CHARTERS TOWERS
REGIONAL COUNCIL

20 July 2023

Our Ref: 4812592
File Ref: MCU2022/0005
Enquiries: Jorja Feldt

Shri Vikavas Mataji Pty Ltd
C/- Viva Property Group Pty Ltd
PO Box 419
**INDOOROOPILLY QLD 4068**

**Sent via email: *info@vivapropertygroup.com.au***

Dear Sir/Madam,

**Decision Notice – Approval**
(Given under Section 63 of the *Planning Act 2016*)

The assessment manager wishes to advise that the application was approved by Council at the General Meeting on 19 July 2023. The approval is subject to reasonable and relevant conditions and supported by a notice of reasons as detailed below:

## Applicant details

| | |
|---|---|
| Applicant name: | Shri Vikavas Mataji Pty Ltd C/- Viva Property Group Pty Ltd |

## Location details

| | |
|---|---|
| Street address: | 112-118 Mosman Street, Charters Towers City QLD 4820 |
| Real property description: | Lots 304-308 on CT1834 |
| Current lawful use: | Dwelling House |

## Application details

| | |
|---|---|
| Application number: | MCU2022/0005 |
| Approval type: | Development Permit |
| Development type: | Material Change of Use |
| Category of assessment: | Impact Assessment |
| Description of development: | Service Station and Food and Drink Outlet |
| Categorising instrument: | Charters Towers Regional Town Plan Version 2 |

## 1. Details of the approval

Details of the approval are listed below in accordance with the *Planning Regulation 2017.*

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | Planning Regulation 2017 reference | Development Permit | Preliminary Approval |
|---|---|---|---|
| Development assessable under the planning scheme, a temporary local planning instrument, a master plan or a preliminary approval which includes a variation approval | | ☒ | ☐ |

## 2. Conditions of approval

| Condition Number | Condition | Timing |
|---|---|---|
| **Approved Plans/Documents** | | |
| 1) | Development is to be carried out generally in accordance with the submitted application including the following plans and supporting documentation except where amendments are required to satisfy the conditions of this approval: | At all times |

| Drawing Title: | Prepared by: | Date: | Reference No: |
|---|---|---|---|
| Proposed Site Plan | Verve | 29/11/22 | 21197-DA02 Rev B |
| Proposed Floor Plan | Verve | 24/03/22 | 21197-DA03 Rev A |
| Building Elevations and Perspectives | Verve | 25/11/22 | 21197-DA04 Rev B |
| Building Elevations and Perspectives | Verve | 25/11/22 | 21197-DA05 Rev B |
| Concept Stormwater Drainage Layout Plan | Inertia Engineering | 15/06/23 | SK001 Rev C |
| Concept Bulk Earthworks Layout Plan | Inertia Engineering | 16/03/22 | SK002 Rev A |
| Concept Services Layout Plan | Inertia Engineering | 15/06/23 | SK003 Rev C |

And supporting documents:

