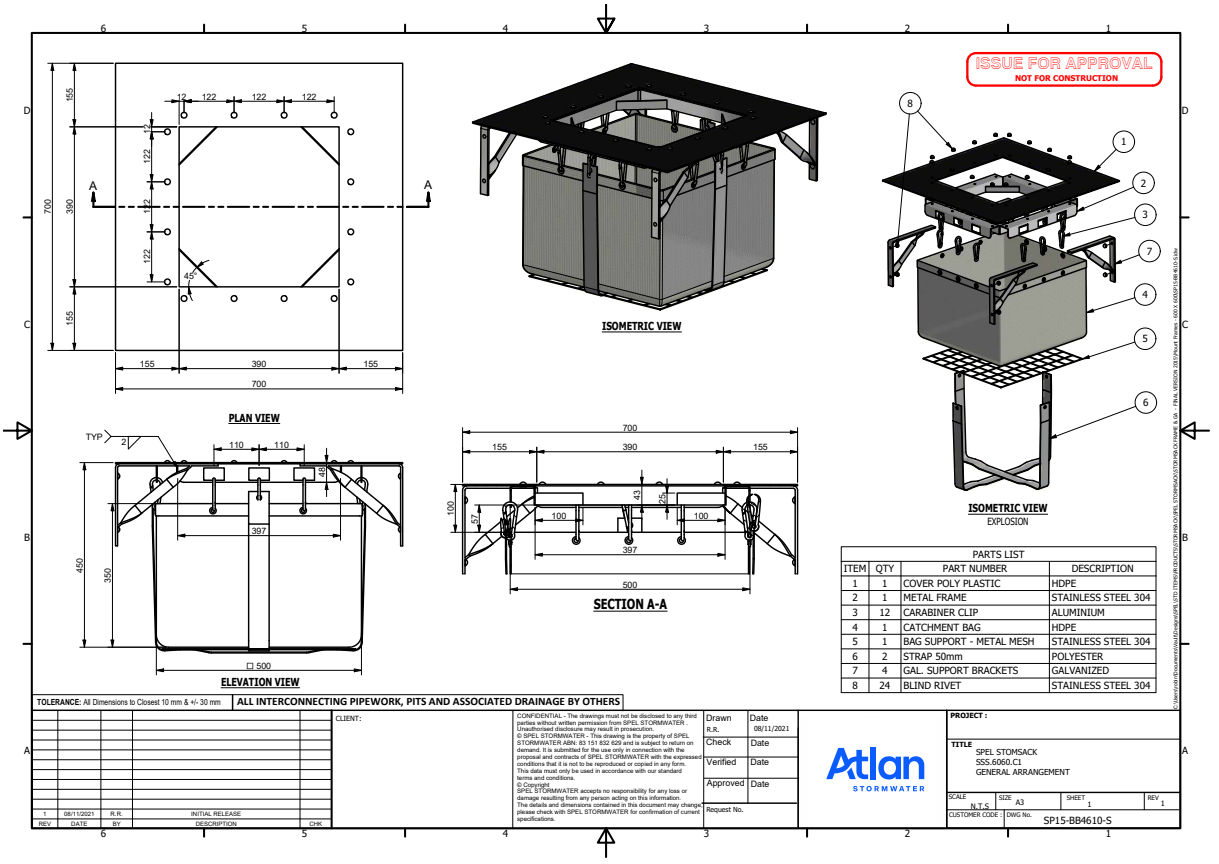


Standard StormSack to suit Pit Sizes
450x450mm
600x600mm
900x600mm
900x900mm

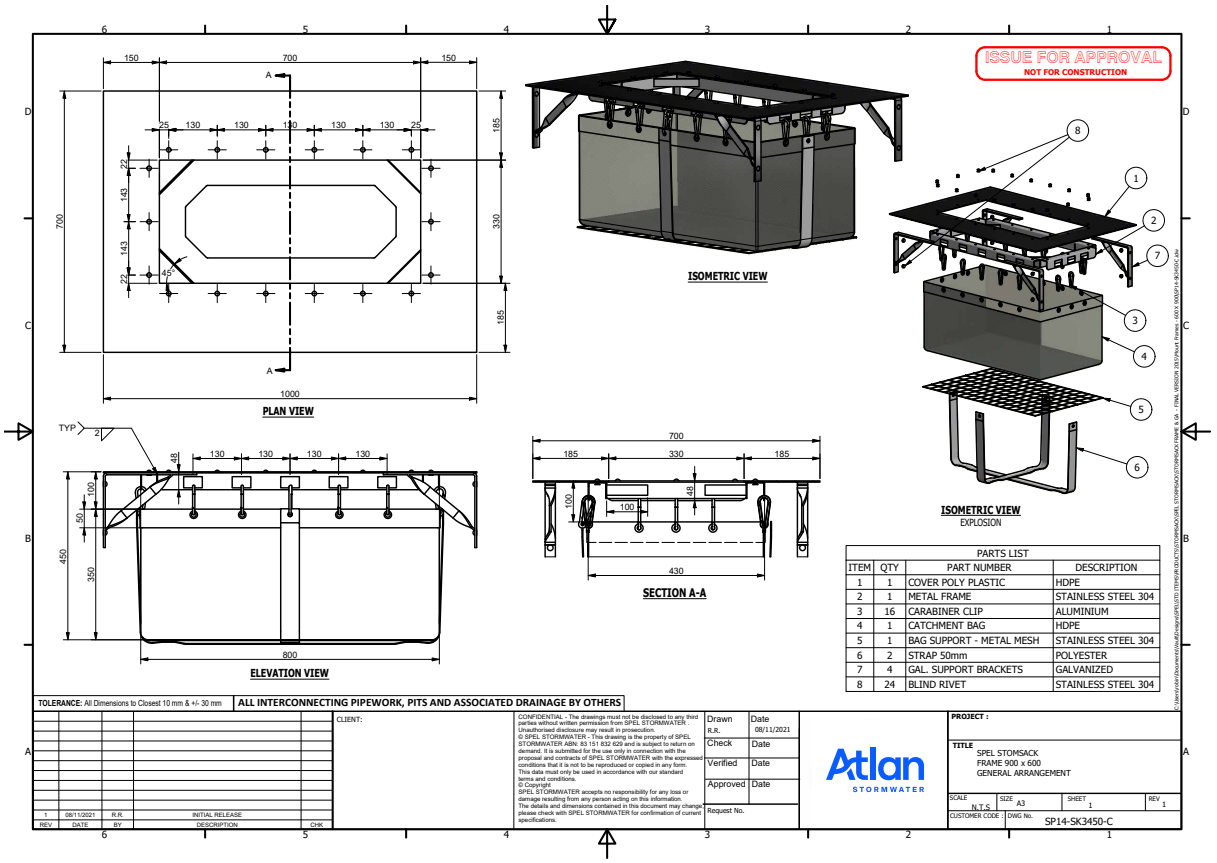
Custom sizes (i.e. 1200x900mm) can be manufactured on short lead times

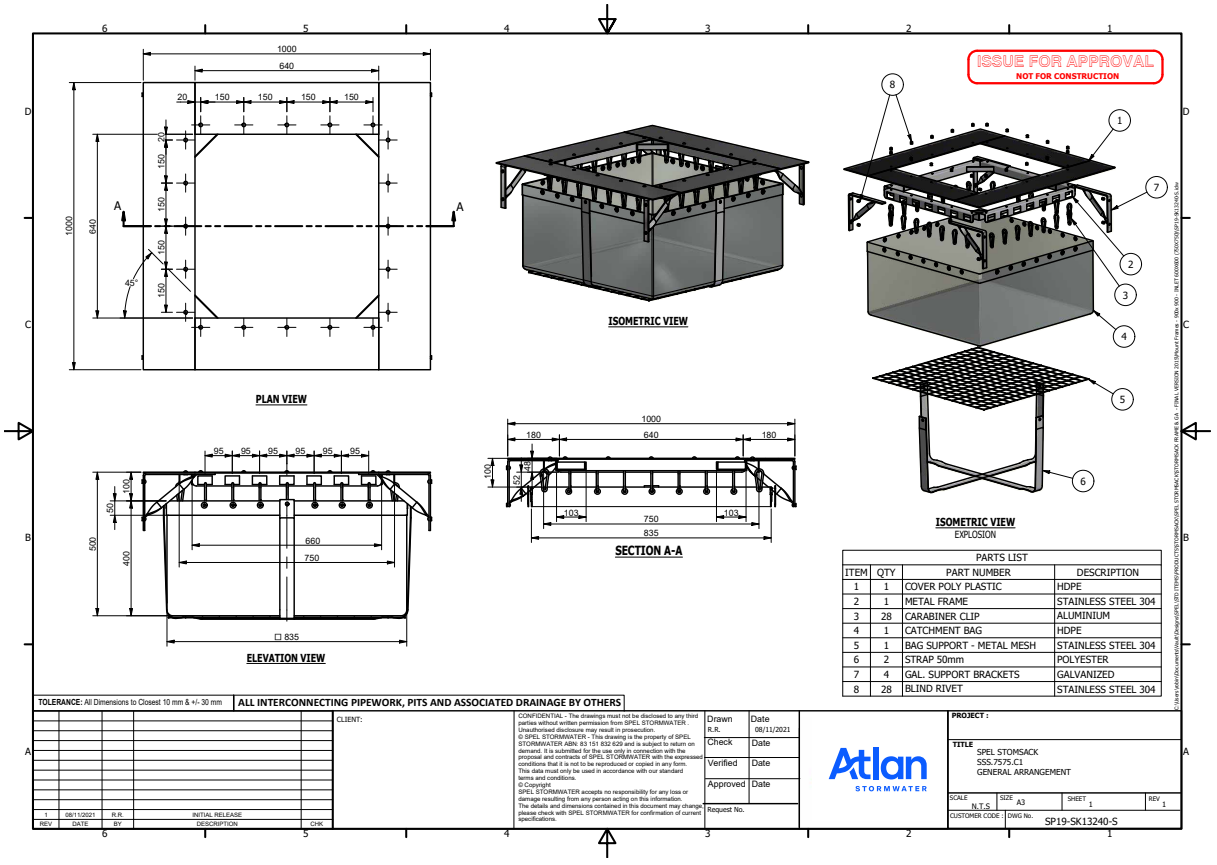
TECHNICAL DRAWINGS



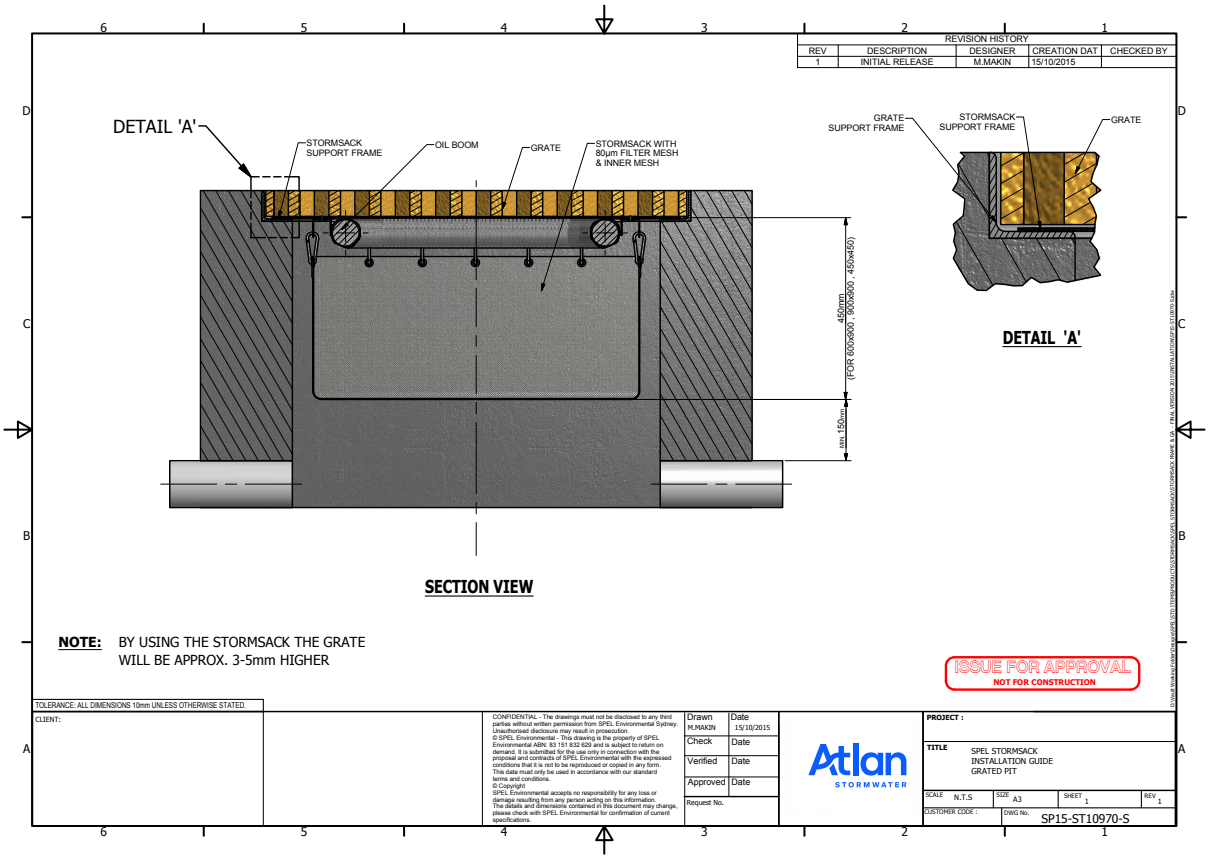


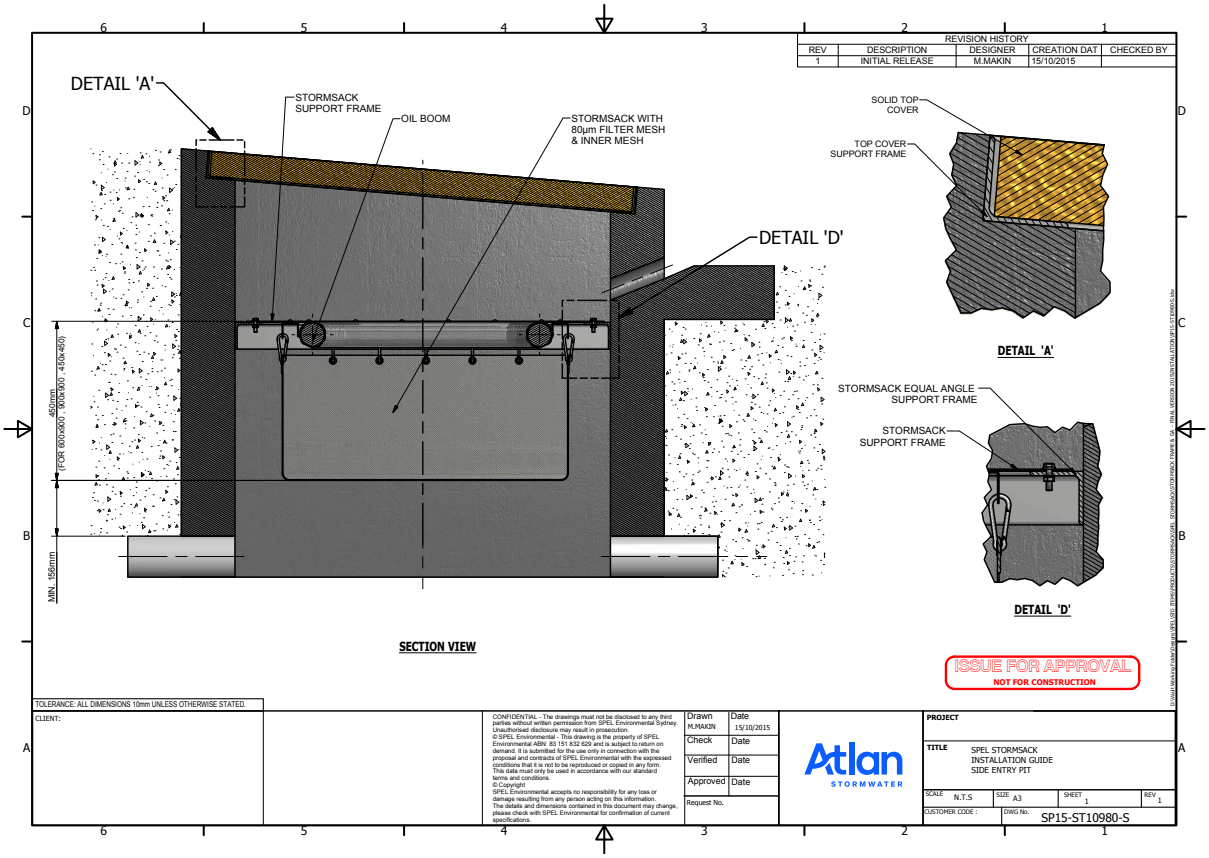
TECHNICAL DRAWINGS





INSTALLATION DETAILS





StormSack

At-Source Gross Pollutant Trap

NSW HEAD OFFICE 100 Silverwater Rd, Silverwater NSW 2128 PO Box 7138, Silverwater NSW 1811 P: +61 2 8705 0255 P: 1300 773 500 nsw.sales@atlan.com.au	**QLD MAIN OFFICE** 130 Sandstone Pl, Parkinson QLD 4115 P: +61 7 3271 6960 P: 1300 773 500 qld.sales@atlan.com.au	**VIC & TAS OFFICE** 897 Wellington Rd Rowville VIC 3178 P: +61 3 5274 1336 P: 1800 810 139 sales@atlan.com.au **VIC GEELONG BRANCH** 70 Technology Close, Corio VIC
SA OFFICE 9 Hampden Road, Mount Barker SA 5251 P: 1300 773 500 sales@atlan.com.au	**QLD SUNSHINE COAST BRANCH** 19-27 Fred Chaplin Cct, Bells Creek, QLD 4551 P: 1300 773 500 qld.sales@atlan.com.au	**WA OFFICE** 2 Modal Cres Canning Vale WA 6155 P: +61 8 9350 1000 P: 1800 335 550 sales@atlan.com.au
NZ OFFICE WANGANUI 43 Heads Road Wanganu New Zealand P: +64 6 349 0088 sales@atlan.com.au atlan.co.nz	**NZ OFFICE WELLINGTON** 41 Raiha St Porirua Wellington New Zealand P: +64 4 239 6006 sales@atlan.com.au atlan.co.nz	**NZ OFFICE AUCKLAND** 100 Montgomerie Road Airport Oaks P: +64 9 276 9045 sales@atlan.com.au atlan.co.nz

Joy in water

'We believe clean waterways are a right not a privilege and we work to ensure a joy in water experience for you and future generations.'

Andy Hornbuckle

Atlan STORMWATER

P 02 8705 0255 | sales@atlan.com.au
100 Silverwater Rd, Silverwater NSW 2128 Australia
atlan.com.au

APPENDIX E – STORMWATER & OILY WATER TREATMENT SYSTEMS MANAGEMENT PLAN

TRAFFIC MANAGEMENT:

PRIOR TO REMOVING COVERS, APPROPRIATE TRAFFIC MANAGEMENT MEASURES MUST BE IMPLEMENTED TO PREVENT UNAUTHORISED PERSONAL ENTRY TO THE WORK AREA.

STEP-1

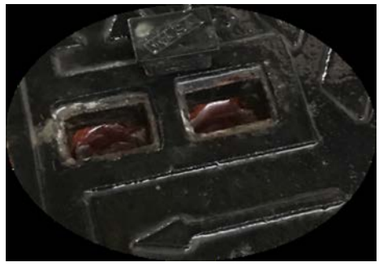
REMOVE SECURITY BOLT

STEP-2

REMOVE LIFTING POINT COVERS

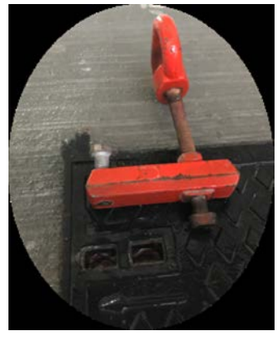
STEP-3

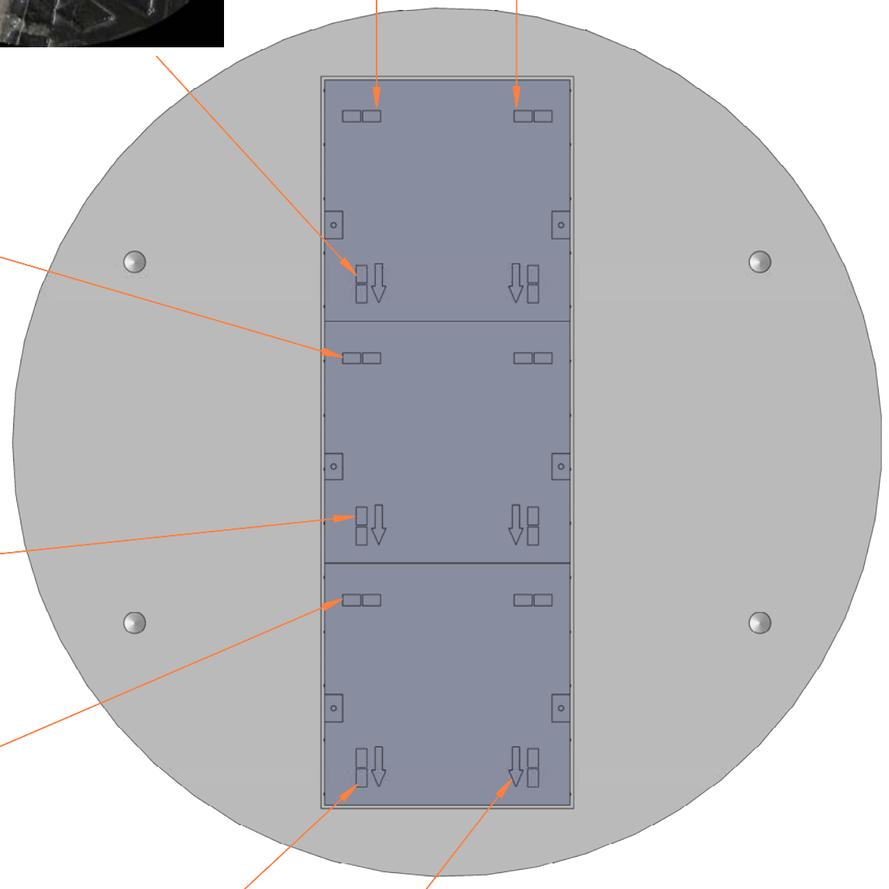
REMOVE DEBRIS FROM ALL LIFTING POINTS



STEP-4

USE AN APPROVED LIFTING ATTACHMENT





LIFTING POINT

LIFT IN ARROW DIRECTION

STEP-5

FIT LIFTING ATTACHMENT

TYPICAL CAST IRON COVER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

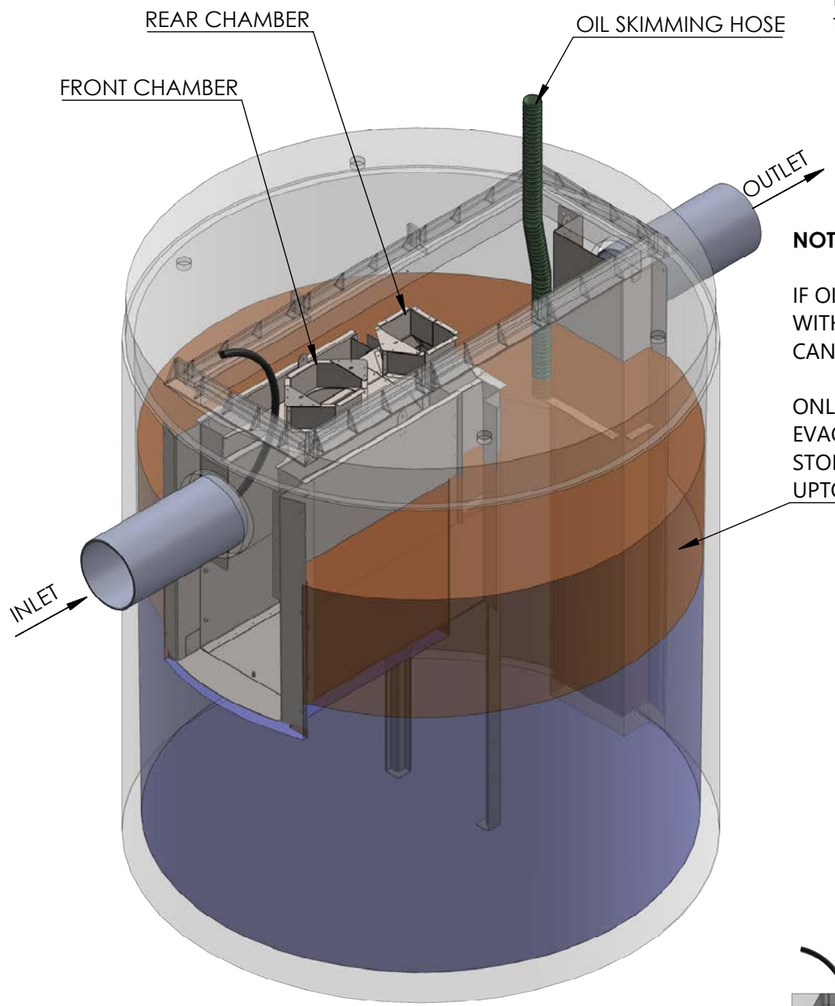
ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:	ASSEMBLY:	A3
		REV:
WEIGHT: Kg	SCALE: NTS	SHEET 1 OF 6

VIEW OF INSERT WITH COVERS REMOVED FOR SERVICE



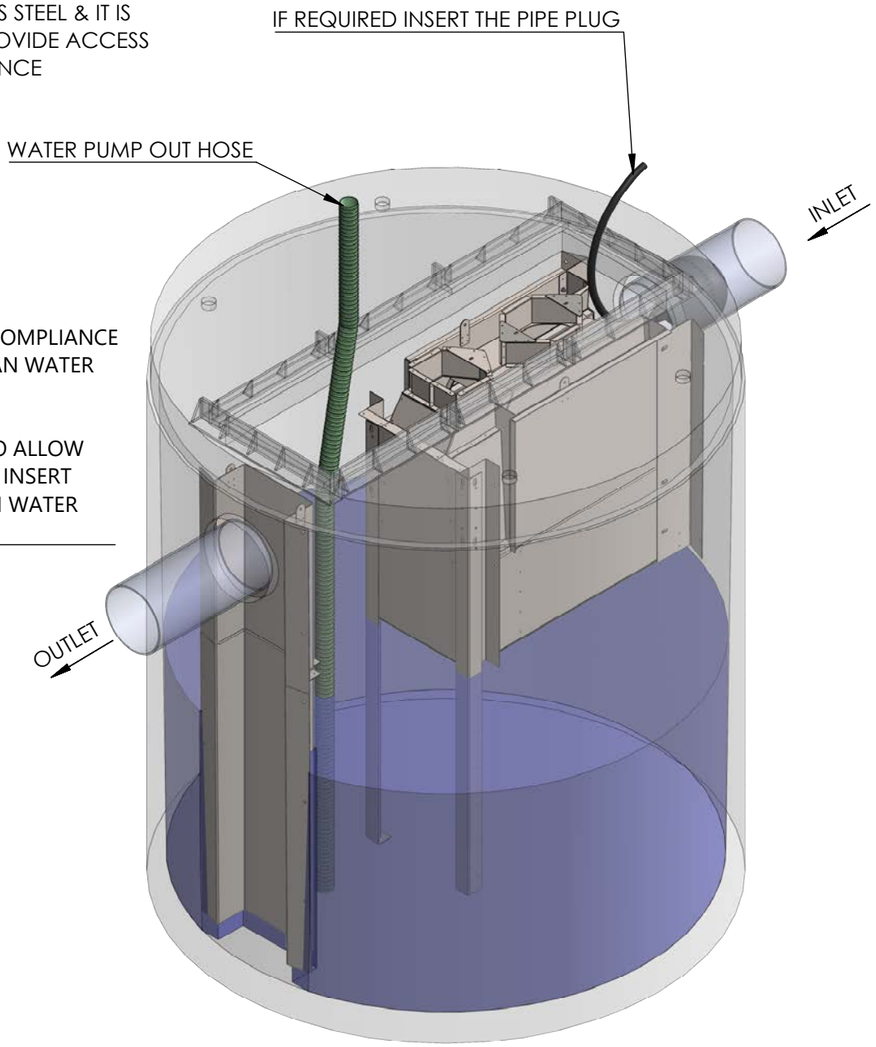
NOTE:

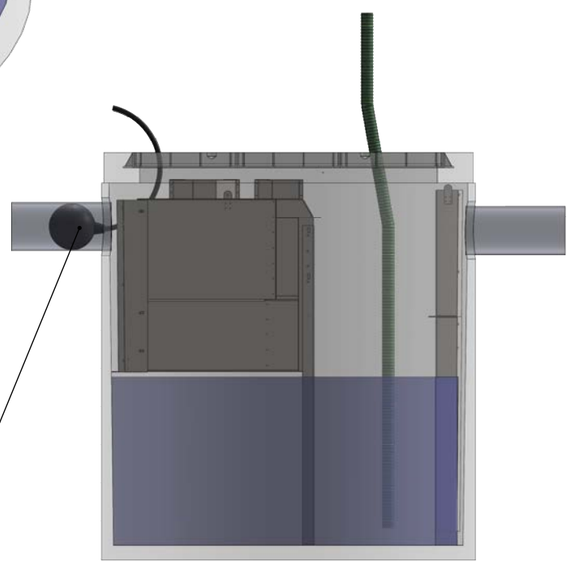
THE INSERT IS MANUFACTURED FROM STAINLESS STEEL & IT IS FITTED WITH REMOVABLE SCREENS.TURRETS PROVIDE ACCESS TO THE INSERT STORAGE ZONE FOR MAINTENANCE

NOTE:

IF OIL IS PRESENT, REMOVE BY SUITABLE MEANS IN COMPLIANCE WITH APPROPRIATE REGULATIONS. REMAINING CLEAN WATER CAN BE PUMPED TO DISCHARGE.

ONLY REMOVE SUFFICIENT WATER TO DISCHARGE TO ALLOW EVACUATION OF CAPTURED MATERIALS WITHIN THE INSERT STORAGE ZONE. AFTER SERVICE, FILL CHAMBER WITH WATER UPTO DISCHARGE PIPE INVERT.





INFLATTABLE PIPE PLUG
ONLY IF REQUIRED

MAX. SIZE OF THE INFLATTABLE BALLOON OD FOR OWS SERIES IS 300mm

SIDE VIEW

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

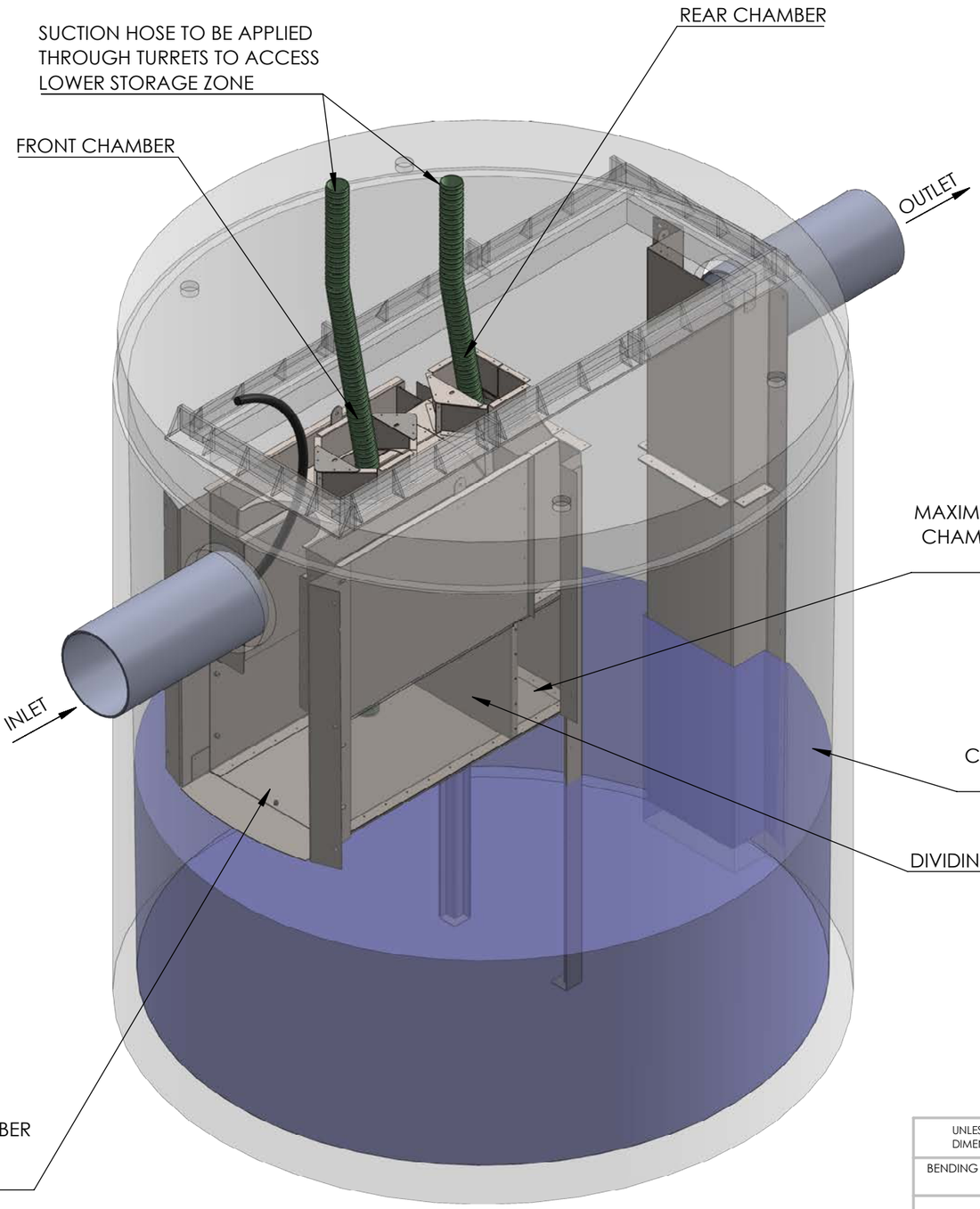
REV:

WEIGHT: Kg

SCALE: NTS

SHEET 2 OF 6

SERIES	VOLUME-1 (LITRES)	VOLUME-2 (LITRES)	VOLUME-3 (LITRES)
OE30	250	110	7,300
OE45	530	360	7,300
OE60	900	430	10,000
M30	250	110	19,000
M45	530	360	19,000
M60	1,200	575	19,000



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

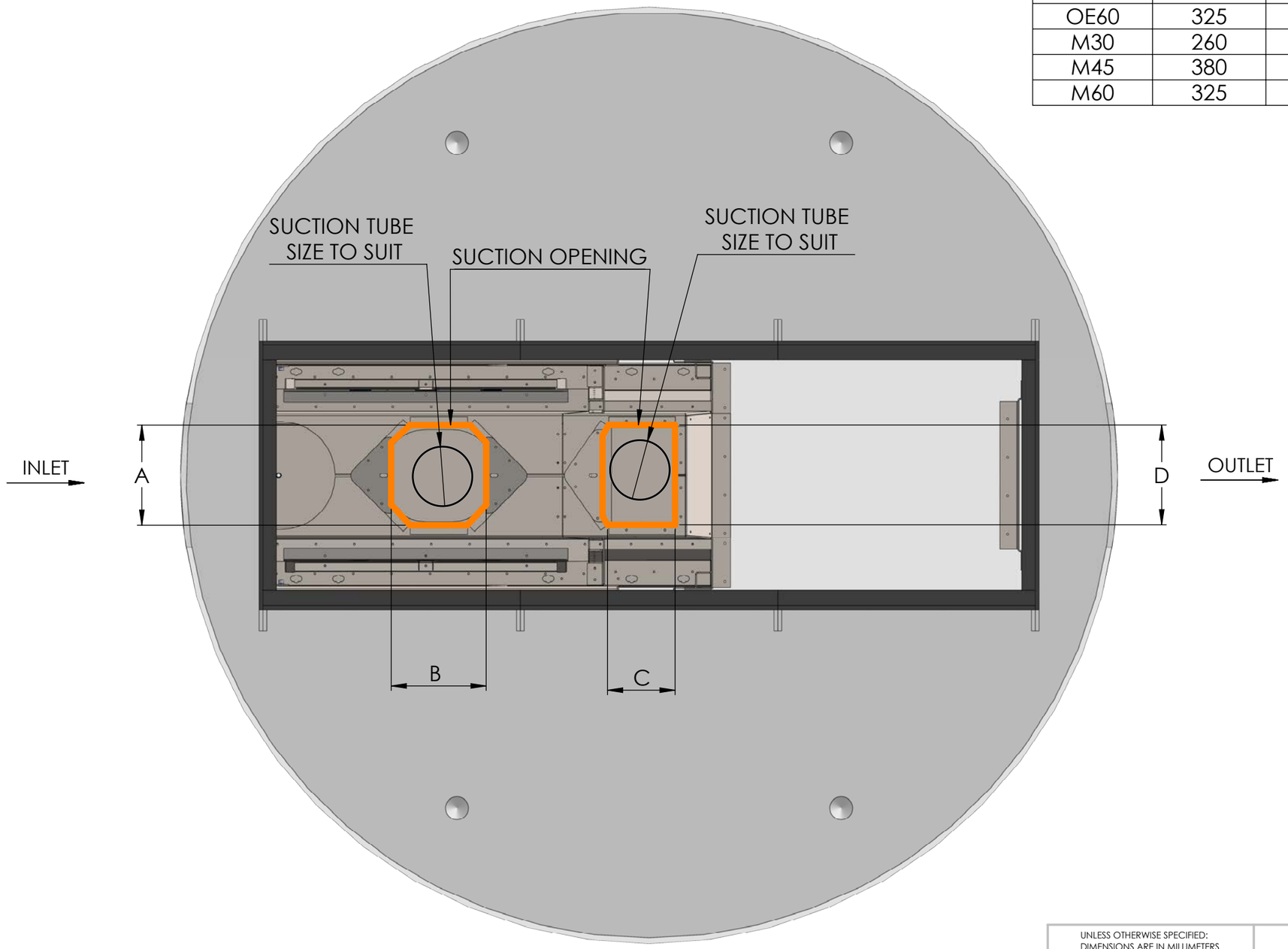
REV:

WEIGHT: Kg

SCALE: NTS

SHEET 3 OF 6

SERIES	A (mm)	B (mm)	C (mm)	D (mm)
OE30	260	250	175	260
OE45	380	520	390	380
OE60	325	850	425	325
M30	260	250	175	260
M45	380	520	390	380
M60	325	850	420	325



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR

PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES
(OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

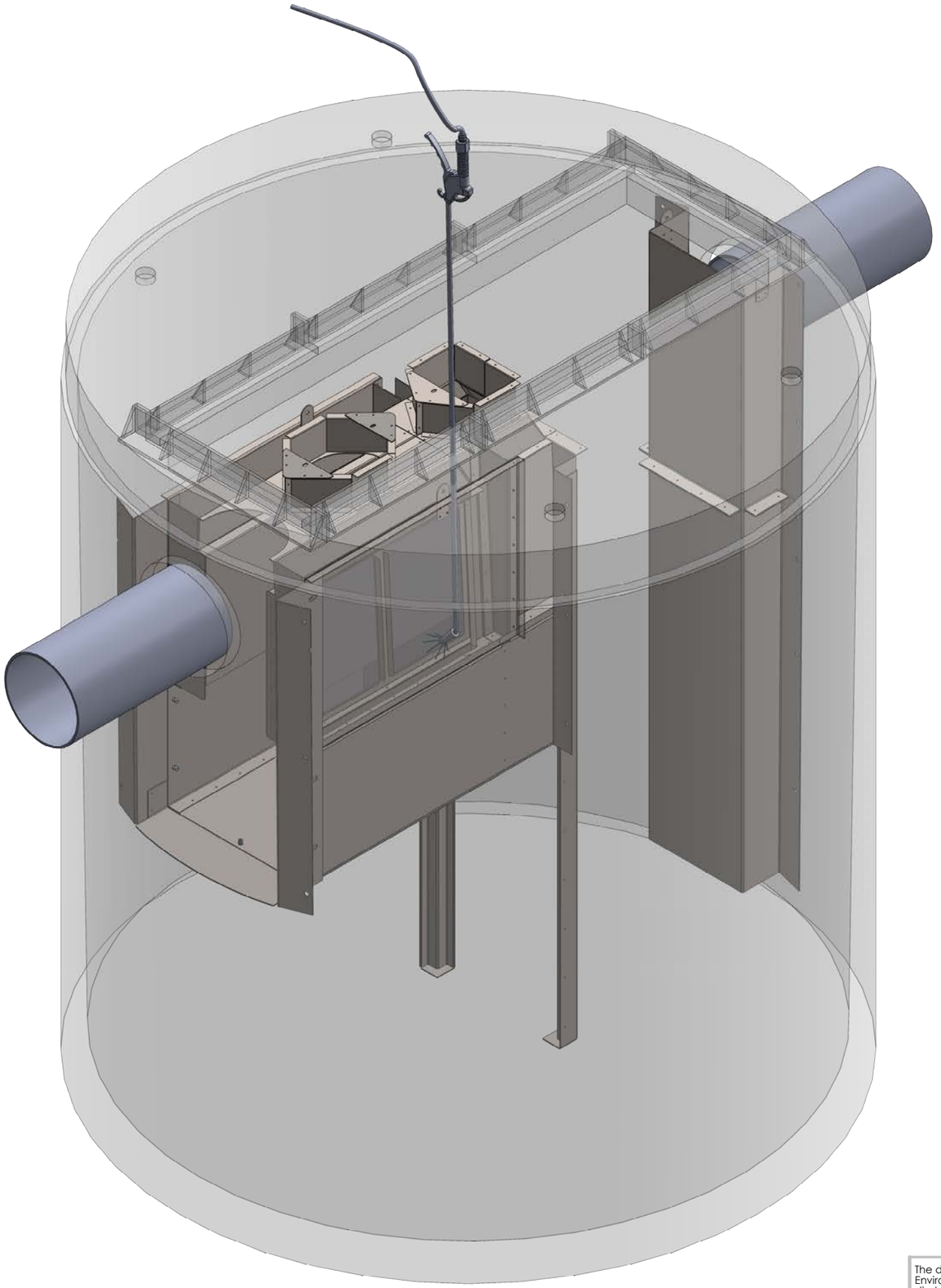
A3

REV:

WEIGHT: Kg

SCALE: NTS

SHEET 4 OF 6



NOTES:

SCREENS ARE LOCATED ON BOTH THE SIDES AND CLEAN DOWN IS ADVISABLE.

MAXIMUM PRESSURE SHOULD NOT EXCEED 4 BAR

IF SUBSTANTIAL AMOUNT OF WATER IS USED WHILE CLEANING THE SCREEN, THEN REMOVE BEFORE REFILLING.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

REV:

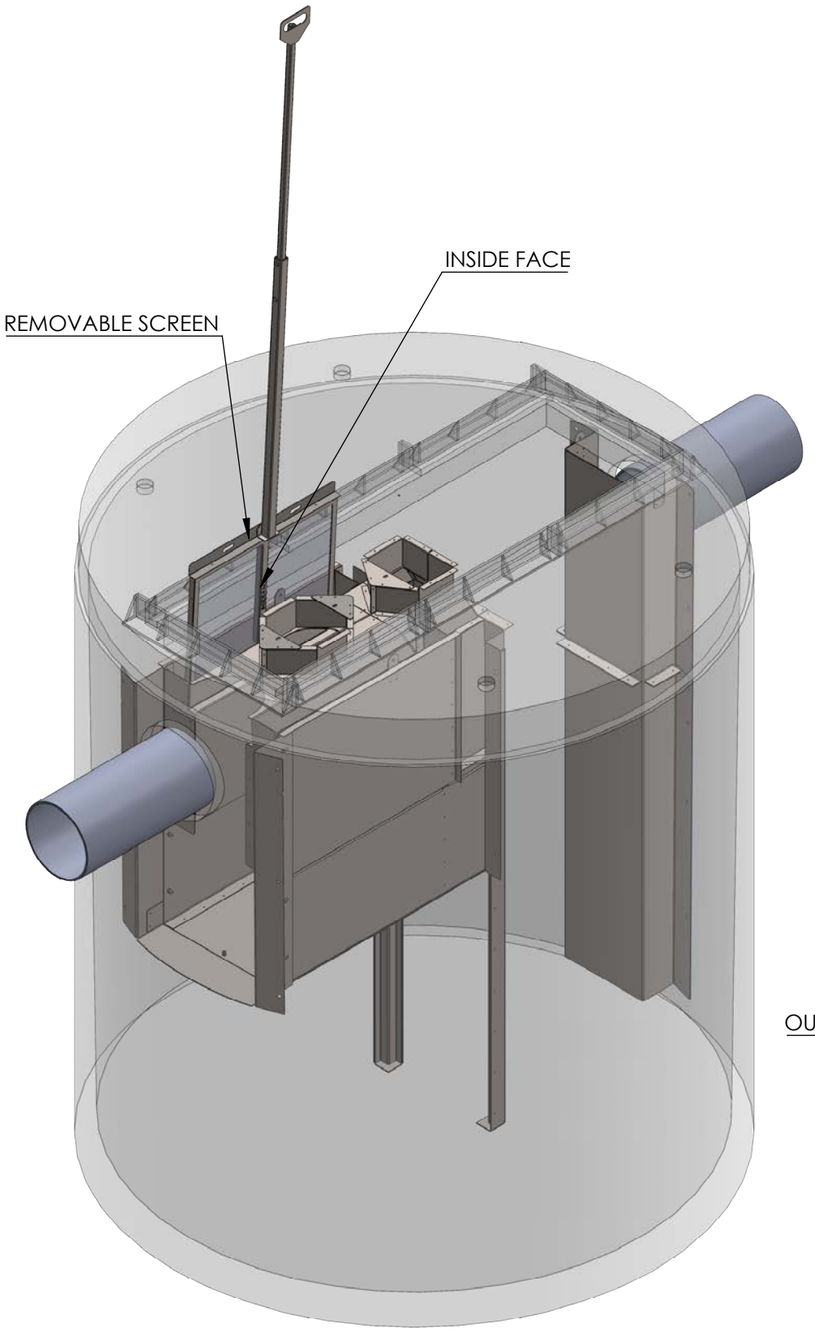
WEIGHT: Kg

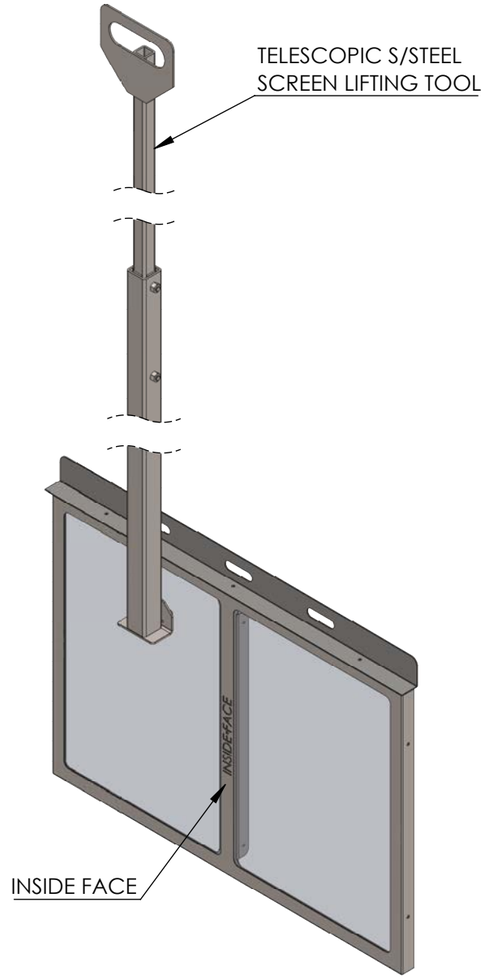
SCALE: NTS

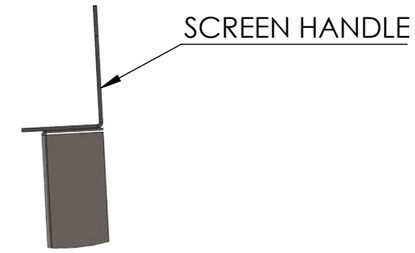
SHEET 5 OF 6

A SPECIAL TOOL TO REMOVE SCREENS CAN BE SUPPLIED

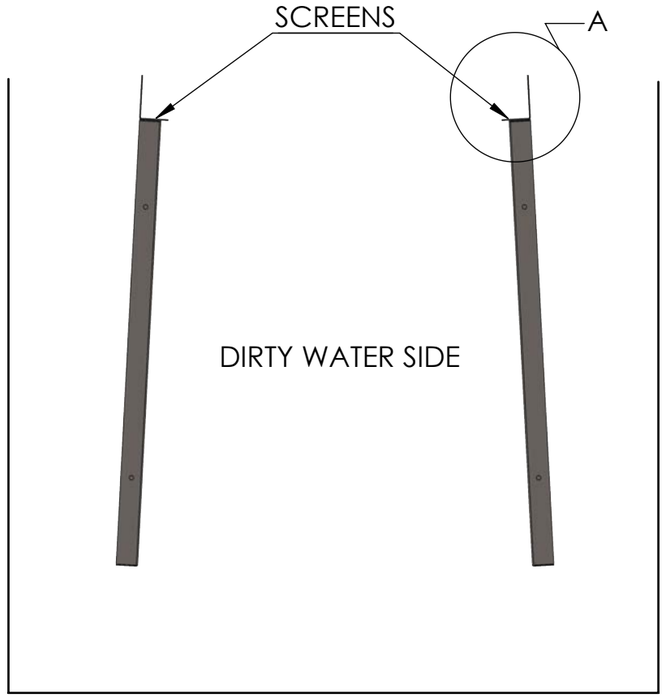
SMOOTH SCREEN FACE ORIENTED TOWARDS DIRTY WATER SIDE.
REFER ETCHING ON SCREEN FACE. SCREENS CAN BE REMOVED FOR SERVICING OR REPLACEMENT WITH SPECIAL TOOL.

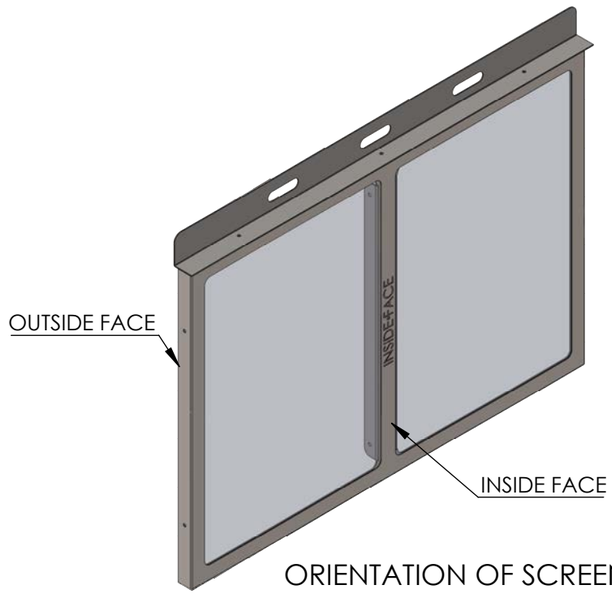






DETAIL A
SCALE 2 : 5





ORIENTATION OF SCREENS

MASS:

SCREEN WEIGHT: 3.60 Kg (EACH)

SCREEN REMOVAL TOOL WEIGHT: 7.5 Kg

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	ASSEMBLY:
WEIGHT: Kg	SCALE: NTS

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

A3

REV:

SHEET 6 OF 6

NOTE:

PRIOR TO REMOVING THE COVERS, APPROPRIATE TRAFFIC MANAGEMENT MEASURES MUST BE USED TO PREVENT UNAUTHORISED PERSONAL ENTRY.