| Drawing Title: | Prepared by: | Date: | Reference No: |
|---|---|---|---|
| Service Station, 112 & 118 Mosman Street, Charters Towers | SEG Pty Ltd | 10/11/22 | 220621D02 |
| Engineering Services Report | Inertia Engineering | 7/01/22 | 970 |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| **General** | | |
| 2) | The applicant is to:<br>a) Comply with all conditions within this Development Permit with conditions prevailing over the approved plan(s) and document(s) in all instances<br>b) Meet the cost of all works associated with the development including any alterations, relocations or repairs to damaged Council infrastructure, and<br>c) All repairs, alterations and relocations of Council infrastructure are to be in accordance with the relevant Council policy and/or Australian Standard. | At all times |
| **Currency of approval** | | |
| 3) | This approval, granted under the provisions of the *Planning Act 2016*, shall lapse six (6) years from the day the approval takes effect in accordance with the provisions of 85 of the Planning Act 2016. | At all times |
| **Amalgamation of Lots** | | |
| 4) | Amalgamate Lots 304-308 on CT1824 into one lot. | Prior to the commencement of the use |
| **Environmental** | | |
| 5) | The applicant is to ensure that erosion and sedimentation control management is undertaken and maintained to prevent soil erosion and sedimentation runoff to watercourses and Council's stormwater drainage system. Erosion and sediment control is to be in accordance with *Sediment Control – Engineering Guidelines for Queensland 1996 (Construction Sites)* and the *Queensland Urban Drainage Manual 2013*. | At all times |
| 6) | The construction of the development (not operation) must be limited to 0630—1830 Monday to Saturday and not at all on Sunday and public holidays, unless otherwise approved by Council. Noise generated from construction must be within the limits set by the *Environmental Protection Act 1994* and the *Environmental Protection (Noise) Policy 2008*. | At all times |
| 7) | The applicant is to ensure that:<br>d) Works occur so they do not cause unreasonable interference with the amenity of adjoining premises because of noise, air or other chemical pollutants;<br>e) The premises including the adjoining Council controlled road reserve are kept in a safe, clean and tidy state; and<br>f) All construction materials are contained wholly within the premises. | As part of construction |
| 8) | Where contaminated soils are evident, remedial works must be undertaken in accordance with *Environmental Protection Act 1994*. Where contaminated soils are identified, Council must be notified and provided with an appropriate Contaminated Soil Remedial Plan. | As part of construction |
| 9) | Where contaminated soils are evident, remedial works must be undertaken in accordance with *Environmental Protection Act 1994*. Where contaminated soils are identified, Council must be notified and provided with an appropriate Contaminated Soil Remedial Plan. | As part of Operational and/or Building Works |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| **Building, Plumbing and Drainage Works** | | |
| 10) | Obtain a Development Permit and Building Final for Building Works in accordance with the *Planning Act 2016*. Construction is to comply with the *Building Act 1975*, the *National Construction Code* and the requirements of other relevant authorities. | Prior to construction |
| 11) | Obtain a Permit for Plumbing and Drainage Works and Final Inspection Certificate in accordance with the *Plumbing and Drainage Act 2018* and the *Plumbing and Drainage Regulation 2019*. Construction is to comply with the *National Construction Code: Volume Three – Plumbing Code of Australia 2019*, the *Queensland Plumbing and Waste Water Code 1: 2019* and the requirements of other relevant authorities. | Prior to construction |
| 12) | Retaining walls must receive a surface treatment such as rendering to maintain the visual amenity of the streetscape. The treatments must complement the developments colour pallet. | As part of construction |
| **Liquid Waste Disposal** | | |
| 13) | Lodge, have approved and construct a Trade Waste System on site in accordance with:<br>a) S0069/CCS - Trade Waste Environmental Management Policy;<br>b) STRAT0071/CCS - Charters Towers Trade Waste Environmental Management Plan; and<br>c) *Water Supply (Safety and Reliability) Act 2008*. | Prior to construction |
| **Air-Conditioning, Plant and Machinery Screens** | | |
| 14) | All plant and equipment (including air conditioners, exhaust fans and the like) are to be housed, screened and located so that these do not cause environmental nuisance or harm to residential uses in the surrounding area. | As part of construction |
| **Lighting and Amenity** | | |
| 15) | Design, position and direct any outdoor lighting so that all lighting complies with AS4282 - Control of the obtrusive effects of outdoor lighting. The installation of external lighting must be certified by a suitably qualified person in accordance with AS4282 - Control of the obtrusive effects of outdoor lighting, all to the satisfaction of the Chief Executive Officer. | As part of construction and at all times |
| **Acoustic Treatments** | | |
| 16) | A screen fence of a minimum height of two (2) metres must be provided along the north, west and southern boundary of the site. The fence must be designed to protect the amenity of adjoining residential uses and assist with noise attenuation, to the satisfaction of the Chief Executive Officer. Details of the fence are to be consistent with the Noise Assessment and are to be included in the Landscape Plan prepared for the development. | At all times |
| 17) | All vehicle access ramps must be smooth and free from discontinuities. All water grates must be bolted/clamped down to avoid rattling noise. | At all times |
| **Damage to Infrastructure** | | |
| 18) | Repair any damage to existing kerb and channel, footway or roadway (including removal of concrete slurry from footways, roads, kerb and channel and stormwater gullies and drain lines) that may occur during and works carried out in association with the construction of the approved development. | As part of construction |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| **On-street works** | | |
| 19) | The on-street car parking must be designed in accordance with AS2890.5:2020 Parking facilities Onstreet parking, including parking bay dimensions, line marking and signage. The parking design must be certified by a suitably qualified RPEQ Engineer. | Prior to the commencement of the use |
| **Transport and Access** | | |
| 20) | A total of 21 car parking spaces are to be constructed on site generally in accordance with the approved plans, including designated accessible car parking space. These spaces and all vehicle movement areas are to be constructed, sealed, line marked, provided with wheel stops and maintained in accordance with and *AS2890.1 Off-Street Car Parking* and the *Manual of Design Vehicles and Turning Path Templates SAA HB 72 (AUSTROADS 1995)*. | As part of construction |
| 21) | A total of 4 bicycle spaces are to be constructed onsite. All bicycle spaces are to be constructed in accordance with AS2890.3 Bicycle Parking Facilities and Guide to Traffic Engineering Practice, Part 14 – Bicycles (AUSTROADS 1999). | As part of construction |
| 22) | Lodge and obtain approval for an application to carry out public access as part of works within the Council controlled road reserve. | Prior to works within Council's road reserve |
| 23) | Construct driveway crossovers at the frontage of Mosman Street in accordance with Council's standard drawing *CTRC-004 Roads commercial and/or truck layout.* | As part of construction |
| 24) | Construct a concrete footpath along the Mosman Street frontage of the site to match the existing footpath in accordance with Council's Standard Drawing CTRC-006 Roads cross section footpath types. The new footpath must match neatly to the existing footpath at both extents in relation to alignment and grade. | As part of construction |
| 25) | Remove redundant crossovers and replace with kerb and channel. | As part of construction works |
| 26) | All loading activities associated with the use must be carried out within the site. | As part of construction works |
| **Water and Sewer** | | |
| 27) | Where changes are required to water service connections and water meters, lodge and have approved, an application for connection to water supply. Upon approval, construct the changes to water services and meters. | Prior to works on Council's water infrastructure |
| 28) | Where changes are required to sewer supply connections, lodge and have approved an application for sewer main cut-in. Upon approval, construct the changes to sewer supply connections. No part of the proposed building is to be constructed over the existing sewer main. | Prior to works on Council's sewer infrastructure |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| **Stormwater** | | |
| 29) | All stormwater runoff must be piped from roofed areas and discharged to the drainage system within Council controlled land located north of Marion Street as detailed in the approved plans. All stormwater management must be undertaken in accordance with *Queensland Urban Drainage Manual 2016* and *AS3500.3:2018 Plumbing and Drainage - Stormwater Drainage*.<br><br>This condition is imposed under section 145 of the Planning Act 2016 (Qld). | At all times |
| 30) | The proposed development must not create ponding nuisances and/or a concentration of stormwater flows to adjoining properties. | At all times |
| **Plan of Drainage Works** | | |
| 31) | Design and construct, at no cost to Council, all necessary stormwater management and drainage works (internal and external to the site) required to satisfactorily drain the subject land. Detailed design drawings are to be provided to Council for approval. | As part of construction |
| **Waste Management** | | |
| 32) | Waste storage area/s are to be sufficient in size to house all waste collection containers including recycling waste containers. The waste storage area/s must be suitably enclosed and imperviously paved, with a hose cock and hose fitted near the enclosure to ensure the area can be easily and effectively cleaned. | As part of construction |
| 33) | Waste storage areas shall be;<br>a) Situated in locations not visible from the street front; and<br>b) Provided with a 1.8m solid screen fence located around storage areas. | As part of construction |
| 34) | Sealed and raised bunding is to be constructed around all holding tanks and forecourt areas on which a vehicle can stand while being fuelled or transferring petroleum products. | As part of construction |
| 35) | Drainage from paved forecourt areas and areas on which a vehicle can stand while being fuelled or transferring petroleum products, shall be directed by appropriate surface grading into grated sumps, where it is treated in an approved manner or held and removed by an approved contractor. | As part of construction |
| 36) | Waste removal must only occur between the hours of 7am and 7pm to avoid the potential for noise impacts on neighbouring properties at night. | At all times |
| **Environmental Health** | | |
| 37) | A Food Business Application is to be submitted to Council for approval in accordance with the *Food Act 2006*. | Prior to serving food on premises |
| **Landscaping** | | |
| 38) | Submit to Council for approval a Landscaping Plan prepared by a suitably qualified consultant which demonstrates:<br>a) All areas proposed to be landscaped;<br>b) The Species used and their suitability for the North Queensland climate; and<br>c) The type of irrigation system used.<br><br>Upon approval of the Landscaping Plan, construct the landscaping. | Prior to the lodgement of any subsequent Development Applications |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| 39) | Construct all landscaping including species in accordance the approved plans. All landscaping is to be provided with an onsite irrigation system. | Prior to the commencement of the use |
| 40) | Landscaped areas adjoining the new hardstand area must be protected by a 150mm high vertical concrete kerb or similar obstruction. The kerb must be set back from the garden edge sufficiently to prevent vehicular encroachment and damage to plants by vehicles. | Prior to the commencement of the use |
| **Lawful Commencement** | | |
| 41) | Request a Compliance Inspection be undertaken by Council to confirm that all conditions of this Development Permit are considered compliant. | Prior to the commencement of the use |
| 42) | Notify Council within 20 business days that this approved use has lawfully commenced. | Prior to the commencement of the use |

| | |
|---|---|
| **Advisory Notes** | |
| **Scale or Intensity of Use** | |
| A. | Any proposal to increase the scale or intensity of the use/new use on the subject land, that is assessable development under the Planning Scheme, would be subject to a separate application for assessment in accordance with the *Planning Act 2016* and would have to comply with the requirements of the relevant provisions. |
| **Staging of Development** | |
| B. | The development as approved is not staged. Where staging is sought, a Change Application under Section 78 of the *Planning Act 2016*. |
| **Local and State Heritage** | |
| C. | The Charters Towers Regional Council local government area contains significant Local and State heritage features including stone pitch kerbing and channels and footbridges. Persons damaging or removing Local or State heritage features may be prosecuted and fined with the maximum penalty under the *Planning Act 2016.* Please contact Council prior to commencing any works, to determine if there are any Local or State heritage features within or adjacent to the premises. |
| **Aboriginal and Cultural Heritage** | |
| D. | The *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003* requires anyone who carries out a land-use activity to exercise a duty of care. Land users must take all reasonable and practicable measures to ensure their activity does not harm Aboriginal or Torres Strait Islander cultural heritage. Prior to carrying out works, it is advised that you contact the Department of Aboriginal and Torres Strait Islander Partnerships on (07) 4799 7470 or by post at PO Box 5620 TOWNSVILLE QLD 4810. For further information on cultural heritage duty of care please visit: https://www.datsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage/cultural-heritage-duty-care |
| **Abandoned Mine Shafts** | |
| E. | The city of Charters Towers is subject to a significant number of abandoned mine shafts due to the former gold rush era. It is recommended that all searches be undertaken through the Queensland State Government's Department of Resources (DoR) to ensure that the development is not unduly impacted upon by these shafts. The DoR can be contacted on 13 74 68. |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | |
|---|---|
| **Workplace Health and Safety** | |
| F. | Ensure compliance with the *Work Health and Safety Act 2011*. It states that the project manager is obliged to ensure construction work is planned and managed in a way that prevents or minimises risks to the health and safety of members of the public at or near the workplace during construction work. It is the principal contractor's responsibility to ensure compliance with the *Work Health and Safety Act 2011*. It states that the principal contractor is obliged on a construction workplace to ensure that work activities at the workplace prevent or minimise risks to the health and safety of the public at or near the workplace during the work. It is the responsibility of the person in control of the workplace to ensure compliance with the *Work Health and Safety Act 2011*. It states that the person in control of the workplace is obliged to ensure there is appropriate, safe access to and from the workplace for persons other than the person's workers. |
| **Environmental nuisance** | |
| G. | Ensure compliance with the *Environmental Protection Act 1994*. It states that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. Environmental harm includes environmental nuisance. In this regard persons and entities, involved in the civil, earthworks and construction phases of this development, are to adhere to their "general environmental duty" to minimise the risk of causing environmental harm.<br><br>Environmental harm is defined by the Act as any adverse effect, or potential adverse effect whether temporary or permanent and of whatever magnitude, duration or frequency on an environmental value and includes environmental nuisance. Therefore, no person should cause any interference with the environment or amenity of the area because of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit, sediment, oil or otherwise, or cause hazards likely in the opinion of the Council to cause undue disturbance or annoyance to persons or affect property not connected with the use. |
| **Ergon Energy and Telstra Corporation Contact Details** | |
| H. | Where a condition requires connections to reticulated electricity and/or telecommunications or a certificate of supply, please contact the below;<br>a) Ergon Energy Connection Solution's Team – (07) 4931 1012, and/or<br>b) NBN Co – 1800 687 626. |
| **Council Forms, Policies and Drawings** | |
| I. | In achieving compliance with conditions, the below Council forms will need to be completed for this development;<br>a) F0339/RI - Application to carry out public access/footpath work<br>b) F0188 – Trade waste application<br>c) F0312/PSD – Application for food business/mobile food business licence<br>d) F0313/IS – Request for water supply connection<br>e) S0069/CCS - Trade Waste Environmental Management Policy, and<br>f) STRAT0071/CCS - Charters Towers Trade Waste Environmental Management Plan.<br><br>In addition, Council's Standard Drawings for roads, driveways and grids can be found at www.charterstowers.qld.gov.au/drawings-specifications. |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

## 3. Currency period for the development application approval

In accordance with section 85 of the *Planning Act 2016*, this approval has a currency period of six (6) years.

## 4. Further development permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

1) Building Works – New Work and Demolition (Dwelling House)
2) Plumbing and Drainage Works
3) Operational Works – Civil Works

## 5. Referral agencies

Not Applicable.

## 6. Submission(s)

Properly made submissions were made in relation this development. The details of these submissions are included below:

| Name: | Address: | Electronic Address |
|---|---|---|
| Jonathan Fowler and Joan Royal | 122 Mosman Street, Charters Towers | jo.roy@westnet.com.au |

## 7. Notice of reasons

This notice is prepared in accordance with Section 63(5) of the *Planning Act 2016* to inform the public about a decision that has been made in relation to a development application.

| | |
|---|---|
| **Description of the development:** | Development Permit for Material Change of Use for Food and drink outlet and Service Station. |
| **Reasons for the decision:** | The proposed development was assessed against the Charters Towers Regional Town Plan Version 2 and was found to generally comply with the relevant Acceptable and Performance Outcomes. Where compliance was not achieved, the development demonstrated compliance with the Strategic Framework. |
| **Assessment benchmarks:** | The proposed development was assessed against the relevant assessment benchmarks of the Charters Towers Regional Town Plan including the:<br>1) Strategic Framework<br>2) Overlay Codes<br>3) Zone Code<br>4) Development Codes |
| | The proposed development was assessed against all the assessment benchmarks listed about and complies with all with the exceptions listed and responded to below. |

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

| | | |
|---|---|---|
| | **Assessment benchmark:** | **Reasons for the approval despite non-compliance with benchmark:** |
| | NA | NA |
| **Relevant matters:** | The assessment did not have regard to any relevant matters as per section 45(5)(b) of the Planning Act 2016. | |
| **Matters raised in submissions:** | **Submission Point:** | **Council Response:** |
| | The submission raises concern with the 24 hour operation of the development (both Service station and Food and drink outlet aspects) and the impact noise will have on their quality of life. | The application to Council included a Noise Assessment that includes recommendations relating to design aspects such as plant and equipment siting and design. Relevant conditions have been included in the recommendation to reflect the recommendations of this study which will ensure surrounding amenity is maintained. |
| | The submission questions the method by which payment for 24 hour fuel will be made. i.e. via a payment terminal or within the Service station building. | The plans of development do not detail a payment terminal and payment will be required within the Service station building. |
| | The submission questions the location of the fuel vents. | The fuel vents were shown at the south-western section in the initial application; however, were moved to the Mosman Street frontage in response to the Information Request. |
| | The submission questions the public notification process, specifically the notification of adjoining land owners. | The applicant has provided a notice of compliance stating that all required public notification aspects were undertaken as required. |
| | The submission questions the material type of the proposed boundary fencing. | A condition has been recommended which requires a further Landscaping Plan be submitted. The Plan will need to detail all fencing proposed. |

## 8. Other requirements under section 43 of the *Planning Regulation 2017*

There are no other requirements.