STEP-1

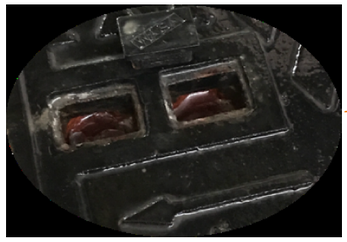
REMOVE SECURITY BOLT

STEP-2

REMOVE LIFTING POINT COVERS

STEP-3

REMOVE DEBRIS FROM ALL LIFTING POINTS

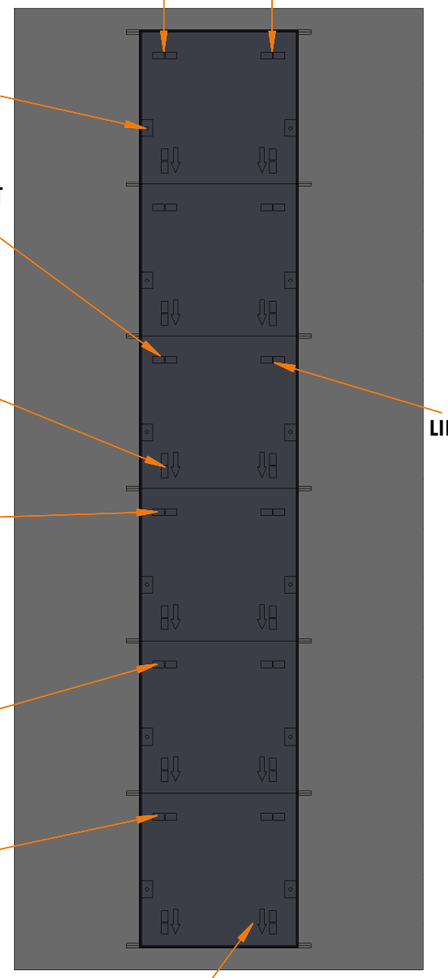


STEP-4

USE AN APPROVED LIFTING ATTACHMENT

STEP-5

FIT LIFTING ATTACHMENT



TYPICAL CAST IRON COVER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE: SERVICE MANUAL

MATERIAL:

ASSEMBLY: E90

A3

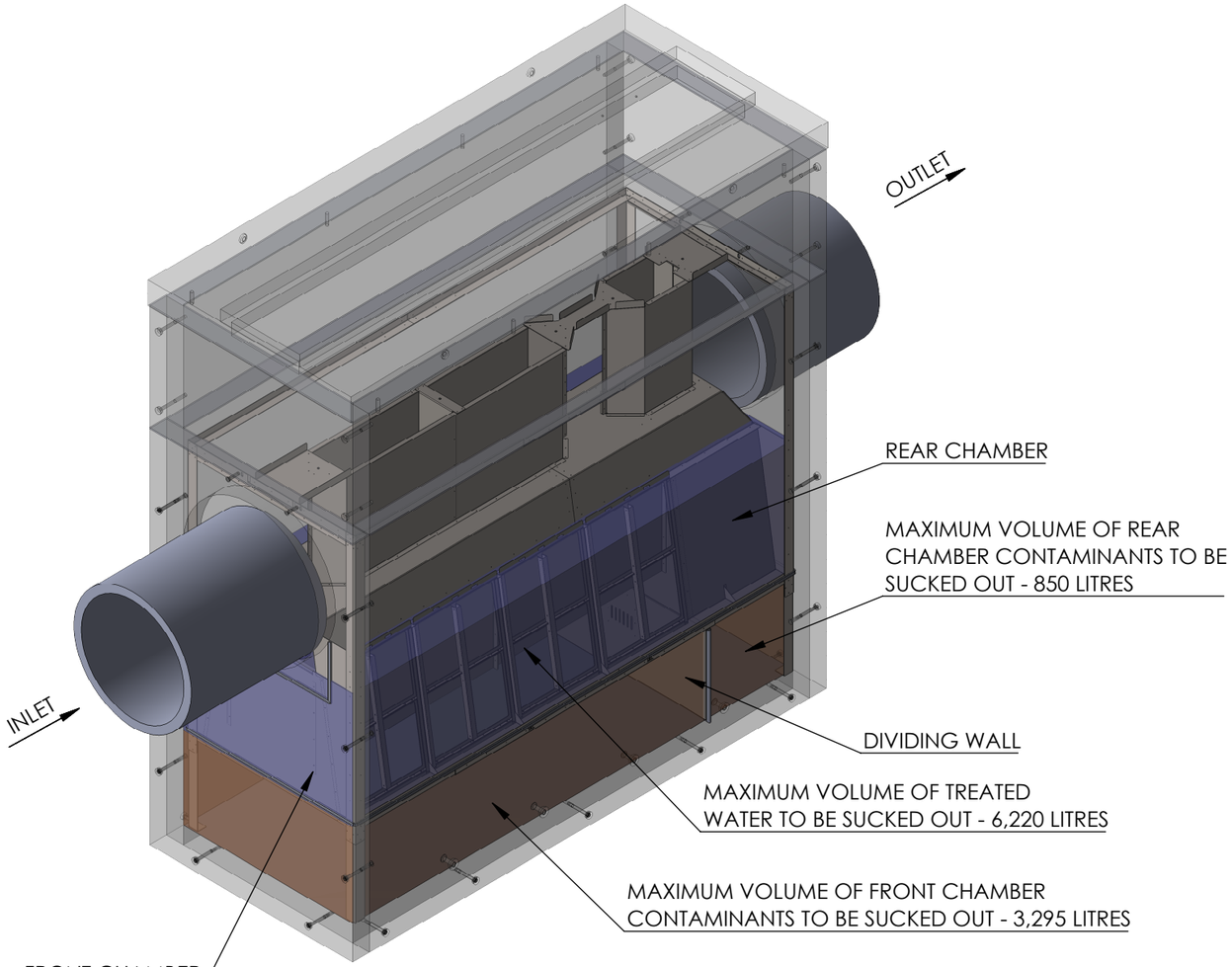
REV:

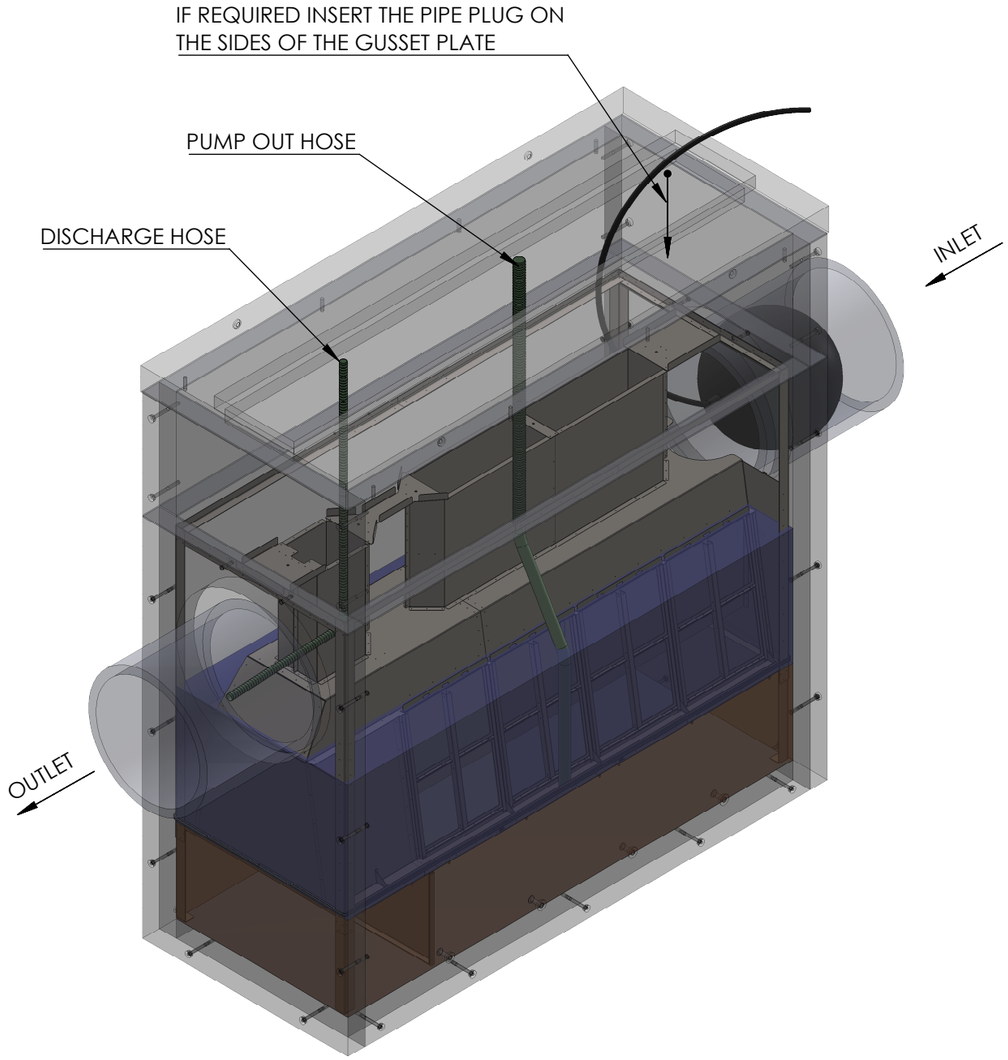
WEIGHT: Kg

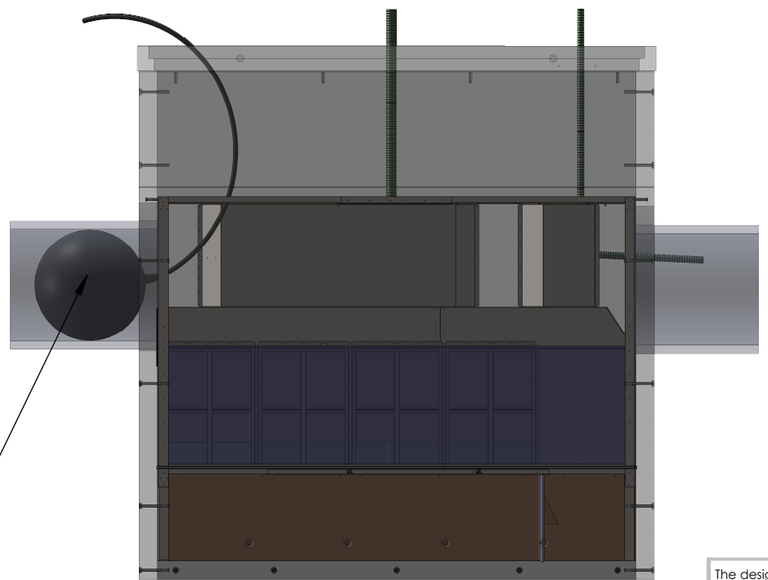
SCALE: NTS

SHEET 1 OF 5

VIEW OF INSERT WITH COVERS REMOVED FOR SERVICE







SIDE VIEW

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

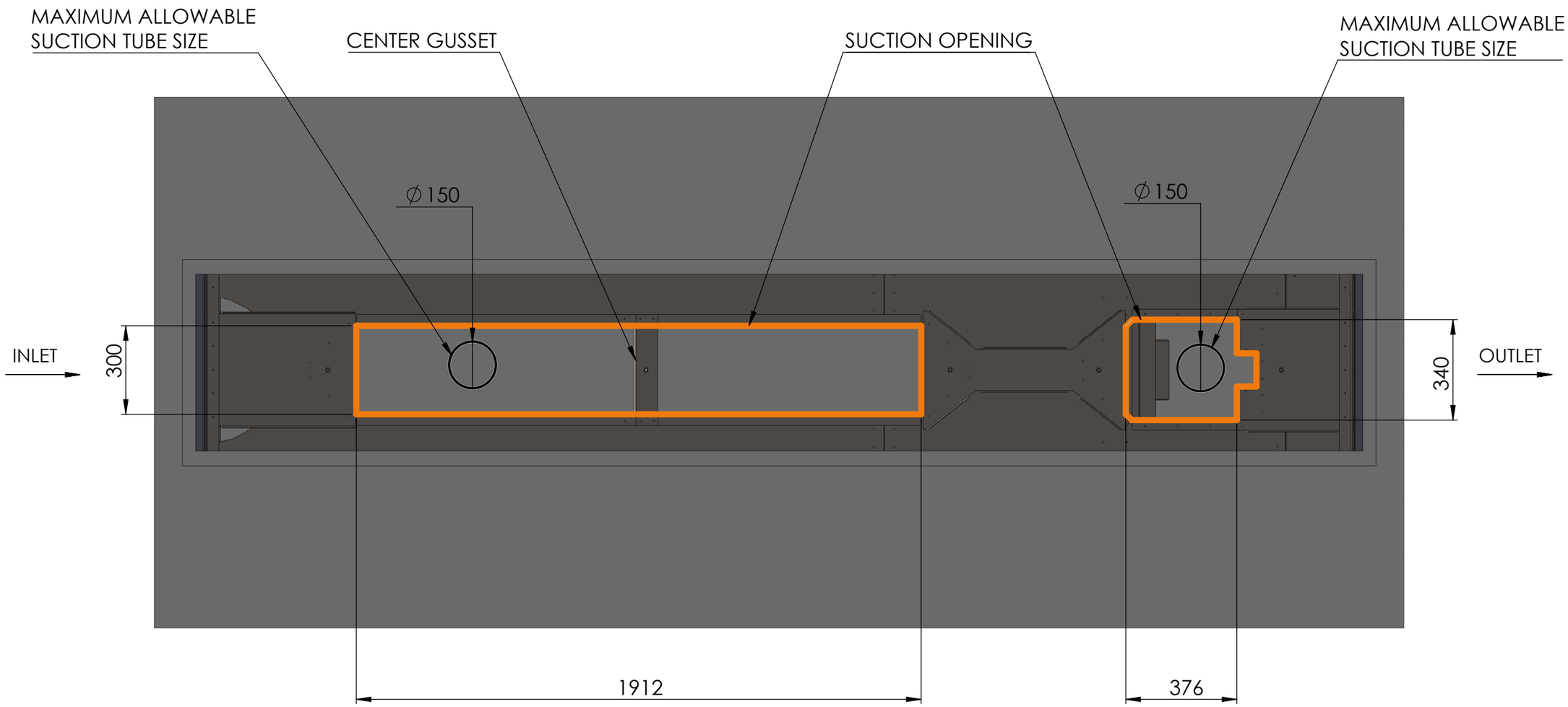
TITLE: SERVICE MANUAL

ASSEMBLY: E90

A3

REV:

SCALE: NTS



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

TITLE:

SERVICE MANUAL

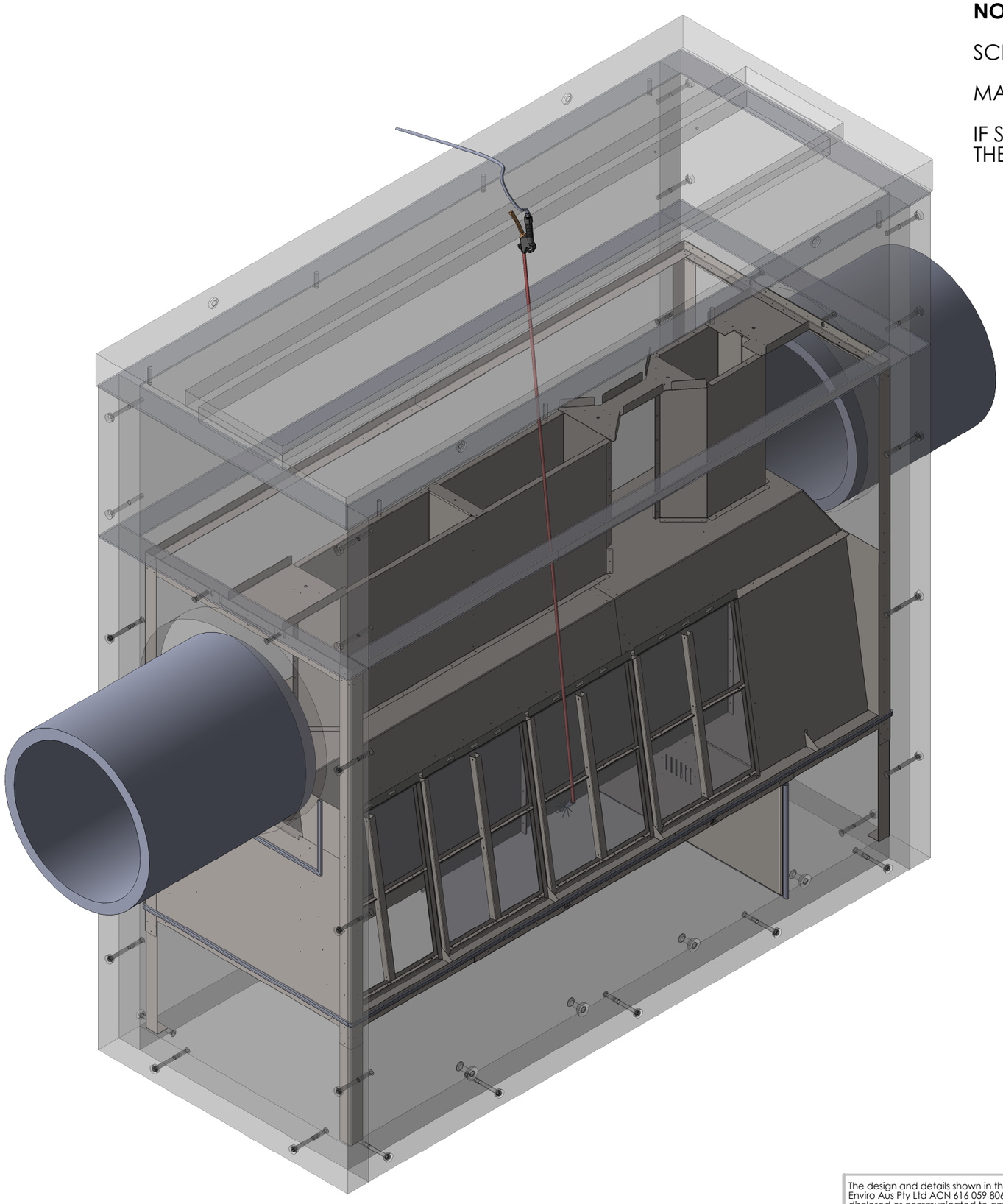
ASSEMBLY: E90

A3

REV:

SCALE: NTS

SHEET 3 OF 5



NOTES:

SCREENS ON BOTH THE SIDES NEEDS TO BE CLEANED THIS WAY.

MAXIMUM PRESSURE DOES NOT EXCEED 4 BAR

IF SUBSTANTIAL AMOUNT OF WATER IS USED WHILE CLEANING THE SCREEN, THEN THAT HAS TO BE SUCKED OUT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

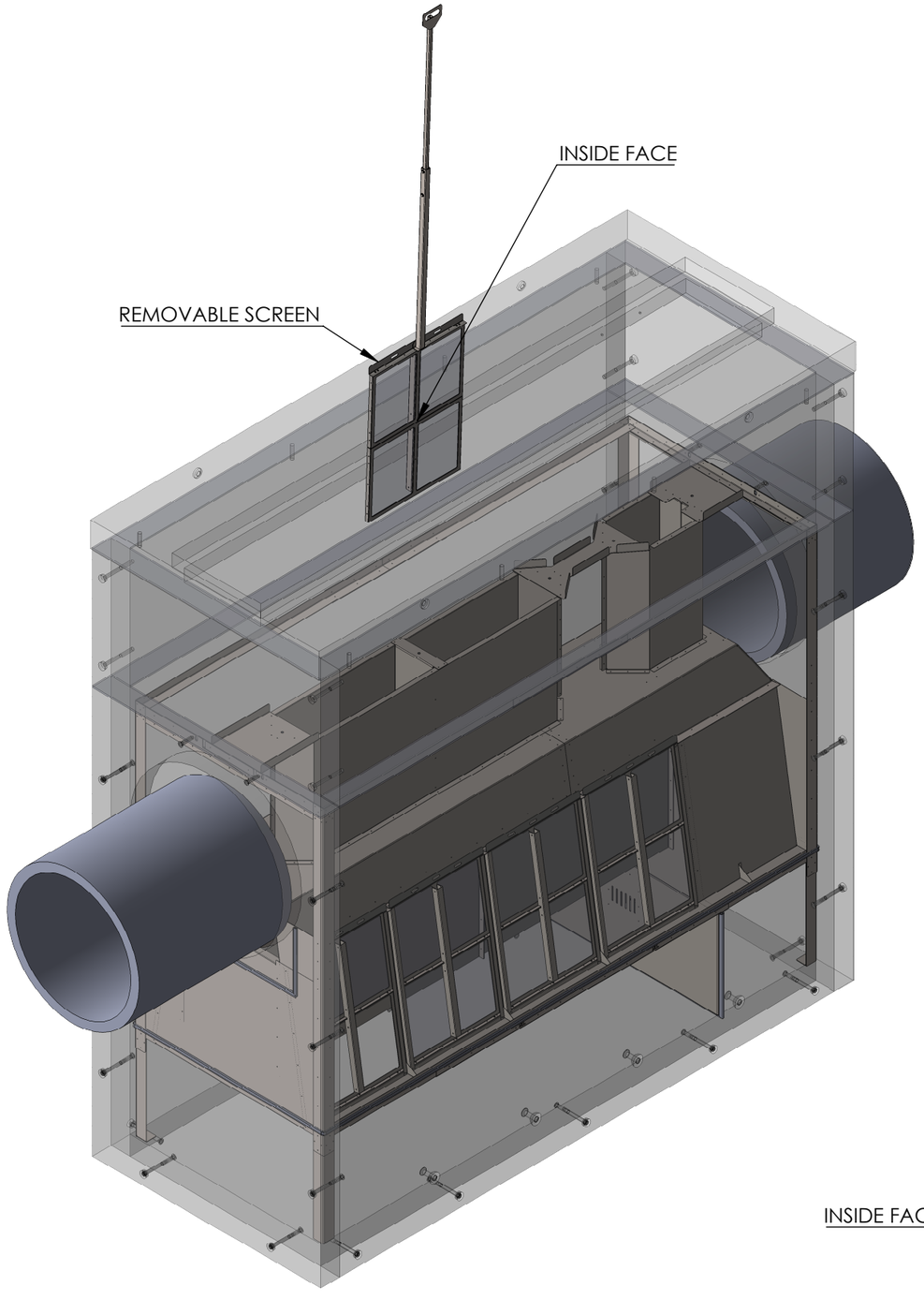
ENVIRO

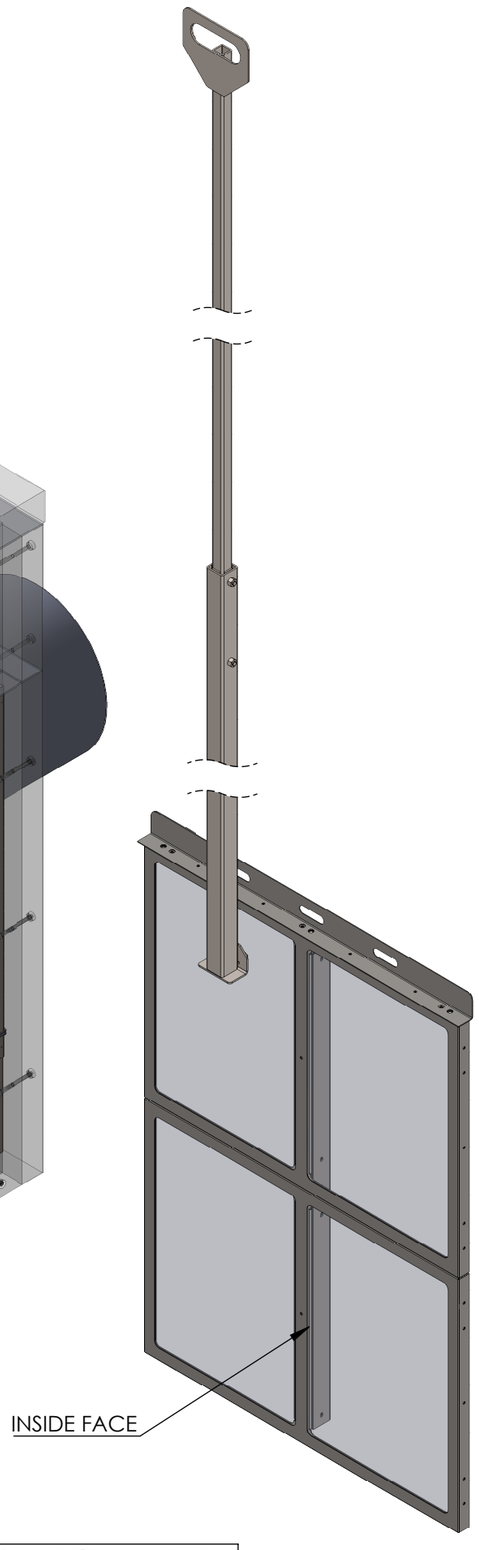
TITLE: SERVICE MANUAL

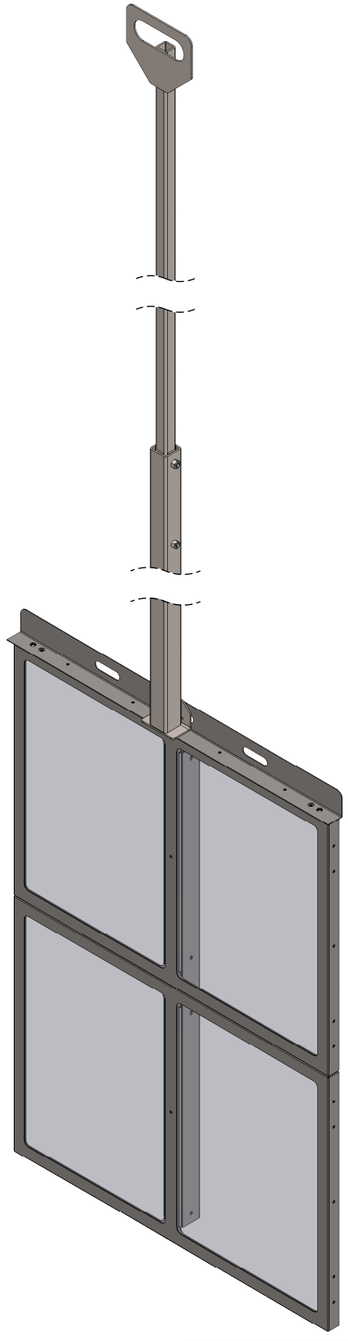
MATERIAL:	ASSEMBLY: E90	A3
		REV:
WEIGHT: Kg	SCALE: NTS	SHEET 4 OF 5

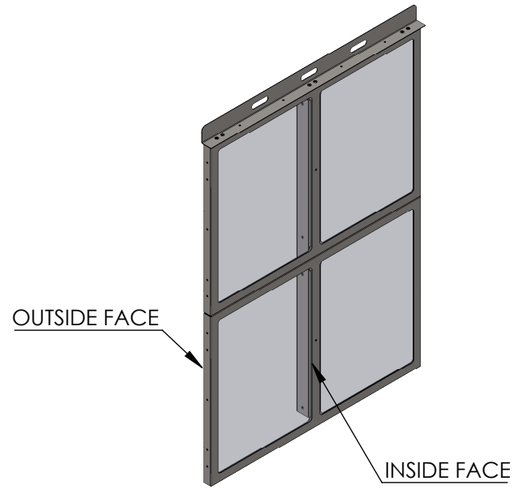
NOTE:

SMOOTH SCREEN FACE ORIENTED TOWARDS DIRTY WATER SIDE. SCREENS CAN BE REMOVED FOR SERVICING OR REPLACEMENT WITH SPECIAL TOOL.









ORIENTATION OF SCREENS

MASS:

SCREEN WEIGHT: 8.20 Kg (EACH)

SCREEN REMOVAL TOOL WEIGHT: 7.5 Kg

S.NO	'E' SERIES	TREATED WATER VOLUME (LITRES)	FRONT CHAMBER CONTAMINANTS VOLUME (LITRES)	REAR CHAMBER CONTAMINANTS VOLUME (LITRES)
1	E90	6,220	3,295	850

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

TITLE: SERVICE MANUAL

ASSEMBLY: E90

A3

REV:

SCALE: NTS

SHEET 5 OF 5

Date >>12 February 2024

PO BOX 1268, Townsville
Queensland 4810

13 48 10

enquiries@townsville.qld.gov.au
townsville.qld.gov.au

ABN: 44 741 992 072

Port Access Pty Ltd
C/- TFA Project Group
166 Knapp Street
FORTITUDE VALLEY QLD 4006

Email >> jacob.mcrae@tfa.com.au

Dear Sir/Madam

Early Referral Entity Response

Townsville SDA Development Scheme (May 2019)

Council refers to your letter dated 28 November 2023 requesting an Early Referral Entity Response for development within the Townsville State development Area.

Upon review, council would like to provide the following comments and conditions to be considered on any future development approval issued by the Coordinator General.

Application Details

Application no:	CAR23/0467
Assessment no:	3173001
Proposal:	Early Referral Entity Response for a Proposed Material Change of Use (Medium Impact Industry, Transport Depot, Service Station and ancillary Office), forming part of the Cleveland Bay State Development Area.
Street address:	1 Colinta Road STUART QLD 4811
Real property description:	Lot 21 SP 341874
Your reference:	23120
Assessment Manager:	Office of the Coordinator General

Referral Triggers

The application has been referred to council as Early Referral in accordance with schedule 2, part 2, section 2.2 of the development scheme for the Townsville State Development Area.

Matters of Referral Agency's Assessment

Pursuant to Schedule 2, part 2, section 2.2 of the Townsville State Development Area Development Scheme, council has reviewed the application and assessed the development against the Local Planning Instruments.
Council would like to advise the application referred to us for an Early Referral response is supported subject to the attached conditions being included on any development permit that may be issued.

Final matters

Council awaits the Coordinator General's decision on the application and receiving a copy of the decision notice.

If you have any further queries in relation to the above, please do not hesitate to contact Senior Development Assessment Officer, Melanie Percival on telephone 07 4727 9479 or email developmentassessment@townsville.qld.gov.au .

Yours faithfully

For Assessment Manager
Planning and Development

Enclosed>> Material Change of Use Schedule of Conditions
Attachments>> Approved Plans

CC>> Office of the Coordinator General
Email >> chandler.walker@coordinatorgeneral.qld.gov.au
sally.wotley@coordinatorgeneral.qld.gov.au

RECOMMENDED CONDITIONS

Condition x – Approved Plans		Timing
x.x	The development must generally comply with the plans referenced below, which forms part of this approval, unless otherwise specified by any condition of this approval.	*To be maintained*

Drawing	Drawing No.	Rev. No.	Plan Date
proposed site plan	23043-D02	C	27.11.23
proposed site elevations	23043-D03	C	23.11.23
proposed office building floor plan	23043-D04	B	13.11.23
proposed office building floor plan elevations	23043-D05	B	13.11.23
proposed workshop floor plan	23043-D06	B	13.11.23
proposed workshop building elevations	23043-D07	B	13.11.23
proposed retail store floor plan	23043-D08	B	13.11.23
proposed retail store elevations	23043-D09	B	13.11.23
truck canopy floor plan	23043-D10	C	23.11.23
truck canopy elevations	23043-D11	C	23.11.23
truck turning path B-Double	23043-D14	B	13.11.23
truck turning path A-Triple	23043-D15	B	13.11.23
truck turning path AV tanker & site circulation	23043-D16	B	13.11.23
site perspectives	23043-D17	C	23.11.23
site perspectives	23043-D18	C	23.11.23
concept stormwater management plan	23043-D19	B	15.11.23

Condition x – Restriction of Use		Timing
x.x	a) The Office is only permitted to operate as an ancillary component of the development. b) The ancillary Office component of the development is not permitted to operate independently of the Medium Impact Industry, Transport Depot, Service Station. Any use outside of these definitions will require a new Material Change of Use application.	*At all times*

Condition x – Inspection		Timing
x.x	Permit the Coordinator-General, or any person authorised by the Coordinator-General, to inspect any aspect of the development or use. *Note: Where practicable, at least forty-eight (48) hours notice will be provided.*	*At all times*

Condition x – Complaints		Timing
x.x	Record all complaints received relating to the development in a register that includes, as a minimum:	*At all times*

	(a) date and time when complaint was received (b) complainant's details including name and contact information (c) reasons for complaint (d) investigations undertaken and conclusions formed (e) actioned taken to resolve this complaint, including the time take to implement these actions (f) include a notation to the register as to the satisfaction (or dissatisfaction) of the complainant with the outcome.	
x.x	Prepare and provide a response to the complainant within 48 hours of receipt of the complaint	*As indicated*
x.x	Provide an up to date copy of the register if request by the Coordinator-General.	*As indicated*
x.x	In the event a complaint is received in relation to odour or air contamination, the developer / operator must engage a suitably qualified consultant to undertake an assessment addressing odour and/or air quality emanating from the site for this use in accordance with the provisions of the *Environmental Protection Act 1994*. The assessment must be accompanied by a report, inclusive of supporting calculations and site investigations. The report must provide recommendations of odour and air attenuation measures. The developer / operator must provide a copy of the report to Townsville City Council and the Coordinator-General and undertake any works within 3-months of supplying the report.	*At all times*
x.x	In the even a complaint is received in relation to noise from the use, the developer / operator must engage a suitably qualified consultant to undertake an assessment addressing noise emanating from the site for this use in accordance with the provisions of the *Environmental Protection Act 1995*. The assessment must be accompanied by a report, inclusive of supporting calculations and site investigations. The report must provide recommendations of noise mitigation measures. The developer / operator must provide a copy of the report to Townsville City Council and the Coordinator-General and undertake any works within 3-months of supplying the report.	

Condition x – External details		**Timing**
x.x	Construct and/or paint external details of buildings and structures to reduce visual impact and negate excessive glare in accordance with best practice.	*To be maintained*
x.x	Legible property numbers must be erected at the premise sand must be maintained. The site identification numbers should be of reflective material, maintained free from foliage and other obstructions, and be large enough to be read from the street.	*Prior to commencement of use and to be maintained*

Condition x – Safety and crime prevention		**Timing**
x.x	Install adequate fencing and signage to warn the public of operations and safety hazards.	*Prior to commencement of use and to be*

		maintained
x.x	Any solid wall or semi permeable fence is protected from graffiti through means of vertical landscaping or vandal resistant paint or artwork.	*Prior to commencement of use and to be maintained*

Condition x – Vehicle crossovers		**Timing**
x.x	Unless otherwise agreed to in writing with Townsville City Council, all access driveways and crossovers must be constructed from the existing kerb and channel to the property boundary generally in accordance with the Transport impact, access and parking code of the Townsville City Plan	*Prior to commencement of use and to be maintained*
x.x	All parking is to occur on site	*At all times*

Condition x – Services and utilities		**Timing**
x.x	Obtain the necessary approvals for all required services and utilities (power, potable water, on-site sewer, gas wastewater, communications etc) for both construction and operation.	*Prior to commencement of construction and to be maintained*
x.x	The development must be serviced by the public sewerage network. In particular, the connection to Council's low pressure sewer system shall be at the boundary connection provided for each lot. Privately owned pressure sewer equipment must be installed and is to generally consist of a suitably sized tank with 36-hour storage capacity, a positive displacement or 2-stage centrifugal grinder pump with minimum 1.75L/s flow rate up to approximately 38m head, electrical control/alarms, property discharge lines and boundary kit in accordance with drawings SEQ-PSS-1100-2, SEQ-PSS-1101-1 and SEQ-PSS-1102-1.	*Prior to commencement of the use. A Compliance Permit to carry out plumbing and drainage works must be obtained prior to the commencement of any sanitary drainage works.*
x.x	The premises must connect to Townsville City Council's reticulated water system. Note: Townsville City Council does not permit the direct connection of pump systems to water mains for firefighting purposes. Private building fire systems must comply with relevant building codes and standards.	*Prior to commencement of the use*
x.x	Electricity and telecommunications must be provided to the premise in accordance with the works code of the Townsville City Plan.	*Prior to commencement of the use*
x.x	Any required relocation and/or alteration to any public service or facility installation must be carried out at no cost to Townsville City Council.	*Prior to commencement of the use and to be maintained*

Condition x – Potential contamination		**Timing**
x.x	Areas where potentially contaminating substances are stored or used, are roofed and sealed with concrete, asphalt or similar impervious substance and bunded.	*At all times*
x.x	Roof water is piped away from areas of potential contamination.	*At all times*

Condition x – Hazardous materials		**Timing**
x.x	All flammable and combustible liquids (including hazardous waste materials) must be contained within an on-site containment system, controlled in a manner that prevents	*At all times*

	environmental harm and must be maintained in accordance with the current edition of *AS1940 – Storage and Handling of Flammable Combustible Liquids*.	
x.x	All containers must be secured to prevent movement during a flood event.	*At all times*

Condition x – Waste management		**Timing**
x.x	The development must reuse, recycle or lawfully dispose of all water (other than treated wastewater released to land) generated by the development.	*At all times*
x.x	Solid waste is to be stored on site in vermin-proof facilities until it is transferred to a licensed refuse facility.	*At all times*
x.x	Bulk refuse facilities are applicable, the bulk refuse facility must: (a) be a suitable enclosure with concrete slab floor, with dimensions which exceed the size of the nominated bin size by at least 300m at the rear and both sides and 600mm at the front (b) be within the curtilage of the premise in an accessible location to receive the service (c) be graded and drained through an approved sediment/silt trap to legal sewer connection and (d) be provided with a hose cock and hose in close proximity to the enclosure. (e) have a minimum overhead clearance of 6.5m for refuse collection. Access for collection is not impeded by any overhead obstructions such as trees, wires or other structure. This minimum height must be maintained at all times.	*Prior to commencement of use and to be maintained*

Condition x – State-controlled road		**Timing**
x.x	Any excavation, filling/backfilling/compaction, retaining structures, stormwater management measures, batters and other works involving ground disturbance must not encroach upon or de-stabilise the State-controlled road corridors, including all transport infrastructure or the land supporting this infrastructure, or cause similar adverse impacts.	*At all times*
x.x	All works, buildings, structure, services and utilities within the State-controlled road reserve must be consistent with, and must not compromise, future upgrades of State transport infrastructure.	*At all times*
x.x	Dust or debris must not enter the State-controlled road during the construction phase of development.	*As indicated*

Condition x – Air contaminants		**Timing**
x.x	Materials that are capable of generating air contaminants are wholly enclosed in storage bins.	*At all times*
x.x	All external areas containing the above storage bins must be sealed (impervious).	*Prior to commencement of use and to be maintained*

Condition x – Stormwater drainage		**Timing**
x.x	The development is required to achieve no-worsening and no-	*At all times*

	actionable nuisance in terms of stormwater quantity and stormwater quality for the major and minor events as defined by the Townsville City Plan relevant to the time of any future building approval.	
x.x	Drainage from the development works/building must not adversely impact upon adjacent properties. Ponding, concentration or redirection of stormwater must not occur on adjoining land.	*At all times*
x.x	Drainage works must be designed and constructed in accordance with the latest edition of the Queensland Urban Drainage Manual and healthy waters code of the Townsville City Plan.	*Prior to commencement of site works and to be maintained*
x.x	Submit to the Coordinator-General and Townsville City Council, certification from a qualified and experienced Registered Professional Engineer of Queensland (RPEQ) that stormwater drainage achieves the prescribed outcomes in accordance with the healthy waters code of the Townsville City Plan. *Note: Certification must reference SDA approval number AP2023/xxx and be provided to:* *Coordinator-General – sdainfo@coordinatorgeneral.qld.gov.au* *Townsville City Council – developmentassessment@townsville.qld.gov.au*	*Prior to commencement site works*

Condition x – Stormwater quality		**Timing**
x.x	Design and implement stormwater quality devices that achieve the pollutant reduction targets specified in the Townsville City Plan.	*Prior to commencement of the use and maintained at all times.*
x.x	Implement the stormwater management plan titled "Site Based Stormwater Quality Management Plan, prepared by TfA Project Group Revision B dated 15 November 2023 and referenced in Table 1 to conditions of this approval.	*At all times*
x.x	An appropriately qualified and experienced RPEQ must certify that stormwater quality devices achieve the prescribed outcomes in accordance with the above condition.	*Prior to commencement of the use*

Condition x – Repair of damage		**Timing**
x.x	Repair any property fencing, roads and service infrastructure and reinstate existing signage and pavement markings that have been removed or damaged during any works carried out in association with the approved development.	*Prior to commencement of the use and ongoing*

Condition x – Storage		**Timing**
x.x	Goods, equipment, packaging material or machinery must not be stored or left exposed within the first 20m of all front boundaries, excluding truck parking bays.	*Prior to commencement of the use and to be maintained*

Condition x – Fire fighting		**Timing**
x.x	The development must be provided with an adequate and accessible supply of water for firefighting purposes. Note: Townsville City Council does not permit the direct	*Prior to the commencement of the use and to be maintained*

	connection of pump systems to water mains for firefighting purposes. Private building fire systems must comply with relevant building codes and standards.	

Condition x – Lighting		**Timing**
x.x	Provide external lighting sufficient to provide safe ingress and egress for site users.	*Prior to the commencement of the use and to be maintained*
x.x	Outdoor lighting must be provided in accordance with *AS1158.1:2005 – Lighting for Roads and Public Spaces.*	*Prior to the commencement of the use and to be maintained*
x.x	Any flood lights or site illumination must be shielded, directed downwards and away from the State-controlled road so as not to interfere with the vision of motorists.	*Prior to the commencement of the use and to be maintained*

Condition x – Landscaping		**Timing**
x.x	Prepare a Landscape Plan (by a suitably qualified person) with specific attention must be given to the following: (a) The landscape plan must be prepared and provided for approval in accordance with Part 9.3.3 Landscape code of the Townsville City Plan; (b) Landscape design plans must include the entire site, including the road reserve, with staging identified (c) Landscaping must be constructed in accordance with the approved landscaping plan(s) and constructed to the relevant standards in accordance with relevant code/s and policy direction; (d) Street trees on frontage/s of Lot 21, as set out in the Landscape code and associated policies. The preferred species for this location is *Grevillea baileyana* for the Helen Downs Road frontage and *Phyllanthus cuscutiflorus* for Colinta Road frontage. (e) Root barrier or other mechanical protection must be installed where sewer infrastructure is located in the road reserve adjacent to street trees. The root barrier must be installed approximately 700mm from centre of trunk (toward the sewer) and must extend 1.5m either side of trunk centre (parallel to the sewer alignment). *Note – Street tree locations must not impact on vehicle movements.*	*Prior to the commencement of the construction and to be maintained thereafter.*
x.x	Implement the works in the Landscape Plan identified in (condition number above)	*Prior to commencement of the use and to be maintained thereafter.*
x.x	Maintain landscaping and replace any failed or failing trees or shrubs.	*At all times*

Condition x – Construction Management Plan		**Timing**
x.x	Prepare a construction management plan that includes the	*Prior to the*

	following: (a) employee and visitor parking areas, as outlined in the approved plans; (b) Provision for loading and unloading materials including the location of any remote loading sites; (c) The storage location/s materials, structures, plant and equipment on the construction site; (d) management of noise and dust generated from the site during and outside construction work hours; (e) a monitoring program to identify issues of non-compliance, actions for correcting any non-compliance and who is responsible for undertaking those actions; (f) a timetable and process for review of the construction management plan to assess its effectiveness and to implement amendments as required.	*commencement of construction*
x.x	Undertake all works generally in accordance with the construction management plan which must be current and available on site at all times during the construction period.	*At all times during construction*
x.x	Water to be used for dust mitigation is to be drawn from sources other than Townsville City Council's reticulated water supply should Level 3 or 4 water restrictions be in effect and / or imposed during the construction of the development.	*At all times during the site works phase*
x.x	Dust or debris must not enter the State-controlled road during the construction phase of development.	*As indicated*

Condition x – Erosion and sediment control		**Timing**
x.x	a) Soil erosion and sediment control (SESC) plans must be prepared by a suitably qualified professional and submitted to Council for approval, with the proposed SESC measures to be designed in accordance with "Best Practice Erosion and Sediment Control" published by the International Erosion Control Association (Australasian Chapter) (lECA, 2008). The plans must demonstrate that the proposed SESC measures will achieve the erosion and sediment control design objectives specified in Appendix 2, Table A of the State Planning Policy 2017. b) Prescribed Water Contaminants (as defined in the Environmental Protection Act 1994) must not be released from the site or to waters within the site, or be likely to be released should rainfall occur, unless all reasonable and practicable measures are taken to prevent or minimise the release and concentration of contamination. These measures must be designed, implemented and maintained in accordance with "Best Practice Erosion and Sediment Control" published by the International Erosion Control Association (Australasian Chapter) (lECA, 2008) and achieve the design objectives specified in Appendix 2, Table A of the State Planning Policy 2017.	*Prior to the commencement of site works and to be maintained during the site works phase*

Condition x – Spillage control		**Timing**
x.x	The developer must ensure that all necessary steps are taken to ensure that the refuelling of the service station via tank vehicle etc. meets all relevant standards including but not limited to safety and environmental.	*Prior to the commencement of the use and to be maintained*

Enclosure 3 – Advice to be attached to an approval

Currency period

This SDA approval is valid until the end of the currency period, four years after the date of approval, unless the approval states a different period. For the SDA approval to remain valid the proponent must have, before the end of the currency period:

(if the development is reconfiguring a lot) provided the plan of subdivision to the Coordinator-General for approval in accordance with the relevant development scheme; or

(for all other development) substantially started the development; or

made an application to the Coordinator-General to extend the currency period.

Other approvals

This approval relates solely to the material change of use in the Townsville State Development Area. All other approvals and/or permits required under local, state and/or commonwealth legislation must be obtained prior to the commencement of the use.

Townsville City Council

Further Approvals Required

A Compliance Permit to carry out plumbing and drainage works prior to the commencement of sanitary drainage works.

A Roadworks permit for the construction of a driveway or access within the road reserve must be obtained.

For filling and excavation associated with this approval, an Operational works application must be submitted to Townsville City Council.

For non-compliant accepted development, an Operational works application must be submitted to Townsville City Council.

Building works

A Development Permit for Building Works must be obtained prior to building works commencing on site.

Prior to the issuing of a Development Permit for Building Works, documentation signed by a RPEQ must be submitted to a Building Certifier identifying the required minimum floor height of all habitable rooms to achieve storm tide/flood immunity.

Infrastructure charges

An Infrastructure Charges Notice outlining the estimated infrastructure contributions payable relevant to the Development Permit will be issued in due course.

Water restrictions

To manage Townsville's water resources, council regulates water restrictions on a permanent basis. All development undertaken in Townsville must be mindful of the current and projected level of water restrictions that may affect development activities such as landscaping establishment and/or soil erosion and sediment control.

Developers remain responsible for compliance with any water restrictions as directed by Townsville City Council.

During times of significant water shortage, Townsville City Council may refuse to grant developer exemptions from water restrictions for the purposes of landscaping works or soil erosion and sediment control activities.

In circumstances where exemptions to water restrictions are no longer issued by Townsville City Council, bonding of soft landscaping works will be permitted to enable the release of plans of survey and / or compliance certificates. In cases where the soft landscaping is a component of permanent soil erosion and sediment control (such as an open drain) the use of "bonded fibre matrix" type hydro-mulch products or other suitable soil erosion and sediment control methods can be carried out as alternatives to demonstrate compliance with water restrictions.

The responsibility for compliance with all relevant environmental protection requirements (in particular sediment and erosion control) remains with the developer.

Connection to services

A copy of the SDA approval and the approved water reticulation design must be submitted to Townsville City Council with the appropriate application form for connection to Townsville City Council's water supply. Townsville City Council will respond to the application with a quotation for the work and upon payment will schedule the works for connection.

A copy of the SDA approval and the approved sewer reticulation design must be submitted to council with the appropriate application form for connection to Townsville City Council's sewer supply. Townsville City Council will respond to the application with a quotation for the work upon payment will schedule the works for connection.

Signage

Plans of any signage to be associated with the use that is deemed to be assessable development in accordance with the Categories of development and assessment - Operational work, specifically Operational work being placing an advertising device on premises of the Townsville City Plan, must be submitted to council for assessment.

Signs must be designed in accordance with relevant codes of the Townsville City Plan. To maintain amenity for the adjoining properties, no illumination of the signage is to occur unless otherwise approved by council.

Construction

Storage of Materials and Machinery

All materials and machinery to be used during the construction period are to be wholly stored on the site, unless otherwise approved.

Building Work Noise

The hours of audible noise associated with construction and building work on site must be limited to between the hours of:

a. 6.30 a.m. to 6.30 p.m. Monday to Saturday
b. No work on Sundays or Public Holidays.

Liquid Trade Waste Approval/Agreement

The developer is advised that a Trade Waste Approval/Agreement may be required under the *Water Supply (Safety and Reliability) Act 2008*. This should be discussed with Townsville City Council's Planning Services team at an early stage of project development.
Contact Tradewaste@townsville.qld.gov.au or 13 48 10.

Asbestos

All asbestos being removed from the site must be transported and disposed in accordance with relevant legislation.

Flammable and Combustible Liquids

Flammable and combustible liquids are to be stored and handled in accordance with *AS1940—The Storage and Handling of Flammable and Combustible Liquids*.

Chemical Storage

Where chemicals are stored or handled on site, the storage and handling of chemicals must be in accordance with the relevant WHS Code of Practice.

Roadworks Approval

The developer is responsible for obtaining a Roadworks permit in accordance with Subordinate Local Law No. 1.15 (Carry out Works or Interfering with a Road or its Operation) 2011 for the installation of any hoardings, gantries or temporary road closures of the footpath or road prior to the commencement of works. The application must indicate the following:

a. Completed Roadworks permit application form
b. Prescribed fee
c. Traffic Management Plan prepared by a suitable qualified traffic professional detailing the traffic management measures put in place to manage all Roadworks including pedestrians, cyclists and vehicles in accordance with the Manual of Uniform Traffic Control Devices (Queensland) Part 3 – Works on Roads.

If the works require closure of part of the road reserve, a temporary Road Closure Permit will be required. This permit allows for a section of road reserve to be closed for the purpose of works. The Queensland Police Service is the issuing authority for these permits. An application will need to be made to Townsville City Council for a letter of 'no objection' prior to applying to the Queensland Police Service for the permit. The Traffic Management Plan will need to be included with the application to Townsville City Council.

Environmentally Relevant Activities

Where the premises is intended to be used for carrying out an Environmentally Relevant Activity as defined by the Environmental Protection Regulation 2019, an application under *the Planning Act 2016* and the *Environmental Protection Act 1994* must be submitted to the relevant administering authority prior to the commencement of the use.

Environmental Management Register

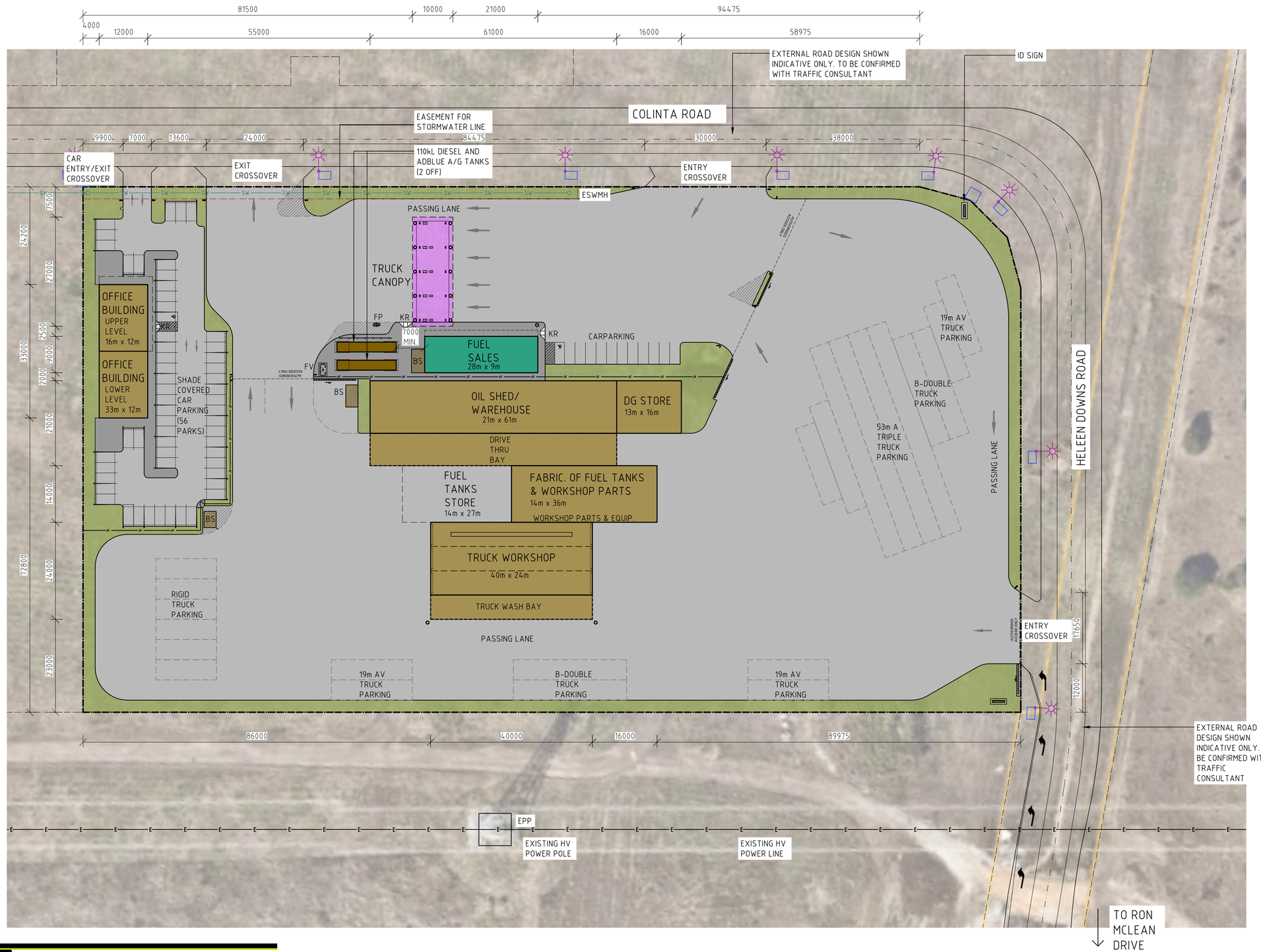
If the business meets the threshold specified in Schedule 3 of the *Environmental Protection Act 1994* for a notifiable activity, it has a responsibility under section 371(1) of the *Environmental Protection Act 1994* to notify the administering authority (Department of Environment and Science) within 22 business days of the use commencing.

Food Business

Where a food business is required to be licensed under the *Food Act 2006* Section 49, a Food Licence Application must be made prior to construction of the food premises. Please contact Townsville City Council's Environmental Health team on 13 48 10 for further information.

Cultural Heritage Duty of Care

Where items of archaeological importance are identified during construction of the project, the proponent must comply with its duty of care under the *Aboriginal Heritage Act 2003* and the Department of Environment and Heritage Protection (2014) *Guidelines: Archaeological investigations*. All work must cease, and the relevant State agency must be notified. Work can resume only after State agency clearance is obtained.



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

BS	BIN STORE - REFER DETAIL DWGS.
EPP	EXISTING POWER POLE - REFER SURVEY PLAN
ESWMH	EXISTING STORMWATER MAN HOLE
FL	FLOODLIGHT - REFER TO ELECTRICAL CONSULTANTS DWGS.
FP	REMOTE FUEL FILL POINT - REFER FUEL DWGS.
FV	FUEL VENT STACK - REFER FUEL DWGS.
KR	KERB RAMP - REFER TYPICAL DETAILS
	EXISTING ELECTRICAL PILLAR/PITS APPROXIMATELY
	EXISTING LIGHT POLES APPROXIMATELY

DEVELOPMENT ASSESSMENT

LANDSCAPE AREA: 3147m² (10%) APPROX.

BUILDING AREAS

FUEL SALES:	252m²
TRUCK CANOPY:	270m²
OFFICE LOWER:	396m²
OFFICE UPPER:	192m²
OIL SHED/ WAREHOUSE:	1280m²
DG STORE:	208m²
FABRIC. FUEL TANKS & WORKSHOP:	504m²
FUEL TANKS STORAGE:	378m²
TRUCK WORKSHOP & TRUCK WASH:	960m²
TOTAL AREA:	4,440m²

CARPARKING ASSESSMENT

FUEL SALES CAR PARKING PROVIDED: = 43 CARS

OFFICE CAR PARKING PROVIDED: = 56 CARS

0 10 20 30 40 50m

SCALE 1:500

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NSW ARCHITECTS REGISTRATION BOARD : 10787

ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	AW	ISSUED FOR INFORMATION	DGC	
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	27.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED SITE PLAN

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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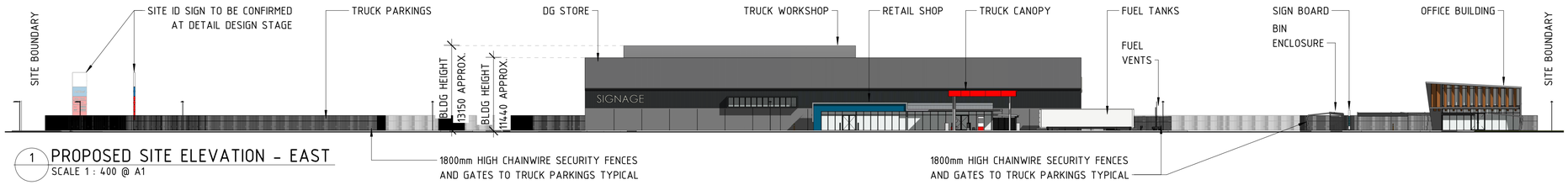
DRAWING NO	REV
23043-D02	C



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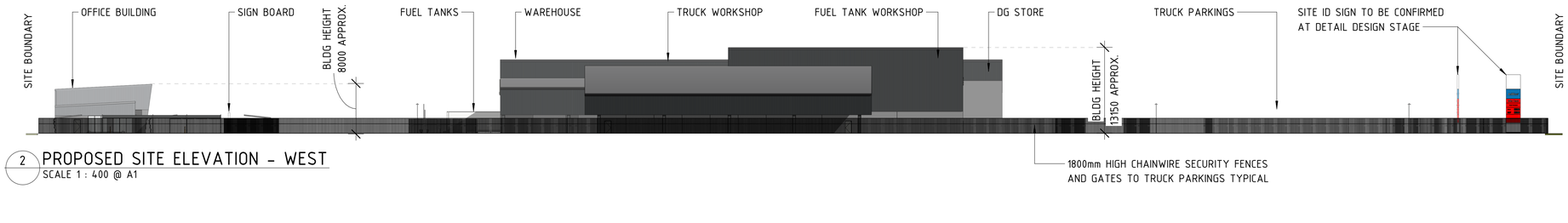
SCALE 1 : 400 @ A1



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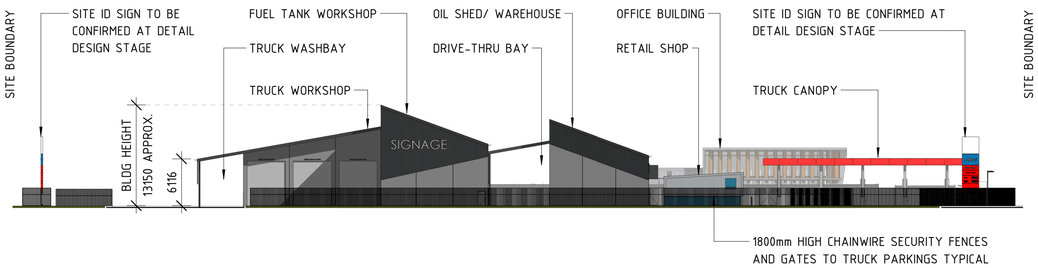

3 PROPOSED SITE ELEVATION - SOUTH
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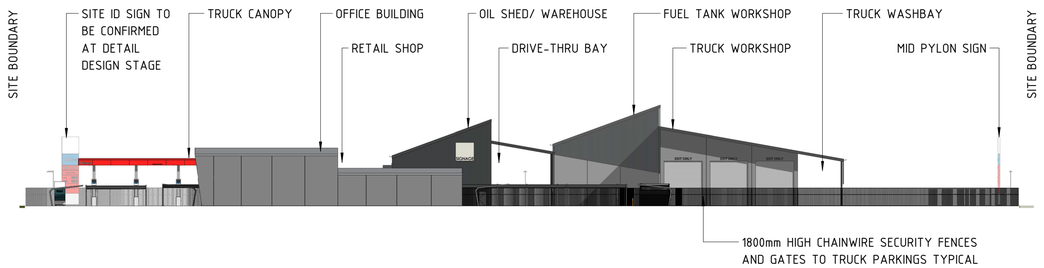

4 PROPOSED SITE ELEVATION - NORTH
SCALE 1 : 400 @ A1

NOTE:
COLOURS, FINISHES AND SIGNAGE SHOWN INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 8 16 24 32 40m
SCALE 1:400

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS
TFA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

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166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	03.11.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE
PROPOSED SITE ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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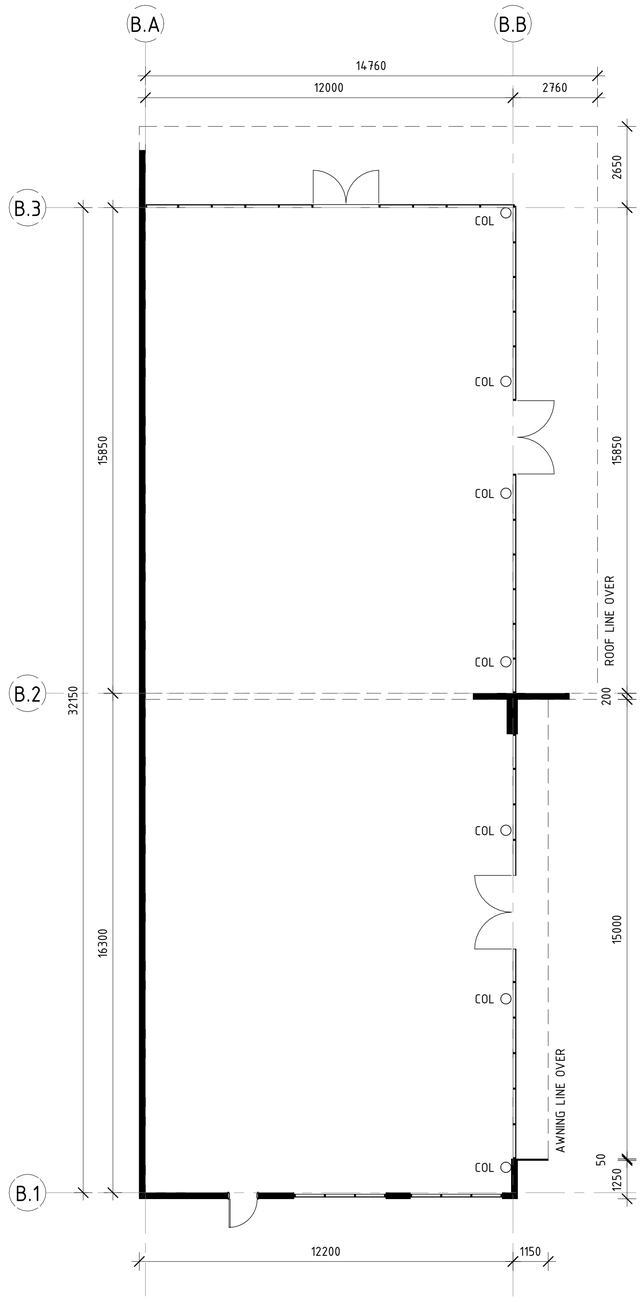

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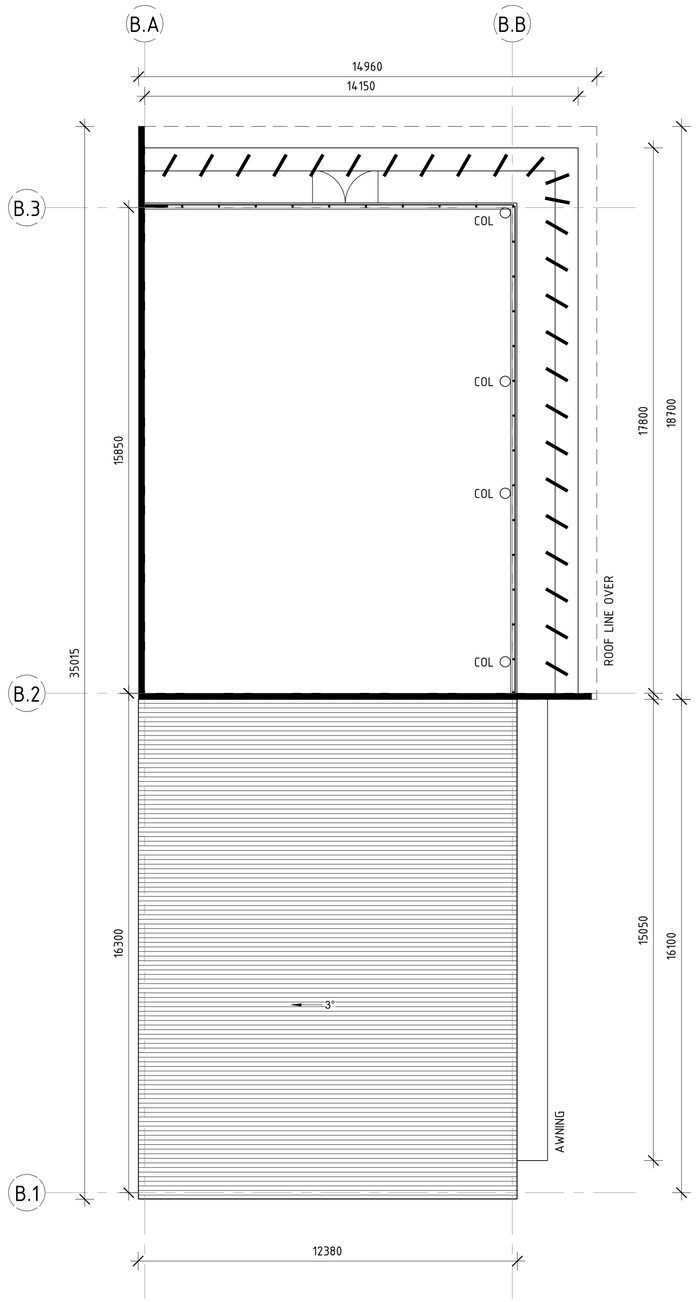

2 D05 OFFICE LEVEL 1
SCALE 1 : 100 @ A1

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0 2 4 6 8 10m
SCALE 1:100

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TFA Project Group

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PROJECT DETAILS

PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED OFFICE BUILDING FLOOR PLAN

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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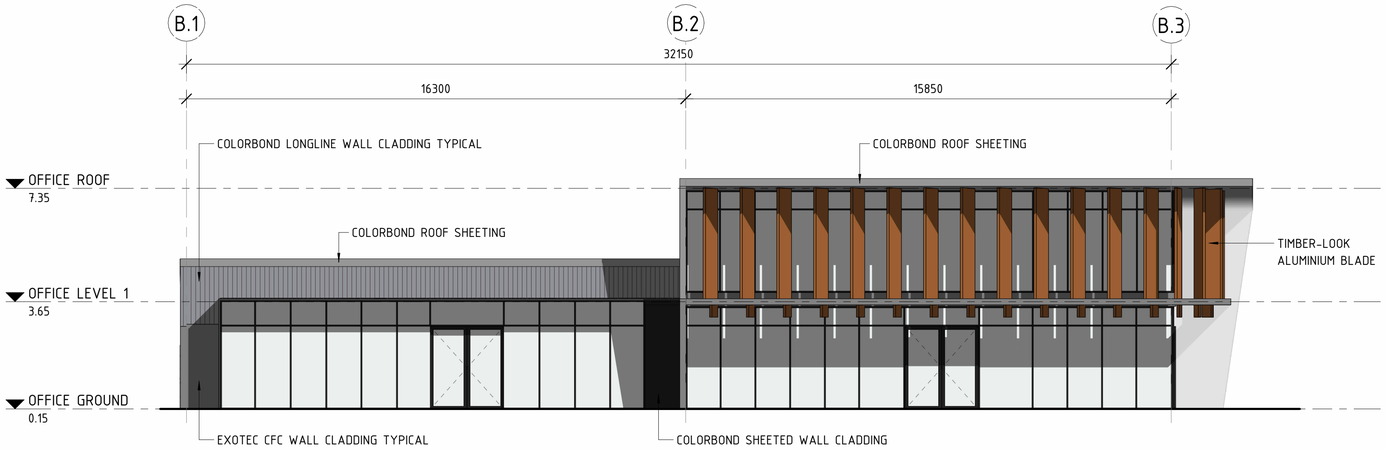

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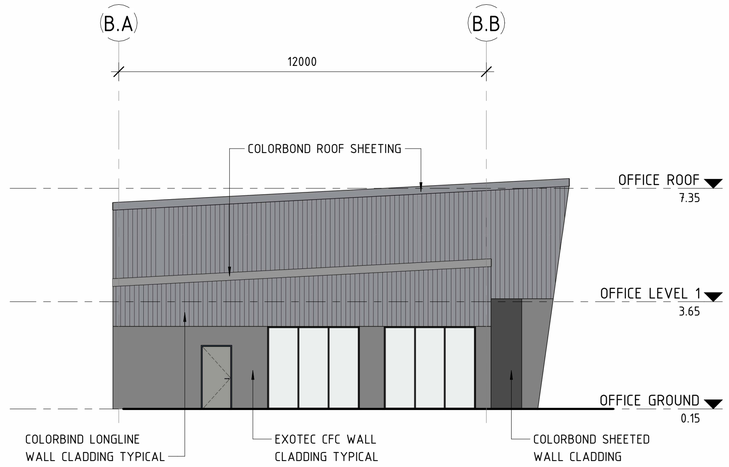
SCALE 1 : 100 @ A1



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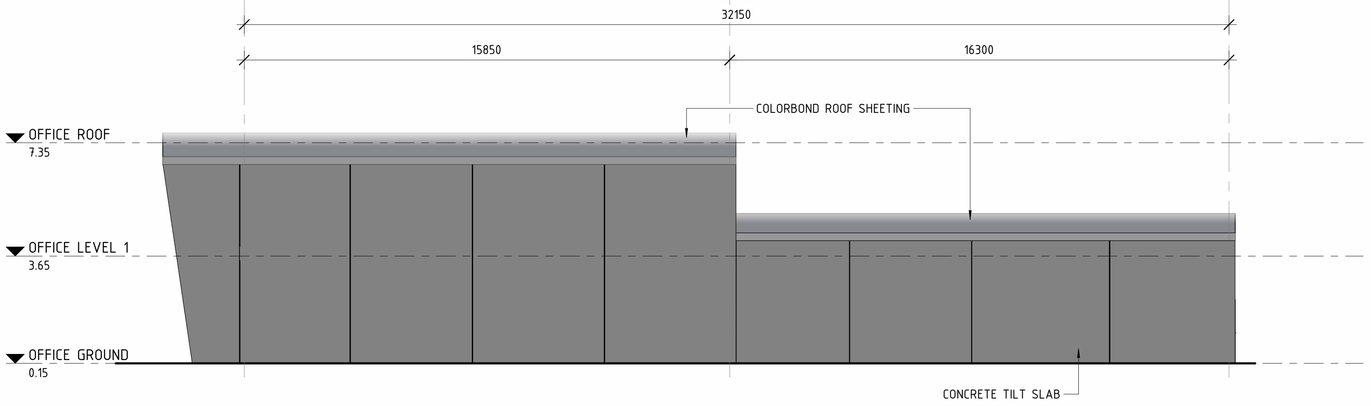

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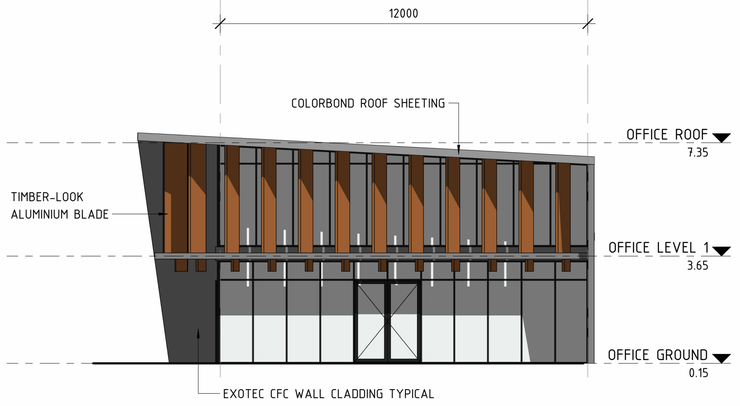

4 PROPOSED OFFICE BUILDING ELEVATION - EAST
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
PROPOSED OFFICE BUILDING
FLOOR PLAN ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
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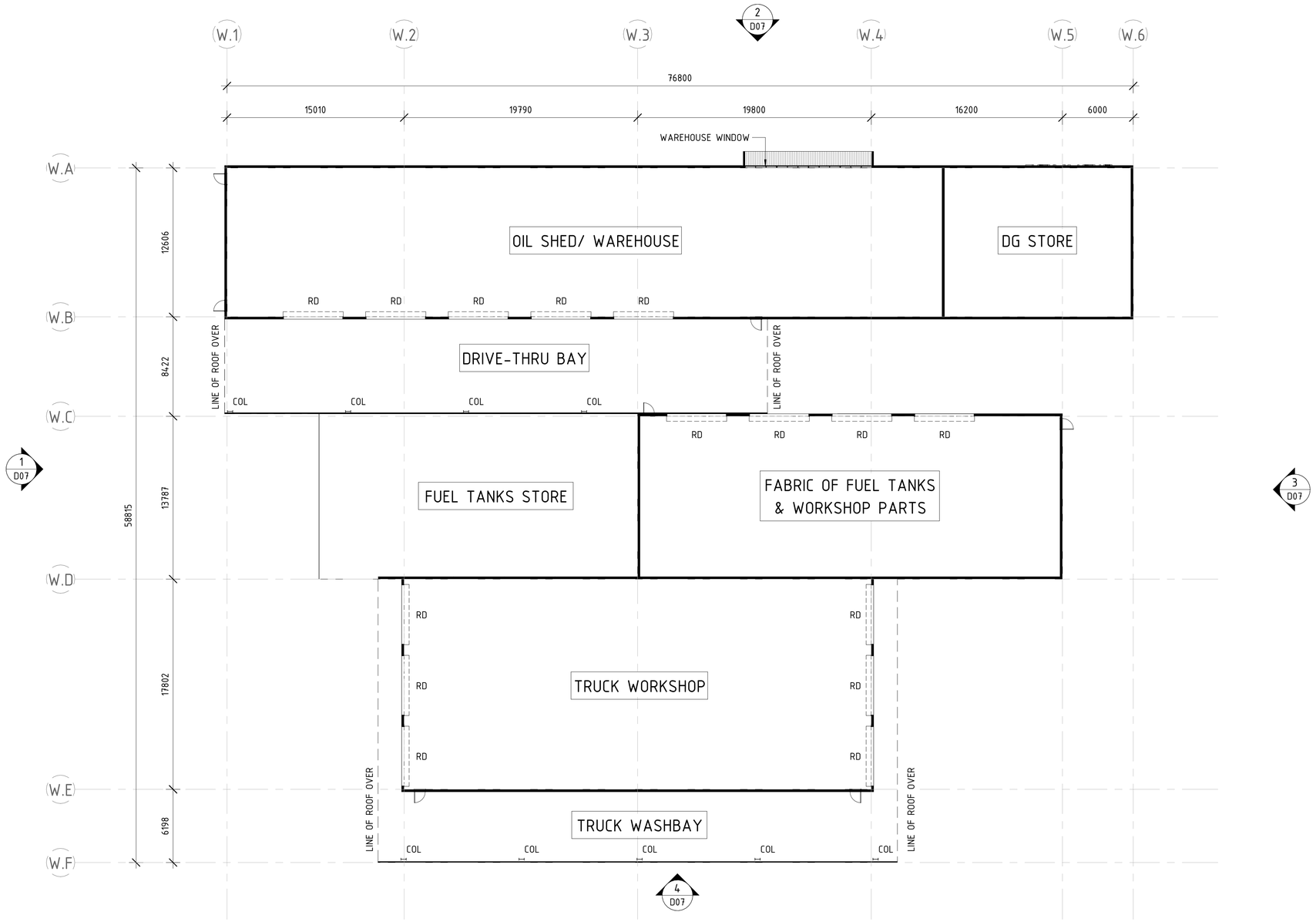

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0 4 8 12 16 20m

SCALE 1:200

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

ACN 612 132 233

DRAWING ISSUE APPROVAL

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PROFESSIONAL QUALIFICATION:

SIGNATURE:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY

for:
PORT ACCESS PTY LTD.

at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED WORKSHOP FLOOR PLAN

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
18.10.23	1 : 200	A1

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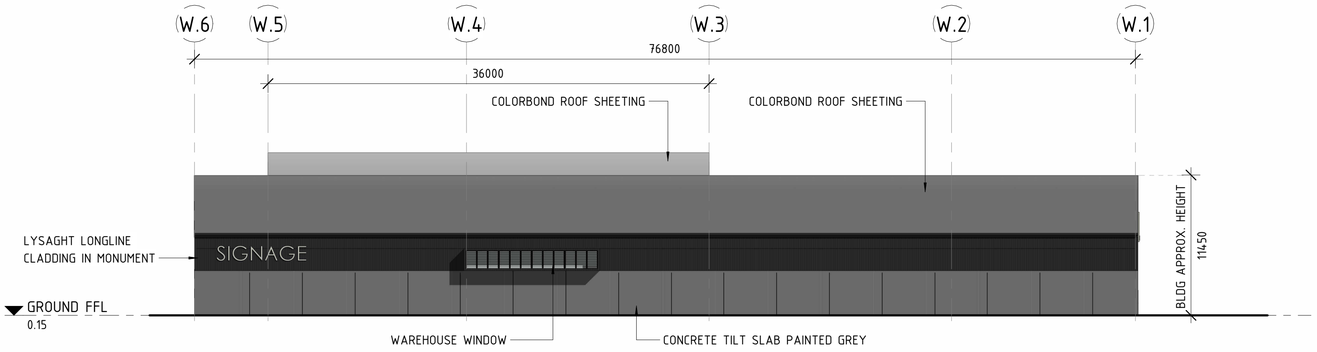

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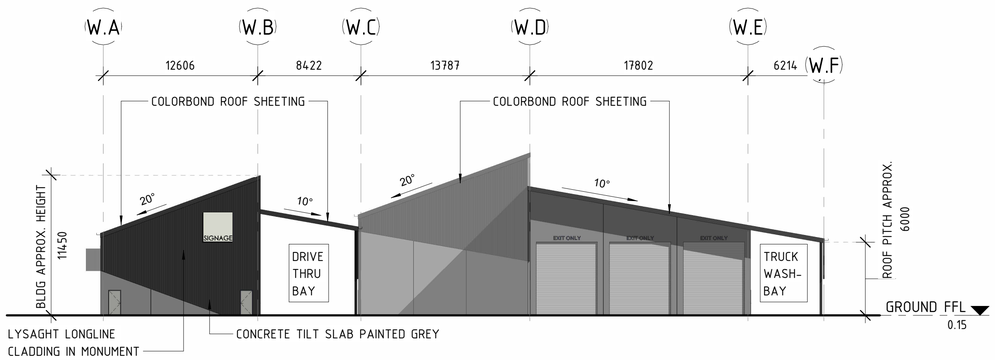

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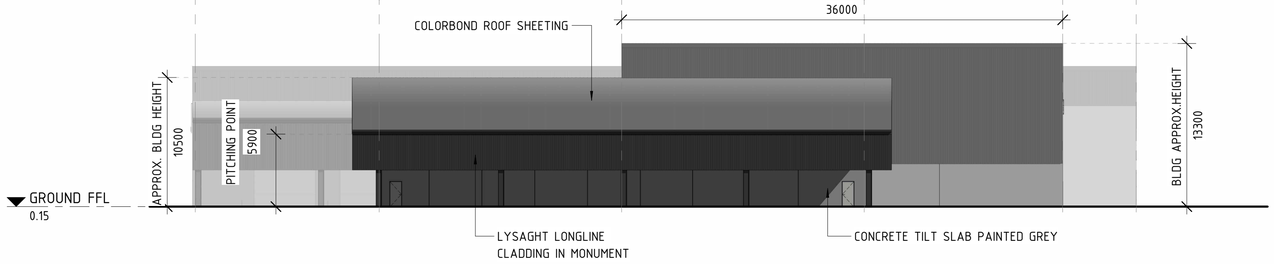
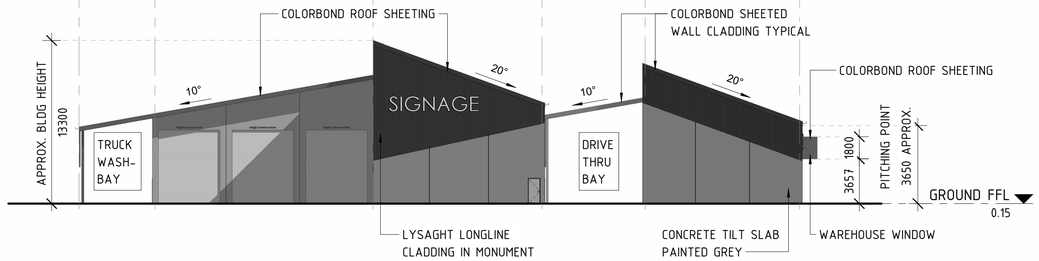


4 D06 WORKSHOP ELEVATION - WEST
SCALE 1 : 250 @ A1



3 D06 WORKSHOP ELEVATION - SOUTH
SCALE 1 : 250 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 5 10 15 20 25m
SCALE 1:250

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NSW ARCHITECTS REGISTRATION BOARD: 10787
ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

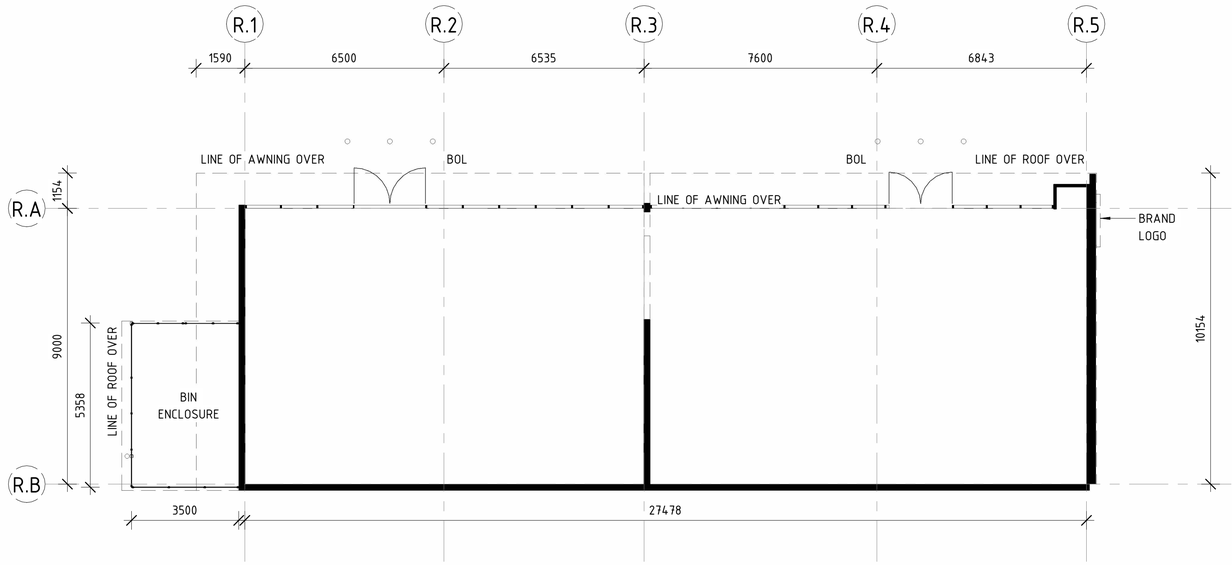
DRAWING TITLE
PROPOSED WORKSHOP BUILDING ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
18.10.23	1 : 250	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043 D07	B



1 / D09 PROPOSED RETAIL STORE FLOOR PLAN

SCALE 1 : 100 @ A1

0 2 4 6 8 10m

SCALE 1:100

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY

for:
PORT ACCESS PTY LTD.

at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED RETAIL STORE FLOOR PLAN

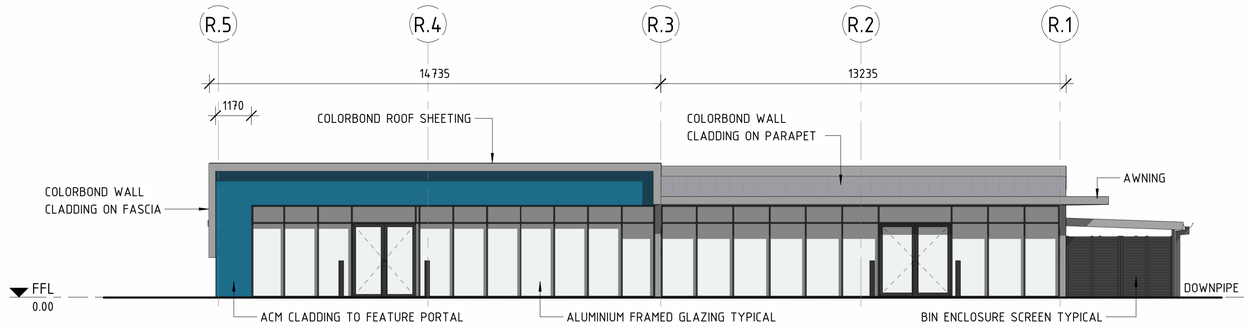
STATUS

DA ISSUE

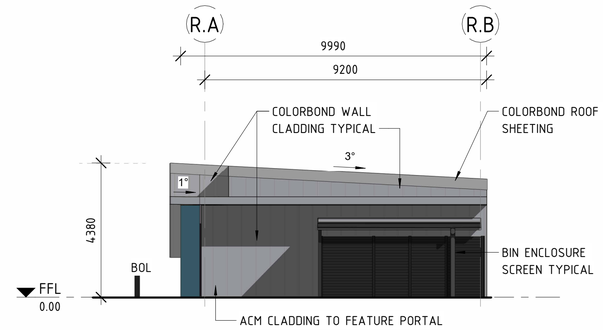
DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

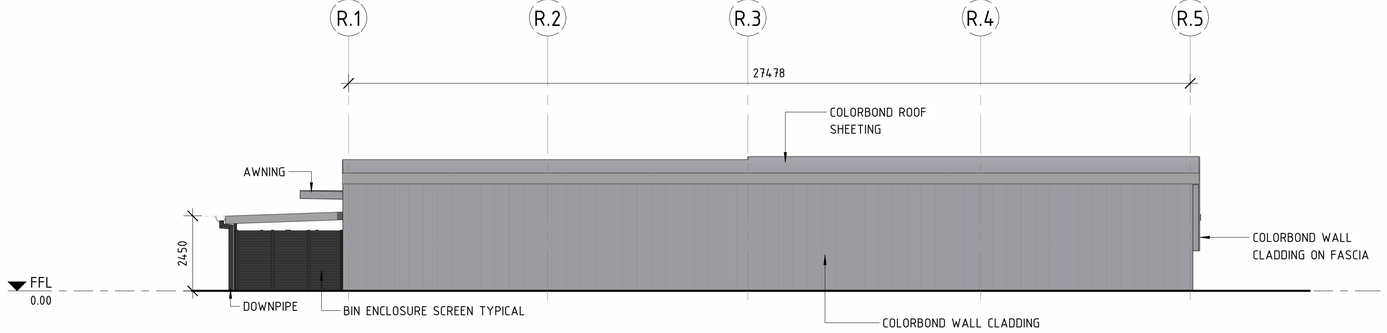
DRAWING NO		REV
23043	D08	B



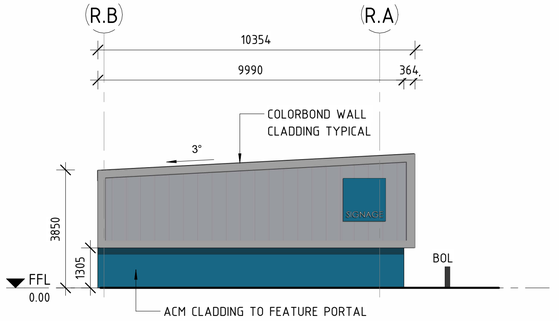
1 PROPOSED RETAIL STORE ELEVATION - EAST
SCALE 1 : 100 @ A1



2 PROPOSED RETAIL STORE ELEVATION - NORTH
SCALE 1 : 100 @ A1



3 PROPOSED RETAIL STORE ELEVATION - WEST
SCALE 1 : 100 @ A1



4 PROPOSED RETAIL STORE ELEVATION - SOUTH
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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TFA Project Group

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	31.10.23	AW	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
PROPOSED RETAIL STORE ELEVATIONS

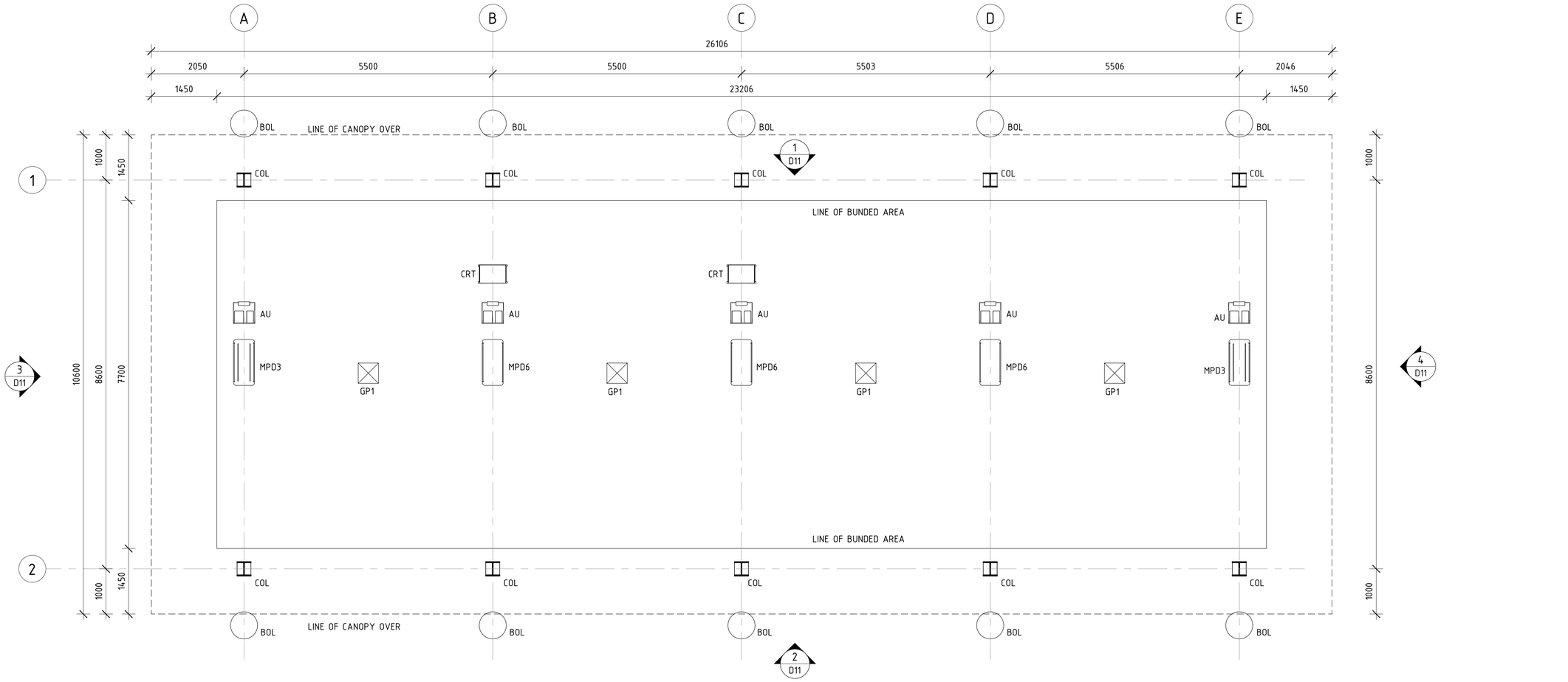
STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
23.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO		REV
23043	D09	B

LEGEND	
ID	DESCRIPTION
AU	AMENITIES UNIT
BOL	BOLLARD
COL	COLUMN TO ENGINEER'S DETAILS
GP1	GULLY PIT - OILY WATER
MPD3	DISPENSER - 3 HOSE
MPD6	DISPENSER - 6 HOSE



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N

0 1000 2000 3000 4000 5000mm

SCALE 1:50

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

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PROFESSIONAL QUALIFICATION:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	BF	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK CANOPY FLOOR PLAN

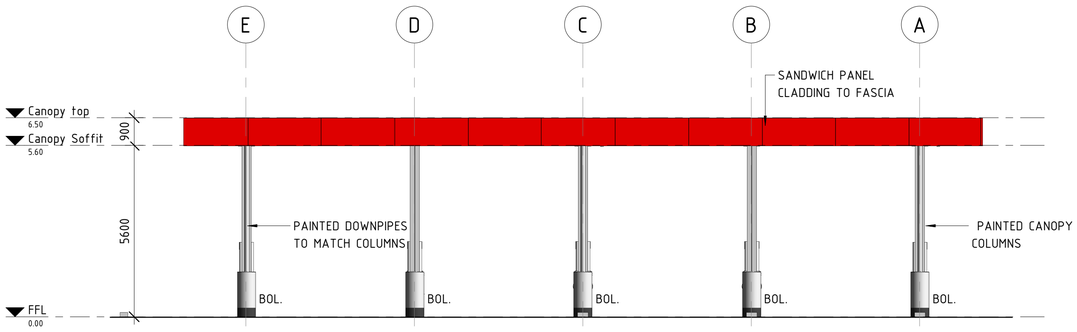
STATUS

DA ISSUE

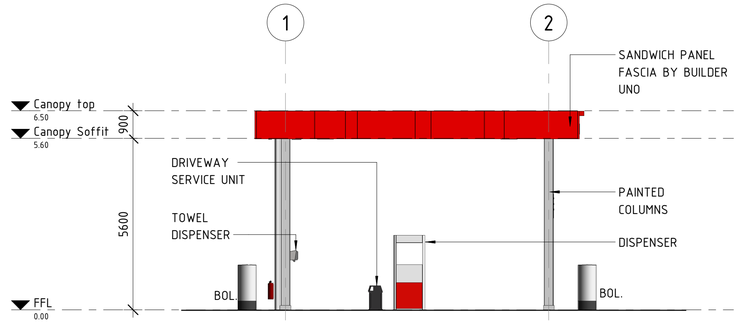
DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	As indicated	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

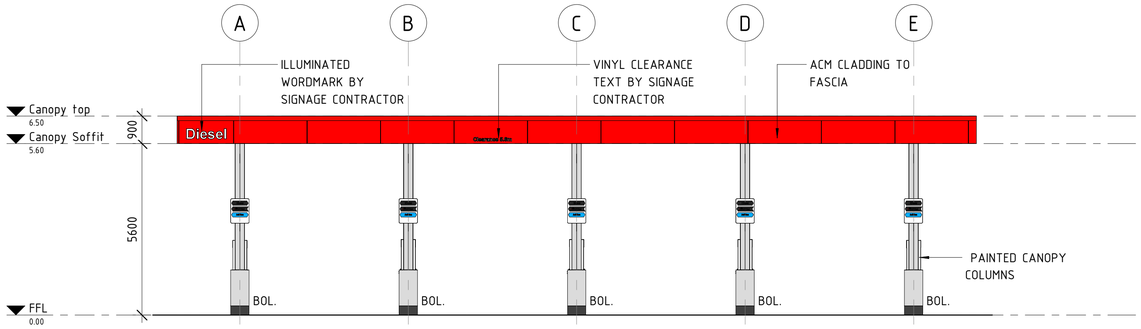
DRAWING NO		REV
23043	D10	C



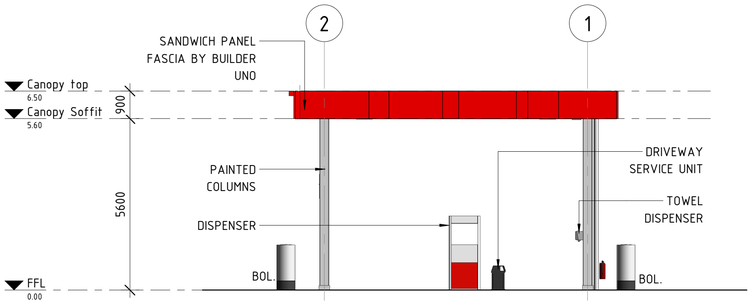
1 / D10 CANOPY ELEVATION - NORTH
SCALE 1 : 100 @ A1



3 / D10 CANOPY ELEVATION - WEST
SCALE 1 : 100 @ A1



2 / D10 CANOPY ELEVATION - SOUTH
SCALE 1 : 100 @ A1



4 / D10 CANOPY ELEVATION - EAST
SCALE 1 : 100 @ A1

NOTES:
COLOURS, FINISHES AND SIGNAGE INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

0 2 4 6 8 10m
SCALE 1:100

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NSW ARCHITECTS REGISTRATION BOARD: 10787
ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	BF	ISSUED FOR INFORMATION		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
TRUCK CANOPY ELEVATIONS

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
19.10.23	1 : 100	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043 D11	C

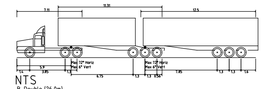
RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

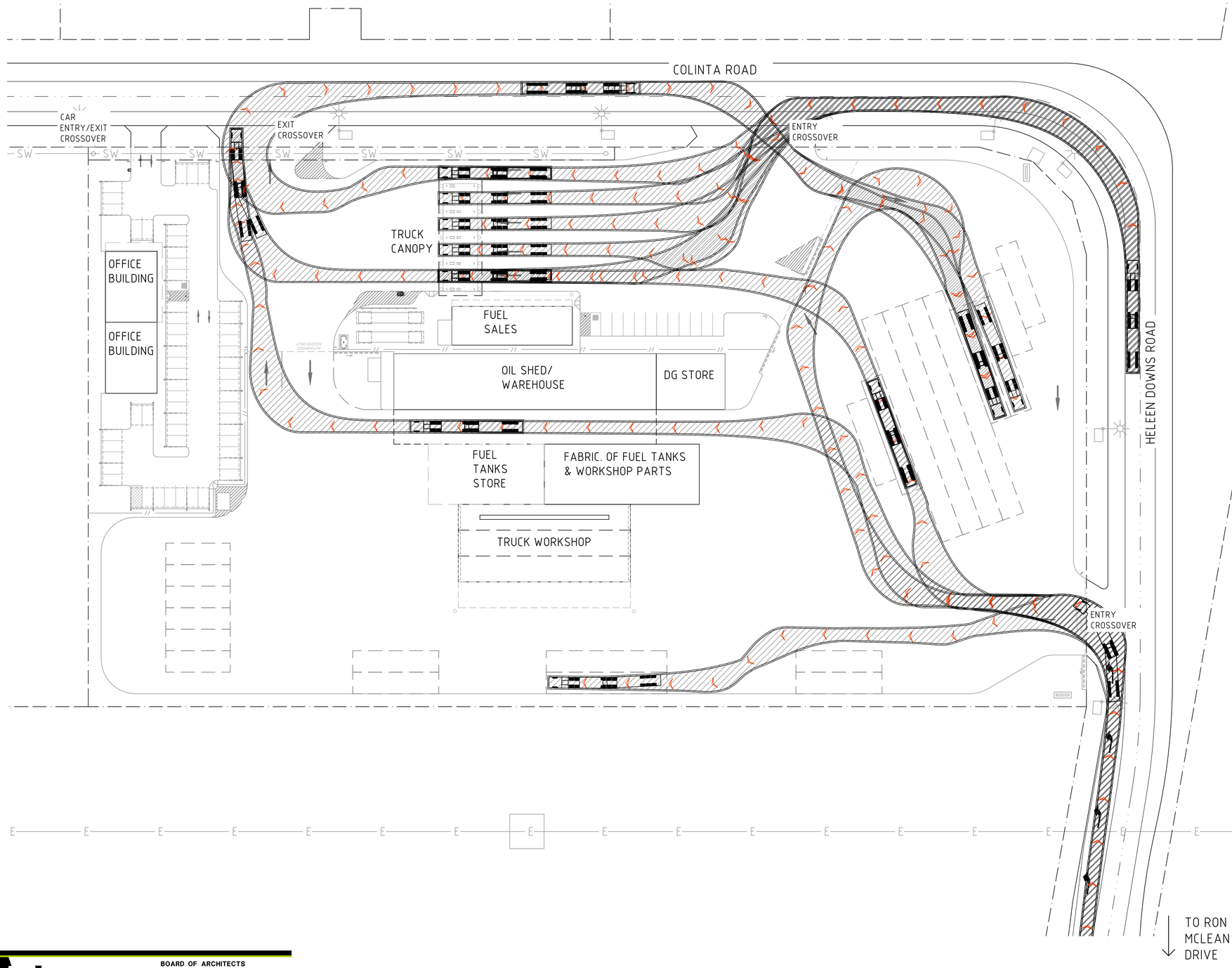
1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.



NTS

B-Double (26.0m)	
Overall Length	26.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE B-DOUBLE (26m)



0 10 20 30 40 50m

SCALE 1:500

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NSW ARCHITECTS REGISTRATION BOARD : 10787

ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

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Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	13.10.23	DGC	PRELIMINARY ISSUE		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH B-DOUBLE

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
13.10.23	1:500	A1

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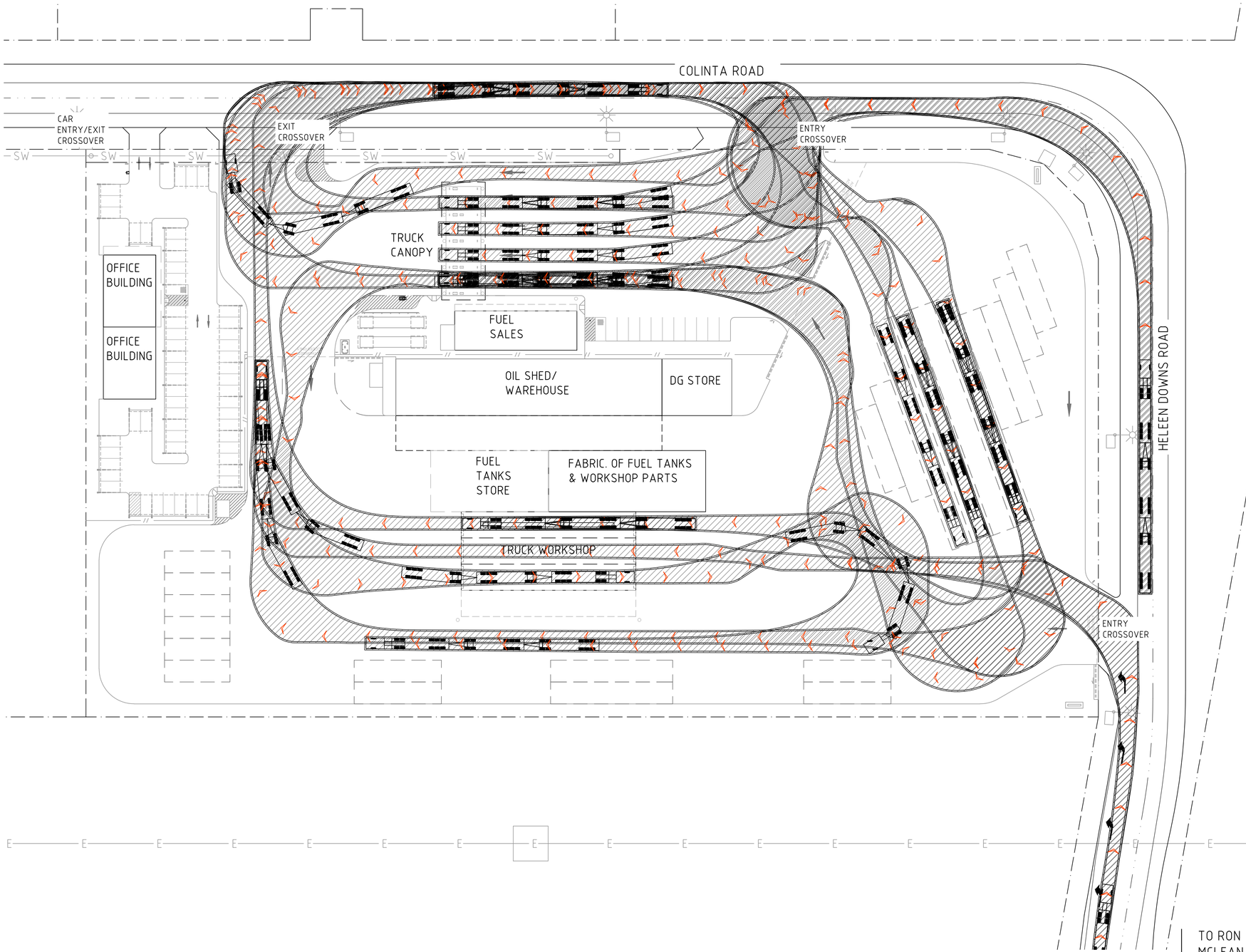
DRAWING NO	REV
23043-D14	B

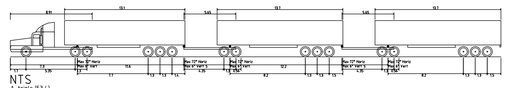
RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES
1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.
4. DEVELOPER TO CONFIRM ACCESS COMPLIANCE FOR A-TRIPLE TO SURROUNDING ROADS.