## 9. Appeal rights

The rights of an applicant to appeal to a tribunal or the Planning and Environment Court against a decision are set out in Chapter 6, Part 1 of the *Planning Act 2016*. For particular applications, there may also be a right to make an application for a declaration by a tribunal (see Chapter 6, Part 2 of the *Planning Act 2016).* Information about how to proceed with an appeal to the Planning and Environment Court may be found on the Court's website: http://www.courts.qld.gov.au/courts/planning-and-environment-court.

An applicant may also have a right to appeal to the Development tribunal. For more information, see schedule 1 of the *Planning Act 2016*. The timeframes for starting an appeal in the Planning and Environment Court are set out in Section 229 and Schedule 1 of the *Planning Act 2016*.

CHARTERS TOWERS
REGIONAL COUNCIL

Date: 20 July 2023
Our Ref: 4812592

Should you wish to discuss this matter, please contact Jorja Feldt, Planner on (07) 4761 5300 or email development@charterstowers.qld.gov.au.

Yours faithfully

M. Drydale

Martin Drydale
**Chief Executive Officer**

Enc. Approved Plans
Appeal Rights
Supporting Documents

PO Box 189 Charters Towers Qld 4820
**ADMINISTRATION:** 12 Mosman Street Charters Towers Qld 4820 Australia
**PH.** (07) 4761 5300 | **F.** (07) 4761 5344 | **E.** mail@charterstowers.qld.gov.au | **ABN.** 67 731 313 583
www.charterstowers.qld.gov.au

D.A ISSUE


## PROPERTY DESCRIPTION

LOT 304-308 on CT1824
COUNTY: DAVENPORT
COUNCIL: CHARTERS TOWERS REGIONAL

## DEVELOPMENT ASSESSMENT

| | |
|---|---|
| TOTAL SITE AREA | - 3,325m² |
| LANDSCAPE AREA | - 425m² |
| SITE COVER (INCLUDES ALL ROOFED AREAS) | - 29% |

### IMPERVIOUS AREA

| | |
|---|---|
| • EXISTING (APPROX) | - 300m² |
| • PROPOSED | - 2,900m² |

### BUILDING AREAS

| | |
|---|---|
| • T1 - SERVICE STATION | - 232m² |
| • T2 - FOOD & DRINK OUTLET | - 198m² |
| TOTAL BUILDING GFA | - 430m² |

### MISCELLANEOUS STRUCTURES

| | |
|---|---|
| • CAR FUEL FORECOURT (UNENCLOSED BUILDING FOOTPRINT) | - 465m² |
| • T1 REFUSE ENCLOSURE | - 20m² |
| • T2 REFUSE ENCLOSURE | - 14m² |
| • SERVICE CORRIDOR | - 52m² |
| TOTAL MISC. STRUCTURES AREA | - 551m² |

### CAR PARKING

| | |
|---|---|
| • PARKING REQUIRED | - 28 |
| • PARKING PROVIDED | - 21 |
| • CAR REFUELLING POSITIONS | - 7 |
| • TRUCK REFUELLING POSITIONS | - 2 |

CHARTERS TOWERS REGIONAL COUNCIL
**PLANNING & DEVELOPMENT APPROVED**
**DATE:** 20 July 2023
**APPLICATION:** MCU2022/0005

Consulting Engineer

VERVE BUILDING DESIGN CO.
BUILDING DESIGNERS LICENCE No. 1002212 PH: 07 3857 0942
OFFICE 2, LEVEL 1, 488 LUTWYCHE ROAD, LUTWYCHE QLD 4030 E: info@vervebd.com.au
imagine ▫ create ▫ deliver

- commercial / industrial / retail
- fast food restaurant design
- travel centre / service stations
- project concept to completion



Revision and approvals

| Code | Date | Drn | Description | Dwn |
|---|---|---|---|---|
| A | 24.03.2022 | TD | DA ISSUE | |
| B | 29.11.2022 | GN | ISSUE IN RESPONSE TO COUNCIL I.R' | |

Project Description
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

Drawing Title
PROPOSED SITE PLAN

Scale 1:200 @ A1 / 1:400 @A3
Drawn
Approved
Issued
Drawing Number 21197-DA02
Revision B

D.A ISSUE


NOTE: INTERNAL LAYOUT SHOWN INDICATIVE ONLY.
FINAL LAYOUT TO BE FINALISED ONCE FOOD RETAILER IS CONFIRMED.

## PROPERTY DESCRIPTION

LOT 304-308 on CT1824
COUNTY: DAVENPORT

COUNCIL: CHARTERS TOWERS REGIONAL

## T1 BUILDING USE AREAS

- SHOP/SALES - 98m²
- FUEL CONSOLE - 32m²
- STAFF/OFFICE - 27m²
- STORAGE/BACK OF HOUSE - 25m²
- DRINKS COLDROOM - 40m²
- PUBLIC AMENITIES - 10m²

AREA USE TOTAL - 232m²

## T2 BUILDING USE AREAS

- INDOOR DINING - 60m²
- BACK OF HOUSE - 102m²
- PUBLIC AMENITIES - 20m²
- COLDROOM/FREEZER - 16m²

AREA USE TOTAL - 198m²

## BUILDING SERVICES

- DELIVERY CORRIDOR - 52m²

CHARTERS TOWERS REGIONAL COUNCIL
PLANNING & DEVELOPMENT APPROVED
DATE: 20 July 2023
APPLICATION: MCU2022/0005

Consulting Engineer

VERVE BUILDING DESIGN CO.
BUILDING DESIGNERS LICENCE No. 1002212 PH. 07 3857 0942
OFFICE 2, LEVEL 1, 488 LUTWYCHE ROAD, LUTWYCHE QLD 4030 E: info@vervebd.com.au

imagine ▫ create ▫ deliver

- ▫ commercial / industrial / retail
- ▫ fast food restaurant design
- ▫ travel centre / service stations
- ▫ project concept to completion



Revision and approvals

| Code | Date | Drn | Description | Chk |
|---|---|---|---|---|
| A | 24.03.2022 | TD | DA ISSUE | |
| P1 | 04.03.2022 | TD | DRAFT DA ISSUE | |