DESIGN VEHICLE A-TRIPLE (53m)

0 10 20 30 40 50m
SCALE 1:500

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738
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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

DRAWING ISSUE APPROVAL
NAME: DATE:
PROFESSIONAL QUALIFICATION:
SIGNATURE:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	13.10.23	DGC	PRELIMINARY ISSUE		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
TRUCK TURNING PATH
A-TRIPLE

STATUS
DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10.10.23	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D15	B

RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
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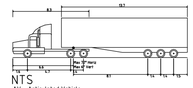
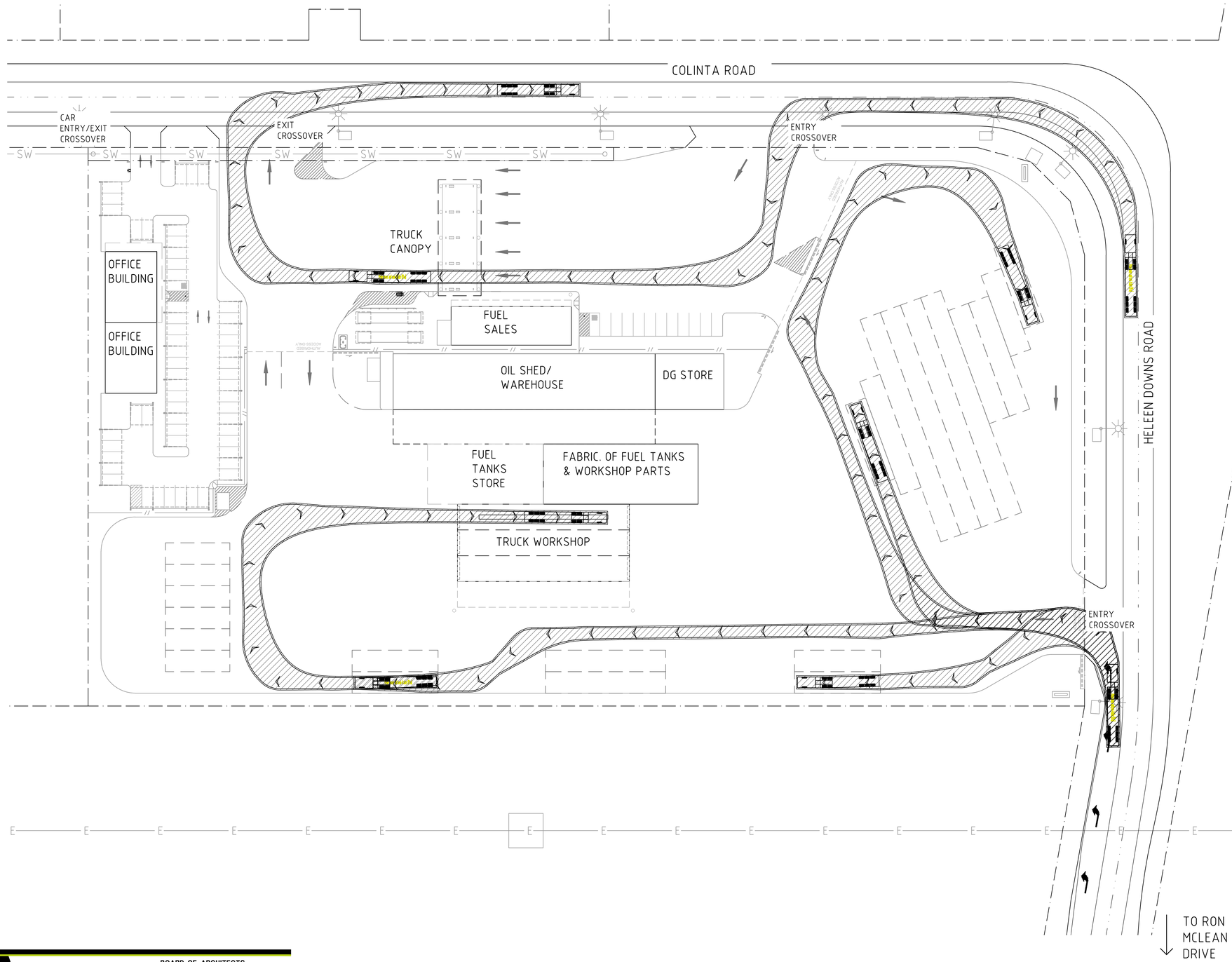


NTS

AV - Articulated Vehicle

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.438m
Track Width	2.500m
Lock-to-lock time	6.00s
Kerb to Kerb Turning Radius	12.500m

DESIGN VEHICLE AV (19m)



0 10 20 30 40 50m

SCALE 1:500

Member Australian Institute of Architects

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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TfA Project Group

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PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH AV TANKER & SITE CIRCULATION

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
13.10.23	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D16	B

SITE VIEW 1

SITE VIEW 2

SITE VIEW 3

SITE VIEW 4

NOTE:
COLOURS, FINISHES AND SIGNAGE SHOWN INDICATIVE.
TO BE CONFIRMED AT DETAIL DESIGN STAGE.

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B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE

SITE PERSPECTIVES

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10/24/23		A1

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DRAWING NO		REV
23043	D17	C

COLINTA ROAD ENTRY VIEW

HELEEN DOWNS ROAD ENTRY VIEW

SHOP & TRUCK CANOPY VIEW

OFFICE VIEW

NOTE:
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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

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TFA Project Group

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B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	23.11.23	DGC	ISSUED FOR INFORAMTION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
for:
PORT ACCESS PTY LTD.
at:
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOENSVILLE, QLD, 4811

DRAWING TITLE

SITE PERSPECTIVES

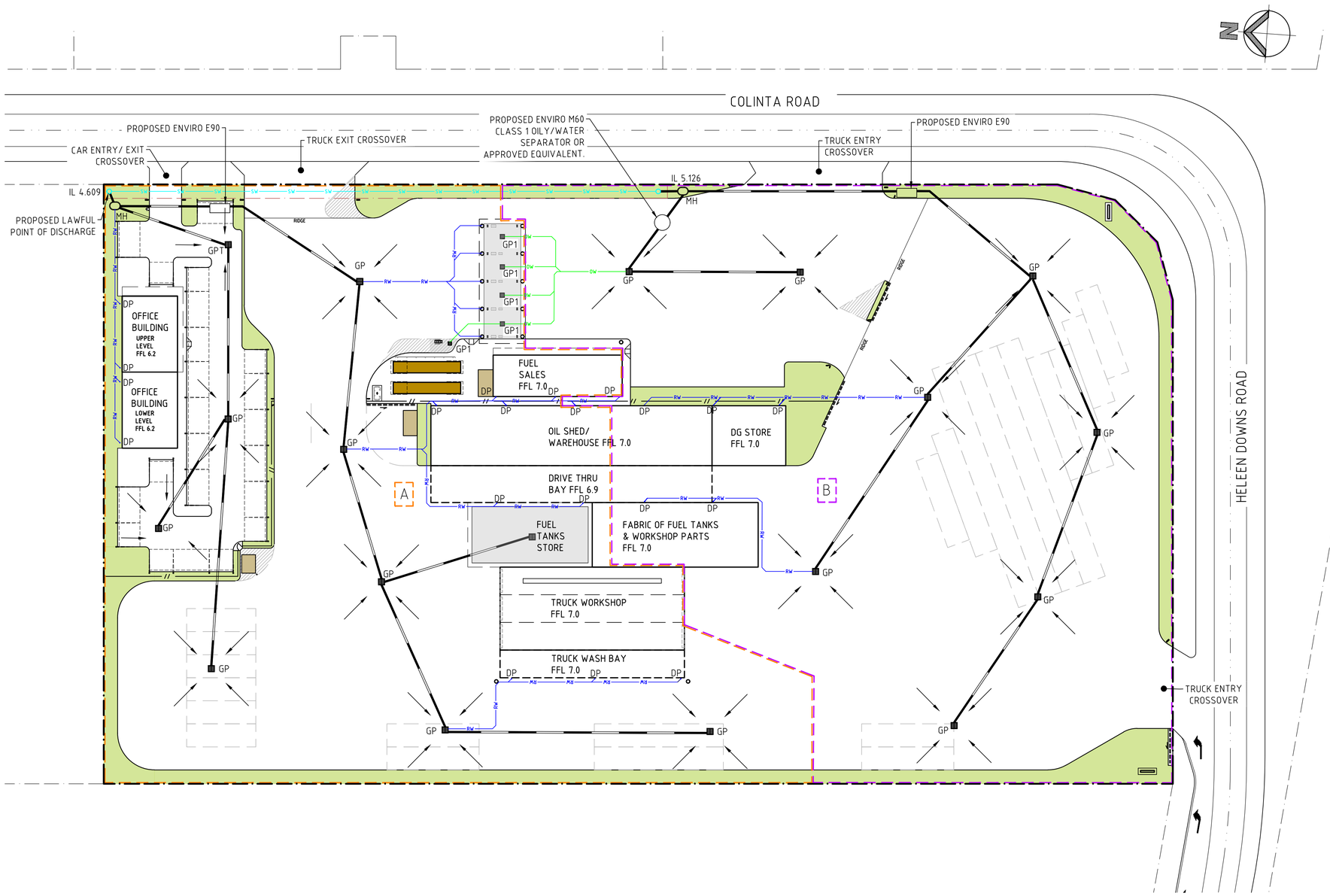
STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10/24/23		A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO		REV
23043	D18	C



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43811/21B REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

	PROPERTY BOUNDARY
	PROPOSED STORMWATER PIPE
RW	PROPOSED ROOFWATER PIPE
OW	PROPOSED OILY WATER HDPE PIPE
SW	EXISTING STORMWATER LINE
MH	PROPOSED MANHOLE
	GENERAL DIRECTION OF SURFACE
DP	PROPOSED DOWN PIPE
GP/GP1	PROPOSED GULLY PIT/OILY WATER GULLY PIT
GPT	PROPOSED GULLY PIT FITTED WITH GROSS POLLUTANT TRAP (ATLAN STORMSACK OR APPROVED EQUIVALENT).
	REFUELING, LOADING AND STORAGE AREA
A B	CATCHMENT LABEL

0 10 20 30 40 50m

SCALE 1:500

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	08.11.23	PM	PRELIMINARY ISSUE	BM	JA
B	15.11.23	PM	ISSUED FOR INFORMATION	BM	JA

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN

STATUS
APPROVAL

DATE CREATED	ORIGINAL SCALE	SHEET
28.07.2023	1:500	A1

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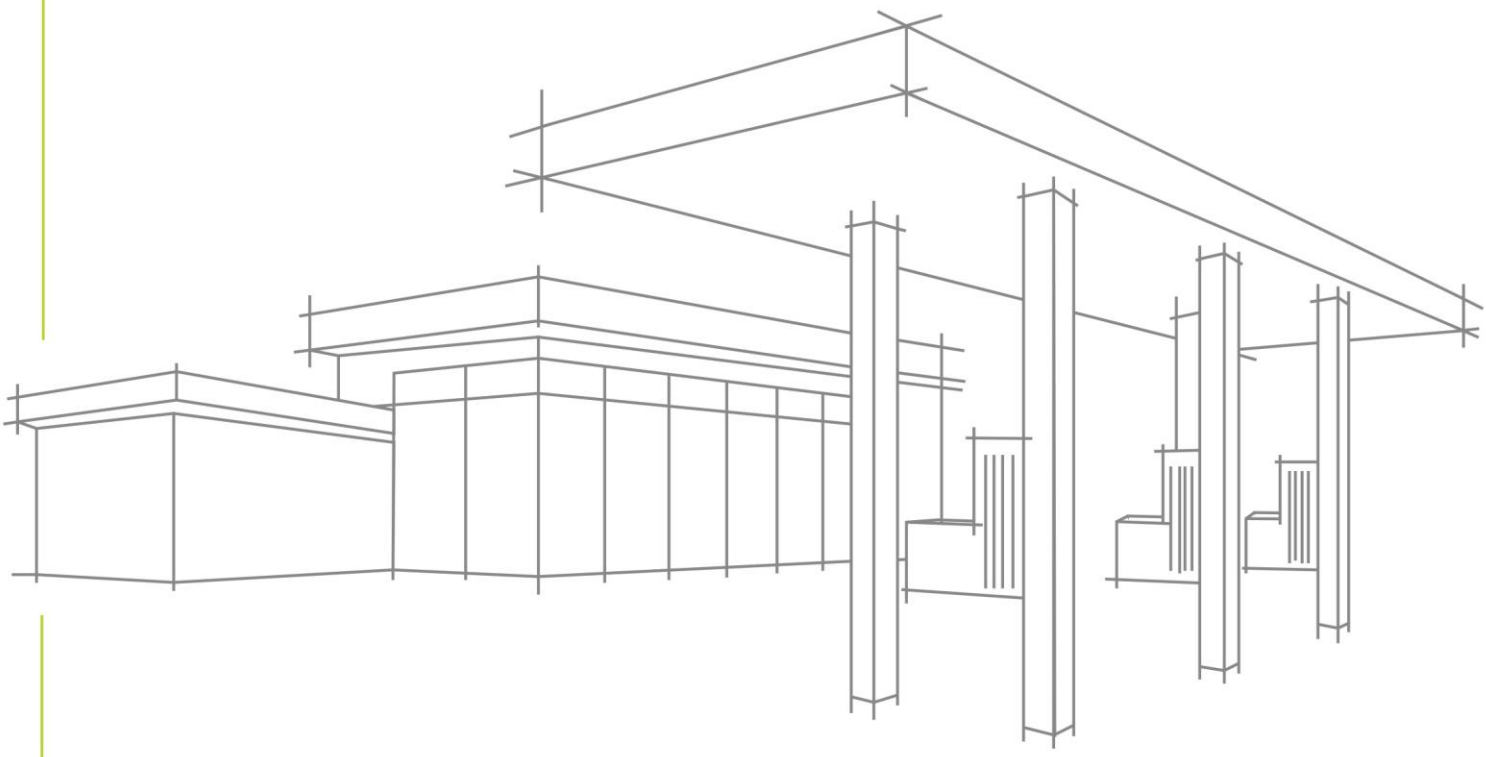
DRAWING NO	REV
23043-D19	B

SITE BASED STORMWATER QUALITY MANAGEMENT PLAN

PORT ACCESS - CLEVELAND BAY



TFA Project Group

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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

SITE BASED STORMWATER QUALITY MANAGEMENT PLAN

Port Access – Cleveland Bay

CLIENT: Port Access Pty Ltd

ADDRESS:

TFA REFERENCE: 23043

TFA CONTACT: Juan Avella

Document Control

REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
A	10 August 2023	P. Manickam	J. Avella	Approval
B	15 November 2023	P. Manickam	J. Avella	Approval

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TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

This Site Based Stormwater Management Plan (SBSMP) report has been prepared by TFA Project Group on behalf of Port Access Pty Ltd (the applicant) for the proposed Port Access Facility at Cleveland Bay Industrial Park, Townsville QLD 4811. The purpose of this document is to verify that stormwater quantity and quality have been considered as part of this development and do not have any adverse impact on the downstream environment as outlined in the State Planning Policy July 2017, the Townsville City Plan and Queensland Urban Drainage Manual 2016.

The proposed development will accommodate the proposed truck refuelling facility, office building, oil shed and warehouse, DG store, fuel tanks store, truck workshop facility, wash bay, car and truck parking areas with associated driveways, walkways, and landscape areas.

The SBSMP is part of the Development Approval process and addresses both the construction and operational phases of the development. Table 1 below shows additional details of the proposed development. The proposed site layout plan is shown in **Appendix A**.

Table 1: Details of Proposed Development

Developer	Port Access Pty Ltd
Address	1 Colinta Road, Cleveland Bay Industrial Park, Townsville, QLD 4811
Property Description	Lot 21 on SP341874
Area of Development	TOTAL: 30,000 m²
Stormwater Risk Classification	High Risk (due to the storage and transfer on site of petroleum products that have the potential to cause harm to the environment, if released)
Existing Land Use	Vacant Land

2.0 THE SITE

2.1 Site Description

The development site is located at 1 Colinta Road, Cleveland Bay Industrial Park, Townsville QLD 4811 within the Townsville City Council area, on Lot 21 SP315832. Currently, the land use of the entire site is vacant land, with a regular shape containing a total area of approximately 30,000 m^2. The site development is bound by Heleen Downs Road on the southern boundary and Colinta Road on the eastern boundary, both comprising access points for the site.

A geotechnical investigation will be completed to determine soil type and any specific treatment or management requirements to mitigate erosion or pollution of the environment will be undertaken, if necessary, prior to the commencement of works. The location of the site is shown on Figure 1.

Figure 1: Location of the proposed development site (Source: Queensland Globe)

3.0 SITE TOPOGRAPHY AND EXISTING DRAINAGE

3.1 Description of the Site Current Condition

Refer to **Appendix B** for the lot plans provided by Rowlands Survey dated 23/06/2023, which show the parcels of land in the area, with contour levels of the final surface. The proposed methodology for the development site is to be graded, where required to ensure positive drainage towards roadways or drainage reserves. The allotments will be built above the defined Q100 flood level. The proposed development site has surface levels approximately between RL 5.81m AHD to RL 7.18m AHD. The ground generally falls from south to north.

The survey plan indicates that there is a stormwater easement located within the site along the eastern boundary, providing two discharge points connected by a drainage pipe that drains from half way along the boundary to the north-east corner of the site. Consequently, it assumed that runoff generated from the site is captured and conveyed towards the two discharge points.

4.0 FLOODING

4.1 Flooding Information

Based on the Townsville City Council flood mapping, a portion of the development would be subject to flooding. Cleveland Bay Industrial Park Pty Ltd, provided the following works to minimise flooding in the development site:

- Filling works of the development site to be above the defined Q100 flood level
- Channel improvements works to compensate for the loss of floodplain storage (due to filling works) and drain runoff into Stuart Creek more efficiently.

An extract of the overlay map is shown in Figure 2 indicating the extent of flooding events near the site and **Appendix B** demonstrates proposed works to avoid the Q100 flood event.

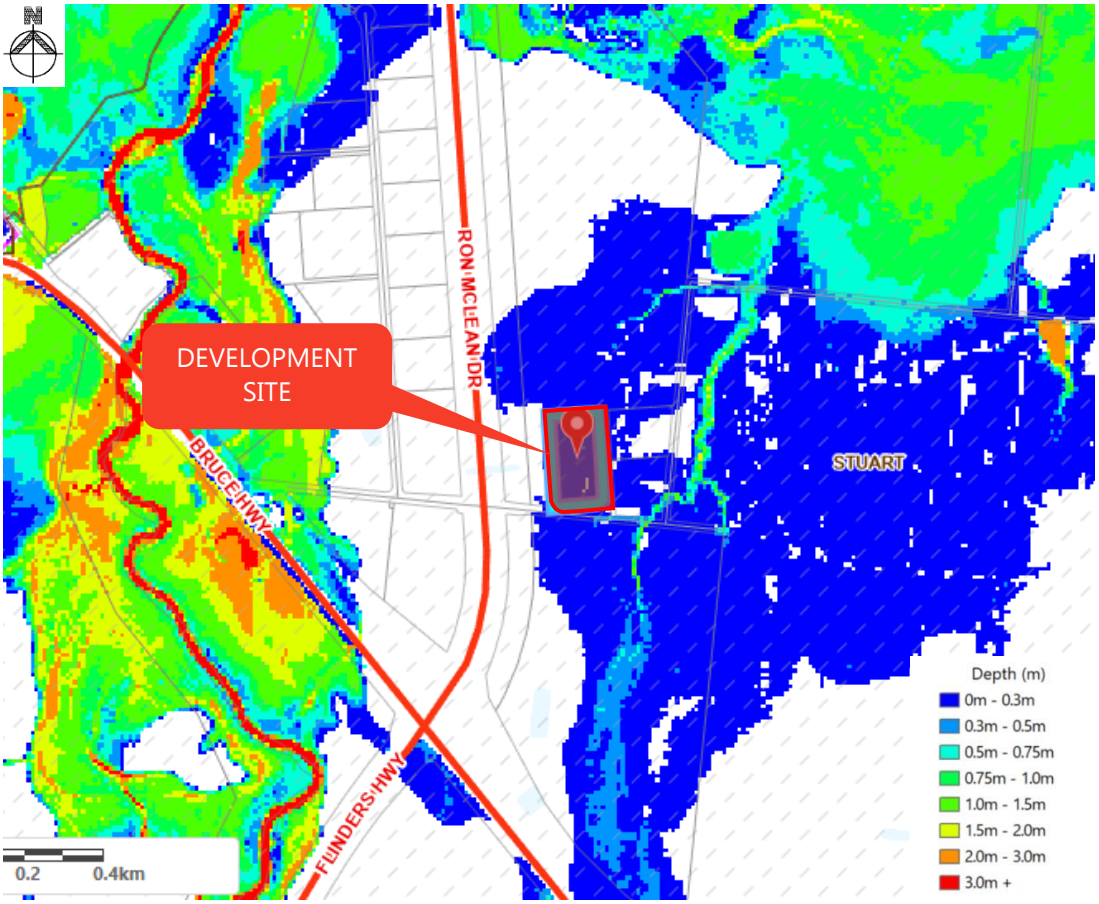


Figure 2: Development Flooding Information - 1% AEP Flood Depths (Source: TownsvilleMAPS)

5.0 PROPOSED DRAINAGE LAYOUT

5.1 Proposed Drainage

The post development stormwater drainage design generally maintains the overall catchment boundaries. The approach taken for the management of stormwater is based on isolating high-risk (hydrocarbon generating e.g. under the canopies) areas from the low-risk areas (the rest of the site).

Considering the high-risk nature of proposed activities, that is, dispensing and transfer of fuel under the canopy, the fuel dispensing/loading areas will be concreted, bunded and graded towards a collection pit which will capture and direct flows to an Enviro Australis M60 device (Class 1 Separator) for hydrocarbon removal at all times. Furthermore, the Enviro M60 unit will have sufficient capacity to treat a portion of runoff generated from low-risk areas in addition to the high-risk areas. Treated flows from the Enviro Australis Unit will be discharged to the stormwater network and a licensed contractor will remove the contents of the Enviro M60 when required.

It should be noted that the 2x50 kL above ground fuel tanks will be self-bunded. Consequently, any spillage or minor spills will not reach low risk areas (the rest of the site).

Stormwater runoff generated from the remaining low-risk areas (which is most of the site's surface area including roofing) will be split into two main catchments (Catchment A & Catchment B). Stormwater runoff will be captured via gully pits and underground pipes then directed to an Enviro Australis E90 series unit and proposed manhole as per each catchment, prior to the proposed lawful point of discharge (LPD). Treated stormwater runoff will result in significantly improved stormwater quality and a licensed contractor will remove the contents of the Enviro E90 devices when required. Refer to **Appendix C** for a detailed Conceptual Stormwater Management Plan.

6.0 WATER QUANTITY ASSESSMENT

The purpose of this part of the assessment is to investigate whether there is a need to attenuate stormwater flows to negate any adverse impacts on upstream or downstream environments.

Following conversations with the Industrial estate Developer, we understand that the provided LPD at each lot, would accommodate for a total flow composed of a 95% impervious area, at each lot accounting for proposed and future development works. This LPD would connect to a large basin north of the proposed development (built as part of the industrial estate), removing the requirement for onsite detention.

7.0 WATER QUALITY ASSESSMENT

7.1 Construction Phase

Impacts on receiving waters and surrounding areas will be minimised during the construction phase with measures as outlined in this SBSMP, and the Erosion and Sediment Control Plan (ESCP) to be developed for the operational works.

7.1.1 Pollutants

Typical pollutants generated during the construction phase of the development are shown below in Table 2.

Table 2: Pollutant Typically Generated During the Construction Phase

POLLUTANT	SOURCES
Litter	Paper, construction packaging, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building
Hydrocarbons	Fuel and oil spills, leaks from construction equipment
Toxic materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash-waters
pH altering substances	Acid sulphate soils, cement slurry and wash-waters

7.1.2 Performance Objectives

The objectives are:

- Minimise the amount of sediment entering waterways and stormwater drains;
- Minimise or prevent environmental harm to waterways and associated ecosystems;
- Minimise localised flooding caused by sediment runoff;
- Minimise exposure of soils.

Table 3: Construction Phase Performance Criteria

INDICATOR	WATER QUALITY OBJECTIVES
pH	6.5 – 8.5
Suspended Solids	Annual Mean < 10mg/L
Oils and Grease	No visible films or odour
Litter/ Gross pollutants	No anthropogenic (man-made) materials greater than 5mm in any dimension
Dissolved oxygen	80-100% saturation

7.1.3 Monitoring and Maintenance

The general requirement of monitoring during the construction phase will be:

- Work activities are restricted to designated construction areas;
- Earthworks and site clearing are undertaken in accordance with an Erosion and Sediment Control Plan;
- Erosion and sediment control devices are to be constructed/installed in accordance with an Erosion and Sediment Control Plan;
- Inspection of sediment fences, erosion and sediment control structures/devices on a weekly basis as well as after any rain event exceeding 25mm in 24hrs (major storm event);

- Stormwater discharges from the site are not having any adverse effect on the downstream environment;
- Monitoring and recording of the performance of the drainage control devices including water quality testing where required;
- Any failure in the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site;
- Any failure to the stormwater system causing damage to surroundings should implement immediate remedial work to the damaged area.

7.1.4 Responsibility and Reporting

- The contractor shall be responsible for monitoring the performance of all drainage control and erosion and sediment control devices;
- Records of any failures to devices should be kept and reported to the Construction Manager;
- Regular inspections of the devices shall be reported to the Construction Manager;
- Inspections of the devices after heavy rainfall shall be reported to the Construction Manager;

7.2 Operational Phase

7.2.1 Pollutants

The key pollutants typically generated during this phase for the entire catchment are shown in Table 4 below.

Table 4: Pollutant Typically Generated During the Operational Phase

POLLUTANT	POTENTIAL SOURCE
Litter / Gross Pollutants	Waste materials, food, food packaging etc.
Hydrocarbons	Fuel and oil spills, dispensing areas, car park
Nutrients (N & P)	Nitrogen, Phosphorus
Sediments	Aggregates bins, wind deposits and car trails
Surfactants	Detergents, cleaning agents

7.2.2 Water Quality Objectives

Based on Townsville City Council for Industrial Developments design objectives for stormwater treatments, the development is required to achieve the TN, TP and TSS pollutant reductions outlined in Table 5 below.

Table 5: Operational Phase Water Quality Objectives

POLLUTANT	REDUCTION*
Total Suspended Solids	80%
Total Phosphorus	65%
Total Nitrogen	40%
Gross Pollutants >5mm	90%

**These values represent the minimum required reductions in the average annual pollutant loads generated from an unmitigated development.*

7.3 Proposed Stormwater Treatment

7.3.1 Stormwater treatment philosophy

Waterways and other aquatic environments are valued by the community for their social, cultural, economic and environmental benefits. Urban runoff, contaminated with nutrients, sediment and other pollutants adversely impacts theses valued resources. Water Sensitive Urban Design (WSUD) is a holistic approach to the planning and design of urban landscapes that minimises theses negative impacts. This approach is used on this project to select the treatment options that considers the civil, landscape and ecological aspects of the site.

7.3.2 Source Controls

Rubbish bins can be an effective source control for litter and are appropriate for most developments. Bins will be placed in appropriate areas (such as buildings and staff amenity) to encourage thoughtful waste disposal.

7.3.3 At-source gross pollutant traps

A gross pollutant trap (GPT) is a treatment device designed to capture coarse sediment, trash and vegetation matter in stormwater runoff. GPTs are often used as the first treatment element in a treatment train. ATLAN Stormsack (or approved equivalent) will be installed in gully pits within this development. The Stormsack has the following removal efficiencies; Gross Pollutants (GP) 100%, Total Suspended Solids (TSS) 61%, Total Phosphorus (TP) 28%, Total Nitrogen (TN) 28%.

7.3.4 In Ground Proprietary Treatment Devices

In ground proprietary stormwater treatment devices are useful for treatment of stormwater on sites that are constrained by available area for stormwater treatment. These devices are installed underground and can remove a full range of pollutants from stormwater, including TSS, soluble heavy metals, oil, grease, and nutrients.

7.3.4.1 Stormwater Treatment Device

All the dispensing of fuel areas and remote fill point (high risk areas) will be bunded and runoff generated from these areas will be conveyed by grated pits and will discharge into the proposed Enviro M60 unit for treatment at all times. Additionally, a portion of runoff generated from low-risk areas will also discharge to the Enviro M60 unit which has a treatment capacity of 142 L/s.

Runoff generated from the majority of low-risk areas will discharge into the proposed Enviro E90 unit. The Enviro E90 is an in-line multi-chamber device designed to remove the broad spectrum of pollutants transported by run-off water from high impact catchments. Pollutant groups are separated and contained in separate zones for removal with a 419 L/s treatment capacity and achieves reduction of gross pollutants (GP) 100%, suspended solids (TSS) 86%, total phosphorus (TP) 97%, total nitrogen (TN) 85% and total hydrocarbons 90%. Refer to section 7.5 for the proposed development MUSIC modelling assessment.

7.4 Fuel Related Stormwater Treatment

The treatment train shown in Figure 3 uses the Best Management guidelines to treat stormwater runoff from the site.

7.4.1 Fuel Dispensing and Tanker Unloading Areas

The fuel dispensing areas will be concrete surfaced and covered by a canopy. Fuel dispensing areas will be bunded to prevent stormwater runoff from outside the canopy flowing into the dispensing area and to ensure that any spills are contained within these areas. The perimeter of the canopies will overhang the dispensing containment areas by 10 degrees to reduce windblown rain into the area. Any flows/spills in the containment area will drain to gully pits which will discharge to an appropriately sized Enviro M60 unit.

Bulk fuel transfers from a road tanker will take place outside the canopy in a concrete bunded area, and therefore any runoff or spills from the tanker delivery stand will drain to the proposed Enviro M60 unit.

7.4.1.1 Enviro M60 Device

The Enviro M60 device is a fully integrated in-line device capable of removing pollutants including oils from run-off. The device does not require any power, utilising the energy of the water flow to separate and contain pollutants for periodical removal by evacuation equipment. Internal surface can be inspected and washed as required, whilst screens can be removed and cleaned if and as required.

The Enviro MR60 unit has a spill containment volume of 18,000 liters, which allows for spills from an 8,000 litres tanker compartment plus allowance for wind-blown rain. The MR60 will remove hydrocarbons, gross pollutants, and total suspended solids.

The device has a design service life of 100 years for fixed parts and 25 years for replacement parts. The Enviro M60 unit claims a performance which can reach reductions of 95% for Gross Pollutants (GP), a 90% of Suspended Solids (TSS), a 97% of Total Phosphorous (TP), an 85% of total Nitrogen (TN), a 99.95% of total hydrocarbons. Hydrocarbon retention occurs in a separate chamber which operates as a best practice oil and grease arrestor. The Enviro M60 will remove hydrocarbons, gross pollutants, total suspended solids, total phosphorous and total nitrogen. Refer to **Appendix D** for the Enviro M60.20 unit details.

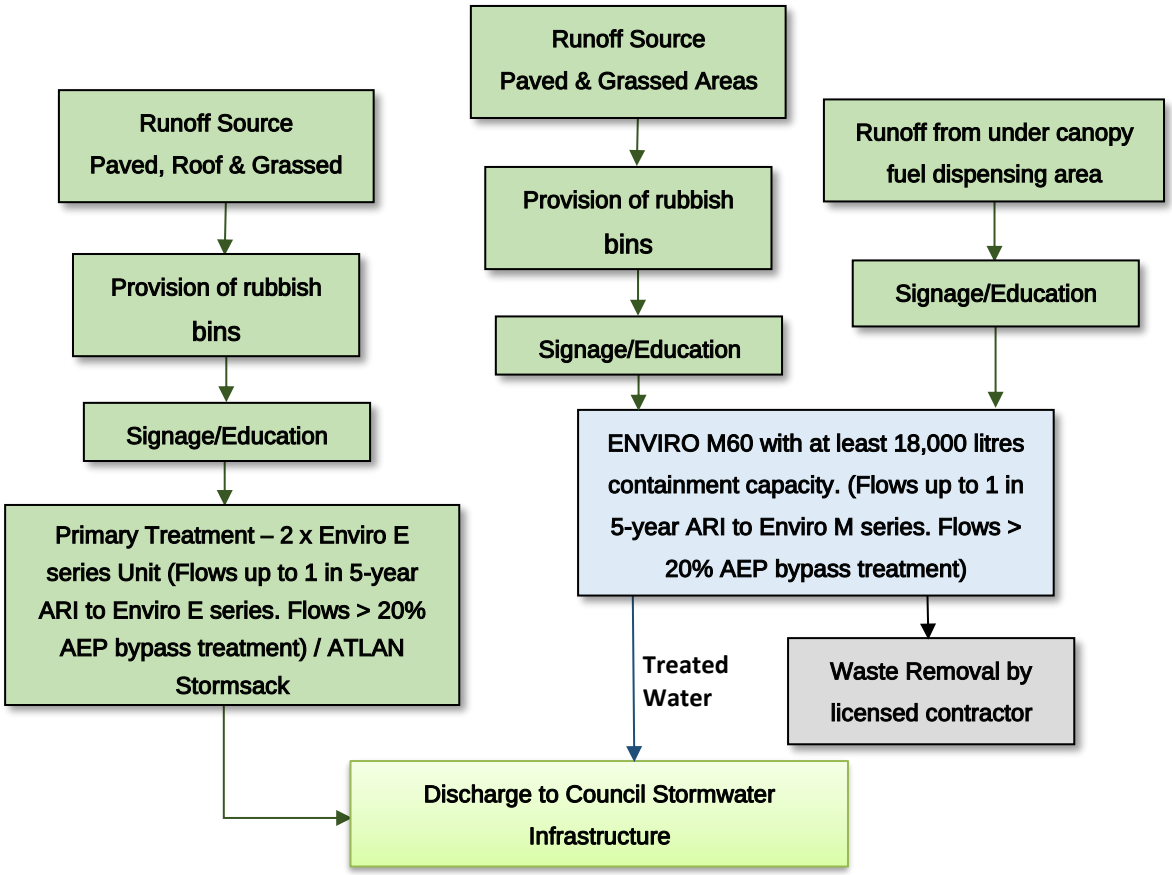


Figure 3: Fuel Related Stormwater Treatment Philosophy

7.4.2 Above Ground Fuel Storage Tanks

The above ground self-bunded fuel storage tanks, piping and fuel dispensers will be installed in accordance with the Australian Institute of Petroleum (AIP) standards.

7.5 MUSIC Modelling

7.5.1 Introduction

The Model for Urban Stormwater Improvement Conceptualisation (MUSIC - Version 6.3) was used to assess the performance of the proposed stormwater treatment measures required to achieve statutory pollutant reduction targets for the operational phase of the project.

7.5.2 Music Model Setup

The input parameters for source node, soil behaviour and pollutant generation characteristics are based on Table A1.2 and 3.9 of MUSIC Modelling Guidelines Version 3.0 - 2018, WaterbyDesign (2018). The following inputs were used:

- MUSIC Modelling Guidelines Version 3.0 - 2018, Waterbydesign
- Queensland Urban Drainage Manual (QUDM), Second Edition 2016

The details of the catchments/source nodes used in the MUSIC model and the proposed treatment train modelled are shown in Table 6 below.

Table 6: MUSIC catchment parameters

CATCHMENT	TOTAL AREA (m^2)	SPLIT CATCHMENT AREA (m^2)	LAND USE	% IMPERVIOUS	PROPOSED TREATMENT TRAIN
Catchment A	15,713	3,404	Roof areas	100	1 x ATLAN Stormsack 1 x Enviro E90
		10,857	Paved areas	100	
		1,452	Landscaped areas	0	
Catchment B	14,287	558	Roof areas	100	1 x Enviro M60 Unit 1 x Enviro E90
		12,308	Paved areas	100	
		1,421	Landscaped areas	0	
TOTAL	**30,000**	**30,000**			

The proposed stormwater treatment train modelled in MUSIC consists of an Enviro M60 for high risk areas (refuelling and loading/unloading areas) and 2 x Enviro E90 and 1 x ATLAN Stormsack for low risk areas. Figure 4 below shows a schematic representation of the models analysed and Table 8 demonstrates that the pollutant load reduction objectives for the site have been achieved, i.e. the treatment methods proposed are adequate.

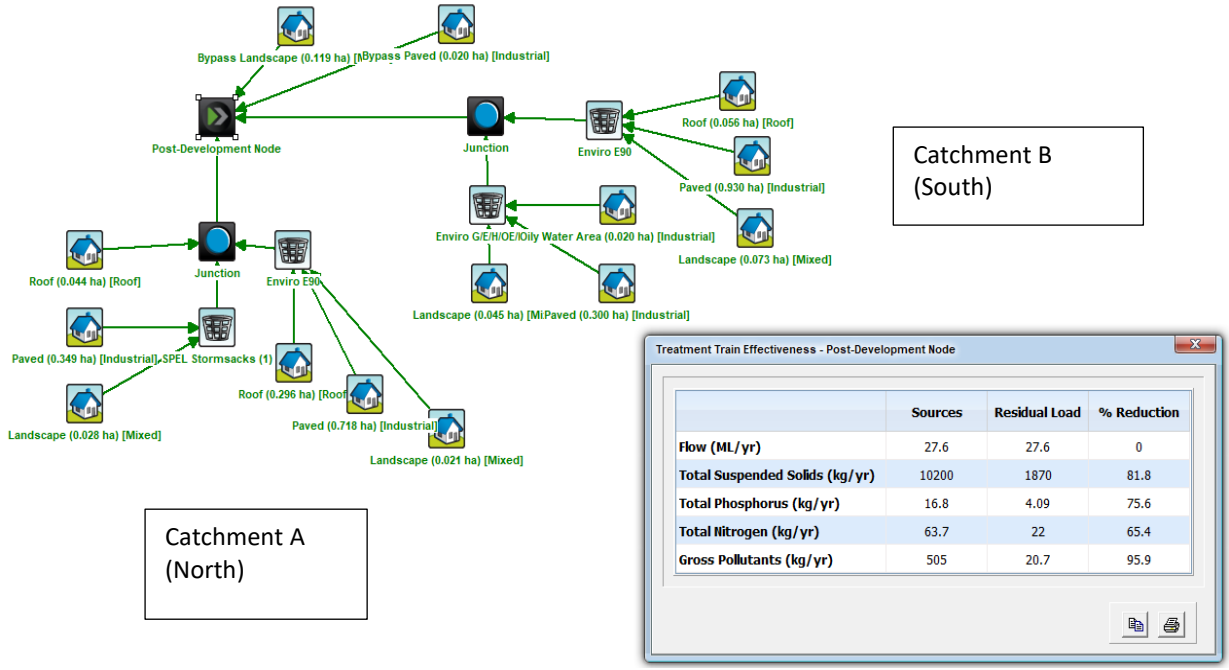


Figure 4: MUSIC Model Schematic – Lot 21 Ron Mclean Drive, Cleveland Bay Industrial Park, Townsville QLD 4811

7.5.3 Music Modelling Results

The proposed stormwater treatment measures were modelled in MUSIC as a treatment train. Table 7 below show details of proprietary products modelled in MUSIC.

Table 7: Details of Proprietary Treatment Systems as Modelled in MUSIC

Catchments	System Used	Number of units
A	ATLAN Stormsack (600 x 600)	1
	Enviro E90	1
B	Enviro Australis M60	1
	Enviro E90	1

Table 8 below, demonstrates that the pollutant load reduction objectives for the site have been achieved, i.e. the treatment methods proposed are adequate.

Table 8: MUSIC Model Treatment Effectiveness

PARAMETER	REQUIRED LOAD REDUCTION	MUSIC RESULTS ACHIEVED	OBJECTIVE ACHIEVED
Total Suspended Solids	80.0%	81.6%	Yes
Total Phosphorus	65.0%	75.5%	Yes
Total Nitrogen	40.0%	65.3%	Yes
Gross Pollutants	90.0%	95.9%	Yes

8.0 SITE MAINTENANCE AND MANAGEMENT PROCEDURES

8.1 Petrol Station Maintenance and Management Procedure

The service station operator will have a Petrol Handling Manual that will set out all requirements for the safe handling of combustible and flammable materials. This manual will dictate weekly, monthly and annual checking procedures with checklists, which will be completed, and the records stored.

The manual will also set out dry cleaning methods to be employed within the fuel dispensing area in lieu of washing down to reduce possible contaminated runoff. Emergency procedures will be also clearly set out detailing actions to be taken by site personnel in the case of varying possible emergencies such as spills, fire or risk of fire, vehicle accidents, etc.

In addition, a regular cleaning, maintenance program/contract is to be established for emptying of rubbish bins located around the site, removal of general litter from the site, inspection of gully pits and removal of any sediment or captured litter from pit's grates. The Enviro Australis unit will be inspected and maintained in accordance with the manufacturer's instructions. Refer to **Appendix E** for maintenance plans.

The maintenance plan will address the following:

- Inspection frequency;
- Maintenance frequency;
- Data collection/storage requirements;
- Detailed cleanout procedures.

The plan will include inspection procedures covering aspects such as equipment needs, maintenance techniques, occupational health and safety, public safety, environmental management considerations, disposal requirements of pollutants collected and access issues.

8.2 Maintenance Plans for Stormwater treatment devices

All stormwater quality improvement systems require regular maintenance in order to function adequately. Table 9 details the basic maintenance requirements for each type of stormwater quality improvements systems. A detailed maintenance schedule will be developed as part of the detailed design of the site.

Table 9: Maintenance Requirements

Control	Maintenance Requirement	Maintenance Period
ATLAN Stormsack	Remove sediment and captured litter	4 months (inspect after major storm)
Enviro M60	Generally, comprehensive maintenance is performed from the surface via vacuum truck. No personnel access required to enter the device for service and maintenance. All surfaces inside the units are visible from the service covers, negating the need for personnel to enter the device. If required, screens can be removed manually to wash them down if required without entering the device.	Design service intervals are 12 months. Service by evacuation trucks is typically completed in less than one hour.
Enviro E90	Generally, comprehensive maintenance is performed from the surface via vacuum truck. No personnel access required to enter the device for service and maintenance. All surfaces inside the units are visible from the service covers, negating the need for personnel to enter the device. If required, screens can be removed manually to wash them down if required without entering the device.	Design service intervals are 12 months. Service by evacuation trucks is typically completed in less than one hour.

For operational and maintenance guidelines refer to **Appendix E** and relevant manufacturer's documentation.

9.0 LIFECYCLE COSTS

A lifecycle cost analysis is not part of the scope of this report. All the recommended water quality treatment infrastructure lies within the development site, and it shall be maintained and serviced by the owners of the development at no cost to Council.

10.0 CONCLUSION

A Site Based Stormwater Management Plan has been prepared with respect to the proposed Cleveland Industrial Park Main Facility. The location of the site is shown on Figure 1 and the proposed development site layout is shown in **Appendix A**.

- Stormwater Quality- Construction Phase

  An Erosion and Sediment Control Plan aimed at minimising unacceptable impacts during the construction phase will be developed at the Operational Works stage, in accordance with Council Guidelines and Standards aiming to minimise unacceptable impacts to occur during the construction phase.

- Stormwater Quality- Operational Phase

  Conceptual MUSIC models for the site's catchment indicated that the proposed treatment measures will achieve the statutory water quality objectives for the site. Refer section 7.5 of this report for details. The proposed treatment is shown in **Appendix C**.

This Site Based Stormwater Management Plan has demonstrated that adequate stormwater quantity and quality management principles and techniques will be employed during the construction and operational of this development to comply with the Queensland State Planning Policy 2017, the Townsville City Plan and Queensland Urban Drainage Manual 2016. The methods proposed are considered current best management practice for a development of this type, on this site.

Yours faithfully

Pradeep Manickam

Cadet Engineer

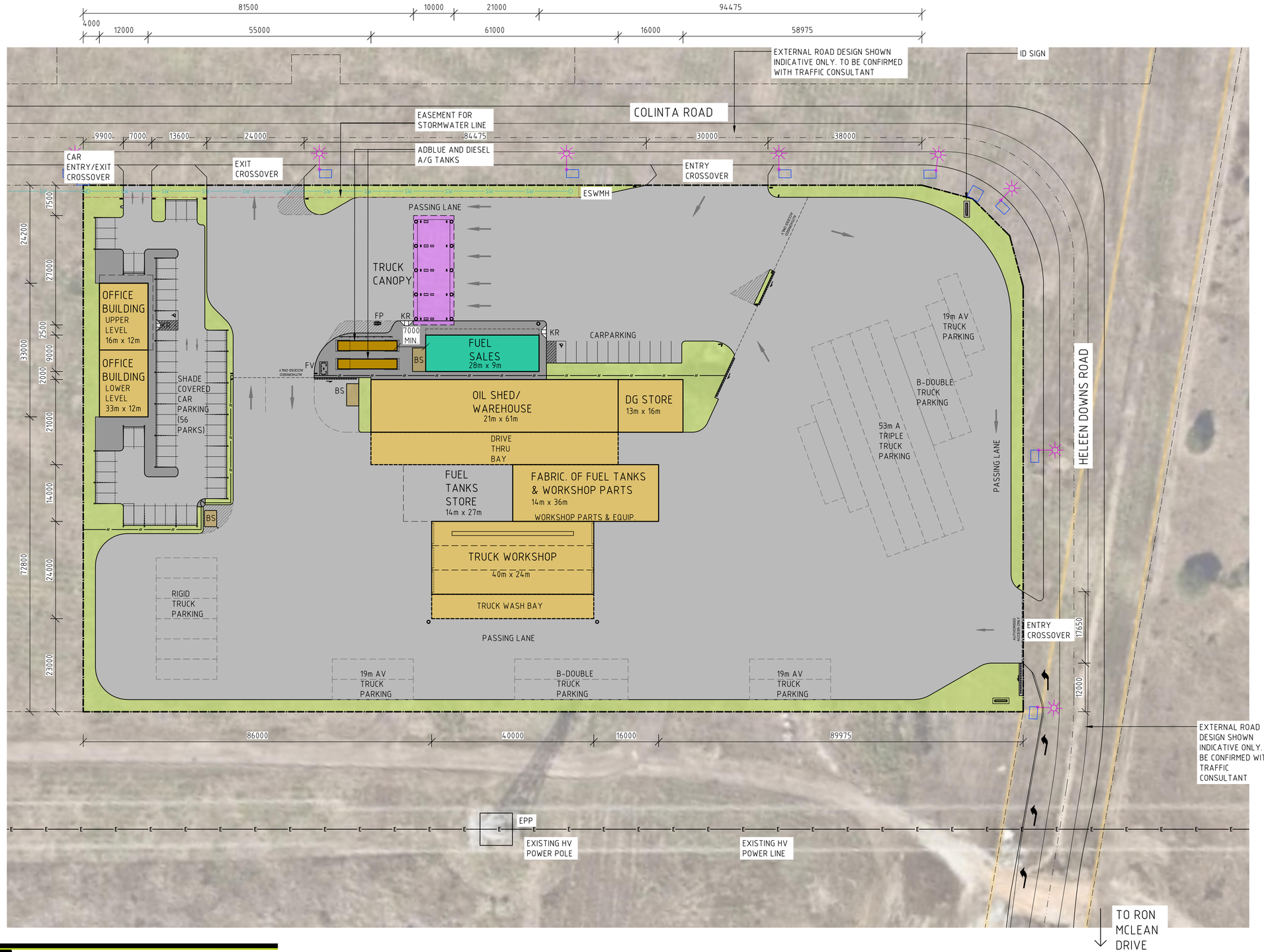
For and on behalf of TfA Group

Reviewed by

Juan Avella (RPEQ 11899)
BEng, MIEAust, CPEng, RPEQ, NER
Director Civil/Structural Engineering

For and on behalf of TfA Group

APPENDIX A – PROPOSED SITE LAYOUT PLAN



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

BS	BIN STORE - REFER DETAIL DWGS.
EPP	EXISTING POWER POLE - REFER SURVEY PLAN
ESWMH	EXISTING STORMWATER MAN HOLE
FL	FLOODLIGHT - REFER TO ELECTRICAL CONSULTANTS DWGS.
FP	REMOTE FUEL FILL POINT - REFER FUEL DWGS.
FV	FUEL VENT STACK - REFER FUEL DWGS.
KR	KERB RAMP - REFER TYPICAL DETAILS
	EXISTING ELECTRICAL PILLAR/PITS APPROXIMATELY
	EXISTING LIGHT POLES APPROXIMATELY

DEVELOPMENT ASSESSMENT

LANDSCAPE AREA: 3147m² (10%) APPROX.

BUILDING AREAS

FUEL SALES:	252m²
TRUCK CANOPY:	270m²
OFFICE LOWER:	396m²
OFFICE UPPER:	192m²
OIL SHED/ WAREHOUSE:	1280m²
DG STORE:	208m²
FABRIC. FUEL TANKS & WORKSHOP:	504m²
FUEL TANKS STORAGE:	378m²
TRUCK WORKSHOP & TRUCK WASH:	960m²
TOTAL AREA:	4,440m²

CARPARKING ASSESSMENT

FUEL SALES CAR PARKING PROVIDED: = 43 CARS

OFFICE CAR PARKING PROVIDED: = 56 CARS

0 10 20 30 40 50m

SCALE 1:500

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PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TFA Project Group

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

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REV	DATE	BY	DESCRIPTION	CHK	APP
A	27.10.23	AW	ISSUED FOR INFORMATION	DGC	
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

PROPOSED SITE PLAN

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10.10.23	1:500	A1

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DRAWING NO	REV
23043-D02	B

APPENDIX B – SITE SURVEY PLAN

REV	BY	DATE	DESCRIPTION
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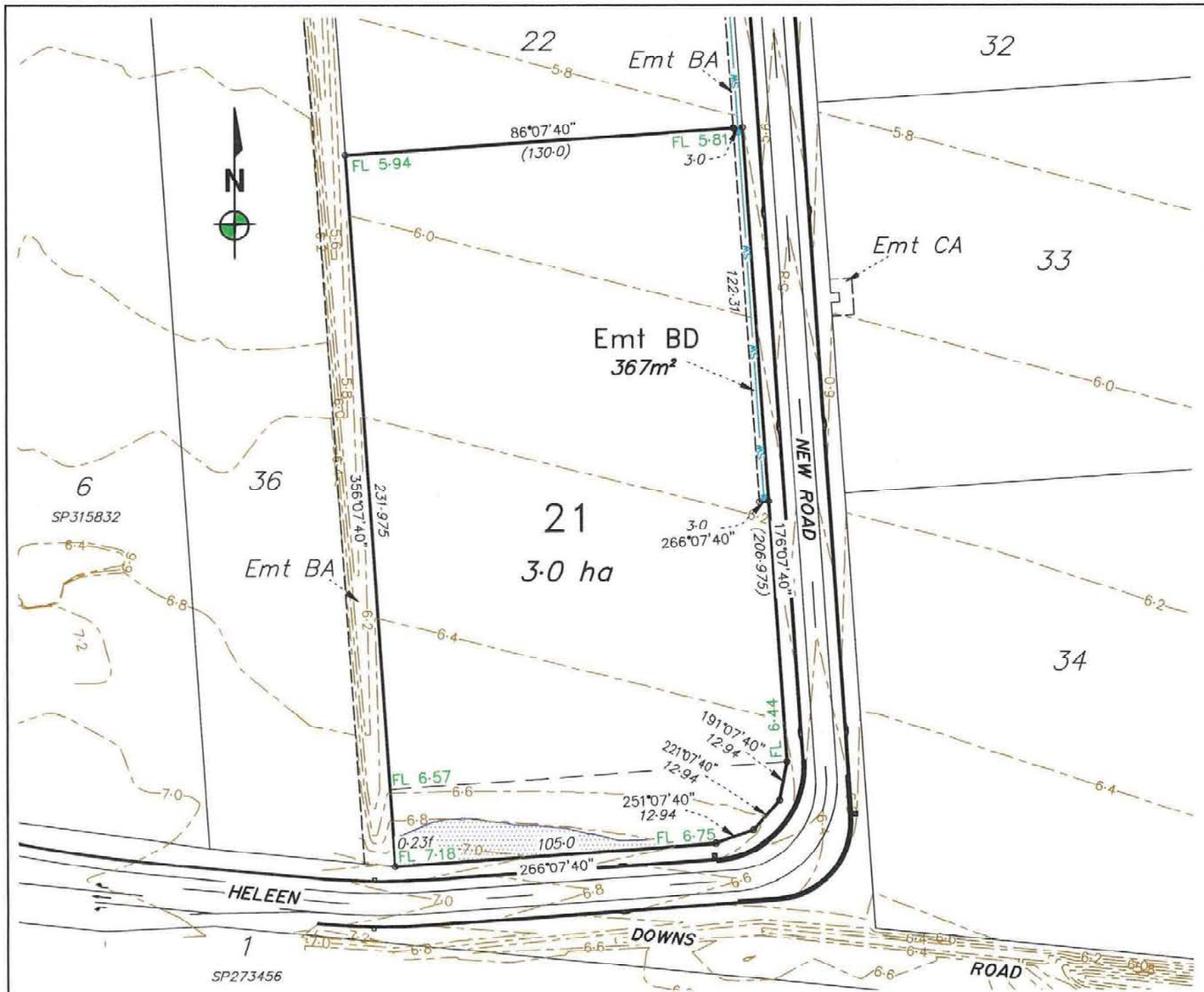
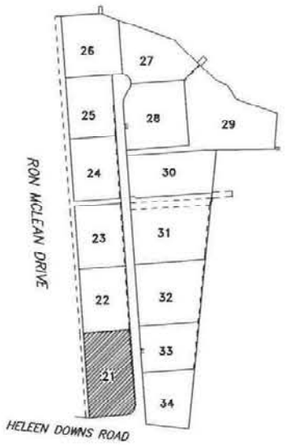
A	RG	22/02/2022	Road name amended.
0	RG	18/02/2022	Original Issue.