Project Description
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

Drawing Title
PROP. FLOOR PLAN

Scale 1:50 @ A1 / 1:100 @A3
Drawn
Approved
Issued

Drawing Number 21197-DA03
Revision A

# DA ISSUE

THIS DRAWING IS NOT FOR CONSTRUCTION

**NOTE**

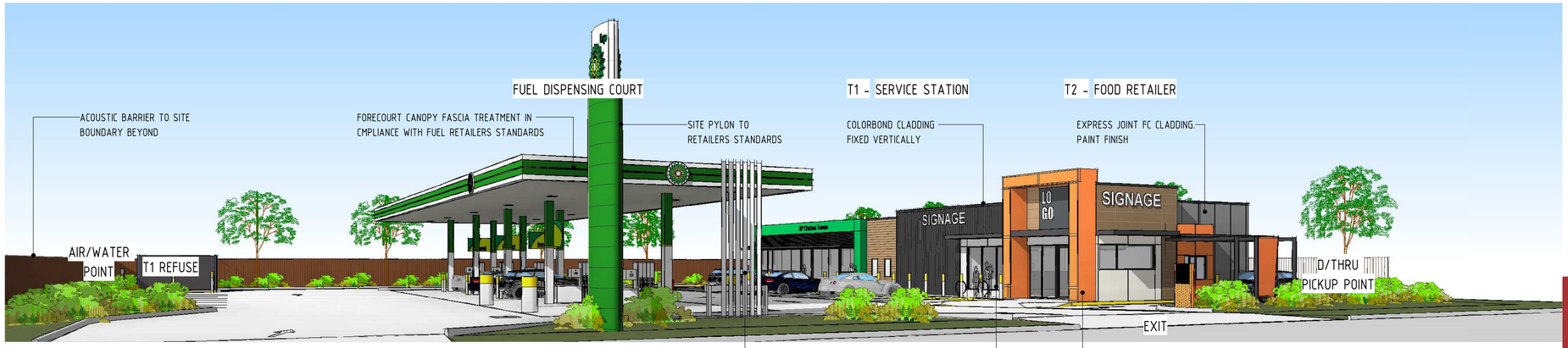
1. ALL EXTERNAL MATERIALS & FINISHES SHOWN INDICATIVE ONLY AND SUBJECT TO FINAL TENANT STANDARDS
2. ALL DIMENSIONS MEASURED FROM FINISHED GROUND FLOOR LEVEL UNLESS NOTED OTHERWISE
3. ALL SIGNAGE INCLUDING LOCATIONS AND HEIGHTS ARE SUBJECT TO A SEPARATE SIGNAGE APPLICATION AND APPROVAL BY LOCAL AUTHORITY
4. LANDSCAPING IS SHOWN FOR "ARTIST IMPRESSION" PUPOSES ONLY. REFERENCE SHOULD BE MADE TO THE LANDSCAPE DRAWINGS PREPARE BY THE RELEVANT CONSULTANT.

CHARTERS TOWERS REGIONAL COUNCIL

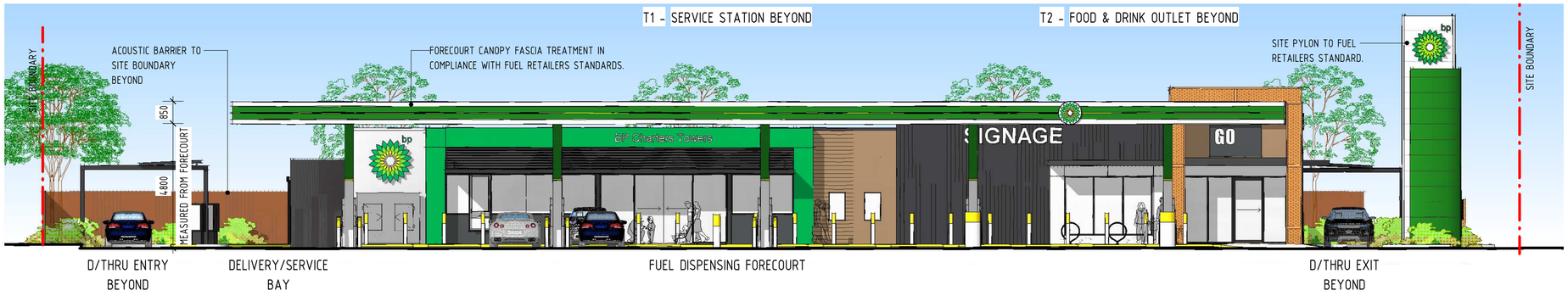
**PLANNING & DEVELOPMENT APPROVED**

**DATE:** 20 July 2023

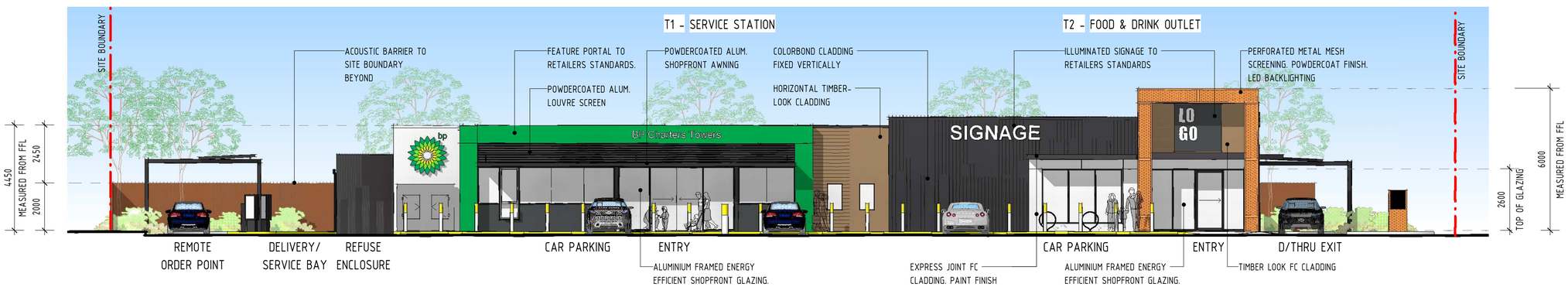
**APPLICATION:** MCU2022/0005




1 PERSPECTIVE 1




2 ELEVATION SOUTH - CANOPY
1 : 100




3 ELEVATION SOUTH - SHOPFRONT
1 : 100

THIS DRAWING PACKAGE IS FOR D.A. PURPOSES ONLY AND IS NOT TO BE USED FOR TENDER PURPOSES.
ALL DESIGN COMPONENTS ARE SHOWN INDICATIVE ONLY AND ARE SUBJECT TO FINAL DESIGN DURING DETAILED DESIGN BY THE RESPECTIVE CONSULTANT.
ANY PRICING BASED UPON THE DETAILS SHOWN IN THESE DRAWINGS ARE COMPLETELY AT THE RESPONSIBILITY OF THE TENDERER.
VERVE BUILDING DESIGN CO. SHALL NOT BE HELD RESPONSIBLE FOR ANY REQUIRED CHANGES OR UPDATES TO THE DESIGN, POST D.A. THAT ARE PRICE IMPACTED.

**VERVE SCHEDULES DISCLAIMER:**

1. ALL SCHEDULES SHOULD BE CHECKED WITH THE REMAINDER OF THE DRAWING SET.
2. SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES.
3. ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR NOTED.
4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE

CONSULTING ENGINEER

VERVE BUILDING DESIGN CO.
QBCC LICENCE No. 1236672
OFFICE 1, LEVEL 1, 488 LUTWYCHE RD, LUTWYCHE 4030
PH. (07) 3857 0942
E: info@vervebd.com.au

imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion



**Revision and approvals**

| Rev | Date | Drn | Description | Appr |
|---|---|---|---|---|
| P1 | 04.03.2022 | DM | DRAFT DA ISSUE | |
| A | 24.03.2022 | TD | DA ISSUE | |
| B | 25.11.2022 | AC | RESPONSE TO COUNCIL I. R. | |

**Project Description**
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

**Drawing Title**
BUILDING ELEVATIONS & PERSPECTIVES

Scale @A1: As indicated
Date: MARCH 2022
Drawn: DM
Approved By: GN

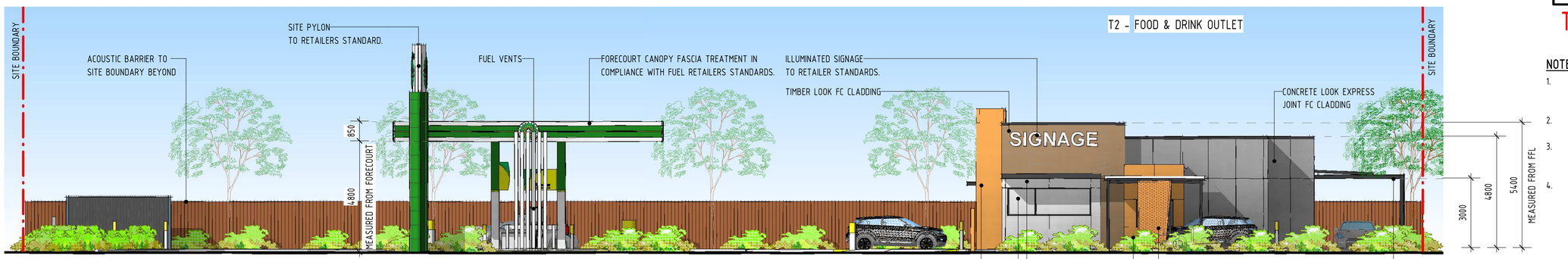
Job Number - Drawing Number: 21197 DA04
Revision: B

# DA ISSUE

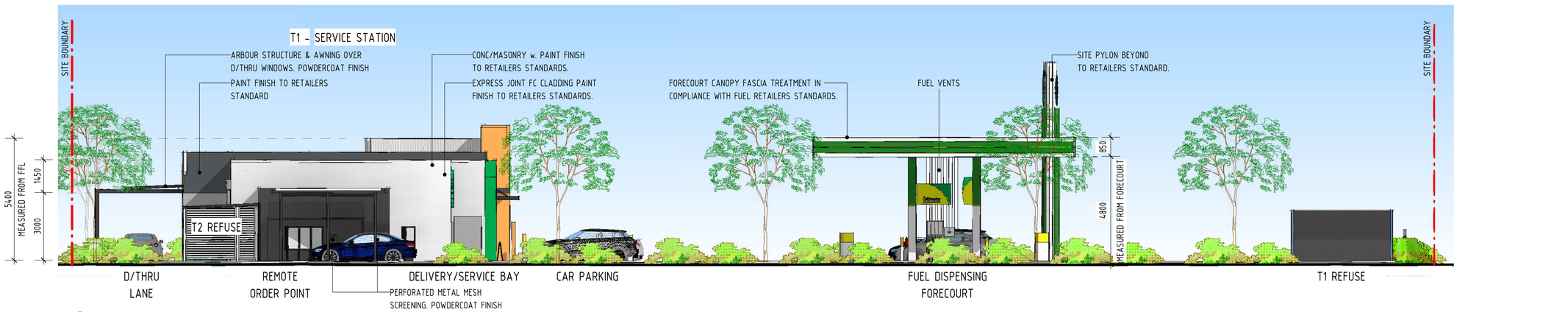
## THIS DRAWING IS NOT FOR CONSTRUCTION

**NOTE**

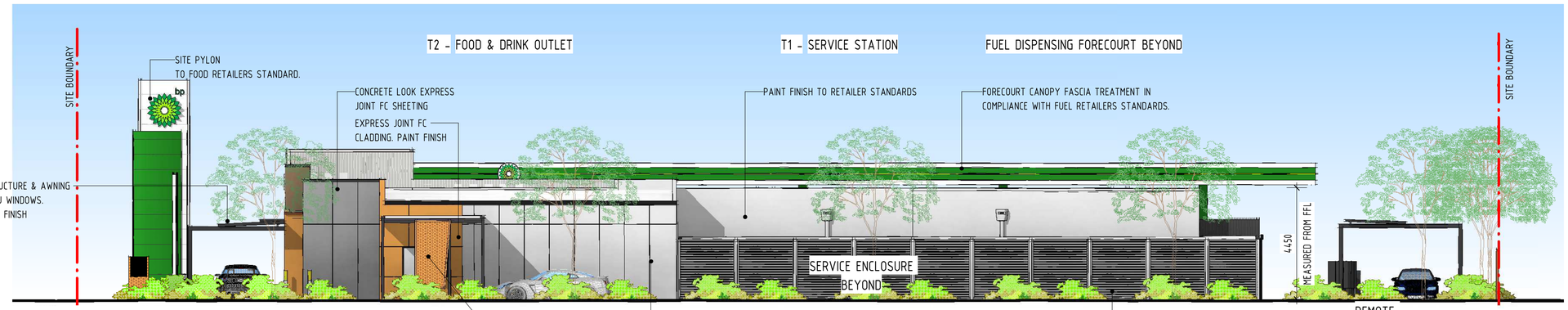
1. ALL EXTERNAL MATERIALS & FINISHES SHOWN INDICATIVE ONLY AND SUBJECT TO FINAL TENANT STANDARDS
2. ALL DIMENSIONS MEASURED FROM FINISHED GROUND FLOOR LEVEL UNLESS NOTED OTHERWISE
3. ALL SIGNAGE INCLUDING LOCATIONS AND HEIGHTS ARE SUBJECT TO A SEPARATE SIGNAGE APPLICATION AND APPROVAL BY LOCAL AUTHORITY
4. LANDSCAPING IS SHOWN FOR "ARTIST IMPRESSION" PUPOSES ONLY. REFERENCE SHOULD BE MADE TO THE LANDSCAPE DRAWINGS PREPARE BY THE RELEVANT CONSULTANT.