Notes:

- Fill shall be placed in accordance with Townsville City Council Town Plan, policy for earthworks (construction) SC6.4.6.10.8, to provide a relative compaction determined by AS1289.5.11 using AS1289.5.4.1 or AS1289.5.7.1 for standard compactive effort, of not less than 98% of standard maximum dry density
- inspection and testing shall be carried out in compliance with SC6.4.6.10.8.



Design Surface Level (0·2m Contours)

Area of fill

FL 7.14 Finished Design Level

0·17f Depth of fill (± 50mm)

SW Drainage pipe

Batter line

LOCAL AUTHORITY

TOWNSVILLE CITY COUNCIL

LEVEL DATUM: AHD(Der)
REF BM No: 53476
REDUCED LEVEL: 7·945
LOCATION: LOT 5 on SP273456

AZIMUTH: MGA'94 vide SP315832

SURVEYOR: RSPL
DRAWN: Romy Ghebosu
SIGNED BY: Laurie Nolan

ROWLANDS SURVEYS
22 Gorden Street Garbutt, Townsville.
Ph:(07) 47755077 surveyors@rowlands.net.au

cleveland bay industrial park TOWNSVILLE

CLEVELAND BAY INDUSTRIAL PARK PTY LTD

– DISCLOSURE PLAN –

Proposed Lot 21

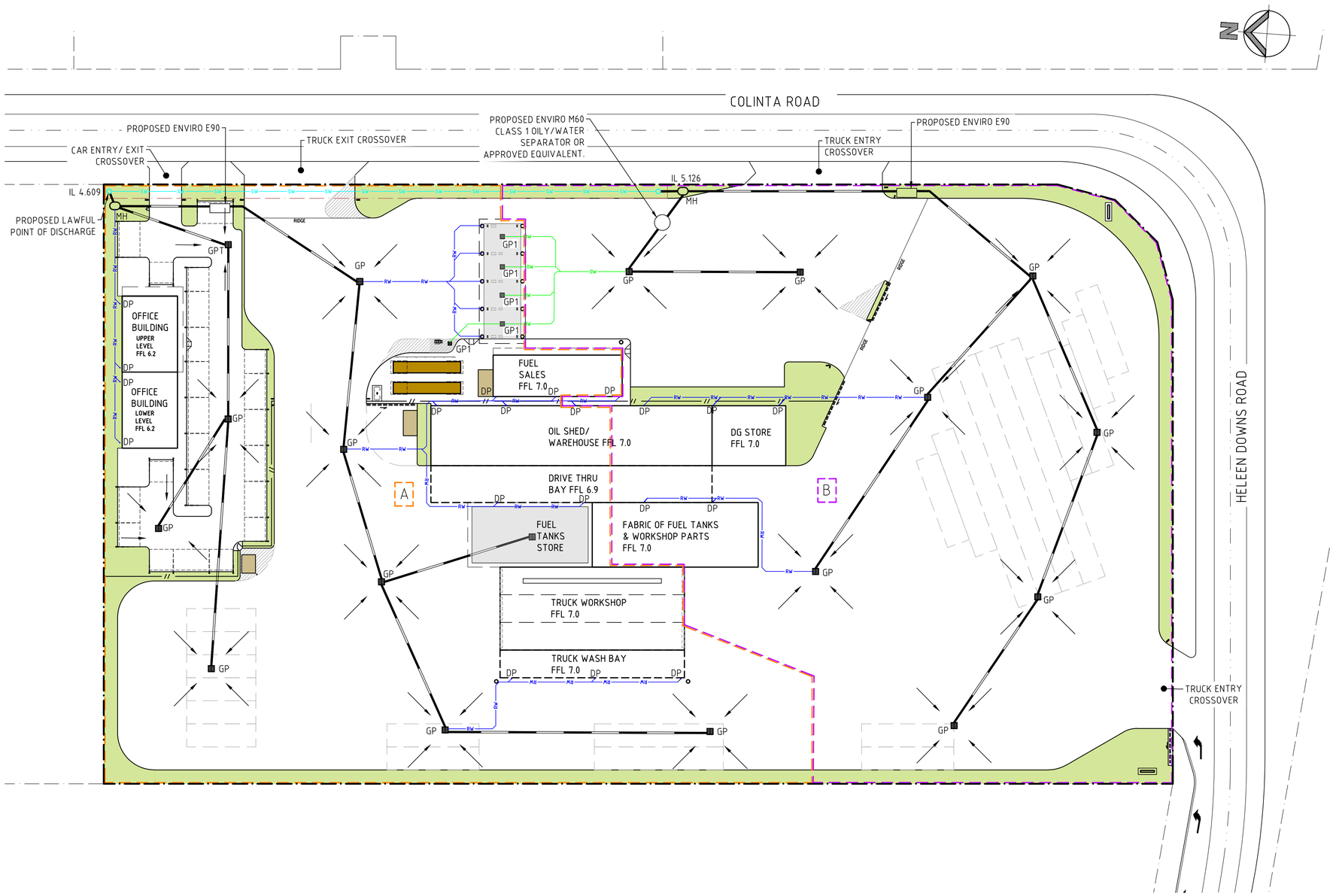
SCALE 1:1500@A3

PASSED

DATE 23/06/2023

43942/21B

APPENDIX C – CONCEPTUAL STORMWATER MANAGEMENT PLAN



RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43811/21B REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.

LEGEND

	PROPERTY BOUNDARY
	PROPOSED STORMWATER PIPE
RW	PROPOSED ROOFWATER PIPE
OW	PROPOSED OILY WATER HDPE PIPE
SW	EXISTING STORMWATER LINE
MH	PROPOSED MANHOLE
	GENERAL DIRECTION OF SURFACE
DP	PROPOSED DOWN PIPE
GP/GP1	PROPOSED GULLY PIT/OILY WATER GULLY PIT
GPT	PROPOSED GULLY PIT FITTED WITH GROSS POLLUTANT TRAP (ATLAN STORMSACK OR APPROVED EQUIVALENT).
	REFUELING, LOADING AND STORAGE AREA
A B	CATCHMENT LABEL

0 10 20 30 40 50m

SCALE 1:500

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

Head office - Brisbane
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au
Ph: 61 7 3854 2900
Aust Wide: 1300 794 300

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

REV	DATE	BY	DESCRIPTION	CHK	APP
A	08.11.23	PM	PRELIMINARY ISSUE	BM	JA
B	15.11.23	PM	ISSUED FOR INFORMATION	BM	JA

PROJECT DETAILS
PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN

STATUS
APPROVAL

DATE CREATED	ORIGINAL SCALE	SHEET
28.07.2023	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D19	B

APPENDIX D – STORMWATER & OILY WATER TREATMENT SYSTEMS

Flow rates based at 1% pipe gradient:-
Treated Flow.....142 L/sec

Enviro 'M60.20' is a oily water separator compliant with EN 858-1 and includes emergency spill protection to 18,000 litres

MASS:
(Based on "D" Class Covers)

Total mass for delivery based on minimum invert is 13.1 **tonnes**

Enviro M60

General Notes

The Enviro 'M60' is an Australia Designed and Manufactured Device for the removal of pollutants including oils from run-off water. The Enviro 'M60' is normally installed in-line within new or existing drainage pipes and can be adapted to be installed in an open channel if required. The device does not require any power, utilising the energy in the water flow to separate and contain pollutants for periodical removal by evacuation equipment. Internal surface can be inspected and washed as required, whilst screens can be removed and also cleaned if and as required.

The Enviro 'M60' are a unique oil/water Separator as well as a Stormwater Quality Improvement Devices (SQID's) which has undergone extensive performance stress testing by independent authorities. These tests indicate compliance with Environmental Protection Authority (EPA) Legislation and Guidelines which prohibit the discharge of pollutants into stormwater. The aim of the Enviro 'M60' is to restore water quality to a safe and environmentally sustainable state, which pre-existed urbanisation. The application is aimed at any catchment, where an oil spill risk may exist.

Recommendations made in the Australian Run-Off Quality Guideline 2007 (ARQ) are adhered to. The 'M' models also comply with EN-858-1, Class 1 oil/water separators.

Specifications: -

1. Design service life 100 years for fixed parts and 25 years for replacement parts
2. Hydraulic Resistance k factor = 0.425
3. Inlet to outlet differential = 25mm
4. Concrete chamber, risers and cover slabs are designed and manufactured in accordance with AS3600-2009 and under Quality Assurance 9001.
5. Covers are designed and tested in accordance with AS3996 – 2006 Access Covers and Grates
6. Internal components are manufactured from high grade, stainless steel to comply with International Corrosion Standards. There is no welding used. This complies with advice from both the American and Australian Institute of Engineers warning that welded stainless steel exposed to bacterial charged water can result in early corrosion and failure
7. 'M60' performance testing verifies the following pollutant removal rates. The testing was performed across a range of concentrations and flow rates which replicated various run-off water conditions and confirmed: -
   7.1. gross pollutants, reduction exceeds 95%
   7.2. suspended solids, reduction exceeds.....90%
   7.3. total phosphorous, (TP) retention 97%
   7.4. total nitrogen, (TN) retention.....85%
   7.5. total hydrocarbons.....99.95%
   7.6. Oil Containment.....18,000 litres
8. The lower storage chamber has the capacity to hold the annual load discharged from a catchment based on the ARQ Section 3.7 recommended allowance of 1m3/ha/ann.
9. An important feature of the Enviro 'M60' is that all in flow is treated in accordance with EPA requirements that fuel-dispensing zones cannot discharge oil contaminants particularly as a result of emergency oil spills into environmental flows. Provision has been allowed for the installation of alarms and automatic evacuation systems.
10. Particle size capture is set to retain all particles greater than 500µ and to then retain a majority of particles to less than 100µ.
11. Hydrocarbon retention occurs in a separate chamber which operates as a best practice oil and grease arrestor
12. Re-suspension of hydrocarbons and all retained materials is prevented by including separate chambers for separation from flow and retention.

REV.	DESCRIPTION	DATE	APPROVED
0	Technical Specification Created	20-Nov-21	LC
REVISIONS			

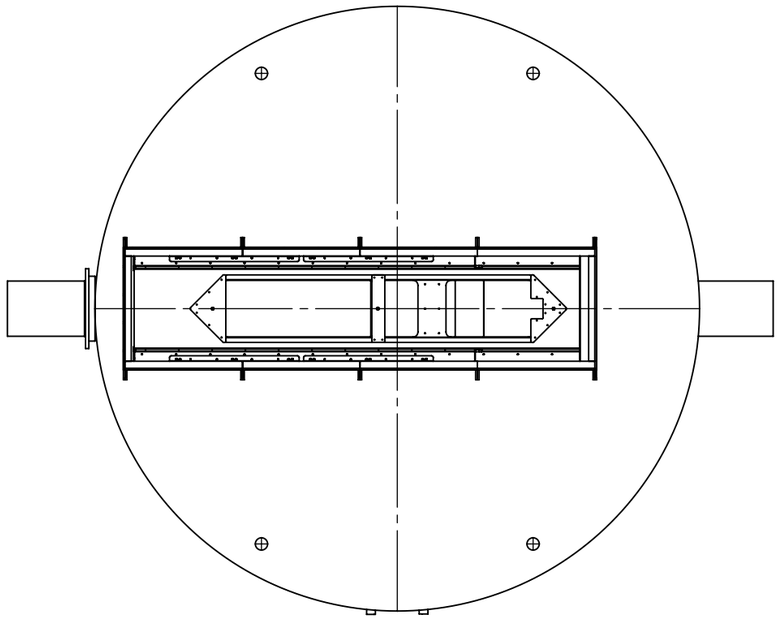
For further assistance: -
Technical Support Ph: .....+61 8 8564 2347
Email: info@enviroaustralis.com.au

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

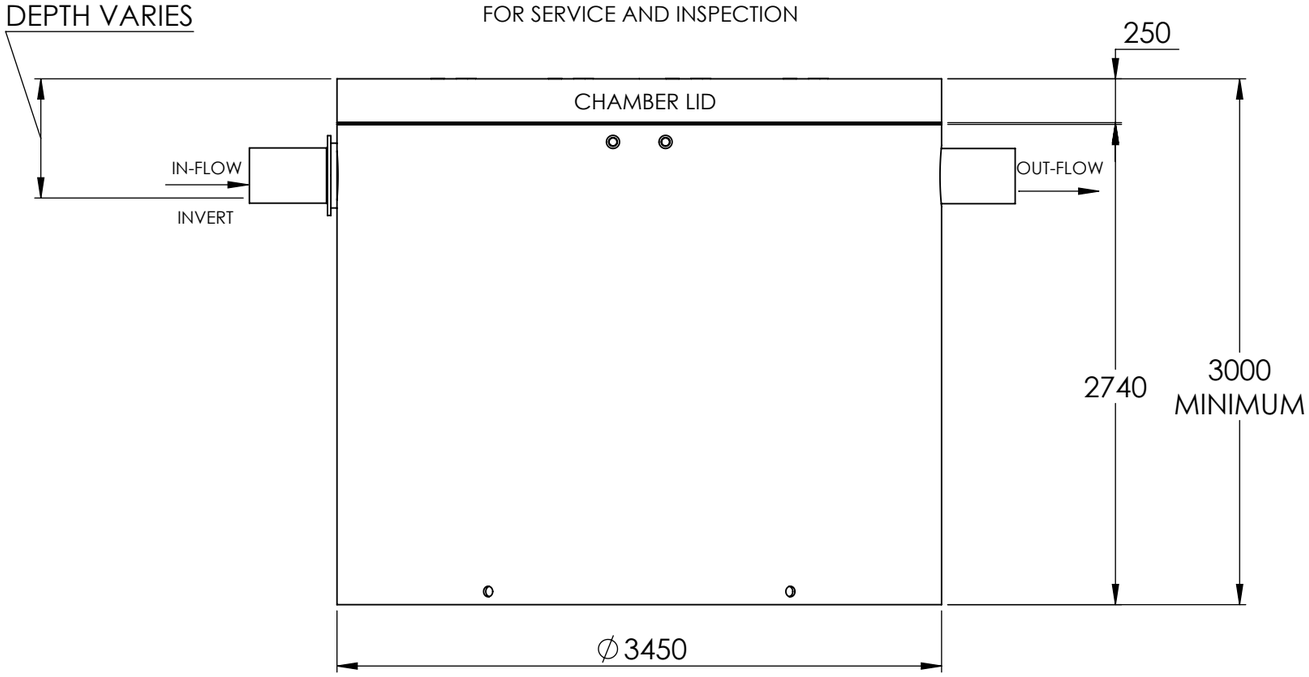
ENVIRO

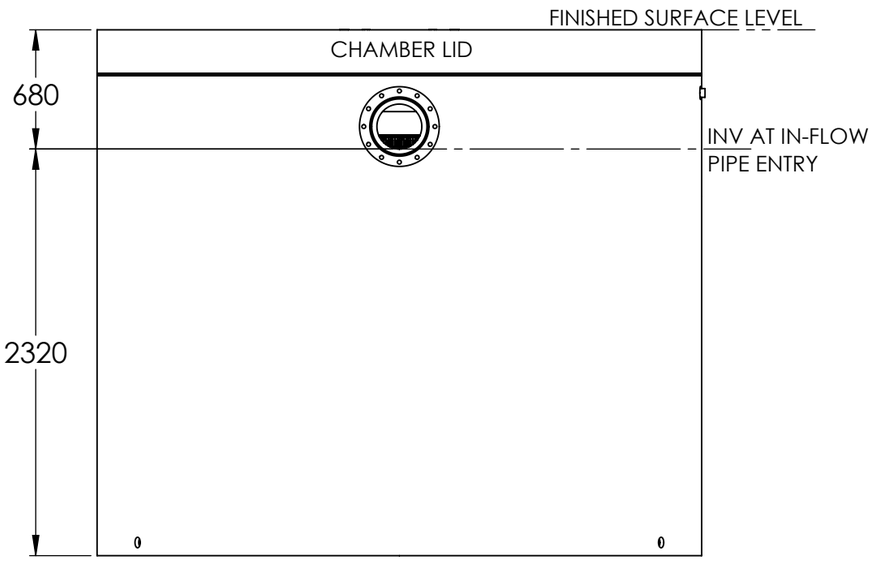
TITLE:
ENVIRO M60.20
SPECIFICATIONS AND TECHNICAL DATA

MATERIAL:	ASSEMBLY:	A3
CONCRETE & S/STEEL	M60.20	REV: 0
WEIGHT:	SCALE: NTS	SHEET 1 OF 5



VIEW AS SEEN THROUGH COVERS OPENING
FOR SERVICE AND INSPECTION





General Table		
CLASS	OVERALL HEIGHT	MIN. DEPTH TO INVERT
'D' CLASS	3000 mm	680 mm

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR

PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

MATERIAL: CONCRETE & STEEL

ENVIRO

TITLE:
ENVIRO M60.20
GENERAL ARRANGEMENT

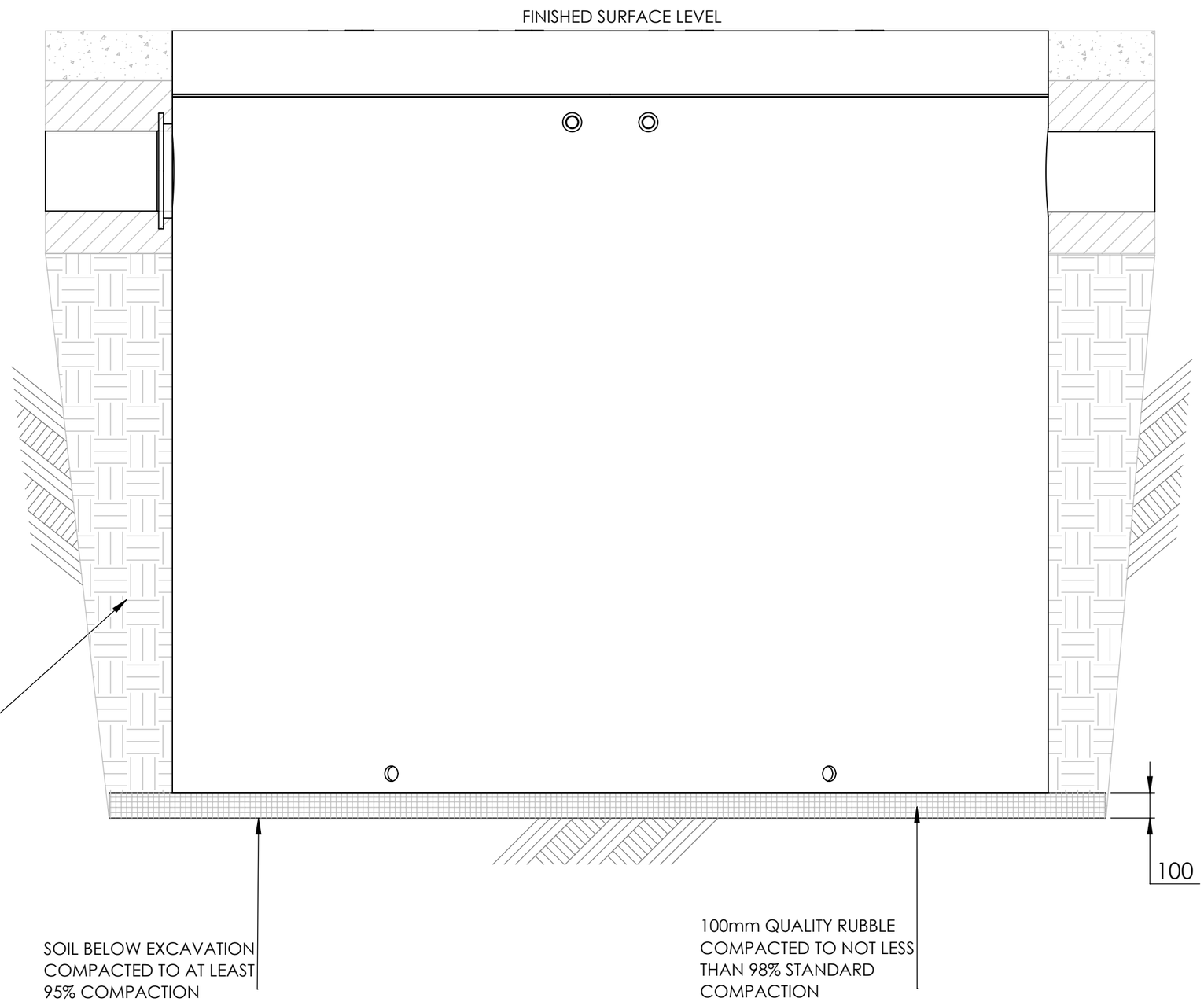
ASSEMBLY: M60.20

A3

REV: 0

SCALE: NTS

SHEET 2 OF 5



EXCAVATION VOLUME:

TOTAL EXCAVATION VOLUME - 67 m^3

BACKFILL VOLUME FROM CHAMBER BOTTOM
TO PIPE INVERT = 23 m^3

BACKFILL VOLUME FROM PIPE INVERT
TO SURFACE LEVEL = 15 m^3

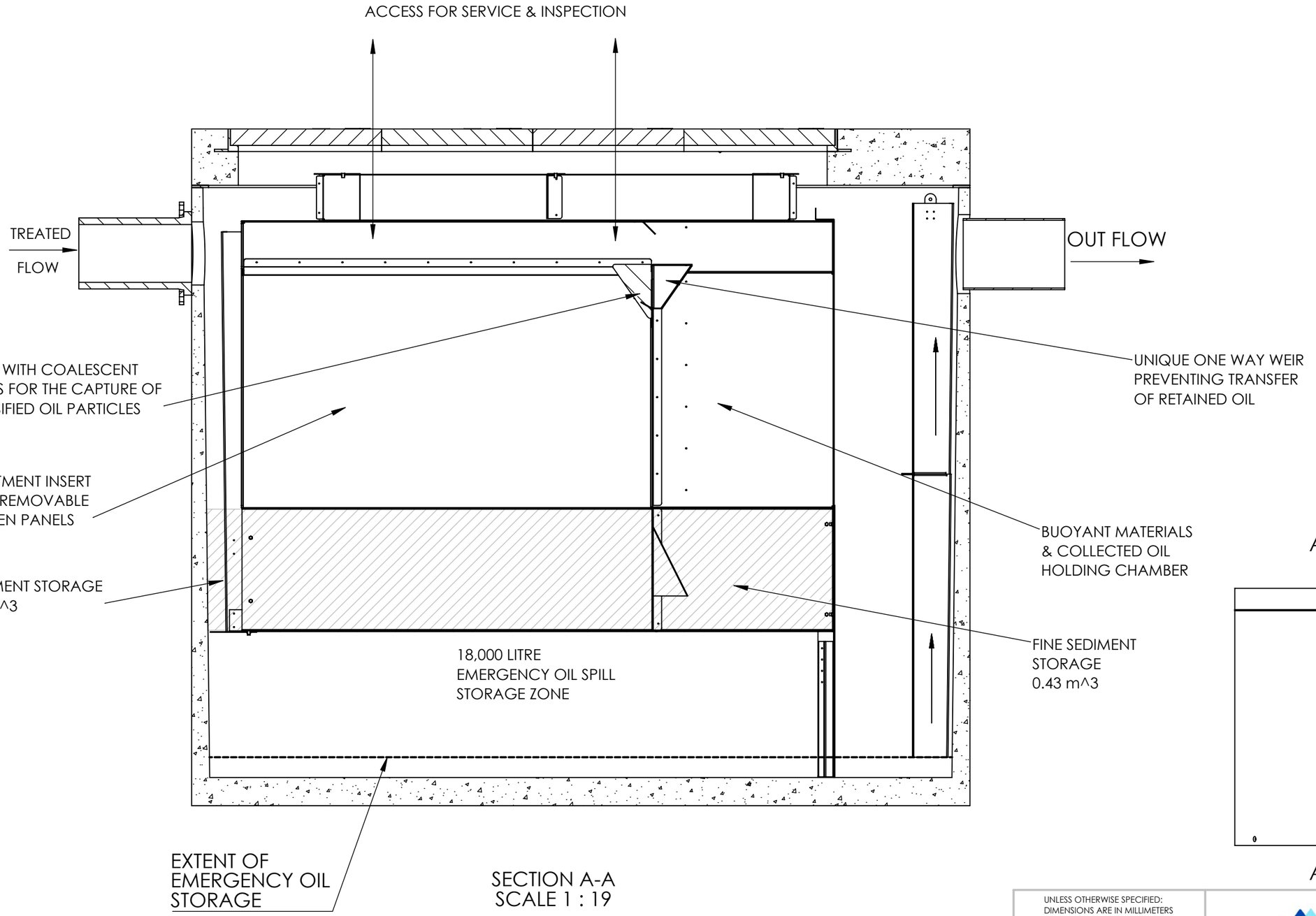
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

ENVIRO

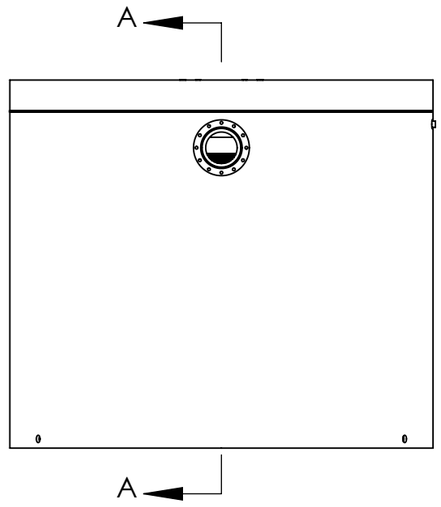
TITLE:

ENVIRO M60.20
SITE INSTALLATION

MATERIAL:	ASSEMBLY:	
CONCRETE & STEEL	M60.20	A3
		REV: 0
	SCALE: NTS	SHEET 3 OF 5



SECTION A-A
SCALE 1 : 19



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022

ENVIRO

TITLE:

ENVIRO M60.20
GENERAL OPERATION

MATERIAL: CONCRETE & STEEL

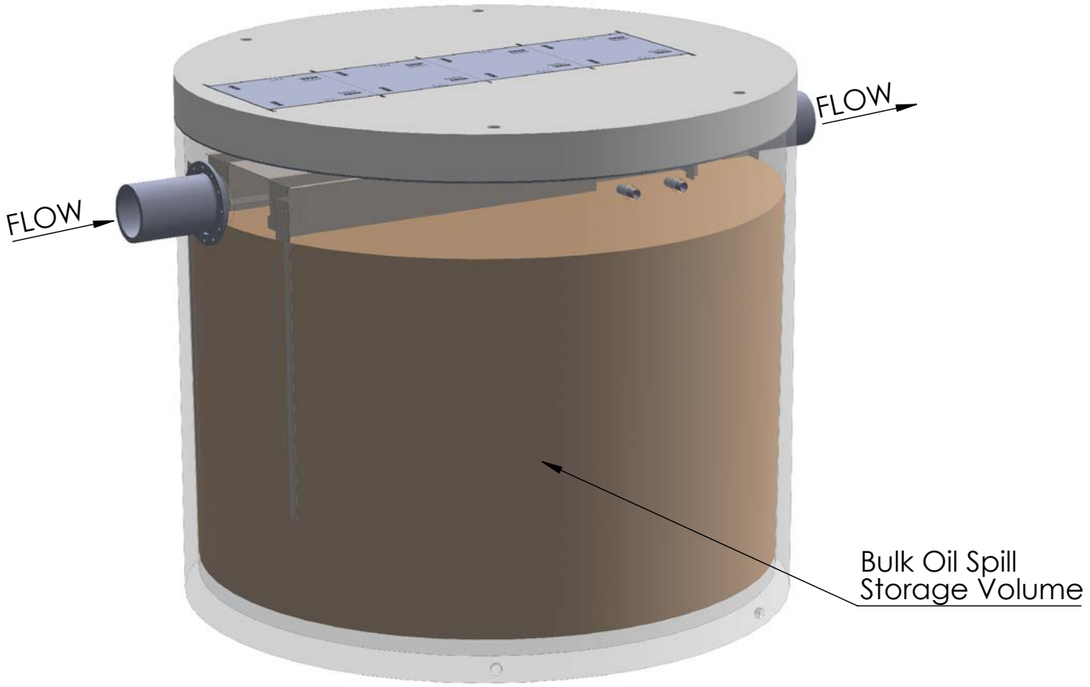
ASSEMBLY: M60.20

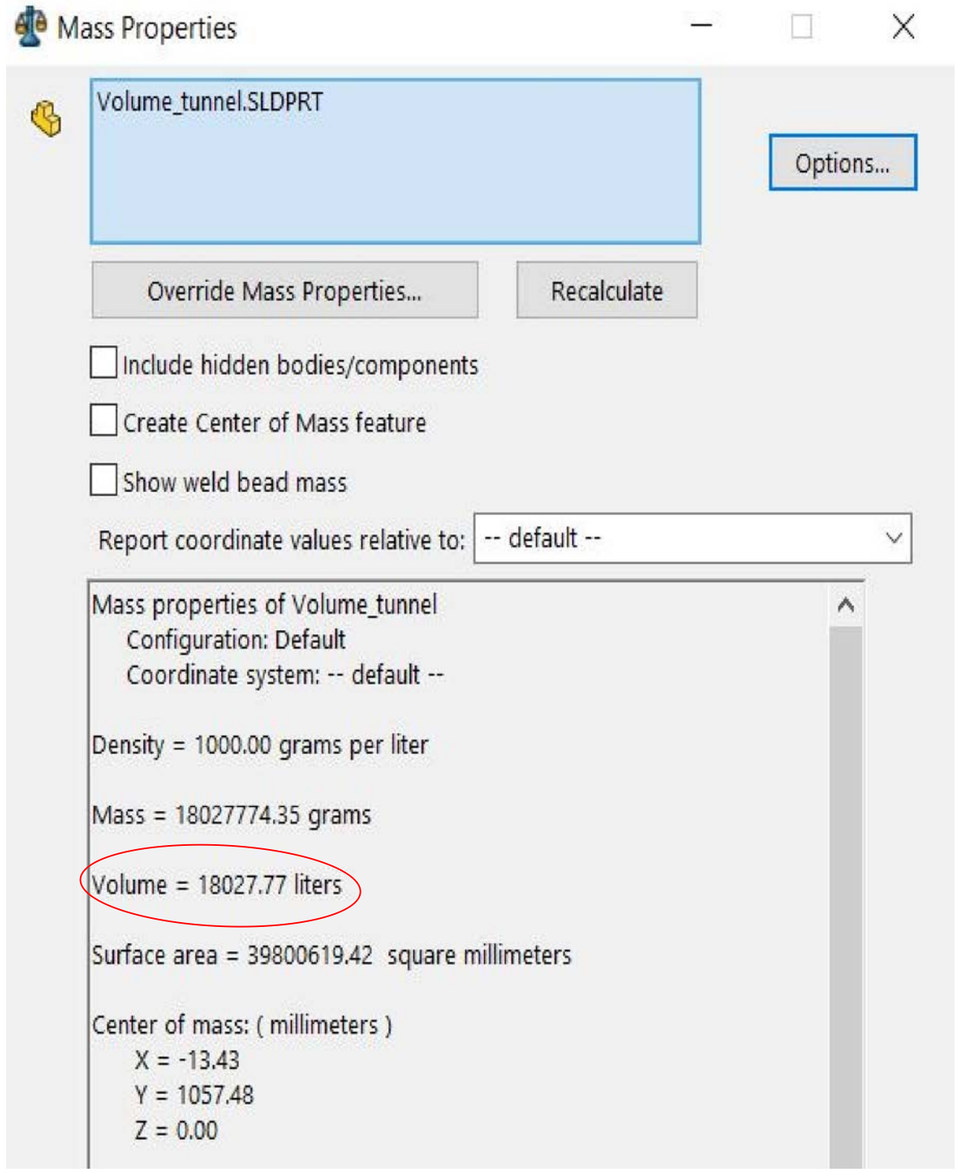
A3

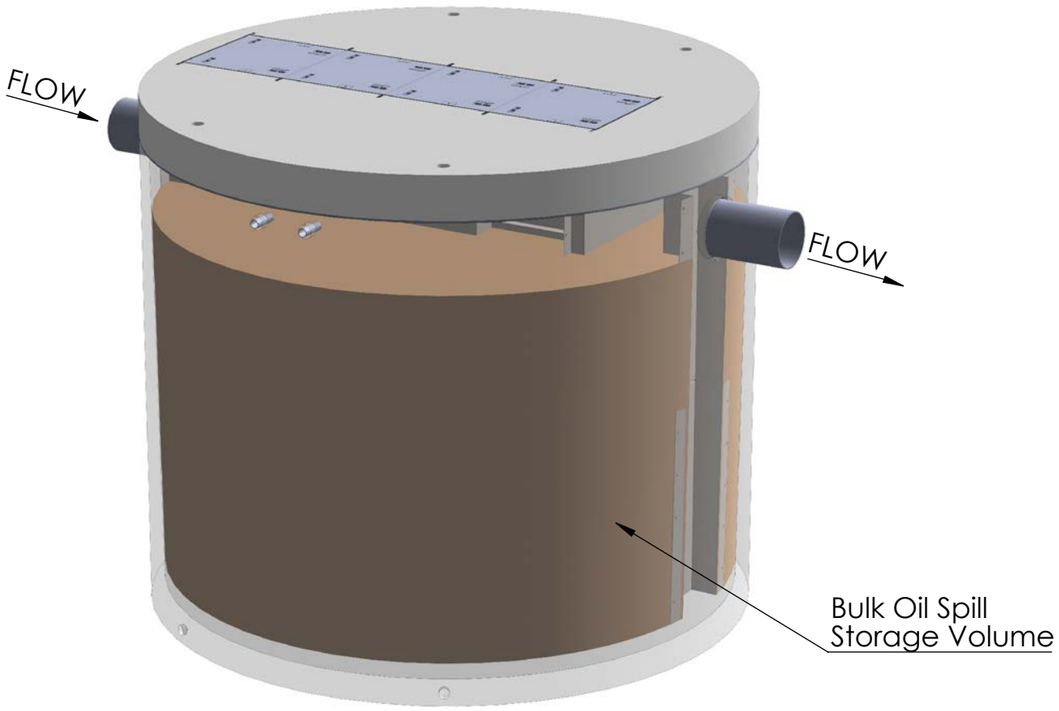
REV: 0

SCALE: NTS

SHEET 4 OF 5







UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	02-02-2022
MATERIAL:	CONCRETE & STEEL

ENVIRO

TITLE:

ENVIRO M60.20 STORAGE VOLUME

ASSEMBLY: M60.20

A3

REV: 0

SCALE: NTS

SHEET 5 OF 5

Enviro E Series

An in-line multi-chamber device with integrated separation zones for removal of broad spectrum pollutants generated by high impact catchments

The Enviro E series is an in-line multi-chamber device designed to remove the broad spectrum of pollutants transported by run-off water from high impact catchments. Pollutant groups are separated and contained in separate zone for removal.

All Enviro models are designed to match pipe size, treated flow and flow velocity.

All models offer the same performance. This has been established and certified by independent parties. The following removal rates were exceeded in full scale controlled testing and/or were verified by university analysis.

- Gross Pollutants 100%
- Suspended Solids 86%
- Total Nitrogen 85%
- Total Phosphorous 97%
- Hydrocarbon Removal 90%

Other factors include:

- Treated flow of pipe diameter[1] 30%
- Hydraulic Resistance, k factor.....0.425
- Nominal service intervals[2,3] .....1 year
- Max particle size by-pass .....500 μ
- Nominal particle size capture .....100 μ
- Design service life .....100 years
- Fully removable internal screens

Installation instructions are included with each unit at the time of delivery. Site supervision is also available if required.

Physical parameters:

- Enviro's models are designed so that the combined mass and size enable units to be legally transported without special conditions.
- Cover slab removable for ease of installation.
- Riser increments supplied to match invert and surface levels.
- Covers available for B and D duty applications
- Locked down covers supplied.
- More products are available - subject to custom design.

Note 1: Treatment continues after this level is exceeded enabling capture of higher density materials transported by increased energy in flow resulting from higher rainfall intensity.

Note 2: Additional storage of a further 1.4 m^3 is available before unit performance is compromised.

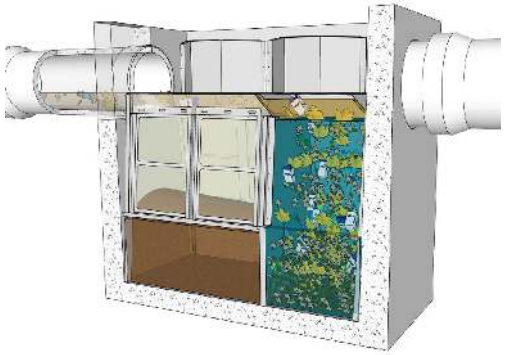
Note 3: Load volume allowance of 1m^3/ann based on ARQ section 3.7.

Enviro systems include:

- **H series oil/water separator**
- **E series for medium/high impact catchments**
- **G series for low impact applications**

Visit our website and use the selection guide, or contact our design engineers for advice.

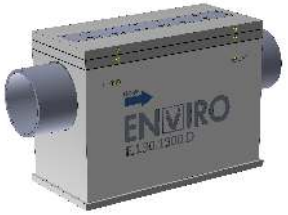
Similar to all Enviro systems, the E series system arrives complete and is ready for easy installation.



Simply, lift and place directly into final position. The E90 shown below.

Standard model features are as follows. Custom design features, such as dry sump, G cover duty and telemetry systems are available.

	Model	Pipe Size	Treated Flow and Storage Capacity	Plan Dimensions (external length x width)	Depth Below Invert	Mass	Excavation Volume
Enviro E30		Nominally 300 ID. Can be used for 375mm ID subject to gradient and velocity	22 litres/sec 0.23 m^3	1.5m x 0.9m	1.2m	3.2 tonnes	2.2 m^3
Enviro E45		450mm ID	66 litres/sec 0.45 m^3	2.2m x 1.2m	1.4m	6.1tonnes	4.9 m^3
Enviro E60		600mm ID	142 litres/sec 0.85 m^3	2.8m x 1.2m	1.8m	9.3 tonnes	7.9 m^3
Enviro E75		750mm ID	258 litres/sec 3.1 m^3	3.6m x 1.95m	2.2m	16.1 tonnes	20.1 m^3
Enviro E90		Nominally 900 ID. Can be used for 1,050mm pipe size subject to gradient and velocity	419 litres/sec 3.2 m^3	4.35m x 1.95m	2.0m	18.6 tonnes	22.1 m^3

Enviro E120		1200mm ID	902 litres/sec 5.2 m^3	4.35m x 2.1m	1.8m	19.2 tonnes	22.0 m^3
Enviro E130		1300 mm ID	1285 litres/sec 6.7 m^3	5.1m x 2.4m	1.7m	23.9 tonnes	25.0 m^3
Enviro E180		1800 mm ID	2570 litres/sec 13.4 m^3	9.5m x 5.1m	1.65m	87.3 tonnes	56.0 m^3

Notes: Mass excludes additional riser increments. Excavation volume is a guide with 30% over allowance. Storage volume includes floatable holding chamber.

Enviro H, E and G Range - Typical Service and Maintenance

All Enviro treatment devices are designed to minimise service and maintenance costs as a result of the following features:

1. The storage chamber located below the processing chamber is designed to be easily inspected and serviced. Based on the ARQ extrapolation of 1m^3/ann/ha from a typical urban catchment, the large storage volume provides for extended service intervals of at least 1 year, with 2 year intervals subject to site usage.
2. Service is by evacuation. (Refer Fig 1) The volume of water contained in the process chamber is minimised to reduce evacuation costs. Furthermore, this water can be pumped out as the first stage of service avoiding evacuation and the cost of disposal. A dry sump option is available on request.
3. All surfaces inside the Enviro EPS are visible from the service covers, negating the need for personnel to enter the device and perform longer term wash downs. (Refer Fig 2)
4. If required, screens can be removed manually without entering the device. This facilitates inspection, cleaning or replacement, without additional labour or equipment. (Refer Fig 3)
5. During the construction phase ie before hand over, screens can be removed enabling the device to act as a sediment trap. This enables the constructor to clean out the device and handover to the client an unused, clean unit eliminating disputes over condition of the device.

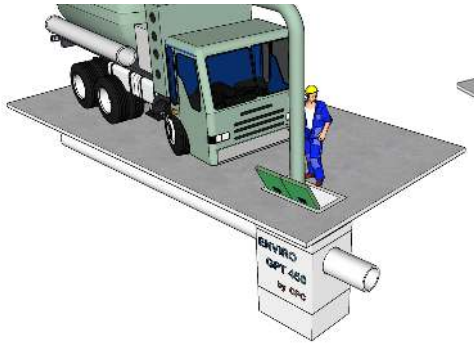


Fig 1 evacuation service

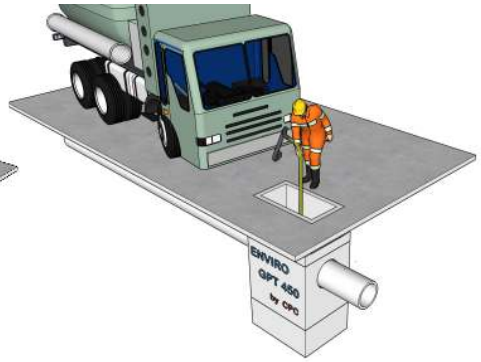
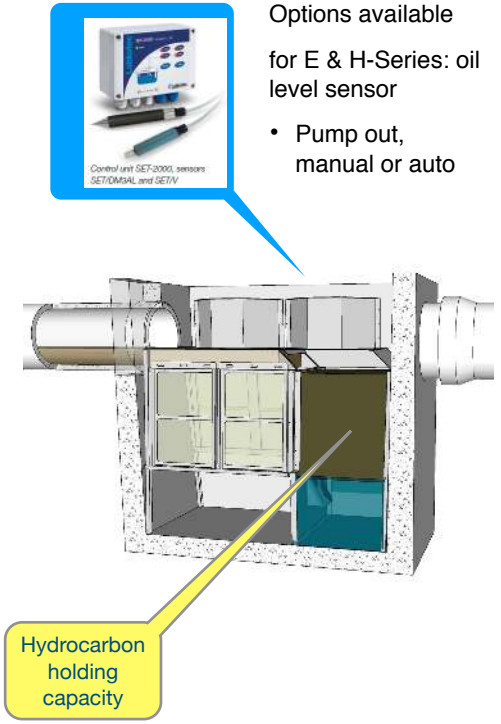


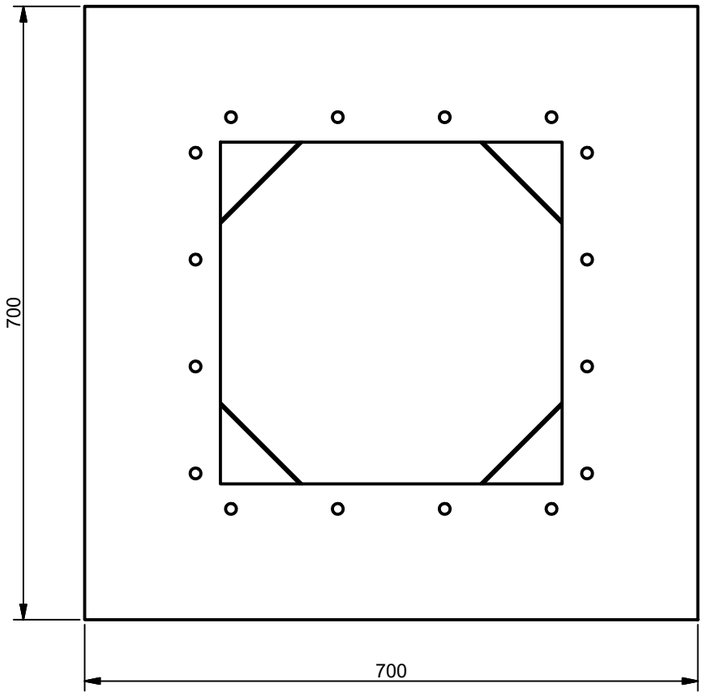
Fig 2 wash down as required

Fig 3 screen removal as required

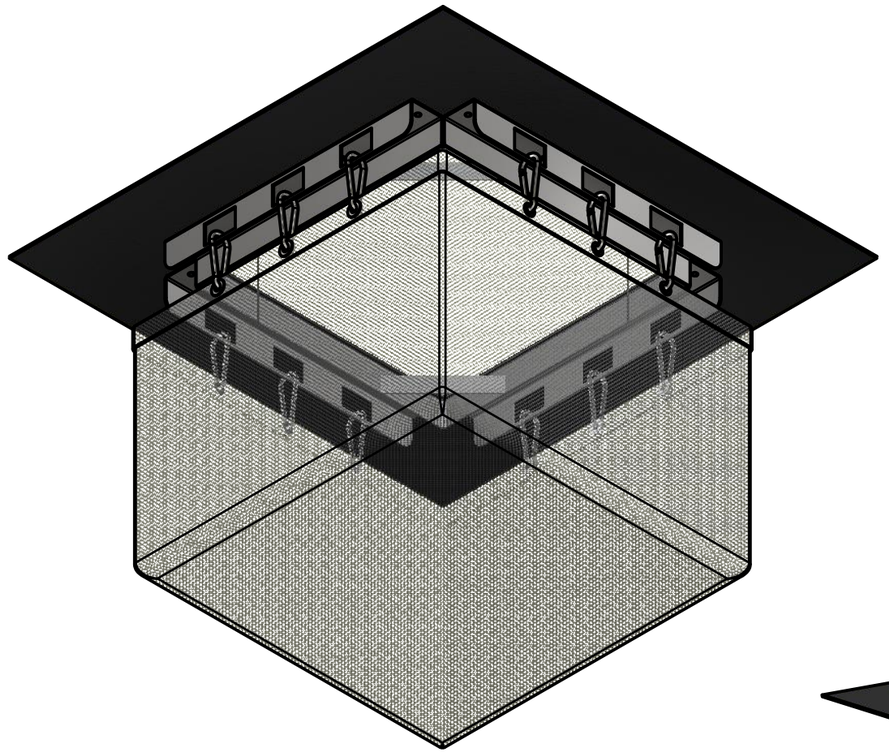


Technical: 08 8 564 2347
After Hours : 0419 555 514
www.enviroaustralis.com.au
info@enviroaustralis.com.au

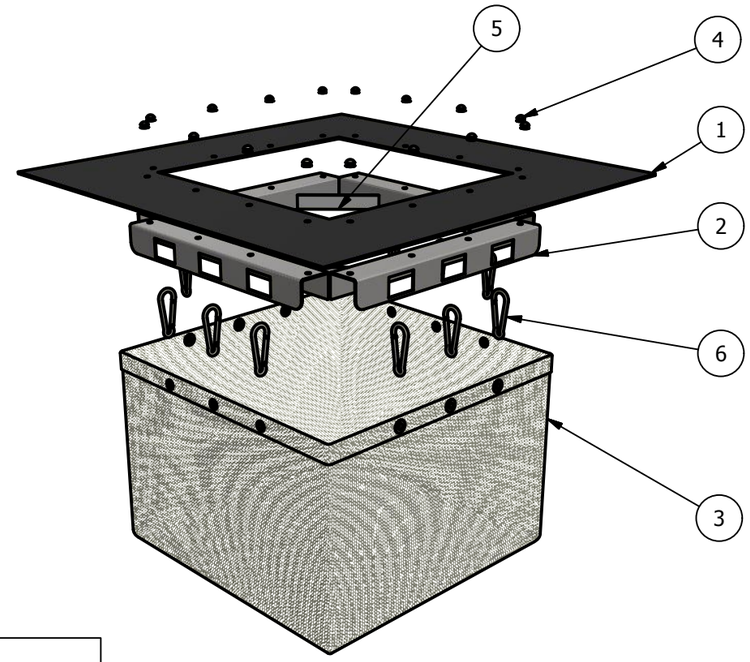
REVISION HISTORY				
REV	DESCRIPTION	DESIGNER	DATE	CHECKED BY
1	INITIAL RELEASE	M.M	25/03/2015	



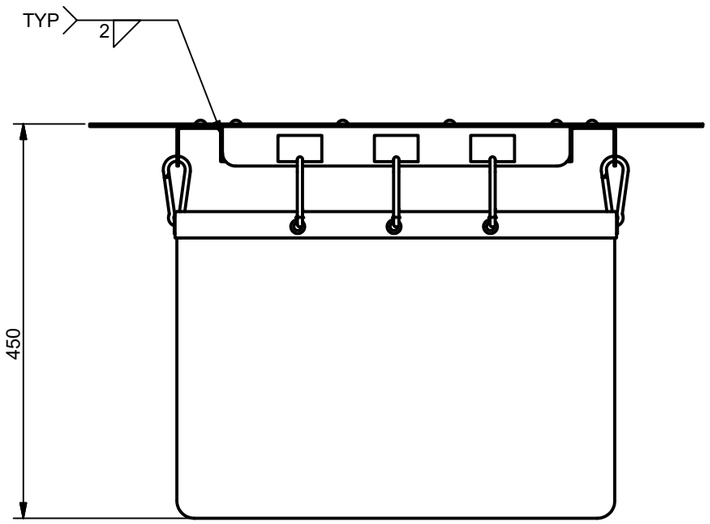
PLAN VIEW



ISOMETRIC VIEW
BOTTOM VIEW



ISOMETRIC VIEW
EXPLOSION



ELEVATION VIEW

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PLASTIC SHEETING	HDPE
2	4	SHEET METAL BENDING	STAINLESS STEEL 304
3	1	TEXTILE FABRIC & MESH LINER	HDPE
4	16	BLIND RIVIT 7 DIA.	STAINLESS STEEL 304
5	4	CORNER ESTIFFENER - FLAT BAR 25 x 2 - 141 LG	STAINLESS STEEL 304
6	12	CARABINER CLIP 6	ALUMINIUM

CLIENT:

DISTRIBUTOR

Drawn M.M	Date 25/03/2015
CHECKED BY	Date
Verified	Date
Approved	Date
Customer Code :	

SPEL ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS
100 Silverwater Road Silverwater NSW 2128
PH: 1300 773 500 | E: sales@spel.com.au
www.spel.com.au

TITLE
SPEL STOMSACK
FRAME 600 x 600
BASKET MOUNTING ASSEMBLY DRAWING

REQUEST No.	SIZE	SHEET	REV
D20194	A3	1	1

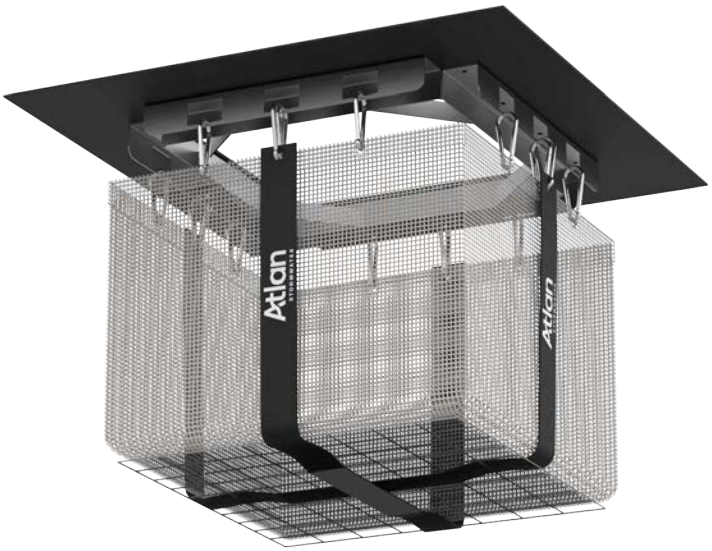
SCALE	DWG No.
N.T.S	SP15-BB4610-S

StormSack

At-Source Gross Pollutant Trap

atlan.com.au

Atlan STORMWATER



The Atlan StormSack is specifically designed for the capture of gross pollutants, sediment, litter, and oil and grease. Ideally suited for storm drain retrofits, the StormSack's unique design allows maintenance to be performed using conventional vacuum suction equipment.