1 ELEVATION EAST
1 : 100




2 ELEVATION WEST
1 : 100




3 ELEVATION NORTH
1 : 100

**PLANNING & DEVELOPMENT APPROVED**
CHARTERS TOWERS REGIONAL COUNCIL
**DATE:** 20 July 2023
**APPLICATION:** MCU2022/0005

THIS DRAWING PACKAGE IS FOR D.A. PURPOSES ONLY AND IS NOT TO BE USED FOR TENDER PURPOSES.
ALL DESIGN COMPONENTS ARE SHOWN INDICATIVE ONLY AND ARE SUBJECT TO FINAL DESIGN DURING DETAILED DESIGN BY THE RESPECTIVE CONSULTANT.
ANY PRICING BASED UPON THE DETAILS SHOWN IN THESE DRAWINGS ARE COMPLETELY AT THE RESPONSIBILITY OF THE TENDERER.
VERVE BUILDING DESIGN CO. SHALL NOT BE HELD RESPONSIBLE FOR ANY REQUIRED CHANGES OR UPDATES TO THE DESIGN, POST D.A. THAT ARE PRICE IMPACTED.

**VERVE SCHEDULES DISCLAIMER:**

1. ALL SCHEDULES SHOULD BE CHECKED WITH THE REMAINDER OF THE DRAWING SET.
2. SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES.
3. ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR NOTED.
4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE

CONSULTING ENGINEER

VERVE BUILDING DESIGN CO.
QBCC LICENCE No. 1236672
OFFICE 1, LEVEL 1, 488 LUTWYCHE RD, LUTWYCHE 4030
PH: (07) 3857 0942
E: info@vervebd.com.au

imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion



**Revision and approvals**

| Rev | Date | Drn | Description | Appr |
|---|---|---|---|---|
| P1 | 04.03.2022 | GM | DRAFT DA ISSUE | |
| A | 24.03.2022 | TD | DA ISSUE | |
| B | 25.11.2022 | AC | RESPONSE TO COUNCIL I. R. | |

**Project Description**
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

| Scale @A1 | Date |
|---|---|
| As indicated | MARCH 2022 |
| Drawn: DM | Approved By: GN |

**Drawing Title**
BUILDING ELEVATIONS & PERSPECTIVES

| Job Number - Drawing Number | | Revision |
|---|---|---|
| 21197 | DA05 | B |

## LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS) — XX.XX
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- EXISTING SEWERAGE — ExS
- EXISTING WATER — ExW
- EXISTING OVERHEAD ELECTRICITY — ExOH
- DESIGN CONTOURS (AT 0.10m INTERVALS) — XX.XX
- PROPOSED WATER PROOF BUND
- PROPOSED STORMWATER — SWD
- SURFACE FLOW DIRECTION
- PROPOSED BUILDING BY OTHERS
- CONCRETE PAVEMENT EXTENT
- PROPOSED CONCRETE FOOTPATH
- PROPOSED LANDSCAPING
- LAWFUL POINT OF DISCHARGE — LPOD

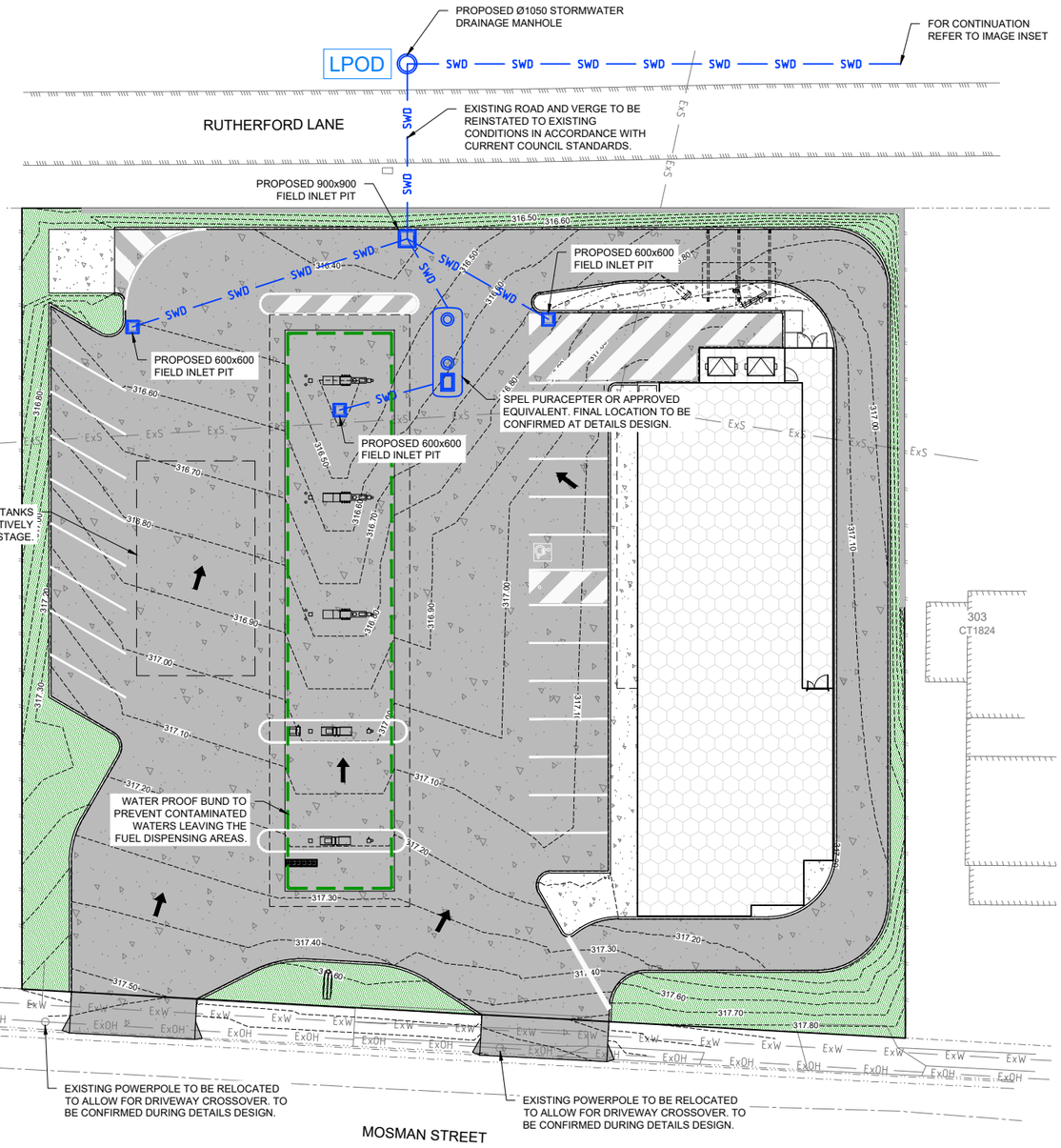




IMAGE INSET
NOT TO SCALE

CHARTERS TOWERS REGIONAL COUNCIL
**PLANNING & DEVELOPMENT APPROVED**
**DATE:** 20 July 2023
**APPLICATION:** MCU2022/0005

FOR APPROVAL

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| C | ISSUED FOR APPROVAL | 15.06.23 | HF | AI |
| B | ISSUED FOR APPROVAL | 04.11.22 | HF | AI |
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP


Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359



SCALE BARS: 0 4 8 12m
SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT 112 MOSMAN STREET CHARTERS TOWERS QLD, 4820

DRAWING TITLE: CONCEPT STORMWATER DRAINAGE LAYOUT PLAN

DESIGNED: K.BETTERIDGE

9970 JOB No.

SK001 DWG. No.