StormSack filtration solutions are highly engineered water quality devices that are deployed directly in the stormwater system to capture contaminants close the surface for ease of maintenance. Easily retrofitted into new or existing structures, StormSack filtration technology is a decentralized approach to stormwater treatment that essentially repurposes traditional site infrastructure and customizes it to meet specific site water quality goals. In this way, it satisfies important objectives of today's LID (Low Impact Development) criteria.

From an operations perspective, catch basins with StormSack filters are also easier and quicker to clean out because pollutants are trapped just under the grate.

APPLICATIONS

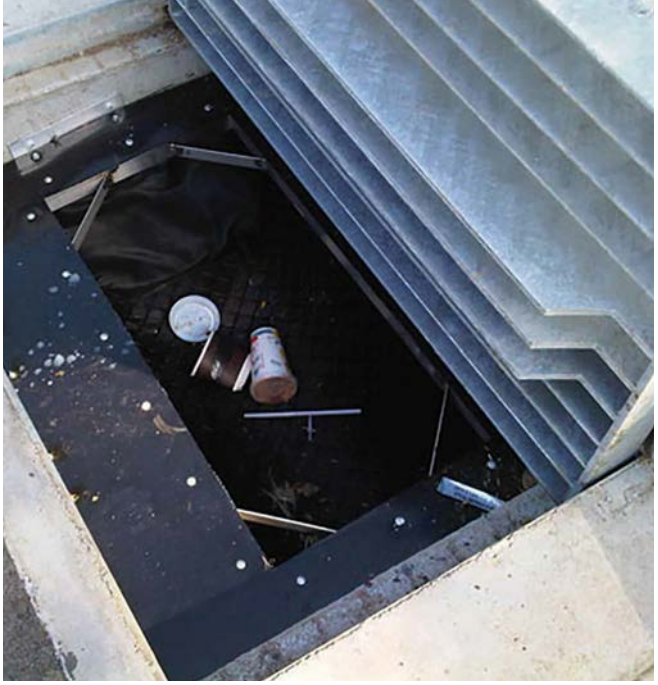
- Council storm drain retrofits
- Commercial / retail / residential
- Litter prone urban areas
- Scrap metal / solid waste / oil storage
- Part of treatment train
- Construction sediment / erosion

BENEFITS

- Can be modelled in MUSIC in conjunction with bio-retention
- Low cost gross pollutant capture
- Quick & easy installation
- Simple maintenance
- At-source capture
- Adjusts to custom pit sizes

The StormSack was introduced to the Australian market in 2012 and field testing is underway at several locations in South-east Queensland. Laboratory testing has shown capture of 99.99% of gross pollutants up to the bypass flow rate. Further results will be provided as they become available.

Recommended minimum clearance from bottom of StormSack to inside bottom of vault is 50mm. Typical frame adjustability range of 127mm in each direction.



HOW IT WORKS

This technology is a post developed stormwater treatment system. The StormSack provides effective filtration of solid pollutants and debris typical of urban runoff, while utilising existing or new storm drain infrastructure. The StormSack is designed to rest on the flanges of conventional catch basin frames and is engineered for most hydraulic and cold climate conditions.

Installation procedures shall include removing the storm grate, cleaning the ledge of debris and solids, measuring catch basin clear opening and adjusting flanges to rest on the grate support ledge. Install StormSack with splash guard under curb opening so the adjustable flanges are resting on the grate support ledge. Install corner filler pieces. Reinstall storm grate directly on support flanges rise shall be no more than 3mm.

FEATURES

POLLUTANT	EFFICIENCY
Gross Pollutants (GP)	100%
Total Suspended Solids (TSS)	61%
Total Phosphorus (TP)	28%
Total Nitrogen (TN)	45%

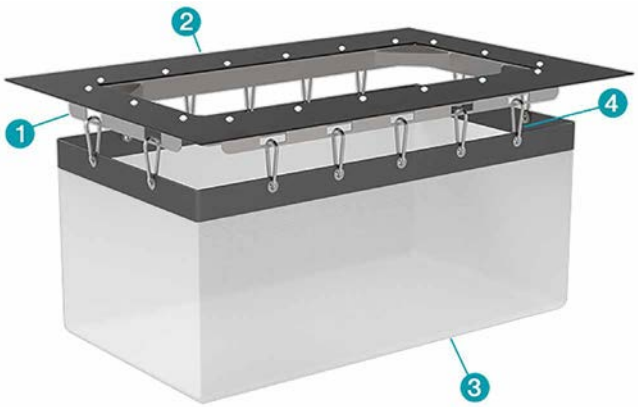
*Contact Atlan to confirm approved performance for the project LGA

MAINTENANCE

Typically the StormSack is serviceable from the street level, and therefore maintenance does not require confined space entry into the catch basin structure. The unit is designed to be maintained in place with a vacuum hose attached to a sweeper or a vactor truck. Use only Atlan replaceable parts.

Application	Regulatory Issue	Target Pollutants
Council Storm Drain Retrofits	At-source litter capture	Sediment, Litter, O&G
Commercial/Retail/Residential	Stormwater Compliance	Sediment, Litter, O&G
Litter Prone Urban Areas	Cost effective litter control	Litter ≥ 5 mm
Scrap Metal/Solid Waste/Oil Storage/Etc	Industrial Multi-Sector General Permit	Gross Pollutants, O&G
Part of Treatment Train	Council Stormwater Quality Improvement Targets	Sediment, Litter, O&G
Construction Sediment/Erosion	Sediment Control Plan	Sediment/Erosion Control

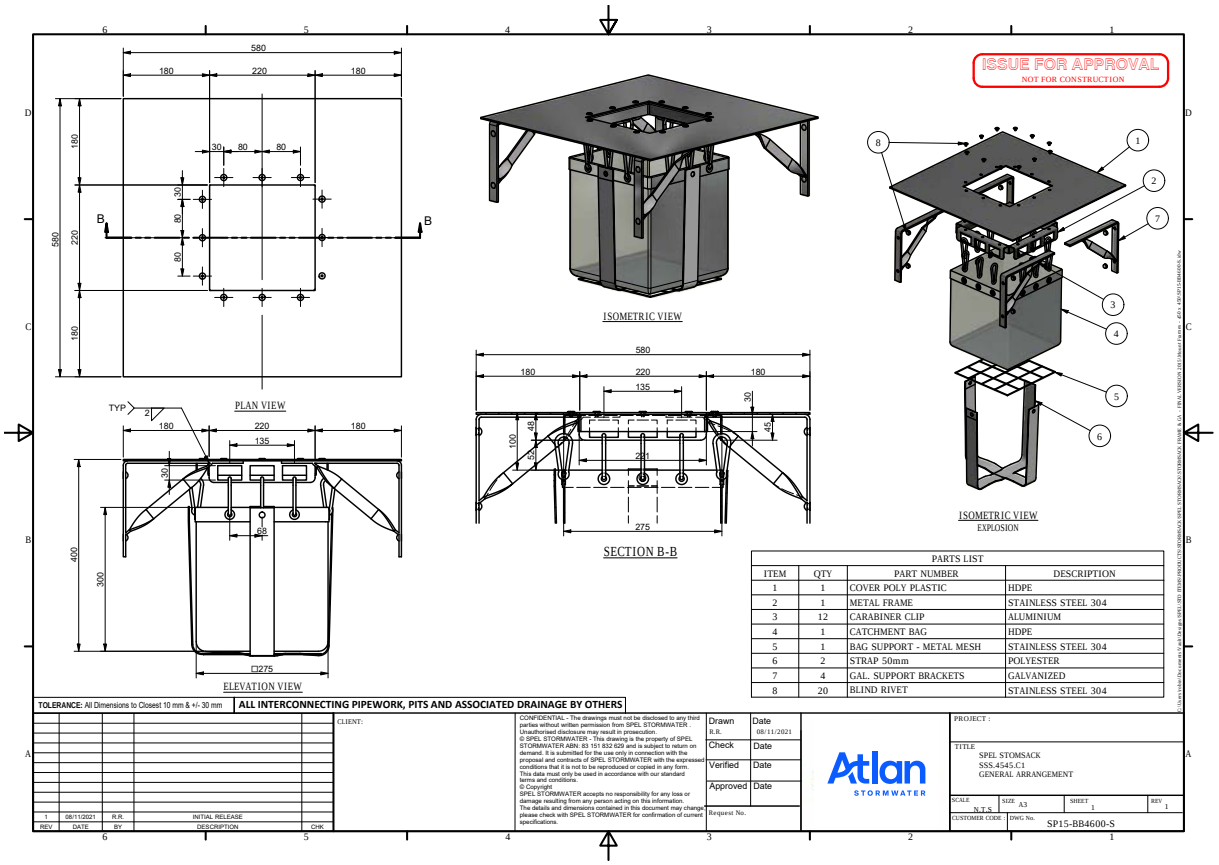
Features	
1.	1. Ultra-Durable Aluminium Frame • Available in 450x450mm, 600x600mm, 600x900mm and 900x900mm sizes • Custom pit arrangements upon request
2.	Black Poly Surround riveted to Frame • Can be cut to suit on site
3.	Reinforced Stormsack Bag • Bag has sewed eyelets • Square bottom design for even distribution
4.	Karabiners attach Bag to Frame for easy service & replacement
5.	5. Aluminium Support Angles & Fixings

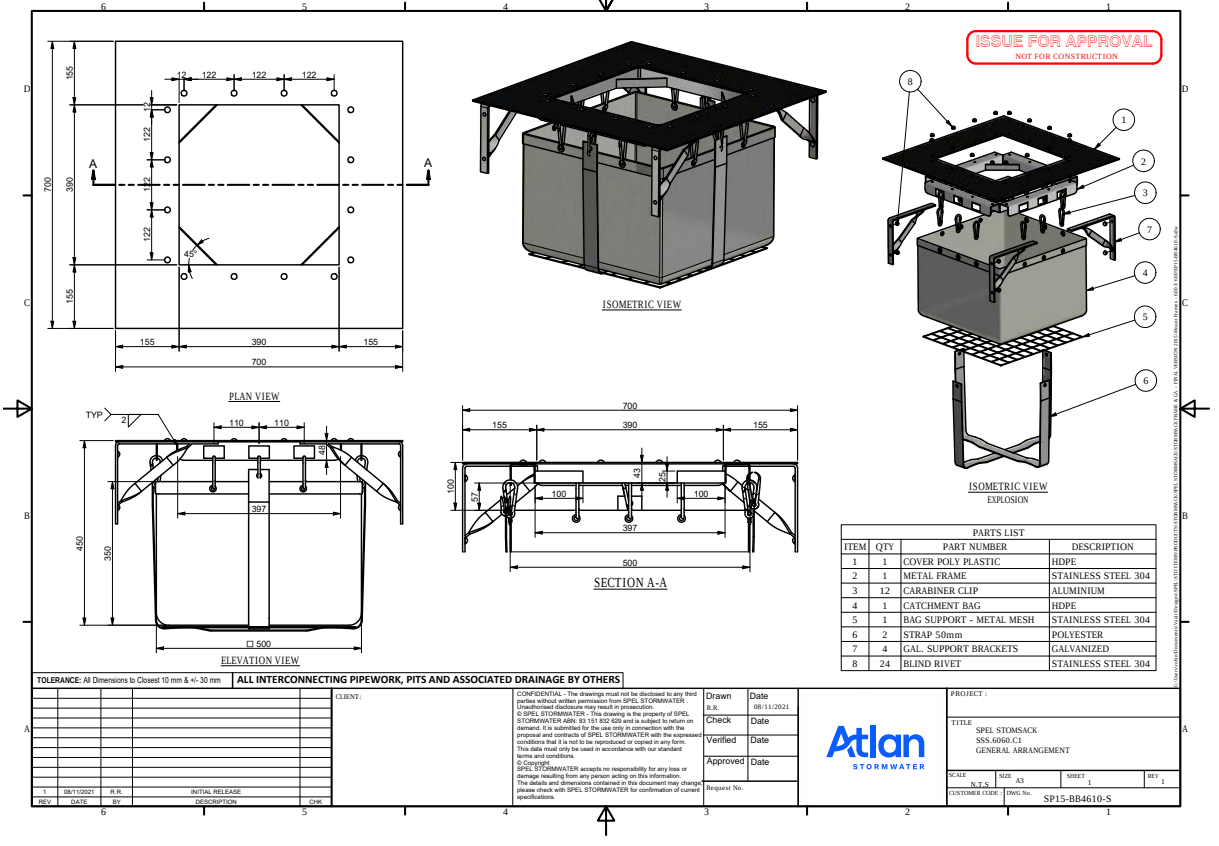


Standard StormSack to suit Pit Sizes
450x450mm
600x600mm
900x600mm
900x900mm

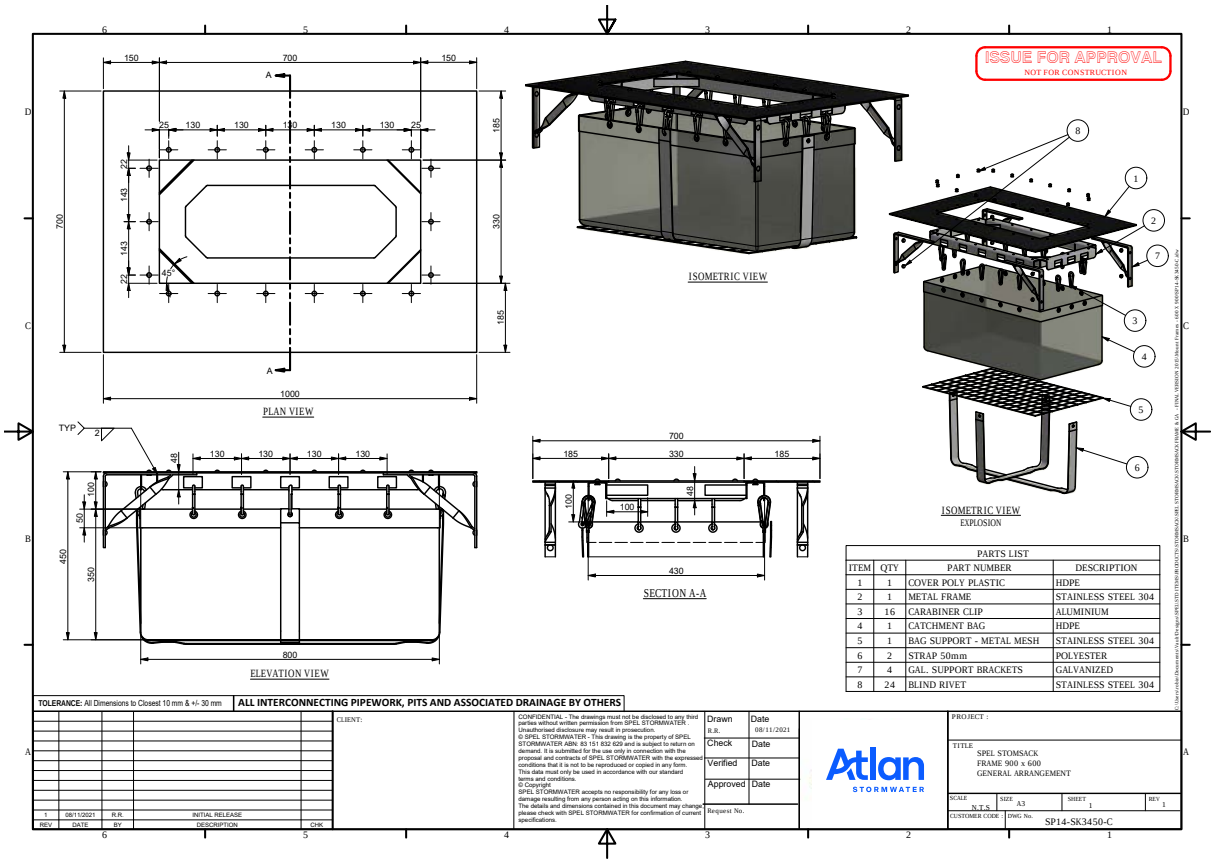
Custom sizes (i.e. 1200x900mm) can be manufactured on short lead times

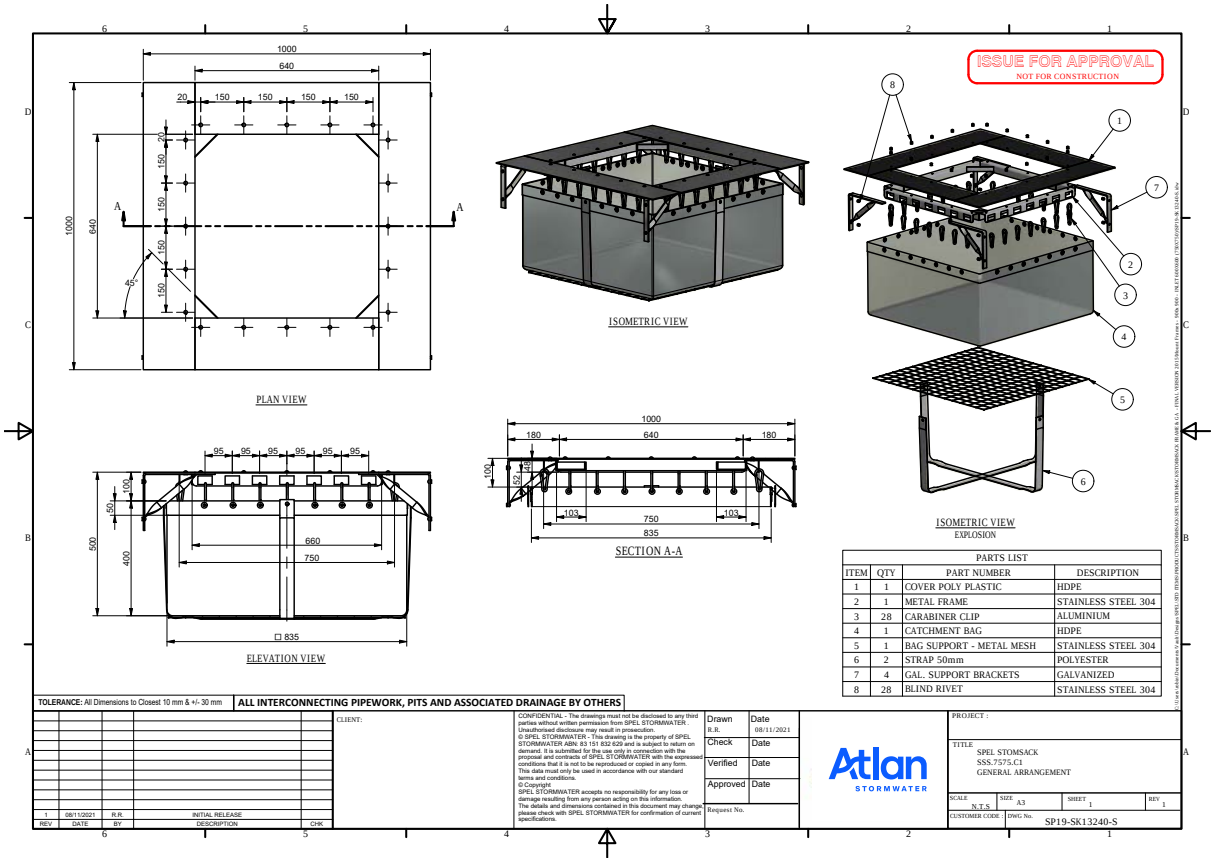
TECHNICAL DRAWINGS



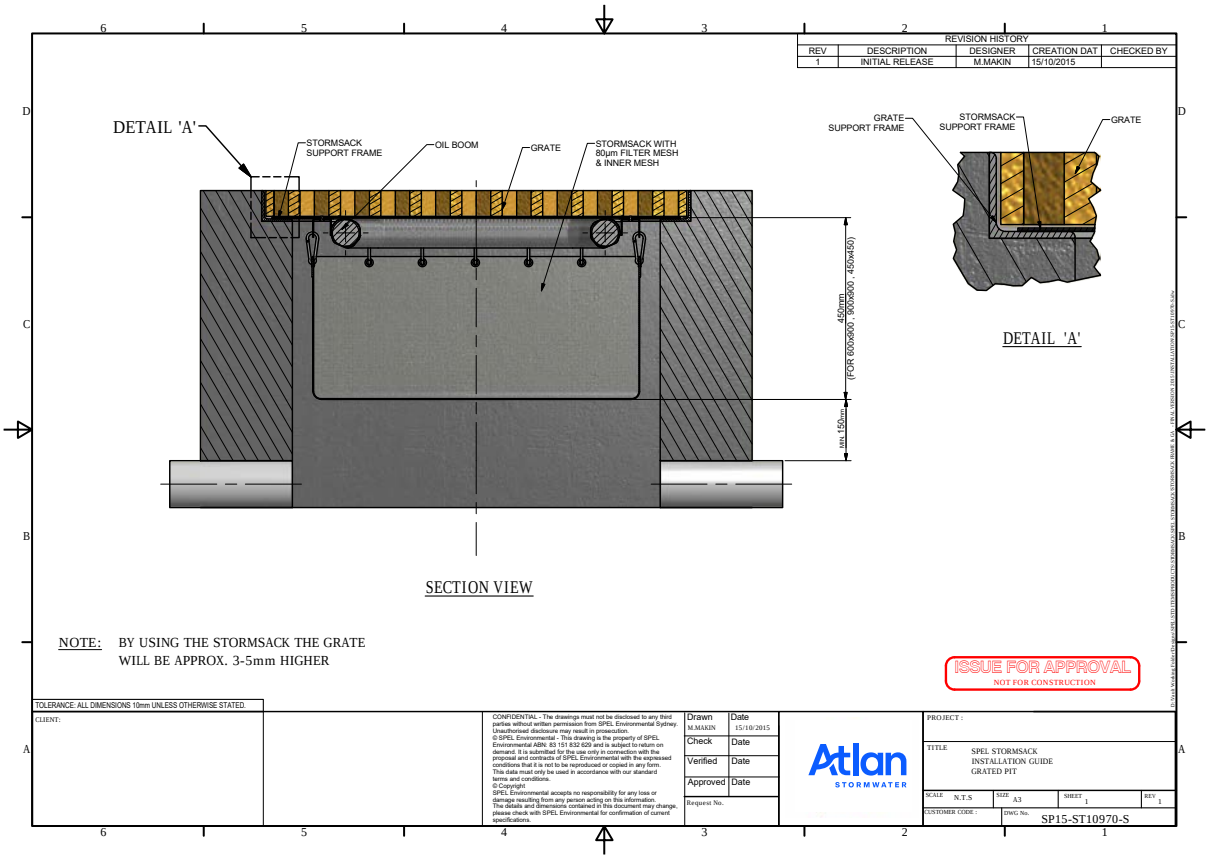


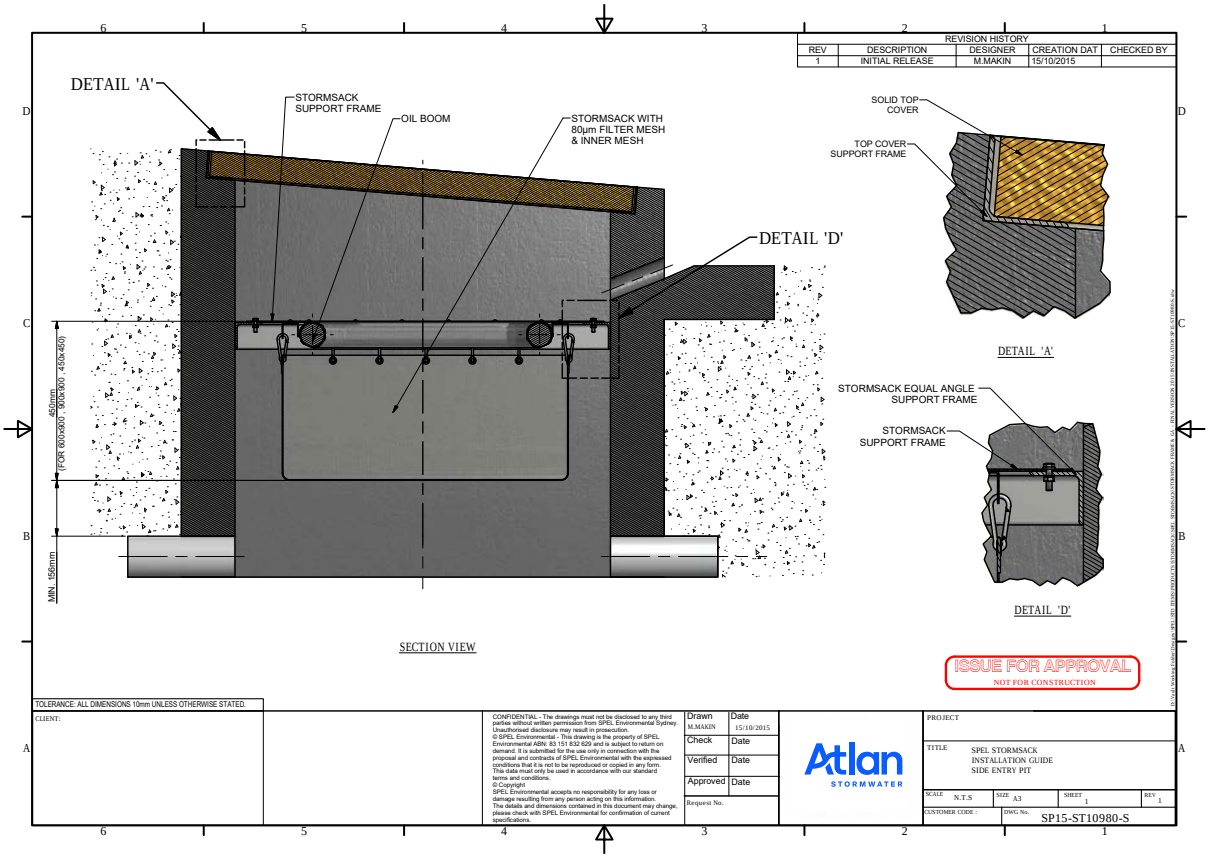
TECHNICAL DRAWINGS





INSTALLATION DETAILS





StormSack

At-Source Gross Pollutant Trap

NSW HEAD OFFICE 100 Silverwater Rd, Silverwater NSW 2128 PO Box 7138, Silverwater NSW 1811 P: +61 2 8705 0255 P: 1300 773 500 nsw.sales@atlan.com.au	**QLD MAIN OFFICE** 130 Sandstone Pl, Parkinson QLD 4115 P: +61 7 3271 6960 P: 1300 773 500 qld.sales@atlan.com.au	**VIC & TAS OFFICE** 897 Wellington Rd Rowville VIC 3178 P: +61 3 5274 1336 P: 1800 810 139 sales@atlan.com.au **VIC GEELONG BRANCH** 70 Technology Close, Corio VIC
SA OFFICE 9 Hampden Road, Mount Barker SA 5251 P: 1300 773 500 sales@atlan.com.au	**QLD SUNSHINE COAST BRANCH** 19-27 Fred Chaplin Cct, Bells Creek, QLD 4551 P: 1300 773 500 qld.sales@atlan.com.au	**WA OFFICE** 2 Modal Cres Canning Vale WA 6155 P: +61 8 9350 1000 P: 1800 335 550 sales@atlan.com.au
NZ OFFICE WANGANUI 43 Heads Road Wanganu New Zealand P: +64 6 349 0088 sales@atlan.com.au atlan.co.nz	**NZ OFFICE WELLINGTON** 41 Raiha St Porirua Wellington New Zealand P: +64 4 239 6006 sales@atlan.com.au atlan.co.nz	**NZ OFFICE AUCKLAND** 100 Montgomerie Road Airport Oaks P: +64 9 276 9045 sales@atlan.com.au atlan.co.nz

Joy in water

'We believe clean waterways are a right not a privilege and we work to ensure a joy in water experience for you and future generations.'

Andy Hornbuckle

Atlan STORMWATER

P 02 8705 0255 | sales@atlan.com.au
100 Silverwater Rd, Silverwater NSW 2128 Australia
atlan.com.au

APPENDIX E – STORMWATER & OILY WATER TREATMENT SYSTEMS MANAGEMENT PLAN

TRAFFIC MANAGEMENT:

PRIOR TO REMOVING COVERS, APPROPRIATE TRAFFIC MANAGEMENT MEASURES MUST BE IMPLEMENTED TO PREVENT UNAUTHORISED PERSONAL ENTRY TO THE WORK AREA.

STEP-1

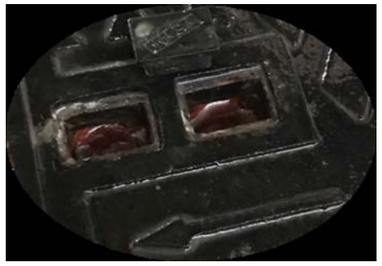
REMOVE SECURITY BOLT

STEP-2

REMOVE LIFTING POINT COVERS

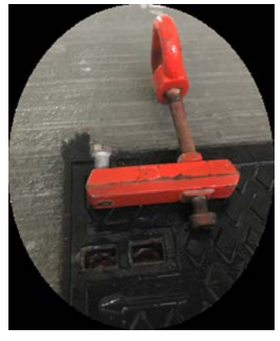
STEP-3

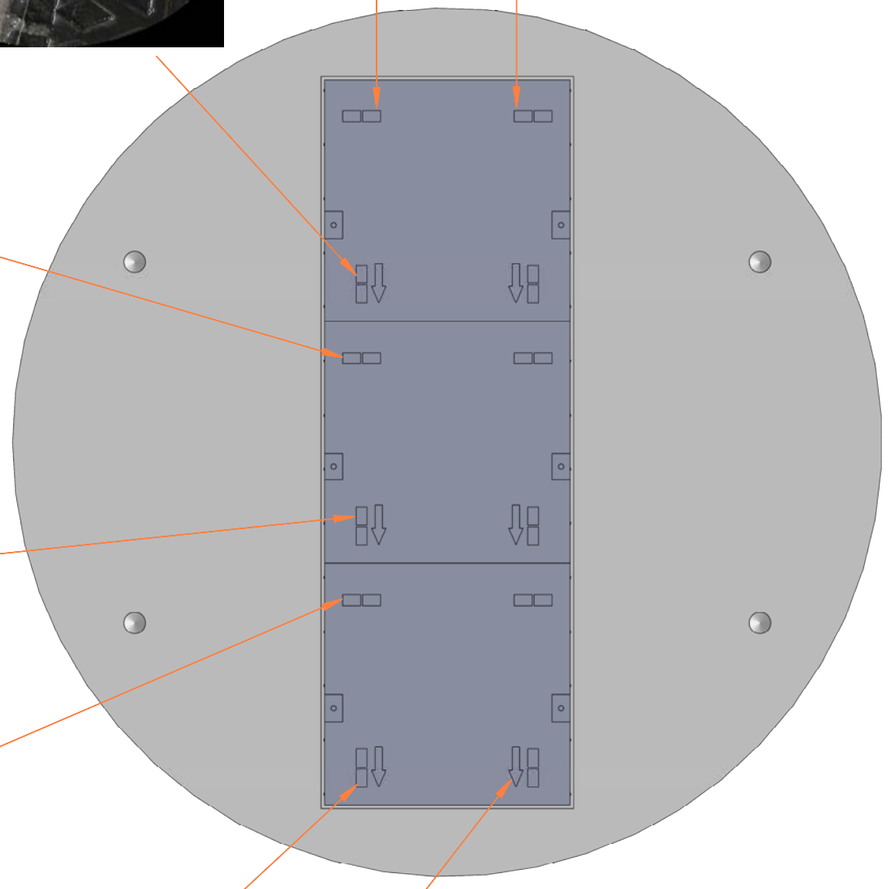
REMOVE DEBRIS FROM ALL LIFTING POINTS



STEP-4

USE AN APPROVED LIFTING ATTACHMENT





LIFTING POINT

LIFT IN ARROW DIRECTION

STEP-5

FIT LIFTING ATTACHMENT

TYPICAL CAST IRON COVER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

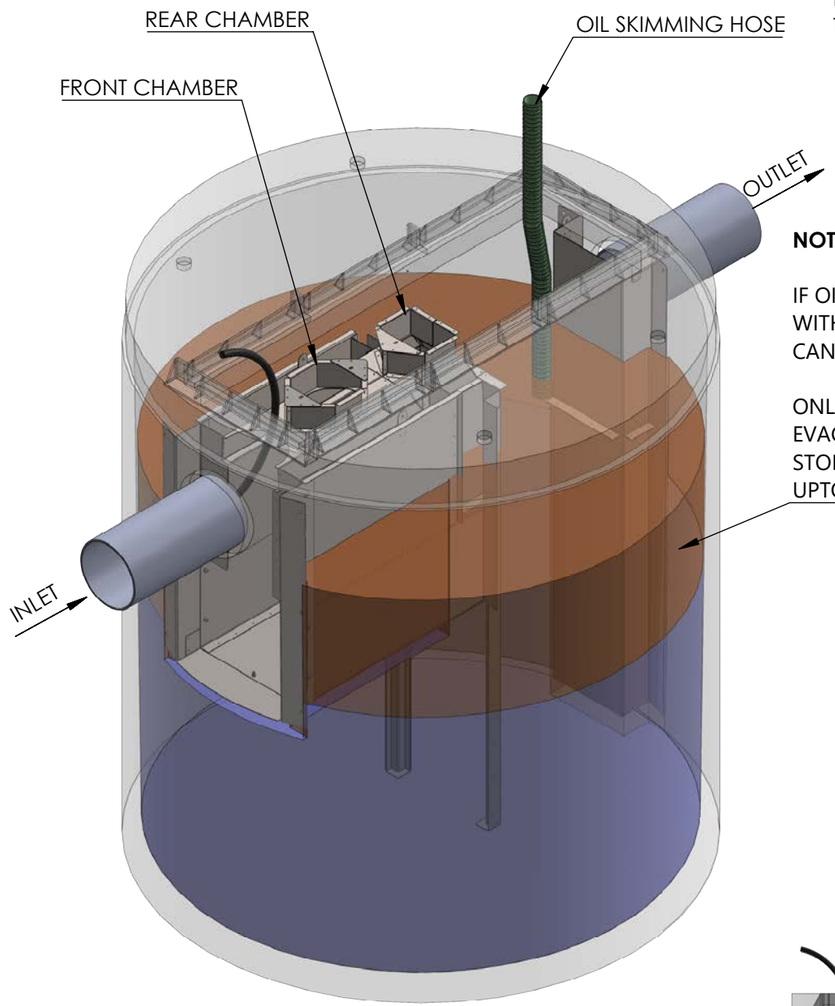
ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:	ASSEMBLY:	A3
		REV:
WEIGHT: Kg	SCALE: NTS	SHEET 1 OF 6

VIEW OF INSERT WITH COVERS REMOVED FOR SERVICE



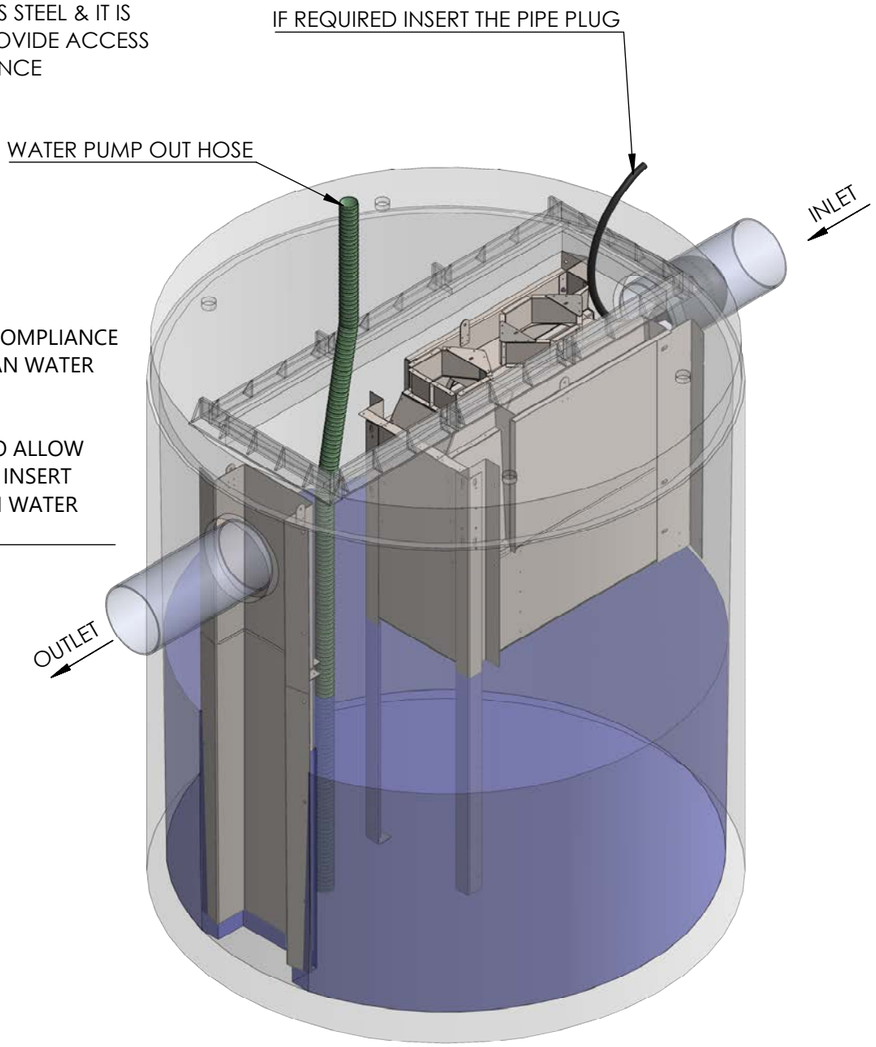
NOTE:

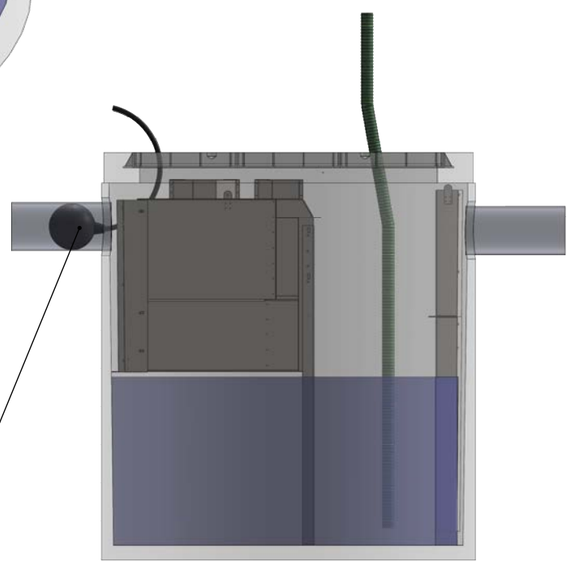
THE INSERT IS MANUFACTURED FROM STAINLESS STEEL & IT IS FITTED WITH REMOVABLE SCREENS.TURRETS PROVIDE ACCESS TO THE INSERT STORAGE ZONE FOR MAINTENANCE

NOTE:

IF OIL IS PRESENT, REMOVE BY SUITABLE MEANS IN COMPLIANCE WITH APPROPRIATE REGULATIONS. REMAINING CLEAN WATER CAN BE PUMPED TO DISCHARGE.

ONLY REMOVE SUFFICIENT WATER TO DISCHARGE TO ALLOW EVACUATION OF CAPTURED MATERIALS WITHIN THE INSERT STORAGE ZONE. AFTER SERVICE, FILL CHAMBER WITH WATER UPTO DISCHARGE PIPE INVERT.





INFLATTABLE PIPE PLUG
ONLY IF REQUIRED

MAX. SIZE OF THE INFLATTABLE BALLOON OD FOR OWS SERIES IS 300mm

SIDE VIEW

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

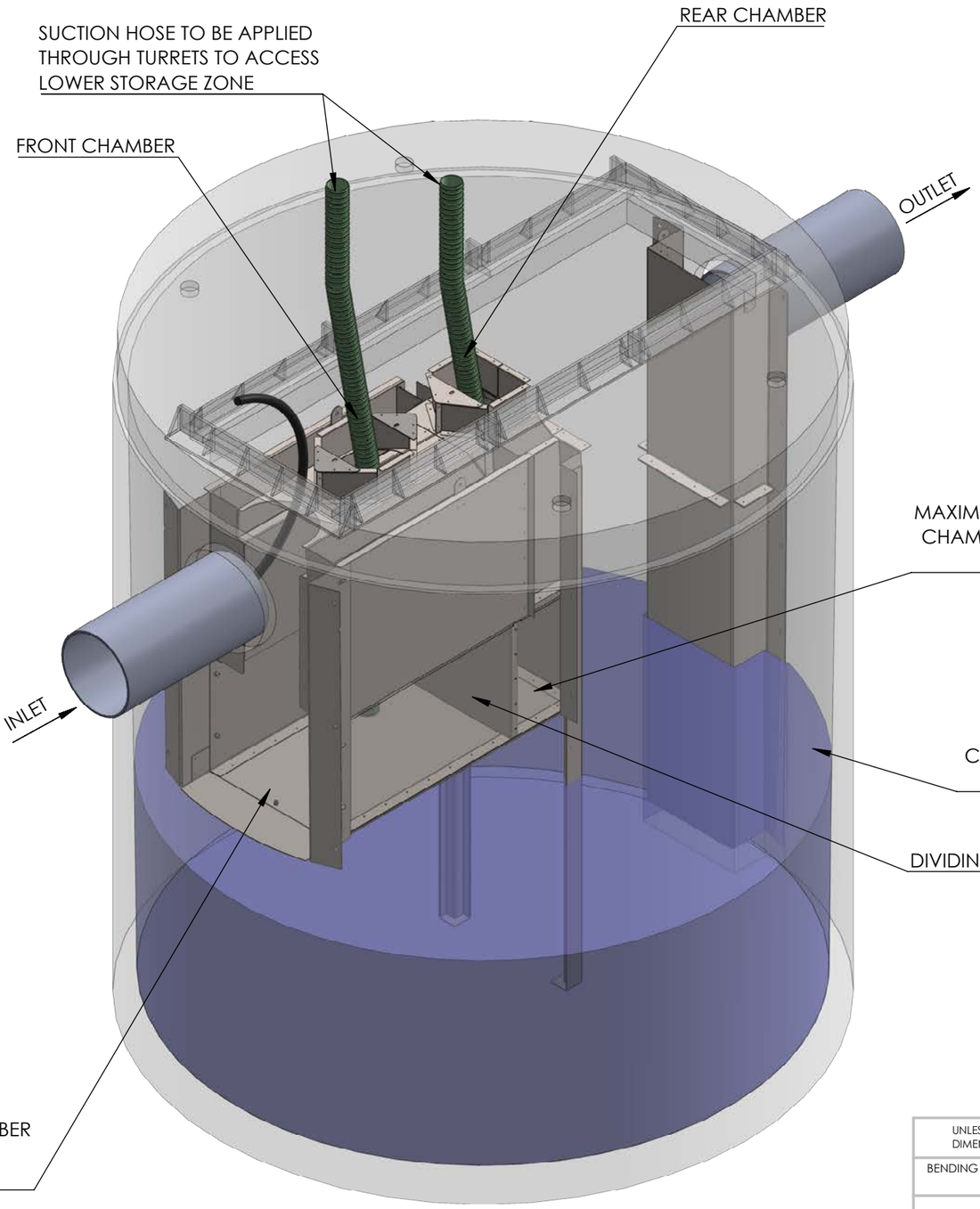
REV:

WEIGHT: Kg

SCALE: NTS

SHEET 2 OF 6

SERIES	VOLUME-1 (LITRES)	VOLUME-2 (LITRES)	VOLUME-3 (LITRES)
OE30	250	110	7,300
OE45	530	360	7,300
OE60	900	430	10,000
M30	250	110	19,000
M45	530	360	19,000
M60	1,200	575	19,000



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

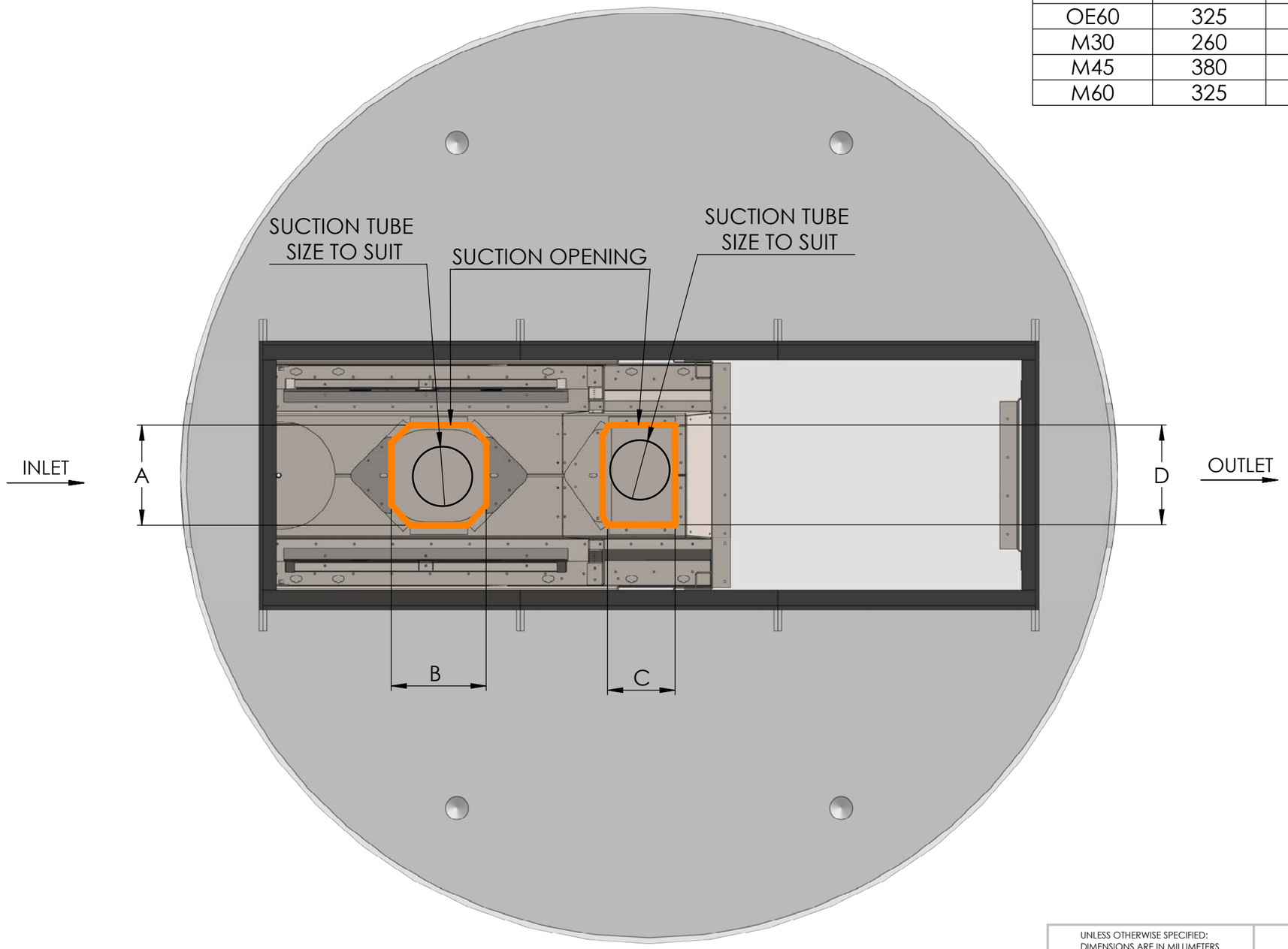
REV:

WEIGHT: Kg

SCALE: NTS

SHEET 3 OF 6

SERIES	A (mm)	B (mm)	C (mm)	D (mm)
OE30	260	250	175	260
OE45	380	520	390	380
OE60	325	850	425	325
M30	260	250	175	260
M45	380	520	390	380
M60	325	850	420	325



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

BENDING RADIUS	K - FACTOR

PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES
(OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

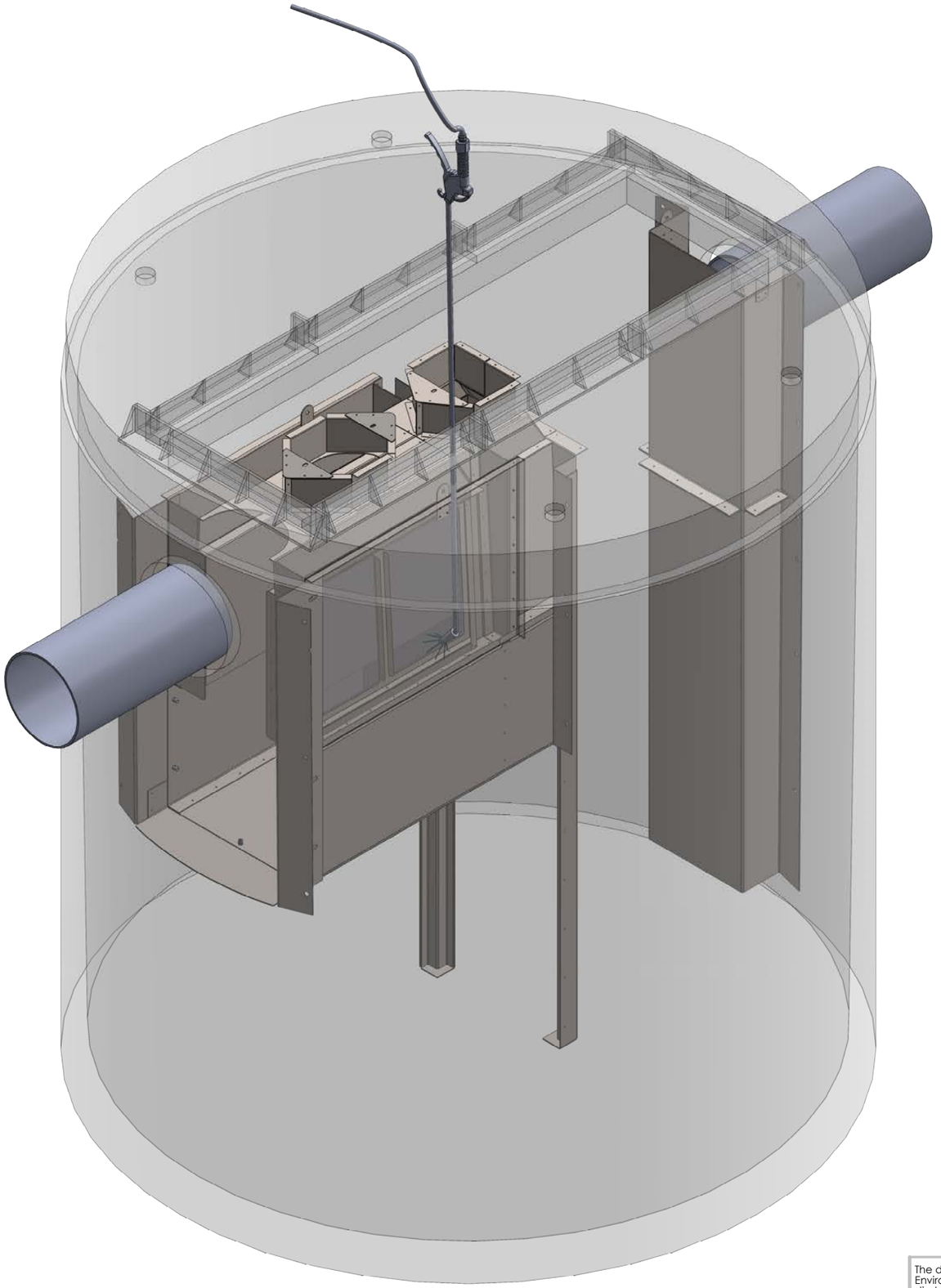
A3

REV:

WEIGHT: Kg

SCALE: NTS

SHEET 4 OF 6



NOTES:

SCREENS ARE LOCATED ON BOTH THE SIDES AND CLEAN DOWN IS ADVISABLE.

MAXIMUM PRESSURE SHOULD NOT EXCEED 4 BAR

IF SUBSTANTIAL AMOUNT OF WATER IS USED WHILE CLEANING THE SCREEN, THEN REMOVE BEFORE REFILLING.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

MATERIAL:

ASSEMBLY:

A3

REV:

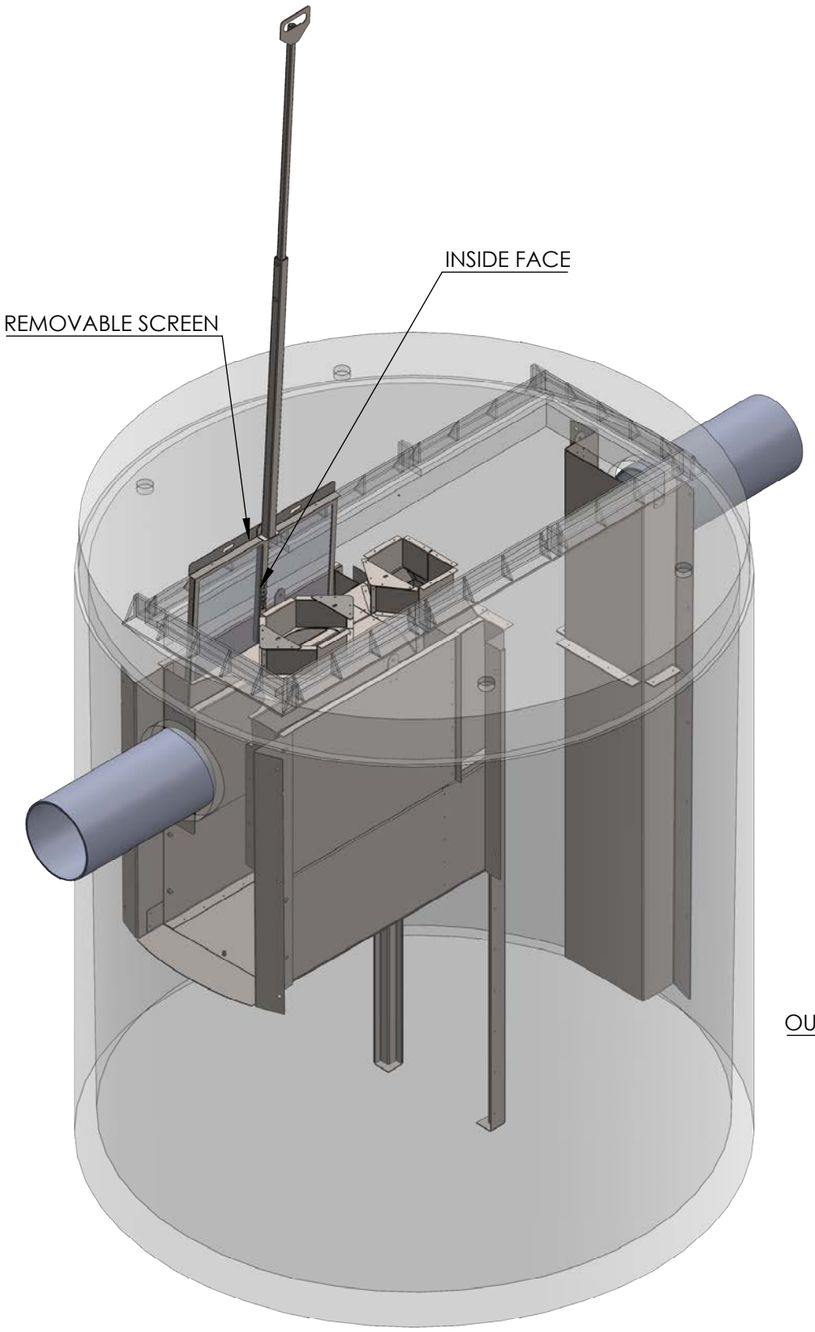
WEIGHT: Kg

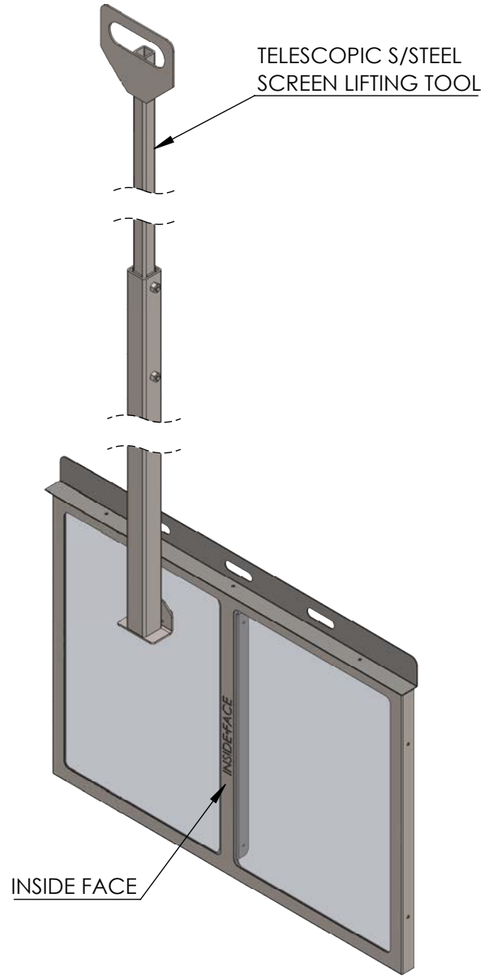
SCALE: NTS

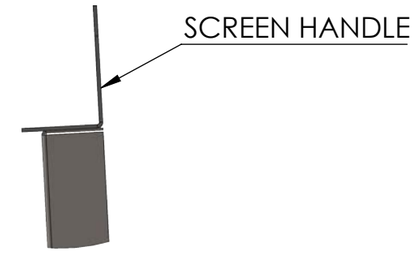
SHEET 5 OF 6

A SPECIAL TOOL TO REMOVE SCREENS CAN BE SUPPLIED

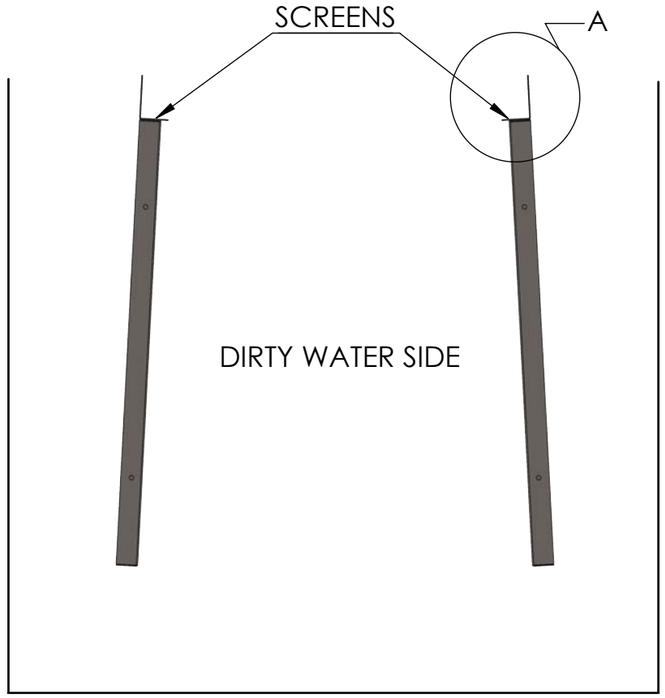
SMOOTH SCREEN FACE ORIENTED TOWARDS DIRTY WATER SIDE.
REFER ETCHING ON SCREEN FACE. SCREENS CAN BE REMOVED FOR SERVICING OR REPLACEMENT WITH SPECIAL TOOL.

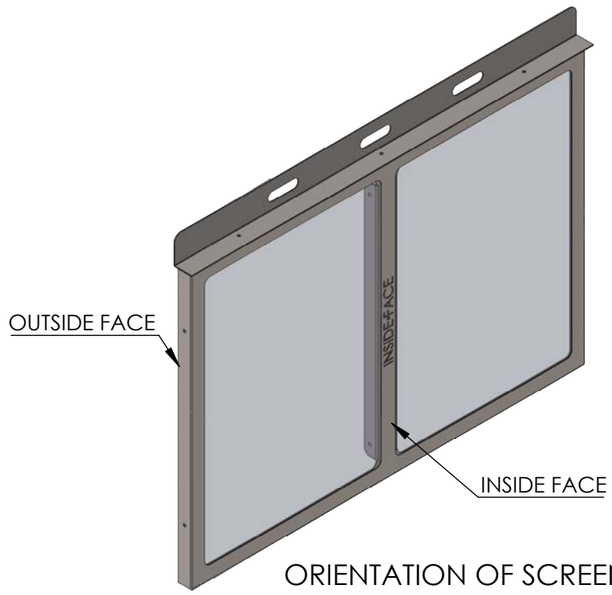






DETAIL A
SCALE 2 : 5





ORIENTATION OF SCREENS

MASS:

SCREEN WEIGHT: 3.60 Kg (EACH)

SCREEN REMOVAL TOOL WEIGHT: 7.5 Kg

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	ASSEMBLY:
WEIGHT: Kg	SCALE: NTS

ENVIRO

TITLE:

SERVICE MANUAL - ENVIRO OWS SERIES (OE30, OE45, OE60, M30,M45,M60)

A3

REV:

SHEET 6 OF 6

NOTE:

PRIOR TO REMOVING THE COVERS, APPROPRIATE TRAFFIC MANAGEMENT MEASURES MUST BE USED TO PREVENT UNAUTHORISED PERSONAL ENTRY.

STEP-1

REMOVE SECURITY BOLT

STEP-2

REMOVE LIFTING POINT COVERS

STEP-3

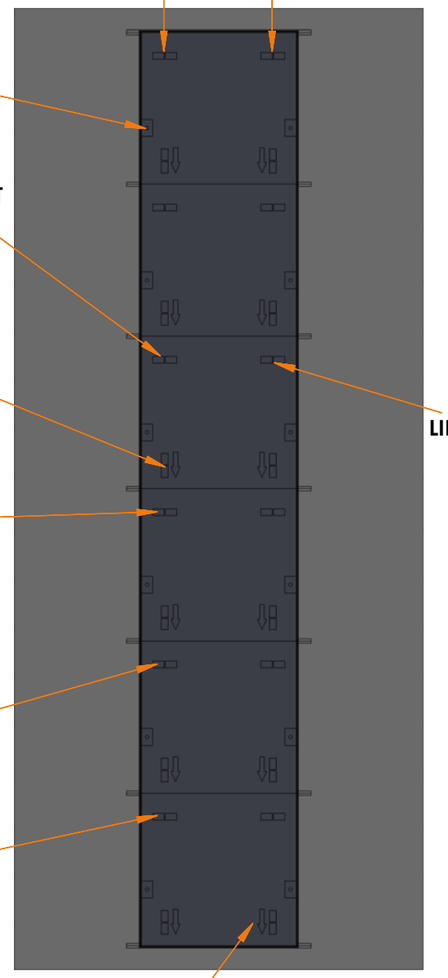
REMOVE DEBRIS FROM ALL LIFTING POINTS

STEP-4

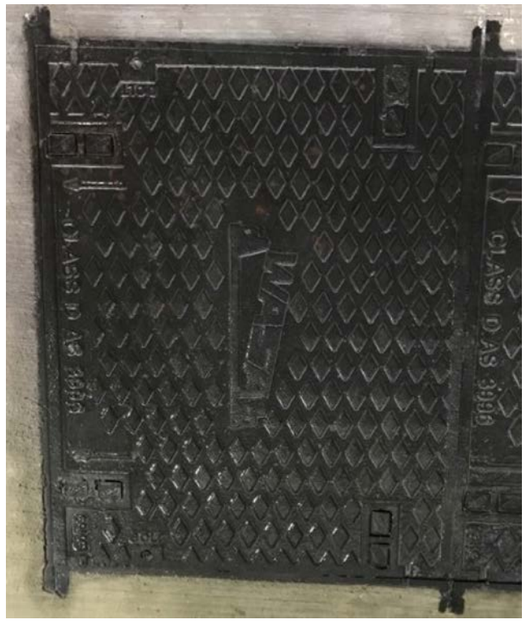
USE AN APPROVED LIFTING ATTACHMENT

STEP-5

FIT LIFTING ATTACHMENT



LIFT IN ARROW DIRECTION



TYPICAL CAST IRON COVER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

ENVIRO

TITLE:

SERVICE MANUAL

MATERIAL:

ASSEMBLY: E90

A3

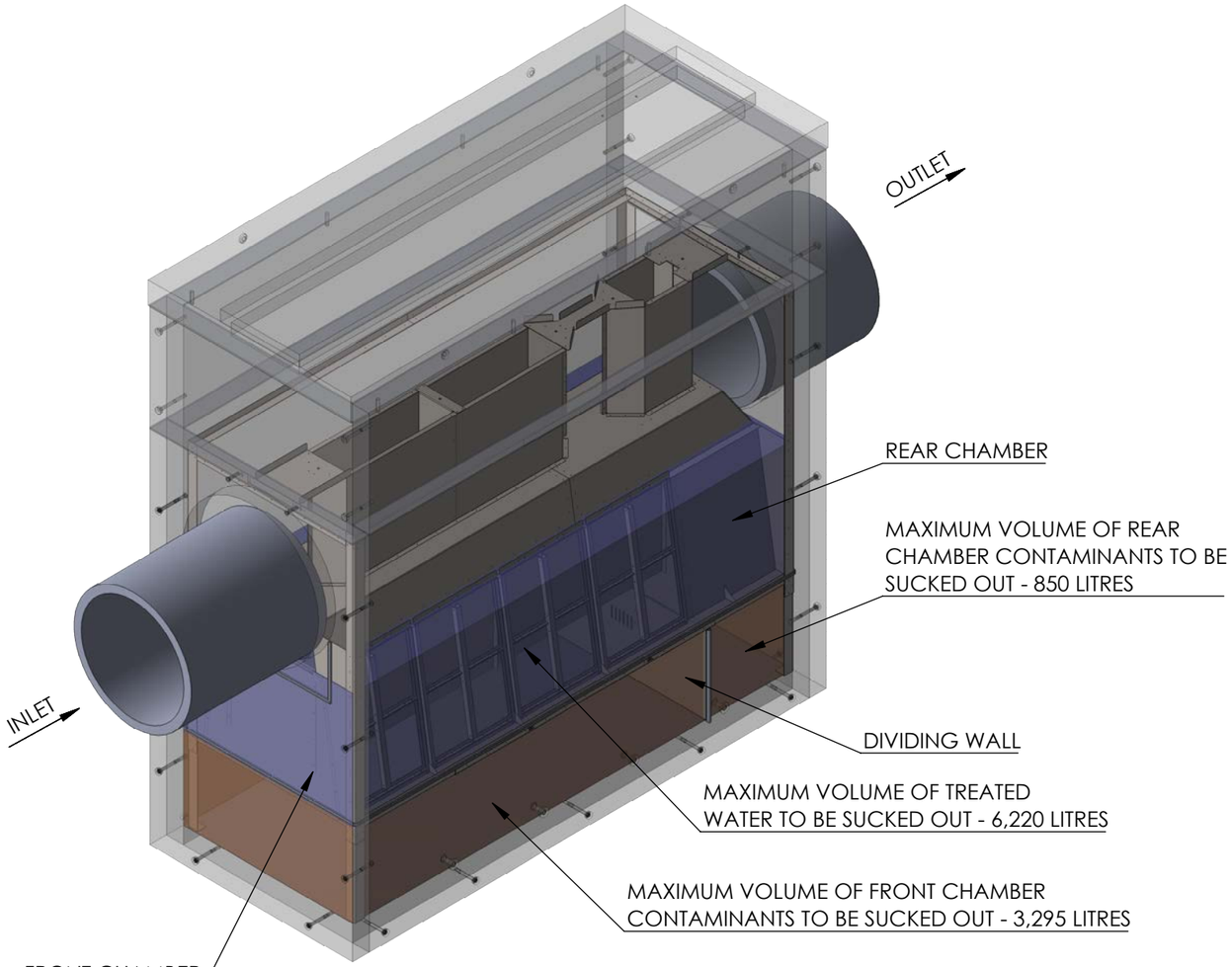
REV:

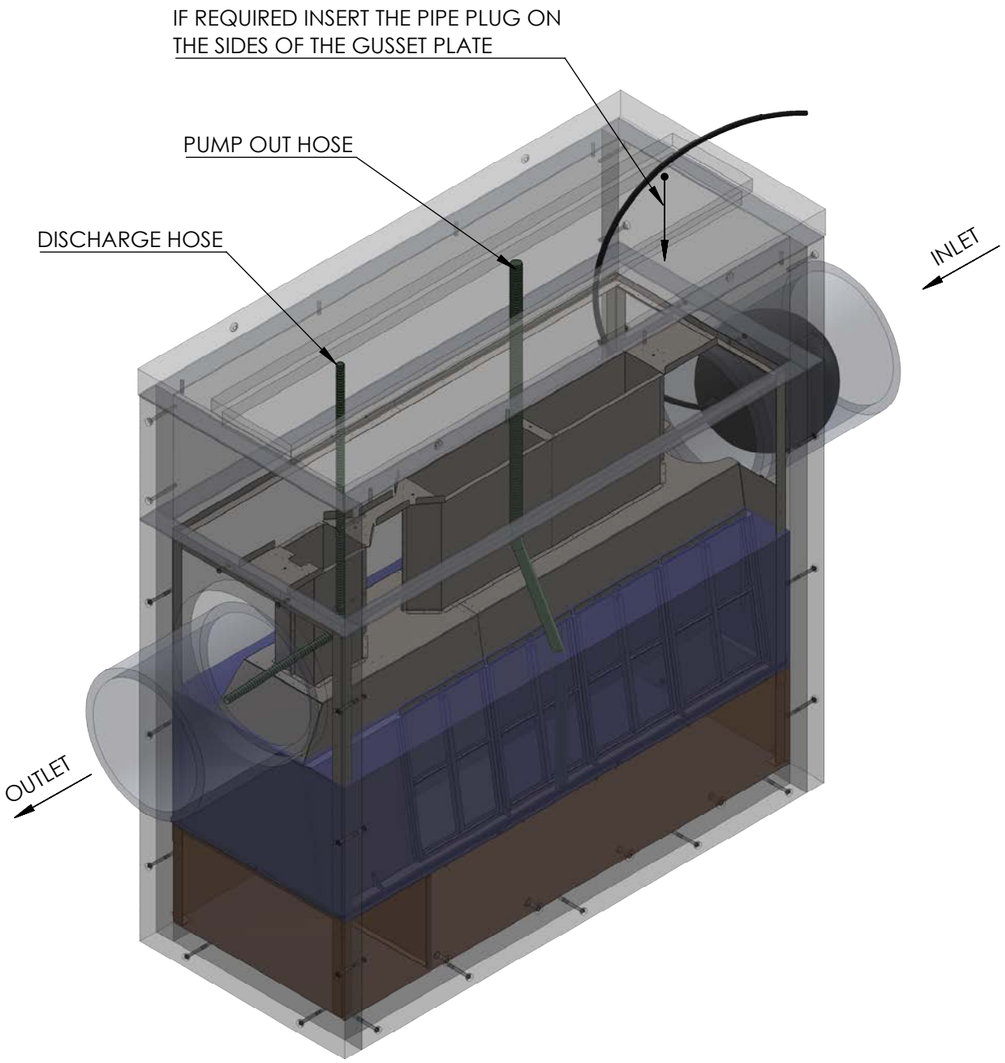
WEIGHT: Kg

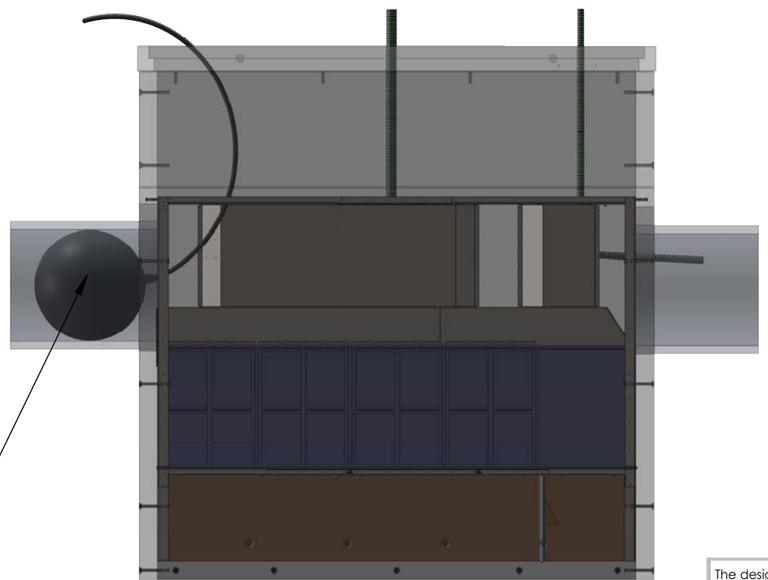
SCALE: NTS

SHEET 1 OF 5

VIEW OF INSERT WITH COVERS REMOVED FOR SERVICE







SIDE VIEW

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

TITLE: SERVICE MANUAL

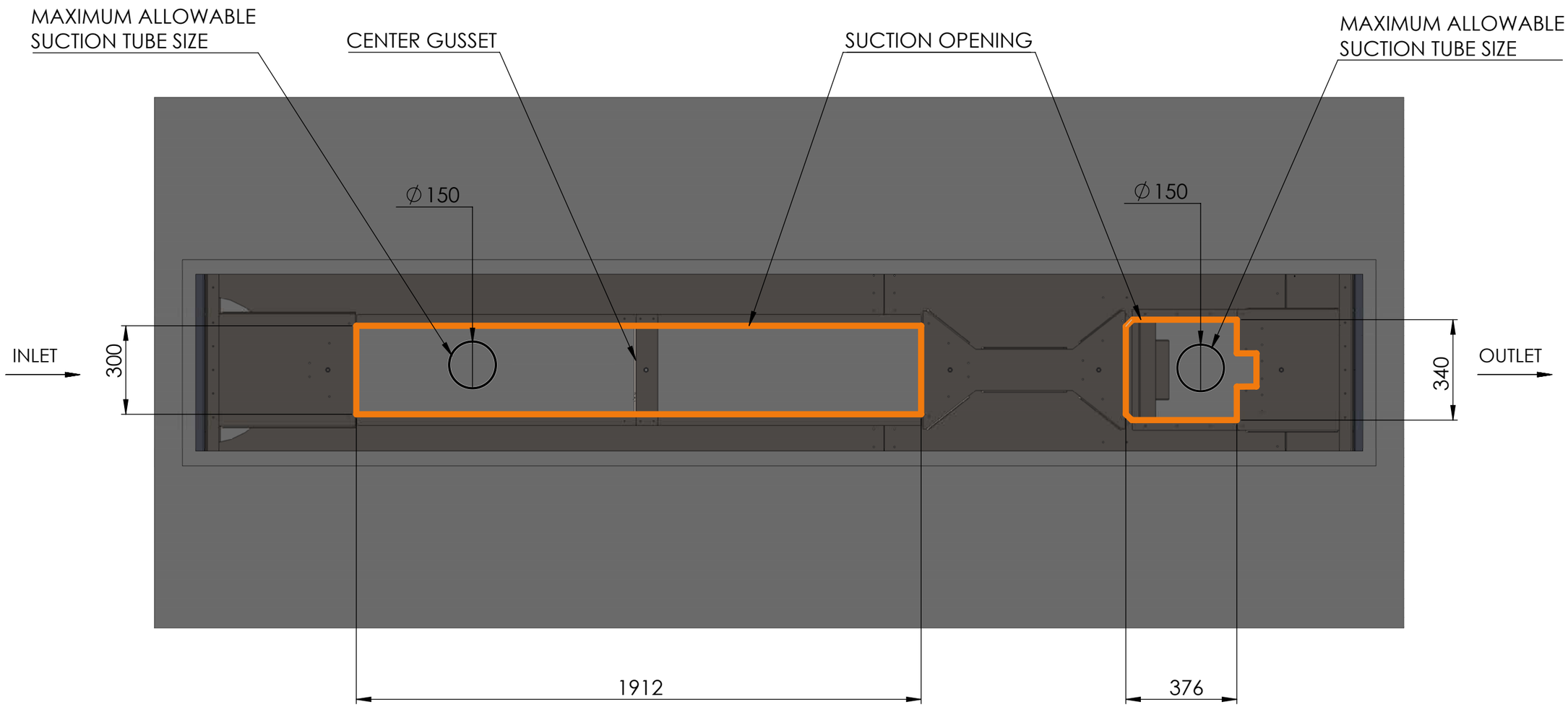
ASSEMBLY: E90

A3

REV:

SCALE: NTS

SHEET 2 OF 5



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

TITLE:

SERVICE MANUAL

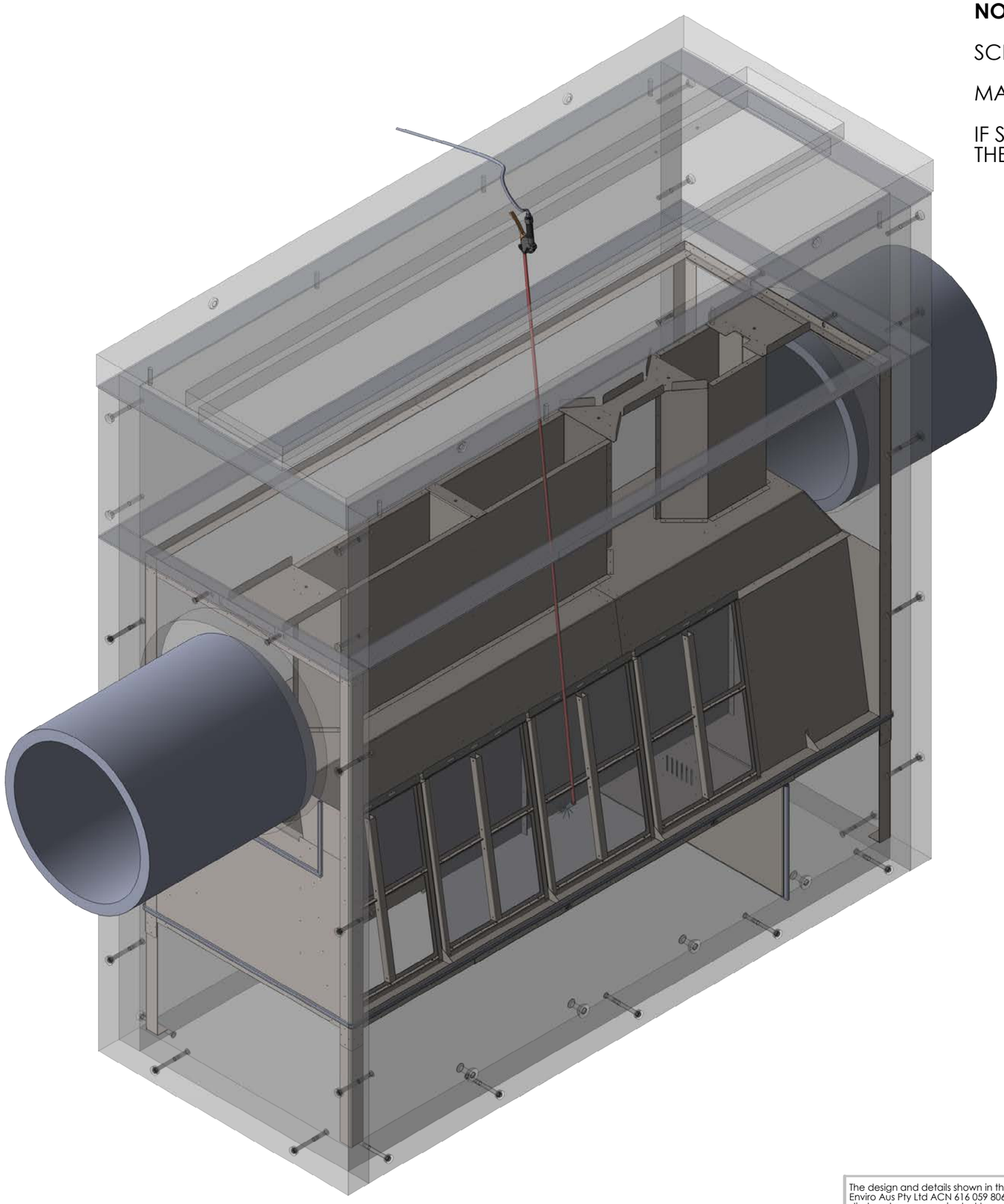
ASSEMBLY: E90

A3

REV:

SCALE: NTS

SHEET 3 OF 5



NOTES:

SCREENS ON BOTH THE SIDES NEEDS TO BE CLEANED THIS WAY.

MAXIMUM PRESSURE DOES NOT EXCEED 4 BAR

IF SUBSTANTIAL AMOUNT OF WATER IS USED WHILE CLEANING THE SCREEN, THEN THAT HAS TO BE SUCKED OUT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21

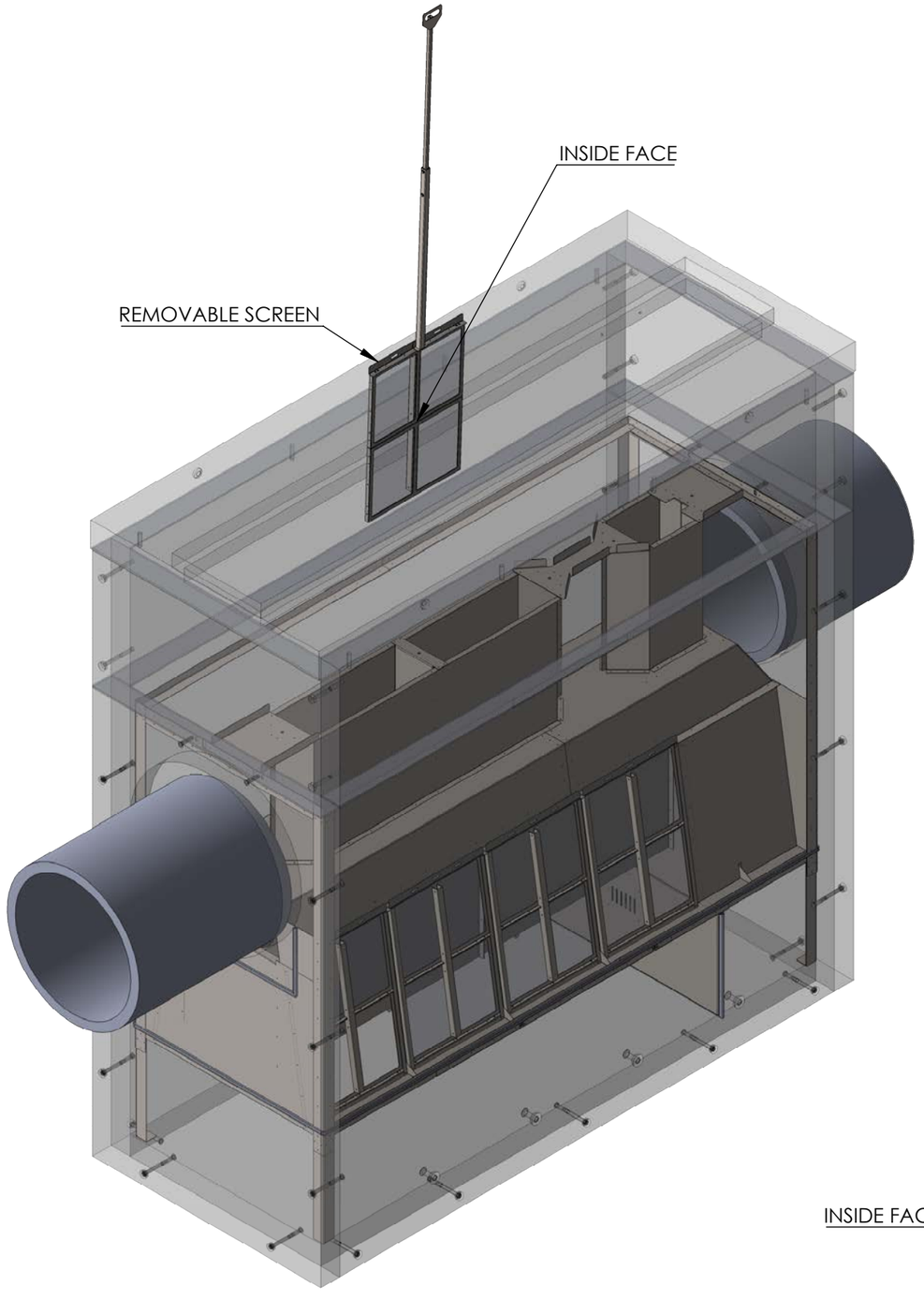
ENVIRO

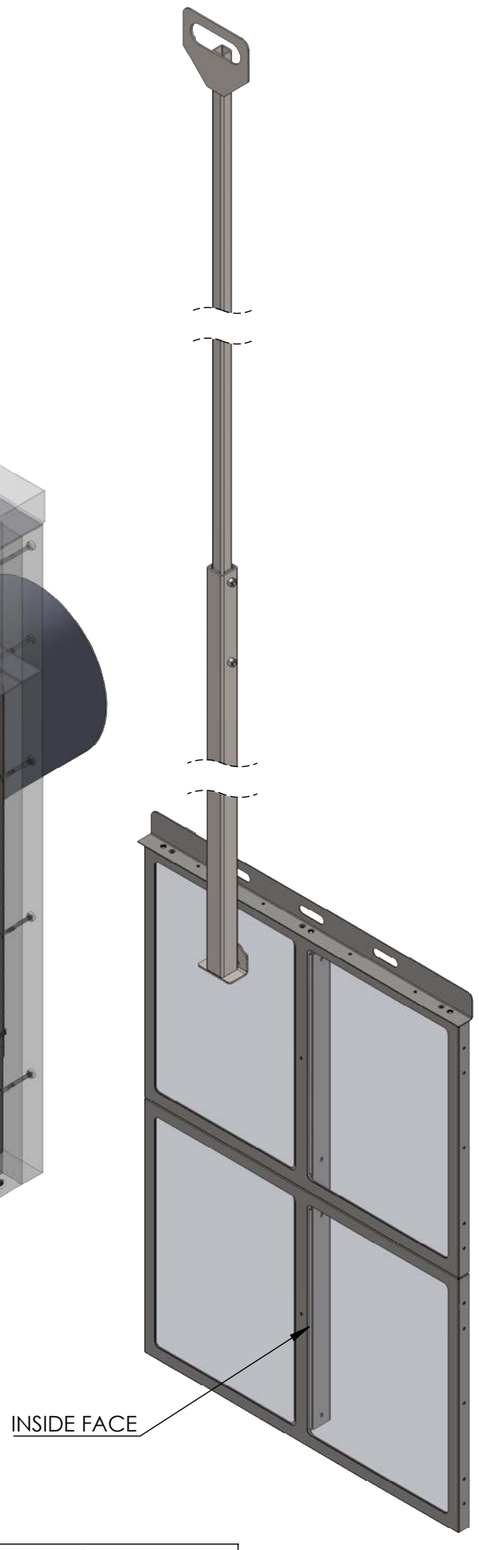
TITLE: SERVICE MANUAL

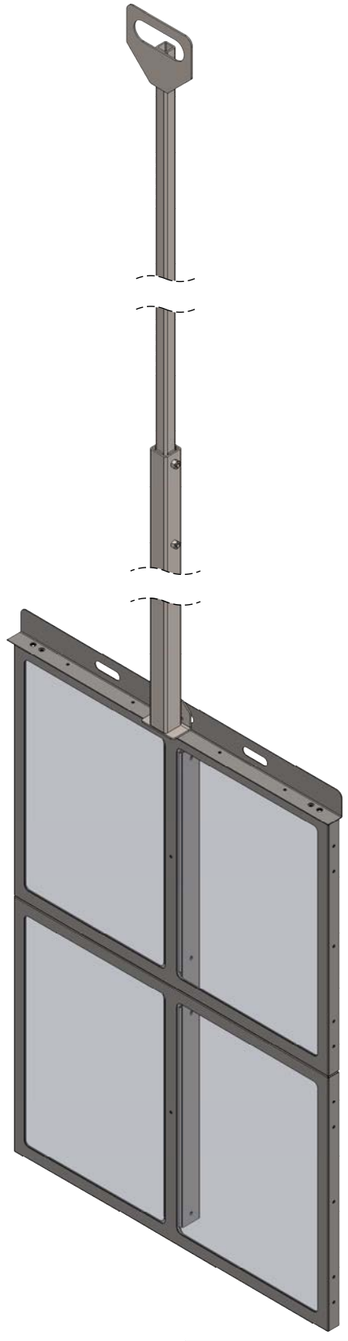
MATERIAL:	ASSEMBLY: E90	A3
		REV:
WEIGHT: Kg	SCALE: NTS	SHEET 4 OF 5

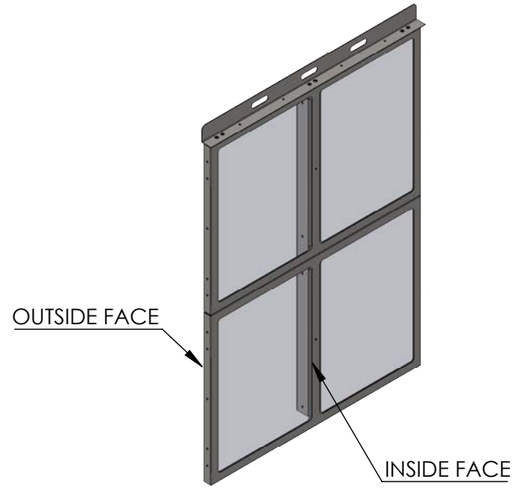
NOTE:

SMOOTH SCREEN FACE ORIENTED TOWARDS DIRTY WATER SIDE. SCREENS CAN BE REMOVED FOR SERVICING OR REPLACEMENT WITH SPECIAL TOOL.









ORIENTATION OF SCREENS

MASS:

SCREEN WEIGHT: 8.20 Kg (EACH)

SCREEN REMOVAL TOOL WEIGHT: 7.5 Kg

S.NO	'E' SERIES	TREATED WATER VOLUME (LITRES)	FRONT CHAMBER CONTAMINANTS VOLUME (LITRES)	REAR CHAMBER CONTAMINANTS VOLUME (LITRES)
1	E90	6,220	3,295	850

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	
BENDING RADIUS	K - FACTOR
PREPARED BY	Logesh S
APPROVED BY	L Crasti
DATE	28-Dec-21
MATERIAL:	
WEIGHT: Kg	

ENVIRO

TITLE: SERVICE MANUAL

ASSEMBLY: E90

A3

REV:

SCALE: NTS

SHEET 5 OF 5

The Coordinator-General

State development areas: Application and request form

Before you start

Important information

There are a number of different types of applications or requests relating to development within a State development area (SDA).

The most common of these is an SDA application for a material change of use (MCU). An MCU is:

- the start of a new use of the premises
- the re-establishment on the premises of a use that has been abandoned
- a material change in the intensity or scale of the use of the premises.

A development scheme may also provide for some or all of the following applications and requests:

- request for pre-lodgement consideration
- SDA application for:
  - reconfiguring a lot
  - operational work
- request to change an SDA application
- change application for an SDA approval
- request to state a later currency period
- request to carry out prior affected development
- request for approval of a plan of subdivision.

It is important to note there are some variations in terminology used in the development schemes as a result of amendments to the *State Development and Public Works Organisation Act 1971*. For more information, read the Applications and requests advisory note.

Before making an application or request, refer to the relevant development scheme.

How to complete forms

All SDA application and request forms are to be submitted via the approved online forms.

The Coordinator-General can only accept SDA applications that are properly made. For an SDA application to be properly made, you must:

- complete all fields
- upload the necessary documentation
- pay the relevant fee.

For certain applications or requests, a planning report, environmental impact statement (EIS) or impact assessment report (IAR) (draft and/or final) and evaluation report on the EIS or IAR (if prepared) may also be required.

The information provided must be detailed enough to enable the Coordinator-General to adequately assess the application or request. Insufficient information may result in the Coordinator-General requesting additional information.

If for any reason you cannot submit the forms online you can contact the SDA Division on 1800 001 048 or via sdainfo@coordinatorgeneral.qld.gov.au to have a hard copy form sent out to you.

Fee waiver request

Prior to making an application or request, a proponent may request that the Coordinator-General waive all or part of the relevant fee.

If you would like to request a fee waiver, a written request providing sufficient grounds for the waiver must be made as part of a pre-lodgement consideration.

For more information, read the Guideline to state development area fees.

☑ I have read and understood the requirements for requesting a fee waiver. *

Privacy and security

The Coordinator-General collects personal information from you, including information about your name, email address, address, and telephone number. We collect this information to process, assess and make decisions about your application.

Your personal information will be used and may be disclosed publicly on the Department's website, and/or provided to third parties and other government agencies in the course of processing, assessing and making a decision about your application, and as authorised or required by law.

Your personal information will be handled and protected in accordance with the *Information Privacy Act 2009* and the Department's Privacy and Security Statement.

☑ By completing the form/s you agree to our Privacy and Security Statement. *

Disclaimer

All information that is provided as part of this application or request, including any further information requests, may be publicly released on the Department's website, and/or provided to third parties and other government agencies to process, assess, and make a decision about your application.

All information will be stored on the Departmental files as required by the *Public Records Act 2002* and may be disclosed for purposes relating to the processing and assessment of the application or as authorised or required by law.

☑ By completing the form/s you have agreed to this disclaimer. *

Application type

State development area

Select state development area *

- ○ Abbot Point State Development Area
- ○ Bromelton State Development Area
- ○ Bundaberg State Development Area
- ○ Cairns South State Development Area
- ○ Callide Infrastructure Corridor State Development Area
- ○ Galilee Basin State Development Area
- ○ Gladstone State Development Area
- ○ Stanwell-Gladstone Infrastructure Corridor State Development Area
- ○ Surat Basin Infrastructure Corridor State Development Area
- ◉ Townsville State Development Area

Application or request

Select application or request type *

- ○ Request for pre-lodgement consideration
- ◉ SDA application for a material change of use
- ○ SDA application for reconfiguring a lot
- ○ SDA application for a material change of use and reconfiguring a lot
- ○ SDA application for operational work
- ○ SDA application for a material change of use and operational work
- ○ SDA application for reconfiguring a lot and operational work
- ○ SDA application for a material change of use and reconfiguring a lot and operational work
- ○ Request to change an SDA application
- ○ Change application for an SDA approval
- ○ Request to state a later currency period
- ○ Change application for an SDA approval and request to state a later currency period
- ○ Request to carry out prior affected development
- ○ Request for approval of a plan of subdivision

Proponent details

ABN

Enter your Australian Business Number (ABN)

99 999 999 999

Proponent name

The proponent is the person responsible for making the application and need not be the owner of the land. A decision notice will be issued to the proponent.

Title

First name *

Jamie

Last name *

Regan

Company name

Port Access Pty Ltd

Applicant

Applicants details *

- ○ Same as above
- ◉ Alternate contact

Title

Mr

First name *

Jacob

Last name *

McRae

Company name

TfA Project Group

Postal address

Address line 1 *

166 Knapp Street

Address line 2

Suburb *

Fortitude Valley

State *

QLD

Postcode *

4006

Contact details

Phone number (Australia) *

07 3854 2909

Mobile number *

0429151208

Email address *

jacob.mcrae@tfa.com.au

Confirm email address *

jacob.mcrae@tfa.com.au

Property details

Property description

Identify all lots, including any part of a lot over which the development is proposed.

Lot 1

Lot *

21

Plan *

SP341874

Address *

1 Colinta Road, Stuart QLD 5320

You may wish to check the **DA mapping system** to confirm your site details.

Easements

Are there any easements over the land the subject of the SDA application (e.g. for vehicular access, electricity, overland flow, water, etc.)? *

(•) Yes ( ) No

Ensure the nature, location and dimensions of each easement are included in the plans submitted.

Current land use

Provide a brief description of what the land is currently being used for (e.g. grazing, vacant, etc.). *

Vacant

Land owner's consent

See 'Application stage' of the relevant development scheme for owner's consent requirements.

Is owner's consent required for this SDA application or request? *

(•) Yes ( ) No

A letter providing landowners' consent must be uploaded with your supporting information.

Land owner's name *

Port Access Pty Ltd

Application details

Proposed use

Provide a brief description of the proposed use of the land.

Proposed use *

Medium Impact Industry, Service Station, Transport Depot and Office

Use definition (as per development scheme) *

Medium Impact Industry, Service Station, Transport Depot and Office

Estimated capital investment value (AUD) *

$ 10,000,000.00

Estimated employee numbers:

Construction *

50

Operational *

47

Estimated production (e.g. up to nine million tonnes of LNG per annum)

EIS or IAR

Identify if the proposed development is subject to an environmental impact statement (EIS) process or an impact assessment report (IAR). *

- ○ Yes
- ◉ No
- ○ Will be

Supporting information

Please upload all supporting information here and ensure that file names clearly reflect the type of document uploaded e.g. survey plan, traffic report, site drawing.

The information provided must be detailed enough to enable the Coordinator-General to adequately assess your application or request. Insufficient information may result in the Coordinator-General requesting additional information.

File Name	Size
Landowners Consent.pdf	55.25 kB
APPA_Title Search.pdf	66.17 kB
APPD_Townsville Planning Scheme - Code Response.pdf	466.14 kB
Partial Fee Waiver.PDF	148.31 kB
Port Access - Townsville_Development Assessment Report_A.pdf	1.30 MB
APPB_Development Application Drawngs.pdf	10.88 MB
APPE_Townsville City council - Early Referral Response.pdf	15.97 MB
APPC_Site Based Stormwater Management Plan.pdf	25.59 MB

Declaration

Applicant declaration

☑ This document is a true representation of the submission I have prepared. By transmitting it electronically to the Coordinator-General, and the Coordinator-General agreeing to accept it electronically, it has the same status as if I had signed it. I understand that it is an offence to give the Coordinator-General a document that contains information known to be false or misleading. *

Applicants name *

Jacob McRae

Date

18 Mar 2024

Payment details

Fee waiver

Have you received a fee waiver? *

◉ Yes ○ No

Relevant fee

Is there a relevant fee payable? *

◉ Yes ○ No

Please enter the fee amount stated in your letter.

Relevant fee amount *

$ 15,600.00

Payment type

Please confirm your preferred method of payment. *

- ○ Credit/Debit card
- ◉ Direct deposit

Account name: Department of State Development, Infrastructure, Local Government and Planning
BSB: 064-013
Account no: 10007096
Reference: SDA proponent's name e.g. SDASmithJonesPL

Owner's consent for making an SDA application or request under Part 6 of the *State Development and Public Works Organisation Act 1971*

PART 1: Company owner's consent

I,

Jamie Leigh Regan

Sole Director/Secretary of the company mentioned below

Of

Port Access Pty Ltd

as owner of the premises identified as follows:

1 Colinta Road, Stuart QLD 4811, described as Lot 21 SP341874

consent to the making of an SDA application or request under Part 6 of the *State Development and Public Works Organisation Act 1971* by:

Port Access Pty Ltd

on the premises described above for:

Material Change of Use for Medium Impact Industry, Service Station, Transport Depot, Office

Company name and ACN.....
Port Access Pty Ltd ACN: 645 356 636 ATF for the Port Access Trust ABN: 72 102 488 314

.....
Signature of Sole Director/Secretary

19-2-24
.....
Date

The *State Development and Public Works Organisation Act 1971* is administered by the Department of State Development, Infrastructure, Local Government and Planning, Queensland Government.

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**51326015**	**Search Date:**	31/10/2023 17:11
Date Title Created:	01/09/2023	**Request No:**	46143539
Previous Title:	51279118		

ESTATE AND LAND

Estate in Fee Simple

LOT 21 SURVEY PLAN 341874
Local Government: TOWNSVILLE

REGISTERED OWNER

Dealing No: 722774340 27/09/2023

PORT ACCESS PTY LTD A.C.N. 645 356 636 TRUSTEE
UNDER INSTRUMENT 722774340

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10401028 (POR 67)

2. EASEMENT IN GROSS No 722706398 28/08/2023 at 10:40
burdening the land
TOWNSVILLE CITY COUNCIL
over
EASEMENT BD ON SP341874

3. MORTGAGE No 722774341 27/09/2023 at 12:36
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

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 TITLES QUEENSLAND

MEDIUM IMPACT INDUSTRY ZONE CODE

Performance Outcomes	Acceptable Outcomes	Comments
For accepted development subject to requirements and assessable development — where involving a new building or expansion to an existing building		
Built Form		
PO1 Development is consistent with the scale of surrounding buildings.	AO1.1 Site cover does not exceed 80%.	**Complies with Acceptable Outcome** The proposed development comprises a total site area of approximately 13.3% the total area of the allotment.
	AO1.2 Buildings are set back from street and road frontages: (a) within 20% of the average front setback of adjoining buildings; or (b) where there are no adjoining buildings, 6m.	**Complies with Acceptable Outcome** All buildings are setback a minimum of 6m from all road frontages.
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 with Performance Outcome** The proposed office and service station building is designed to permit visibility to the main pedestrian entrance from the road frontage of the site. For the industrial / workshop building(s), as this premises is not for public access it is not considered that entrance visibility is necessary.
	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.	**Complies with Acceptable Outcome** All building recesses are considered to be of a size that would not conceal a person.
	AO2.3 Each building or tenancy is provided with a highly visible street and unit number respectively	**Will comply if required**
	AO2.4	**Will comply if required**

Performance Outcomes	Acceptable Outcomes	Comments
	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. Editor's note—Screening can be provided by any combination of the above treatments to meet the acceptable outcome.	**Will Comply** All utility elements will be ensured to be appropriately screened from the frontage of the site.
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 with acceptable outcome** All landscaping areas along the frontage of the site is provided with a minimum 2m depth, except around crossovers where reduced depths are required to permit vehicle movement.
For accepted development subject to requirements and assessable development		
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. Editor's note—Applicants should have regard to relevant legislative, industry and licensing requirements.	AO5.1 Development achieves the noise generation levels set out in the Environmental Protection (Noise) Policy 2008.	**Complies with Acceptable Outcome** As the proposed development is to be located within an industrial precinct, separated from sensitive land uses. It is therefore not considered that there would be any substantial noise impact.
	AO5.2 Development achieves the air quality objectives set out in the Environmental Protection (Air) Policy 2008.	**Complies with Acceptable Outcome** As the proposed development is to be located within an industrial precinct, separated from sensitive land uses. It is therefore not considered that there would be any substantial air impact.
	AO5.3	**Complies with Acceptable Outcome**

Performance Outcomes	Acceptable Outcomes	Comments
	Materials that are capable of generating air contaminants are wholly enclosed in storage bins.	Any potential contaminants stored in association with the development are to be stored in enclosed canister.
	AO5.4 All external areas are sealed, turfed or landscaped.	**Complies with Acceptable Outcome** All external areas are proposed to be sealed or landscaped.
	AO5.5 Light emanating from any source complies with *Australian Standard AS4282 Control of the Obtrusive Effects of Outdoor Lighting*.	**Will Comply**
	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*.	**Will Comply**
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. Editor's note—Applicants should also have regard to Section 9.3.7 Works code, Section 9.3.2 Healthy waters code and other relevant legislative, industry and licensing requirements.	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 with Acceptable Outcome** The proposed areas for the storage or use of contaminating substances are to be roofed and sealed. Bunding is to be provided within the truck canopy area, which is to drain to a separator unit for treatment prior to discharge. It is not anticipated that the warehouse / workshop areas are to be bunded, as any storage would occur wholly indoors, preventing substances from discharging to the environment. It is anticipated that operational procedures would be implemented within this area to ensure clean up of spills when they occur.
	AO6.2 Roof water is piped away from areas of potential contamination.	**Complies with Acceptable Outcome** As detailed within the provided stormwater management plan, all stormwater generated within the roofed areas is to be directed via downpipes to the proposed underground stormwater network prior to discharge, separated from areas of potential contamination.
PO7	AO7	**Complies with Performance Outcome**

Performance Outcomes	Acceptable Outcomes	Comments
The site layout and design: (a) minimises earthworks; (b) maximises retention of natural drainage patterns; and (c) ensures existing drainage capacity is not reduced.	Development does not involve earthworks involving more than 100m3.	While the extent of earthworks required for the proposed development is still to be confirmed as part of detailed design, it is considered that the extent of earthworks would comply with PO7 on the following grounds: • the required earthworks would only be undertaken for the purpose of achieving the outcomes detailed within the stormwater management plan; • substantial earthworks have / are to be undertaken for the purpose of the subdivision works on the subject premises. It is therefore not considered that substantial earthworks would be required to achieve the outcomes of the stormwater management plan.
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	**Not Applicable**
Caretakers 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.	**Not Applicable**
	AO9.2 The caretaker's accommodation dwelling has a gross floor area of no more than 70m2.	**Not Applicable**
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 250m^2 or 10% of the gross floor area, whichever is the lesser.	**Complies with Performance Outcome** While the proposed office space comprises a GFA of greater than 250m^2, it is still considered that it ancillary to the industrial functions on the site, having regard to the following:

Performance Outcomes	Acceptable Outcomes	Comments

		• the space at most comprises 15% of the total GFA on the subject premises, which is still considered to be inherently low in the context of the proposed development;
		• the office space is only intended to be utilized by the proponent in the operation of the premises, undertaking administrative function of the manufacturing and logistics operations on the site in accordance with the Medium Impact Industry Precinct of the Townsville SDA;
		• the separation of the office space from the industrial building is of benefit to the function of the site, noting:
		  ○ staff would be separated from potential noise / air impacts associated with the industrial operation;
		  ○ potential customers accessing the premises would have a clear access point to the site.

For Assessable Development		
Uses		
PO11 Development within the zone facilitates: (a) industrial activities whose impacts on sensitive land uses and the natural environment can be appropriately managed; or (b) uses which require larger sites in locations that are separated from sensitive land uses, and are not more appropriately accommodated in other zones; or (c) 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 with Performance Outcome** The proposed development is considered to comply on the following grounds: • The proposed development is primarily industrial in nature, that is capable of mitigating potential impacts to sensitive environments; • All non industrial functions proposed on the site are considered to be of a type that is ancillary to the function of the premises (office) or support the industrial locality (service station).

Performance Outcomes	Acceptable Outcomes	Comments
PO12 Development is not primarily oriented to retail sales, other than where involving an outdoor sales activity.	No acceptable outcome is nominated.	**Complies with Performance Outcome** No retail orientated uses are proposed.
PO13 Development does not significantly detract from the availability or utility of land for industry purposes.	No acceptable outcome is nominated.	**Complies with Performance Outcome** None of the land uses proposed are considered to impact the future function of other industrial premises in the locality.
Crime prevention through environmental design		
PO14 Site layout facilitates the security of people and property having regard to: (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. Editor's note—Applicants should have regard to Crime Prevention through Environmental Design Guidelines for Queensland.	No acceptable outcome is nominated.	
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 with Performance Outcome** The proposed development is to minimise risk to public health, noting: • the high risk spill areas are to drain to an oily water separator unit prior to discharging from the site;

Performance Outcomes	Acceptable Outcomes	Comments
		• the premises is not anticipated to generate a high level of noise and in any case is considered to be sufficiently separated from sensitive land uses.
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 with Performance Outcome** The proposed forms part of a recent subdivision being undertaken in the locality, of which the site has been graded and cleared of vegetation. The proposal is therefore not expected to substantially change drainage capacity or ecological separation.
Additional benchmarks for assessable development in precincts		
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. Editor's note—In accordance with the Act, council may seek to secure the necessary infrastructure through conditions of approval or infrastructure agreements.	**Not Applicable**
PO18 Development protects the environmental quality, existing riparian vegetation and hydraulic capacity of waterways including Stuart and Stoney Creeks.	No acceptable outcome is nominated.	**Not Applicable**
PO19 Development does not compromise the safe use of the nearby magazine reserve.	AO19 The development does not compromise the protective works safety distance from explosive storage stipulated	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
	in AS2187-1 Explosives — Storage, transport and use and is otherwise consistent with that standard. Editor's note—The magazine reserve is located on the following property descriptions, Lot 103 Plan EP2187 and Lot 220 Plan SP138418.	
PO20 Impacts on nearby residential uses are minimised as far as practicable. Editor's note—Applicants should have regard to relevant legislative, industry and licensing requirements.	No acceptable outcome is nominated	**Not Applicable**

HEALTHY WATERS CODE

Performance Outcomes	Acceptable Outcomes	Comments
Assessable development		
Stormwater management – protecting water quality		
PO1 Development contributes to the protection of environmental values and water quality objectives of receiving waters to the extent practicable. Editor's note - The environmental values and water quality objectives are established under the Environmental Protection (Water and Wetland Biodiversity) Policy (2019). Catchment-specific Environmental Values (EVs) and Water Quality Objectives (WQOs) have been prepared for some catchments (including the Ross River and Black River catchments). The Queensland Water Quality Guidelines 2009 provides EVs and WQOs for waters where no catchment-specific values have been established.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 - SC6.4.8.10 Stormwater Management Plans; and SC6.4.10.2 Water Sensitive Urban Design.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO2 High environmental value waters and slightly disturbed waters (shown on Figure 9.1 — High environmental value waters and slightly disturbed waters) are protected from the impacts of development within their catchments. Existing water quality, habitat and biota values, flow regimes and riparian areas are maintained or enhanced.	No acceptable outcome is nominated. Editor's note—Refer to the Queensland Water Quality Guidelines (QWQG) for details on how to establish a minimum water quality data set for these areas.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO3 The entry of contaminants into, and transport of contaminants in, stormwater is avoided or minimised.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 - SC6.4.8.10 Stormwater Management Plans; and SC6.4.10.2 Water Sensitive Urban Design.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO4 Within the areas identified as potential acid sulfate soils on Figure 9.2 — Acid sulfate soils, the generation or release of acid and metal contaminants into the environment from acid sulfate soils is avoided by: (a) not disturbing acid sulfate soils when excavating or otherwise removing soil or sediment, draining or extracting groundwater, excluding tidal water or filling land; or (b) where disturbance of acid sulfate soils cannot be	AO4.1 Development does not: (a) involve excavating or removing 100m3 or more of soil and sediment at or below 5m AHD; or (b) permanently or temporarily drain or extract groundwater or exclude tidal water resulting in the aeration of previously saturated acid sulfate soils; or (c) involve filling with 500m3 or more with an average depth of 0.5m or greater that results in:	**Will Comply** Any earthworks associated with the proposal are expected to result from the stormwater management works required to be undertaken on-site. it will be ensured to the extent relevant that the impact on acid sulfate soils is minimized or managed during the construction works on-site.

Performance Outcomes	Acceptable Outcomes	Comments
avoided, development: (i) neutralises existing acidity and prevents the generation of acid and metal contaminants; and (ii) prevents the release of surface or groundwater flows containing acid and metal contaminants into the environment.	(i) actual acid sulfate soils being moved below the water table; or (ii) previously saturated acid sulfate soils being aerated. OR AO4.2 Development manages waters so that: (a) all disturbed acid sulfate soils are adequately treated and/or managed so that they can no longer release acid or heavy metals; (b) the pH of all site any water including discharges and seepage to groundwater, is maintained between 6.5 and 8.5 (or an agreed pH in line with natural background); (c) waters on the site, including discharges and seepage to groundwater, do not contain elevated levels of soluble metals; (d) there are no visible iron stains, flocs or sums in discharge water; (e) all reasonable preparations and actions are undertaken to ensure that aquatic health is safeguarded; and (f) infrastructure such as buried services, pipes, culverts and bridges are protected from acid attack. Editor's note—Where works are proposed within the areas identified as potential acid sulfate soils on Figure 9.2 - Acid sulfate soils, the applicant is required to undertake an on-site acid sulfate investigation. The reason for undertaking an acid sulfate soils investigation is to determine the presence of acid sulfate soil in order to avoid disturbance. Where acid sulfate soils cannot reasonably be avoided, investigation results assist in the planning of treatment and remedial activities and must be undertaken in accordance with the Queensland Acid Sulfate Soil Technical Manual and relevant State Planning Policy. Applicants should also refer to the Guidelines for Sampling Analysis of Lowland Acid Sulfate Soils in Queensland, Acid Sulfate Soils Laboratory Methods Guidelines or Australian Standard 4969. It is highly recommended that the applicant develop a practical Acid Sulfate Soil Management Plan for use in monitoring and treating acid sulfate soils.	
PO5	No acceptable outcome is nominated.	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
Construction activities for the development avoid or minimise adverse impacts on stormwater quality or hydrological processes.	Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 - SC6.4.8.10 Stormwater Management Plans, SC6.4.23.1 Construction Management; and SC6.4.10.2 - Water Sensitive Urban Design.	
Hydrological processes		
PO6 The stormwater management system: (a) retains natural waterway corridors and drainage paths; and (b) maximises the use of natural channel design in constructed components.	AO6.1 All existing waterways and overland flow paths are retained.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
	AO6.2 The stormwater management system is designed in accordance with the Development manual planning scheme policy no. SC6.4 — SC6.4.10.2 Water Sensitive Urban Design.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO7 The development is designed to minimise run-off and peak flows by: (a) minimising large areas of impervious material; and (b) maximising opportunities for capture and reuse.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 - SC6.4.8.10 Stormwater Management Plans; and SC6.4.10.2 Water Sensitive Urban Design.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO8 Stormwater management is designed to: (a) protect in-stream ecosystems from the significant effects of increased run-off frequency by capturing the initial portion of run-off from impervious areas; and (b) create conditions such that the frequency of hydraulic disturbance to in-stream ecosystems in developed catchments is similar to pre-development conditions. Editor's note—Frequent flow management is distinct from flood management purposes, which is concerned with the management of less frequent, more extreme stormwater flows. The latter is an important part of integrated stormwater management and should in no way be compromised in pursuit of the management of more frequent flows for waterway health enhancement.	AO8 The stormwater management system is designed in accordance with the Development manual planning scheme policy no. SC6.4 - SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity and SC6.4.10 Stormwater Quality.	**Complies with Acceptable Outcome** Refer to stormwater management plan provided as part of this application.
PO9	AO9	**Complies with Acceptable Outcome**

Performance Outcomes	Acceptable Outcomes	Comments
Stormwater management is designed to prevent exacerbated in-stream erosion downstream of a development site by controlling the magnitude and duration of sediment-transporting, erosion-causing flows.	The stormwater management system is designed in accordance with the Development manual planning scheme policy no. SC6.4 — SC6.4.10.2 Water Sensitive Urban Design and SC6.4.8.10 Stormwater Management Plans.	Refer to stormwater management plan provided as part of this application.
Stormwater drainage generally		
PO10 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.	AO10.1 The development does not result in an increase in flood level or flood duration on upstream, downstream or adjacent properties	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
	AO10.2 The stormwater management system is designed and constructed in accordance with the Development manual planning scheme policy SC6.4 –SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
PO11 Development does not cause ponding, or changes in flows and velocities such that the safety, use and enjoyment of nearby properties are adversely affected.	AO11 The stormwater management system is designed and constructed in accordance with the Development manual planning scheme policy SC6.4 – SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
PO12 The drainage network has sufficient capacity to safely convey stormwater run-off from the site.	AO12 Development is undertaken in accordance with the Development manual planning scheme policy SC6.4 – SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
PO13 The stormwater management system: (a) provides for safe access and maintenance; and (b) where relevant, provides for safe recreational use of stormwater management features.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 - SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Complies with Performance outcome** Please refer provided stormwater management plan.
Point source waste water management (other than contaminated stormwater and sewage)		

Performance Outcomes	Acceptable Outcomes	Comments
PO14 Waste water is managed in accordance with a waste management hierarchy that: (a) avoids waste water discharge to waterways; or (b) if waste water discharge to waterways cannot practicably be avoided, minimises waste water discharge to waterways by re-use, recycling, recovery and treatment for disposal to sewer, surface water and groundwater. Editor's note—To meet this outcome, a waste water management plan (WWMP) should be prepared by a suitably qualified person. The WWMP is to account for the waste water type, climatic conditions, Water Quality Objective (WQOs) and best practice environmental management.	No acceptable outcome is nominated.	**Will Comply**
PO15 Any treatment and disposal of waste water to a waterway: (a) protects the applicable water quality objectives for the receiving waters; and (b) avoids adverse impact on ecosystem health of receiving waters.	No acceptable outcome is nominated.	**Will Comply**
PO16 Development avoids or minimises and appropriately manages soil disturbance or altering natural hydrology in nutrient hazardous areas	No acceptable outcome is nominated.	**Will Comply**
PO17 Waste water discharge to waterways is managed to avoid or minimise the release of nutrients of concern so as to minimise the occurrence, frequency and intensity of coastal algal blooms. Editor's note—Compliance with this outcome can be demonstrated by following the management advice in the Implementing Policies and Plans for Managing Nutrients of Concern for Coastal Algal Blooms in Queensland and associated technical guideline.	No acceptable outcome is nominated.	**Will comply**
Constructed lakes and artificial waterways		
PO18	No acceptable outcome is nominated.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
Where established, a constructed lake or artificial waterway is designed to maintain a reasonable standard of water quality, having regard to factors affecting lake health, including: (a) nutrients and eutrophication; (b) gross pollutants, including organic material; (c) light and turbidity; (d) organic carbon loads; (e) lake stormwater detention time; (f) salinity; (g) temperature; (h) water depth and seasonal variations; (i) water column mixing temperature; and (j) pesticides and other chemicals.	Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	
PO19 Stormwater run-off entering and leaving a constructed lake or artificial waterway maintains receiving water quality.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC 6.4 - SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
PO20 The location, design and operation of a constructed lake or artificial waterway: (a) protects environmental values in downstream and upstream waterways; (b) protects any groundwater recharge areas; (c) incorporates low lying areas of a catchment connected to an existing waterway; (d) does not disrupt natural wetlands and any associated buffer areas; (e) avoids disturbing soils or sediments; and (f) avoids altering the natural hydrologic regime in acid sulfate soil and nutrient hazardous areas. Editor's Note—Monitoring and maintenance programs will be required to adaptively manage water quality and to achieve relevant water quality objectives.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
PO21 The constructed lake or artificial waterway is located in a way that is compatible with existing tidal waterways.	For constructed lakes — No acceptable solution is nominated. AO21 For an artificial waterway: Where an artificial waterway is located adjacent to, or connected to, a tidal waterway by means of a weir, lock, pumping system or similar: (a) there is sufficent flushing or tidal flushing with water level variation >0.3m; (b) any tidal flow alteration does not adversely impact on the tidal waterway; and (c) there is no introduction of salt water into freshwater environments. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	
PO22 The construction phase for the constructed lake or artificial waterway is compatible with protecting aquatic environmental values in existing natural waterways and wetlands.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality	**Not Applicable**
PO23 A constructed lake or artificial waterway is designed to avoid terrestrial and aquatic weeds, vectors and concentrations of populations.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
PO24 The lake design provides for suitable machinery access to enable maintenance of the lake, including the removal of terrestrial and aquatic weeds.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
PO25 A constructed lake or artificial waterway has no adverse impact on flood capacity, including the capacity of upstream catchments and floodplain areas.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
PO26 A constructed lake or artificial waterway is designed to minimise hazards to ensure public safety is maintained.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
PO27 A constructed lake or artificial waterway is designed to provide a high level of amenity for surrounding residents.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
PO28 Opportunities for incorporation of accessible passive and active recreation facilities into the design of the constructed lake or artificial waterway are facilitated.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Not Applicable**
Efficiency and whole of life cycle cost		
PO29 Life cycle costs are minimised, taking into account acquisition, construction, establishment, operation, monitoring, maintenance, replacement and disposal costs.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 for assistance in demonstrating this outcome.	**Will Comply**
PO30 The design of the development allows for sufficient site area to accommodate an effective stormwater management system.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 for assistance in demonstrating this outcome.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
PO31 The proposal provides for the orderly development of stormwater infrastructure within a catchment, having regard to: (a) existing capacity of stormwater infrastructure and ultimate catchment conditions; (b) discharge for existing and future upstream development; and (c) protecting the integrity of adjacent and downstream development.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 for assistance in demonstrating this outcome.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
PO32	No acceptable outcome is nominated.	**Complies with Performance outcome** Please refer provided stormwater management plan.

Performance Outcomes	Acceptable Outcomes	Comments
Proposed stormwater infrastructure remains fit for purpose for the life of the development.	Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 for assistance in demonstrating this outcome.	
PO33 Proposed stormwater infrastructure can be easily accessed and can be maintained in a safe and cost effective way.	AO33 The stormwater management system is designed in accordance with the Development manual planning SC6.4.8 Stormwater Management, SC6.4.9 Stormwater Quantity; and SC6.4.10 Stormwater Quality.	**Complies with Acceptable outcome** Please refer provided stormwater management plan.
Water management in reconfiguring a lot		
PO34 Reconfiguration of lots includes water management measures in the design of any road reserve, streetscape or drainage networks to: (a) minimise impacts on the water cycle; (b) protect waterway health by improving stormwater quality and reducing site run-off; and (c) avoid large areas of impervious surfaces.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4 for assistance in demonstrating this outcome.	**Not Applicable**
Ship-sourced pollutants		
PO35 Common user facilities for the handling and disposal of ship-sourced pollutants including oil, garbage and sewage are provided at a suitable location in any development involving a marina or berthing facilities. Editor's note—Refer to: Australian and New Zealand Environment and Conservation Council (ANZECC), 1997, Best Practice Guidelines for Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand.	No acceptable outcome is nominated.	**Not Applicable**
PO36 Marinas or berthing facilities are designed and operated to ensure the risk of spillage from operations is minimised.	No acceptable outcome is nominated.	**Not Applicable**
PO37 Equipment to contain and remove spillages is stored in a convenient position near marina or berthing facilities and is available for immediate use.	No acceptable outcome is nominated.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
PO38 Where practical, the marina pollutant reception facility is connected to a sewerage or other waste reception infrastructure. Editor's note—Reception facilities require compliance assessment under the Plumbing and Drainage Act 2002. The plumbing compliance assessment process will ensure that the proposed facilities address 'peak load'.	No acceptable outcome is nominated.	**Not Applicable**

LANDSCAPING CODE

Performance Outcomes	Acceptable Outcomes	Comments
Assessable development		
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. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Not Applicable**
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	**Will comply** Species chosen for the development will be in accordance with SC6.4 - SC6.4.12
	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	As above.
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 - SC6.4.12 Landscaping and Open Space. Editor's note—Applicants may also have reference to the Development manual planning scheme policy no. SC6.4 - SC6.4.6.1 Geometric Road Design.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
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.	**Not Applicable**
	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.	**Not Applicable**
	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.	**Not Applicable**
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.	**Not Applicable**
	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	**Complies** Majority of the proposed landscaping areas are to comprise soft landscaping, with plantings proposed throughout.
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. Editor's note—Applicants should also have regard to requirements for local recreational parks in the Reconfiguring of a lot code.	**Not Applicable**
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 with Performance Outcome** Given the nature of the proposed development, a high level of hardstand is proposed throughout the site. in order to ensure the amenity of the site is maximized, the hardstand areas are to be broken up by internal landscaping and buildings.

Performance Outcomes	Acceptable Outcomes	Comments
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.	
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. Editor's note—Guidance on desirable treatments in particular circumstances is provided in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies with Acceptable Outcome** Frontage fences are proposed to be integrated with landscaping to maximize positive visual address.
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 with Acceptable Outcome** The proposed landscaping along the side and rear boundaries is to provide screening in the form of trees, shrubs and groundcovers.
	AO10.2 A minimum of 25% of all trees are to grow above the height of the eaves of the equivalent second storey of the building.	**Will Comply**
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,	No acceptable outcome is nominated. Editor's note—Guidance on desirable treatments in particular circumstances is provided in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Complies with performance outcome** Landscaping comprises a mix of planting types are proposed around buildings to minimize the visual impact of these elements.

Performance Outcomes	Acceptable Outcomes	Comments
shrubs and groundcovers to minimise the visual impact of these elements.		
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. Editor's note—Guidance on desirable treatments in particular circumstances is provided in the Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Will comply** It will ensure that the selected vegetation suits the respective space available.
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.	**Will Comply**
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. Editor's note—Applicants should also refer to Section 9.3.6 Works code and Section 9.3.2 Healthy waters code and the Development manual planning scheme policy no. SC6.4 to assist in demonstrating the outcome.	**Will Comply**
PO15 Landscaping works, design and materials used minimise maintenance costs and whole of life cycle costs. Editor's note—Council may request a lifecycle cost analysis and maintenance cost plan for developments that create new public landscape embellishment to determine the appropriateness of landscaping treatment lifecycle costs to the community.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 to assist in demonstrating the outcome, including SC6.4.12 Landscaping and Open Space and SC6.4.12.6 Landscaping Construction Standards.	**Will Comply**
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. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 including SC6.4.12 Landscaping and Open Space to assist in demonstrating the outcome	**Will Comply**
PO17	No acceptable outcome is nominated.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
Drainage of podium planters allows for flush out in future and are adequately drained.		
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. Editor's note—Irrigation systems should be minimized where practical, such as in natural areas or areas where landscaping is likely to endure due to landform and microclimate, for example.	**Will Comply**
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. Editor's note—Applicants should refer to the Development manual planning scheme policy SC6.4.12 Landscaping and Open Space to assist in demonstrating the outcome.	**Will Comply**
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.	**Will Comply**
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.	**Will Comply**
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.	**Will Comply**
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.	**Will Comply**
Sustainability		

Performance Outcomes	Acceptable Outcomes	Comments
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.	**Not Applicable**
	AO24.2 Removed or damaged significant vegetation is replaced with mature vegetation of a comparable quantity and species.	**Not Applicable**
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.	**Not Applicable**
	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.	**Not Applicable**
	AO25.3 Retained and significant vegetation damaged during development or construction is treated to repair any damage to the extent practicable by a qualified aborist.	**Not Applicable**
	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.	**Not Applicable**
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 (c) optimising shade to create useable and	No acceptable outcome is nominated. Editor's note—Applicants should refer to Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Will Comply** Detailing landscaping design will ensure compliance with the performance outcome.

Performance Outcomes	Acceptable Outcomes	Comments
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.	**Will comply** Planting beds will be designed in accordance with SC6.4.12.
PO28 Landscape buffering and species selection is consistent and compatible with any ecological values on or adjoining the site.	No acceptable outcome is nominated. Editor's note—Applicants should refer to Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space.	**Will comply** Buffering and species selection will be consistent with the ecological values of the adjoining site.
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 with Performance Outcome** The proposed parking area are to be provided with shading in the form of vegetation and shade structures where indicated. The landscaping is considered to be of a type that does not impact the safety and legibility of the parking areas.
Safety		
PO30 Landscape design enhances community safety and reduces the potential for crime and antisocial behaviour. Editor's note—Applicants may find useful guidance in the Queensland Government's Crime Prevention through Environmental Design Guidelines for Queensland.	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.	**Will Comply**
	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.	**Will Comply**
	AO30.3 Any solid wall or semi permeable fence is protected from graffiti through means of vertical landscaping or vandal resistant paint or artwork	**Will Comply**
PO31	AO31.1	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
Where appropriate and practicable, all elements of the landscape design are safe and provide accessibility for all abilities.	Paving material, tactile indicators and construction complies with AS1428 - Design for Access and Mobility.	
	AO31.2 Pavement material or treatment clearly delineates between pedestrian and vehicular movement systems through contrasting materials, colours or level changes.	**Will Comply**
	AO31.3 Hard landscaping materials are not highly reflective, or likely to create glare, slipperiness or other hazardous conditions.	**Will Comply**

TRANSPORT IMPACT, ACCESS AND PARKING CODE

Performance Outcome	Acceptable Outcome	Comments
Transport impact Editor's note—Applicants should note that the Department of Transport and Main Roads may have additional requirements. Editor's note—Applicants should also note that a transport impact assessment may be required to demonstrate compliance with this code.		
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. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.1 Townsville Road Hierarchy, SC6.4.6.1 Geometric Road Design and SC6.4.5.2 Traffic Impact Assessment (TIA).	**Complies with Performance Outcome** The proposed development forms part of a locality designed and constructed for an industrial purpose, as proposed on the subject premises.
PO2 Development does not compromise the orderly provision or upgrading of the transport network.	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.1 Townsville Road Hierarchy, SC6.4.6.1 Geometric Road Design and SC6.4.5.2 Traffic Impact Assessment (TIA).	**Complies with Performance Outcome** The proposed development is not anticipated to impact the future upgrade of the adjoining road 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. Editor's note—To demonstrate compliance with this performance outcome with regard to pedestrian and cyclist elements, applicants may be requested to provide a walk and cycle network plan to show connections to internal and external attractions, existing and proposed walk and cycle facilities and which respond to desire lines of all users.	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.2 Traffic Impact Assessments (TIA), SC6.4.4 Active Transport Infrastructure, SC6.4.6.1 Geometric Road Designs, and SC6.4.5.1 Townsville Road Hierarchy.	**Complies with Performance Outcome** The proposed on-site transport network is considered to sufficiently integrate with the surrounding network.
PO4 As far as practicable, development is designed to encourage travel by public transport, walking and cycling.	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.2 Traffic Impact Assessments (TIA), SC6.4.4 Active Transport Infrastructure, SC6.4.6.1 Geometric Road Design, and SC6.4.5.1 Townsville Road Hierarchy.	**Not Applicable** The locality with the site forms part of is not located within close proximity to existing centers or residential area that would promote walking or cycling to the site. Additionally, it is understood that there are no public transport routes within proximity to the premises.
Site access Editor's note—Local government (or other service owner) approval must be obtained before interfering with any infrastructure or undertaking works in the road reserve. In addition, be aware that the location of a driveway may be influenced by an approved plan of development that applies to the site or by the location of existing infrastructure or existing vehicle crossovers.		

Performance Outcome	Acceptable Outcome	Comments
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. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.1 Townsville Road Hierarchy and SC6.4.5.2 Traffic Impact Assessment (TIA).	
PO6 Where practical, access for cyclists and pedestrians is clearly distinguished from vehicle access.	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	**Not Applicable** No pedestrian or cycle infrastructure is located within proximity to the site to warrant the provision of this forms of access to the site.
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 Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.2 Traffic Impact Assessment (TIA) and SC6.4.5.1 Townsville Road Hierarchy.	**Complies with Performance Outcome** The proposed access is considered to be located in a safe and easy location for vehicles accessing the site.
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 with Performance Outcome** The proposed crossovers are design to permit the safe and efficient access of the largest anticipated vehicles.
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.	**Not Applicable**
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 with Performance Outcome** It will be ensured as part of detailed design that the driveways are designed to withstand the anticipated loads for vehicles accessing the premises.

Performance Outcome	Acceptable Outcome	Comments
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 with Performance Outcome** It will be ensured as part of detailed design that the driveways are designed to not cause water to pond on adjacent properties.
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.	**Will Comply**
PO13 All vehicles reasonably expected to access the site can safely manoeuvre to allow vehicles to exit and enter in a forward motion.		**Complies with Performance Outcome** The proposed development is designed to permit the safe and efficient access and maneuvering for all vehicles anticipated of accessing the premises.
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. Editor's note— Applicants should refer to the Development manual planning scheme policy no.SC6.4 — SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.4 Active Transport Infrastructure, SC6.4.5.1 Townsville Road Hierarchy, SC6.4.6.1 Geometric Road Design and SC6.4.12 Landscaping and Open Space to assist in complying with this outcome	**Not Applicable** No pedestrian or cycle infrastructure is located within proximity to the site to warrant the provision of this forms of access to the site.
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. Editor's note—End of trip bicycle facilities will need to be provided for major development in accordance with the Queensland Development Code Mandatory Part 4.1 — Sustainable Buildings. "Major development" is defined in MP4.1.	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 — SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.4 Active Transport Infrastructure, SC6.4.5.1 Townsville Road Hierarchy, SC6.4.6.1 Geometric Road Design and SC6.4.12 Landscaping and Open Space to assist in complying with this outcome.	**Not Applicable** No pedestrian or cycle infrastructure is located within proximity to the site to warrant the provision of this forms of access to the site.
PO16 Parking areas, pathways and other elements of transport network infrastructure are designed to enhance public	No acceptable outcome is nominated. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 — SC6.4.4 Active Transport Infrastructure, SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.1 Townsville Road Hierarchy, SC6.4.6.1 Geometric Road Design, SC6.4.14.2 Public Lighting (Urban, Urban Residential and Rural),	**Not Applicable** No pedestrian or cycle infrastructure is located within proximity to the site to warrant the provision of this forms of access to the site.

Performance Outcome	Acceptable Outcome	Comments
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, 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. Editor's note—Crime Prevention through Environmental Design Guidelines for Queensland prepared by the State Government may provide applicants with guidance on these matters.	SC6.4.14.3 Utility Services and SC6.4.12 Landscaping and Open Space to assist in complying with this outcome.	
Parking		
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.	AO17 Parking is provided in accordance with the standards identified in Parking rates planning scheme policy no. SC6.10. Editor's note— Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.2 Traffic Impact Assessments (TIA), SC6.4.6.1 Geometric Road Design, and SC6.4.5.1 Townsville Road Hierarchy to assist in complying with this outcome.	Complies with Acceptable Outcome Please make note of the following with respect to the proposed parking provision: • Medium Impact Industry – 1 space per 100m^2 ○ 29.53 (30) spaces required • Office – 1 space per 30m^2 ○ 19.6 (20) spaces required • Service Station - 1 space per 40m^2 ○ 3.375 (3) spaces required • Transport Depot – sufficient spaces to service the use Referring to the above, it is determined that approximately 53 car spaces would be required to service the industry, office and service station use. The site is currently provided with a total of 68 car spaces (56 within proximity to the office and 12 within proximity to the service station). It is considered that sufficient car parking has been provided on-site. With respect to the truck depot, as can be noted on the provided drawings, heavy vehicle parking has been provided on-site for a range of heavy vehicles types in accordance with

Performance Outcome	Acceptable Outcome	Comments
		the proponents specifications. This use is therefore considered to be appropriately accounted for.
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 with Acceptable Outcome** All car parking areas are considered to have been designed in accordance with SC6.4.5.4.
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. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.2 Traffic Impact Assessments (TIA), SC6.4.6.1 Geometric Road Design, SC6.4.5.1 Townsville Road Hierarchy and SC6.4.12 Landscaping and Open Space to assist in complying with this outcome.	**Not Applicable**
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. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.5.3 Public Transport Facilities, SC6.4.5.4 Car Parking, SC6.4.5.5 Driveways, SC6.4.5.2 Traffic Impact Assessments (TIA), SC6.4.6.1 Geometric Road Design, and SC6.4.12 Landscaping and Open Space.	**Complies with Performance Outcome** The proposed parking areas are considered to comply with PO20 on the following grounds: • Parking spaces with be clearly defined, marked and signed; • Will be convenient and accessible • Minimises the extent of unbroken hardstand area, noting the industry and transport depot requires a large maneuvering area for heavy vehicles. • Is considered safe for vehicles, as well as potential pedestrians and cyclists, noting that it is a low speed environment. • Is able to provide shading, where in proximity to landscaping areas and buildings. • Is to minimize impacts on surrounding land.
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	**Will Comply** Parking areas will be designed in accordance with the car parking standard.

Performance Outcome	Acceptable Outcome	Comments
	planning scheme policy no. SC6.4 — SC6.4.5.3 Public Transport Facilities and SC6.4.5.4 Car Parking.	
PO22 Pavement is constructed to an appropriate standard.	No acceptable outcome is nominated.	**Will Comply**
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.	**Will Comply** All general access parking areas will be kept accessible at all times.
PO24 Visitor parking for accommodation activities remains accessible and useable to visitors at all times.	No acceptable outcome is nominated.	**Not Applicable**
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.	**Not Applicable**
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 with Performance Outcome** The proposed service areas are designed to provide access and loading space for the anticipated number and type of service vehicles accessing the site. Further they are located as to not impact internal and external traffic.
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 Transport Facilities and SC6.4.5.4 Car Parking.	**Complies with Performance Outcome** As above, refuse areas are off sufficient size to permit on-site servicing for waste vehicles accessing the premises.

Performance Outcome	Acceptable Outcome	Comments
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 with performance Outcome** Given the industrial nature of the immediate locality, the servicing arrangement is not anticipated to impact nearby sensitive uses.

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Performance Outcomes	Acceptable Outcomes	Comments
Accepted development subject to requirements-Access and parking		
Access and parking		
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.	AO1 Access is provided in accordance with Australian Standard AS2890.1.	**Will Comply** All accesses will be constructed in accordance with AS2890.
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 with Acceptable Outcome** The proposed development is provided with sufficient parking in accordance with SC6.10, as discussed previously.
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** All parking areas are designed in accordance with AS2890.
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	**Complies with Performance Outcome** In compliance with the performance outcome, the proposed landscaping design is to incorporate trees around parking areas were possible, however no necessarily in alignment with

Performance Outcomes	Acceptable Outcomes	Comments
	parking spaces; and (b) in double sided, angle or parallel bays - 1 tree per 6 parking spaces. Editor's note—The Development manual planning scheme policy no. SC6.4 - SC6.4.12 Landscaping and Open Space sets out guidance on tree species and planting standards. 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.	the indicated ratio. Overall, the perimeter of the site is to be provided with trees in order to provide screening to the site in general.
PO5 Provision is made for the on-site 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.	**Will Comply** Servicing area will be provided in accordance with AS 2890.
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. Editor's note—If a main exists, then an application for a water meter will be required.	**Will Comply** Proposed development will be provided with direct access to the council reticulated water supply.
	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	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
	Supply Planning and Design Guidelines and SC6.4.3 Standard Drawings.	
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.	**Will Comply** Proposed development will be provided with direct access to the council reticulated sewer system.
	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.	**Will Comply**
PO8 Provision is made for waste management that is appropriate to the use, protects the health and safety of people and the environment. Editor's note—Applicants should also be aware that any provision for disposal of any trade waste is to be made in accordance council's Trade Waste Policy supporting the Water Act 2000, Plumbing and Drainage Act 2002 and the Standard Plumbing Regulation 2003	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 with Acceptable Outcome** The proposed development is provided with bin stores adjacent to the service station retail area and the industrial building. These stores will be sealed and provide screening, as to not be visual beyond the boundaries of the site.
	AO8.2 On sites in an industrial zone that are greater than 2,000m2 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.	**Complies with Acceptable Outcome** All bin stores are located to allow for receptacles to either be adjacent to or are capable of being carted to a loading bay for on-site collection.
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 with Acceptable Outcome** The subject allotment is understood to have been designed as to achieve immunity from flood for the proposed development. It is therefore not considered that the proposed development would exacerbate any flood risk.
	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.	**Complies with Acceptable Outcome** It is proposed that all stormwater generated on the subject premises be discharged to the stormwater pipe running along the eastern boundary of the premises.

Performance Outcomes	Acceptable Outcomes	Comments
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 with Acceptable Outcome** Refer to provided stormwater management plan.
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.	**Will Comply** The proposed development is to be connected to the reticulated water network.
	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.	**Not Applicable**
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	**Will Comply** The proposed development is to be connected to the reticulated sewer network.

Performance Outcomes	Acceptable Outcomes	Comments
	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.	
	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.	**Not Applicable**
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 with acceptable outcome** Please refer stormwater management plan provided as part of this pre-referral response.
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. Editor's note—Applicants should also have regard to 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.	**Will Comply** It is intended that the proposed development be connected to the electrical network, via underground means.

Performance Outcomes	Acceptable Outcomes	Comments
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. Editor's note—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 provides additional information regarding the supply of telecommunications.	**Will Comply** Connections to the telecommunication network will be supplied to the subject premises in accordance with he regulatory authorities standards.
PO16 Provision is made for future telecommunications services (for example fibre optic cable).	No acceptable outcome is nominated.	**Will comply if required** Where required, future telecom service will be allowed for in the detailed design of the premises.
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. Editor's note—Applicants should also have regard to the metering requirements of other relevant authorities.	**Not Applicable**
PO18 Adequate access is provided to public services and utilities for future maintenance.	No acceptable outcome is nominated. Editor's note—The Development manual planning scheme policy no. SC6.4 provides additional information and requirements for applicants, including when council will require easements over public services and utilities.	**Complies with Performance Outcome** The proposed development is not designed as to impact the access to public services for maintenance
Earthworks Editor's note—Applicants should be aware that some retaining walls constitute building works that are assessable under the Building Regulation 2006. No approval is required under the Building Regulation 2006 for retaining walls if: (a) there is no surcharge loading; and (b) the height of wall or height of fill or excavation is not more than 1m; and (c) the wall is no closer than 1.5m to a building, structure (e.g. a swimming pool) or other retaining wall. In these cases, the "applicable code" for the purposes of the Act is the Building Code of Australia (refer to BCA Volume 2, Part 3.1.1). Retaining walls not more than 1m in height may be constructed in accordance with an accepted industry standard publication (e.g. timber, concrete masonry or similar). Editor's note—Applicants should note that council may request the submission of an engineering report undertaken by suitably qualified engineer to demonstrate compliance with the performance outcomes, particularly where alternative solutions are proposed.		
PO19 Filling and excavation does not result in contamination of land or pose a health and safety risk.	AO19 Filling and excavation does not:	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
	(a) use contaminated materials as fill; (b) excavate contaminated material; and (c) use waste material as fill. Editor's note—Applicants should refer to the Development manual planning scheme policy no. SC6.4 - SC6.4.7.4 Earthworks Construction and SC6.4.23.1 Construction Management.	
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.	**Will Comply**
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.	**Will Comply**
	AO21.2 Retaining walls are designed and constructed: (a) certified as stable by a Registered Professional Engineer of Queensland; and (b) have a combined height of retaining wall and fence of not more than 2 metres.	**Will Comply**
PO22 Earthworks do not unduly impact on amenity or privacy for occupants of the site or on adjoining land.	No acceptable outcome is nominated.	**Will Comply**
PO23 Earthworks do not cause environmental harm.	No acceptable outcome is nominated.	**Will Comply**
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.	**Will Comply**
PO25	AO25	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
Any structure used to restrain fill or excavation does not worsen drainage problems or cause surface water to be a nuisance to neighbouring properties.	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.	
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.	**Will Comply**
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.	**Will Comply**
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.	**Will Comply**
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. Editor's note—Applicants should have regard to the following sub-sections of the Development manual planning scheme policy no. SC6.4 - SC6.4.14.2 Public Lighting (Urban, Urban Residential and Rural); SC6.4.14.3 Utility Services; SC6.4.8 Stormwater Management; SC6.4.9 Stormwater Quantity; SC6.4.10 Stormwater Quality; SC6.4.6.2 Pavement Design & Seal Design; SC6.4.4 Active Transport Infrastructure; SC6.4.12 Landscaping and Open Space; SC6.4.6.1 Geometric Road Design; SC6.4.20.1 Footpath Treatment Policy; and SC6.4.23 Construction Management, Quality Management, Inspection and Testing.	**Not Applicable**

Performance Outcomes	Acceptable Outcomes	Comments
(g) conduits to facilitate the provision of and other utility services.		
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.	AO30 Streetscaping works, footpaths and cycle paths are provided in accordance with Development manual planning scheme policy no. SC6.4. Editor's note—Applicants should have regard to the following sub-sections of the Development manual planning scheme policy no. SC6.4 - SC6.4.20.1 Footpath Treatment Policy; SC6.4.6.1 Geometric Road Design; SC6.4.5.1 Townsville Road Hierarchy; SC6.4.4 Active Transport Infrastructure; SC6.4.12 Landscaping and Open Space; SC6.4.14.2 Public Lighting (Urban, Urban Residential and Rural); and SC6.4.14.3 Utility Services in demonstrating compliance.	**Not Applicable**
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.	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.	**Will Comply**
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).	**Not Applicable**
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
	AO33
	Waste management facilities are provided in accordance with the Development manual planning scheme policy no. SC6.4 – SC6.4.22 Waste Management.
	Editor's note—Applicants may be requested to prepare a Waste management plan in accordance with the Development manual planning scheme policy no.SC6.4-SC6.4.22 Waste Management.
		Can Comply with Acceptable Outcome
		In accordance with SC6.4 – SC6.4.22, it is determined that the following waste generation would pertain to the proposed development:
		• Industry:
		  ○ Waste - 10,335L / Week
		  ○ Recycling – up to 2,000L/week (Estimate)
		• Office:
		  ○ Waste – 882L/Week
		  ○ Recycling – 1,176L/Week
		• Service Station –
		  ○ Waste – 472L/Week

Performance Outcomes	Acceptable Outcomes	Comments
impacts.		○ Recycling – 472L/Week In order to permit sufficient waste store availability, it is anticipated that waste be stored on-site in accordance with the following: • Service Station Bin Store – 2 x 660L Bins (1 x Waste, 1 x Recycling) • Industry Bin Store – 5 x 3,000L Bins (4 x Waste, 1 x Recycling)
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. Editor's note—Applicants should refer to the Development manual planning scheme policy no.SC6.4 for assistance in complying with this outcome.	**Will Comply**
PO35 While undertaking development works, the site and adjoining road are maintained in a tidy, safe and hygienic manner.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no.SC6.4 for assistance in complying with this outcome.	**Will Comply**
PO36 Traffic and parking generated during construction are managed to minimise impact on the amenity of the surrounding area	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no.SC6.4 for assistance in complying with this outcome.	**Will Comply**
PO37 Council's infrastructure is not damaged by construction activities.	No acceptable outcome is nominated. Editor's note—Applicants should refer to the Development manual planning scheme policy no.SC6.4 for assistance in complying with this outcome	**Will Comply**
PO38 The integrity of new infrastructure is maintained.	No acceptable outcome in nominated. Editor's note—Applicants should have regard to the following sections of the Development manual planning scheme policy no. SC6.4 - SC6.4.23.1 Construction Management; and SC6.4.24 Acceptance of Completed Works in demonstrating compliance.	**Will Comply**
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.	**Will Comply**

Performance Outcomes	Acceptable Outcomes	Comments
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. Editor's note—Applicants shall also refer to Development manual planning scheme policy no. SC6.4 for assistance in complying with this outcome.	**Not Applicable**

Queensland Government

Office of the
Coordinator-General

Our ref: OUT24/872
Your ref: 21279

1 March 2024

Mr Jacob McRae
Town Planner
TfA Project Group
Jacob.Mcrae@tfa.com.au

Dear Mr McRae

AP2023/012 – fee waiver request - SDA application for a material change of use (MCU) for Medium Impact Industry, Service Station, Transport Depot and Office in the Townsville State Development Area (SDA)

Thank you for your letter of 19 February 2024 requesting a full waiver of the relevant fee for a SDA application for a MCU for Medium Impact Industry, Service Station, Transport Depot and Office within the Townsville SDA.

In accordance with the Guideline to State development area fees July 2023 (the Guideline), the Coordinator-General considers that a reduced fee of $15,600 (GST exempt) is reasonable given the nature and scale of the proposed development. The fee is required to be paid at the time of lodgement of the SDA application for it to be considered properly made.

This waiver is valid for six months from the date of this letter, despite any future variations to the fees as listed in the Guideline.

The Coordinator-General reserves the right to recover costs up to the maximum of the original relevant fee if additional costs are incurred by the Coordinator-General to assess the SDA application.

If you require any further information, please contact Sally Wotley, Senior Project Officer, Office of the Coordinator-General at Sally.Wotley@coordinatorgeneral.qld.gov.au or on (07) 3307 6191, who will be pleased to assist.

Yours sincerely

David Stolz
Assistant Coordinator-General
Planning and Services
(as delegate of the Coordinator-General)

1 William Street
Brisbane Queensland 4000
PO Box 15517
City East Queensland 4002
Telephone 13 QGOV (13 74 68)
Website www.statedevelopment.qld.gov.au
ABN 29 230 178 530

TfA Ref: 23043
OCG Ref: OUT24-1396

2 May 2024

The Office of the Coordinator General
PO Box 15517
City East QLD 4002

ATTN: Sally Wotley

Dear Sally,

Re: Response to Information Request; Material Change of Use for a Medium Impact Industry, Service Station, Transport Depot and Office at 1 Colinta Road, Stuart – Described as Lot 21 SP341874

On behalf of Port Access Pty Ltd, we hereby respond to all information requested by the Coordinator General on 19 April 2024.

In support of this response, we attach the following appendices:

- **Appendix A** – Updated DA Drawing, prepared by TfA Project Group;

For the purposes of responding to the information requested by the Coordinator General, we have provided the details of the information request and associated response within the below table.

Further Information Requested	Development Response
Transport Impacts	
1. Site Access The site plan (23043-D02) dated 10 October 2023 indicates a left turn lane along Heleen Downs Road turning into the subject site. While it is noted that the plans are indicative only, it is unclear whether the turn lane is a channelised turn or a trap lane. In accordance with the Townsville SDA Development Scheme, development is required to be designed to ensure it does not unduly impact on the safe and efficient operation of transport infrastructure. Clarification on how this lane interacts with the Port Access Road is required to ensure there are no impacts to the safety and efficiency of the State-controlled road. The proponent is requested to provide updated plans indicating the full extent of the turn lane to demonstrate how this lane interacts with the intersection of the Port Access Road / Heleen Downs Road.	Please find attached updated DA Drawing (23043-D15) nominating the full extent of the turn Lane into the site from Heleen Downs Road. As nominated within the provided drawing, the proposal is to comprise a channelised turn lane into the site from Heleen Downs Road, in order to separate heavy vehicles accessing the site from the primary transport route into the industrial estate. Accordingly, the following is considered in relation to this access arrangement: • The turnlane is largely anticipated to make use of the wide shoulder established by the developer, minimising potential road works for the establishment of the lane; • The separated turning arrangement into the site from Heleen Downs Road is considered to minimise potential operational impacts (ie. queuing), which in turn is expected to reduce potential operational impacts to the Port Access Road; • The full extent of the turn lane is understood to be located over 100m from the State Controlled Intersection in accordance with the Development Assessment Mapping System (DAMS), as published with the QLD Gov. Based on the above, the proposed channelised turn lane is anticipated to reduce the impact of vehicle movements accessing the site from Heleen Downs Road.

This response comprises our formal response to the Coordinator General's information request. We hereby respectfully request the Coordinator General continue with their assessment of the subject development application.

Please contact myself on (07) 3854 2909, or via email at jacob.mcrae@tfa.com.au should you require any additional information or have any questions in relation to the above.

Yours faithfully,

Jacob McRae
Town Planner
BRTP, MPIA
For and on behalf of TfA Project Group

Reviewed by,

John Rowell
Director / Principal Town Planner
BA, MURP, MPIA
For and on behalf of TfA Project Group

APPENDIX A – UPDATED DA DRAWING

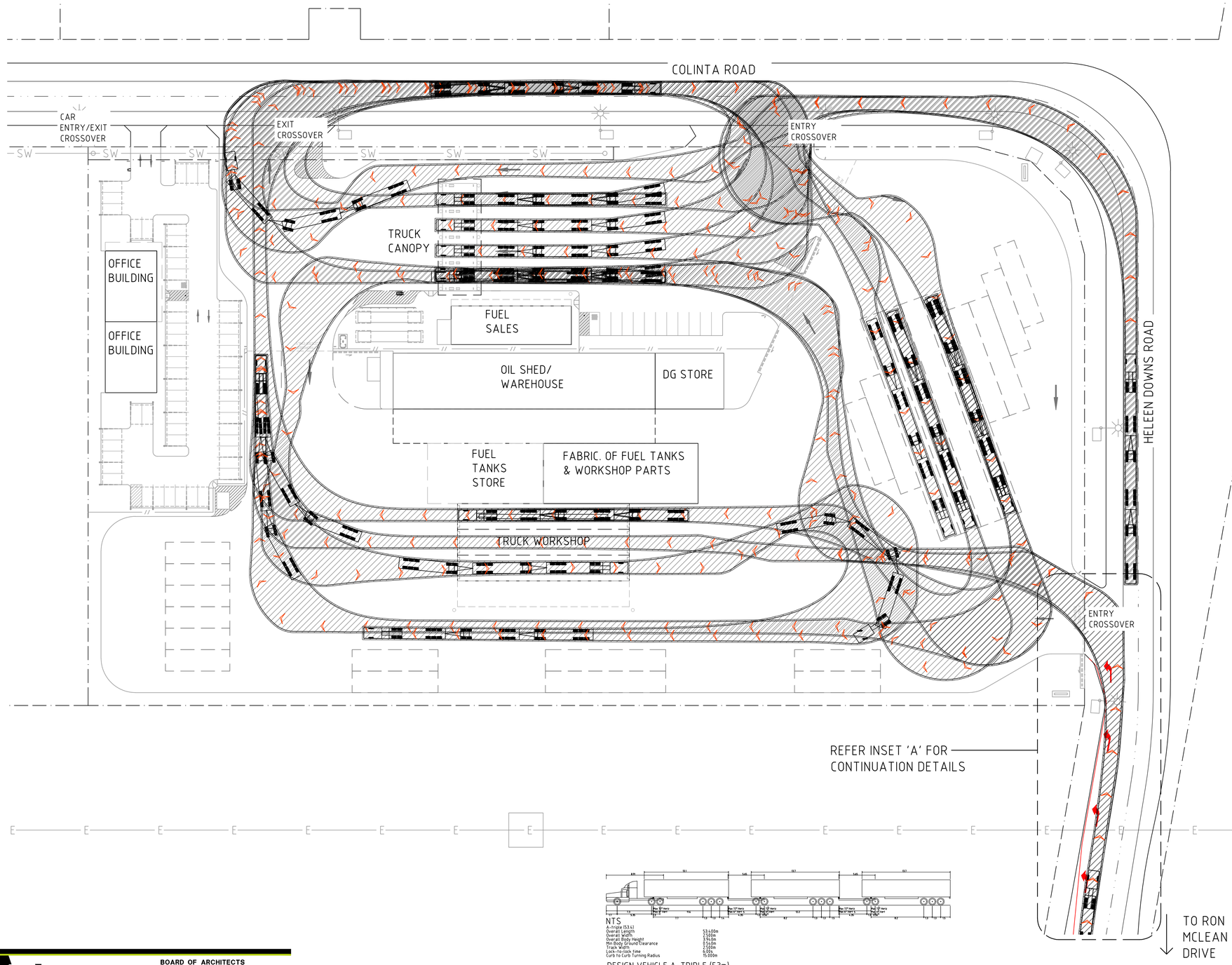
RPD
PROPOSED LOT 21 ON SP273456
CNR HELEEN DOWNS ROAD
& NEW ROAD

LGA: TOWNSVILLE CITY COUNCIL

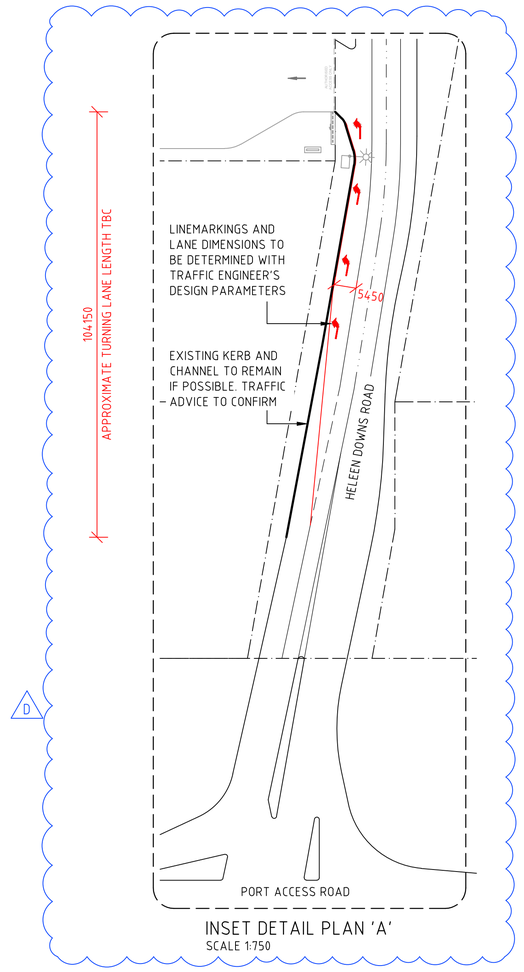
PROP LOT AREAS: 3.0ha

NOTES

1. SITE LAYOUT HAS BEEN BASED ON A BOUNDARY SITE SURVEY FROM ROWLANDS SURVEYS 43942/21 REV 'B' DATED 23/06/2023.
2. FINAL EXISTING SERVICES TO BE CONFIRMED AT DETAIL DESIGN STAGE.
3. SITE LAYOUT TO BE ADVISED BY TRAFFIC CONSULTANT AND TOWN PLANNING.
4. DEVELOPER TO CONFIRM ACCESS COMPLIANCE FOR A-TRIPLE TO SURROUNDING ROADS.



DESIGN VEHICLE A-TRIPLE (53m)



INSET DETAIL PLAN 'A'
SCALE 1:750

0 10 20 30 40 50m

SCALE 1:500

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ARCHITECTS REGISTRATION BOARD OF VICTORIA : 800738

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

TfA Project Group

DRAWING ISSUE APPROVAL

NAME: DATE:

PROFESSIONAL QUALIFICATION:

SIGNATURE:

Head office - Brisbane Ph: 61 7 3854 2900
166 Knapp Street, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Aust Wide: 1300 794 300

REV	DATE	BY	DESCRIPTION	CHK	APP
A	13.10.23	DGC	PRELIMINARY ISSUE		
B	13.11.23	AW	ISSUED FOR INFORMATION	PS	
C	29.04.24	DGC	DA REVISION	PS	
D	02.05.24	DGC	DA AMENDMENTS	PS	

PROJECT DETAILS

PROPOSED MAIN FACILITY
PORT ACCESS PTY LTD.
LOT 21
CLEVELAND BAY INDUSTRIAL PARK
TOWNSVILLE, QLD, 4811

DRAWING TITLE

TRUCK TURNING PATH A-TRIPLE

STATUS

DA ISSUE

DATE CREATED	ORIGINAL SCALE	SHEET
10.10.23	1:500	A1

DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SITE.

DRAWING NO	REV
23043-D15	D