C REVISION

## LEGEND

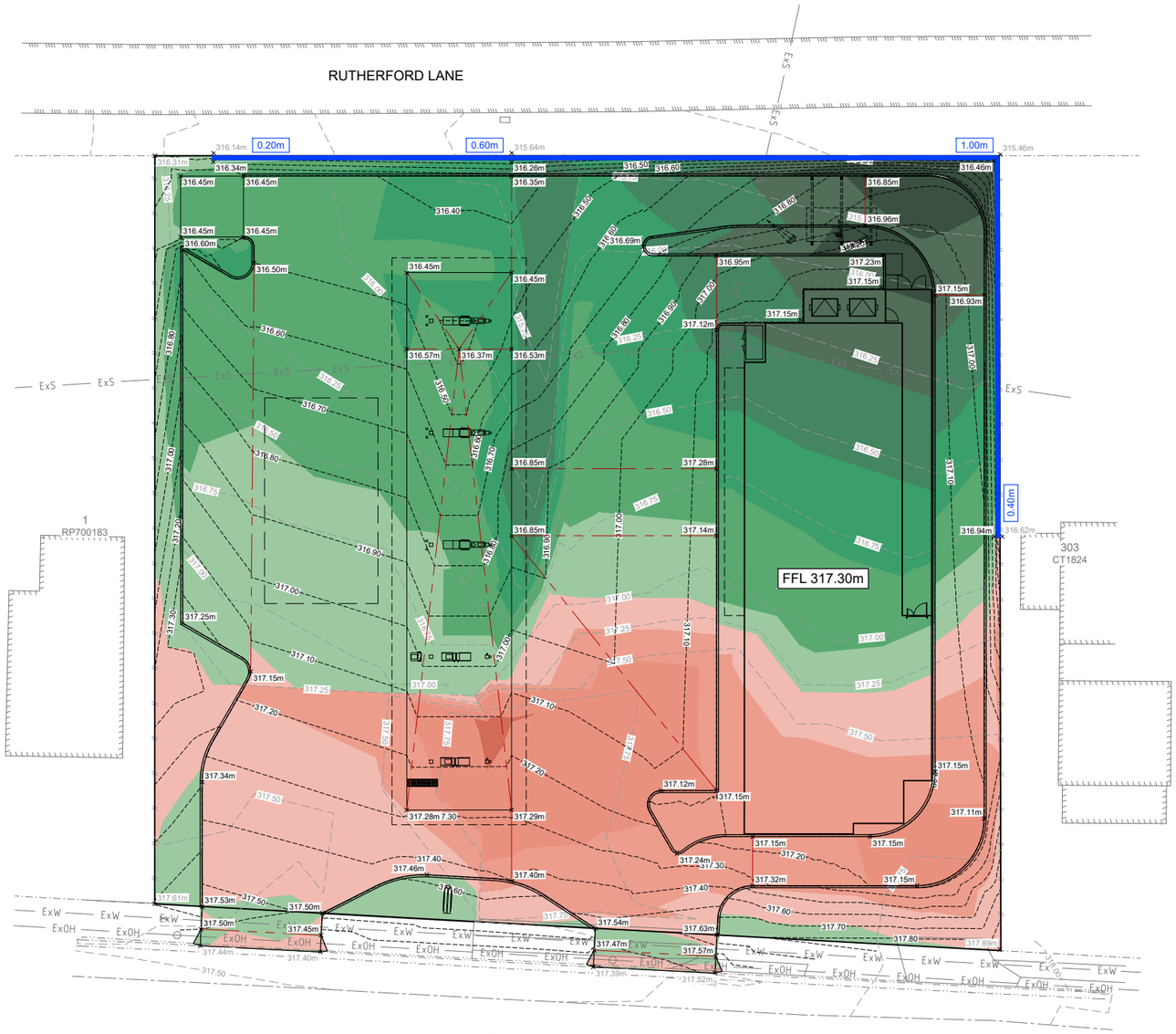
- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- XX.XX EXISTING CONTOURS (AT 0.25m INTERVALS)
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- ExS EXISTING SEWERAGE
- ExW EXISTING WATER
- ExOH EXISTING OVERHEAD ELECTRICITY
- XX.XX DESIGN CONTOURS (AT 0.10m INTERVALS)
- PROPOSED CHANGE OF GRADE
- PROPOSED RETAINING WALL
- XX.XXm × FINISHED SURFACE ELEVATION LABEL
- XX.XXm × EXISTING SURFACE ELEVATION LABEL
- X.XXm PROPOSED RETAINING WALL HEIGHT
- FFL XXX.XXm PROPOSED FINISHED FLOOR LEVEL

## CUT & FILL LEGEND

| EXCAVATION | FILLING |
|---|---|
| 0.01m - 0.25m | 0.01m - 0.25m |
| 0.25m - 0.50m | 0.25m - 0.50m |
| 0.50m - 0.75m | 0.50m - 0.75m |
| 0.75m - 1.00m | 0.75m - 1.00m |
| 1.00m -1.25m | 1.00m - 1.25m |
| 1.25m -1.50m | 1.25m - 1.50m |

## NOTES

- AREAS NOT REQUIRING EARTHWORKS ARE TO REMAIN UNDISTURBED.
- CUT/FILL IS TO ULTIMATE FINISHED INCLUDING TOPSOIL AND ROAD SURFACE AND DOES NOT CONSIDER EXCAVATION NEEDED FOR ROAD PAVEMENTS, TOPSOIL ETC.
- FINAL EXTENTS OF CUT/FILL ARE TO BE DETERMINED BY THE CONTRACTOR ON SITE IN CONJUNCTION WITH THE EARTHWORKS DESIGN.




CHARTERS TOWERS REGIONAL COUNCIL

**PLANNING & DEVELOPMENT APPROVED**

**DATE:** 20 July 2023
**APPLICATION:** MCU2022/0005

PRELIMINARY

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP

Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359


SCALE BARS: 0 4 8 12m
SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT
112 MOSMAN STREET
CHARTERS TOWERS
QLD, 4820

DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN

DESIGNED: K.BETTERIDGE

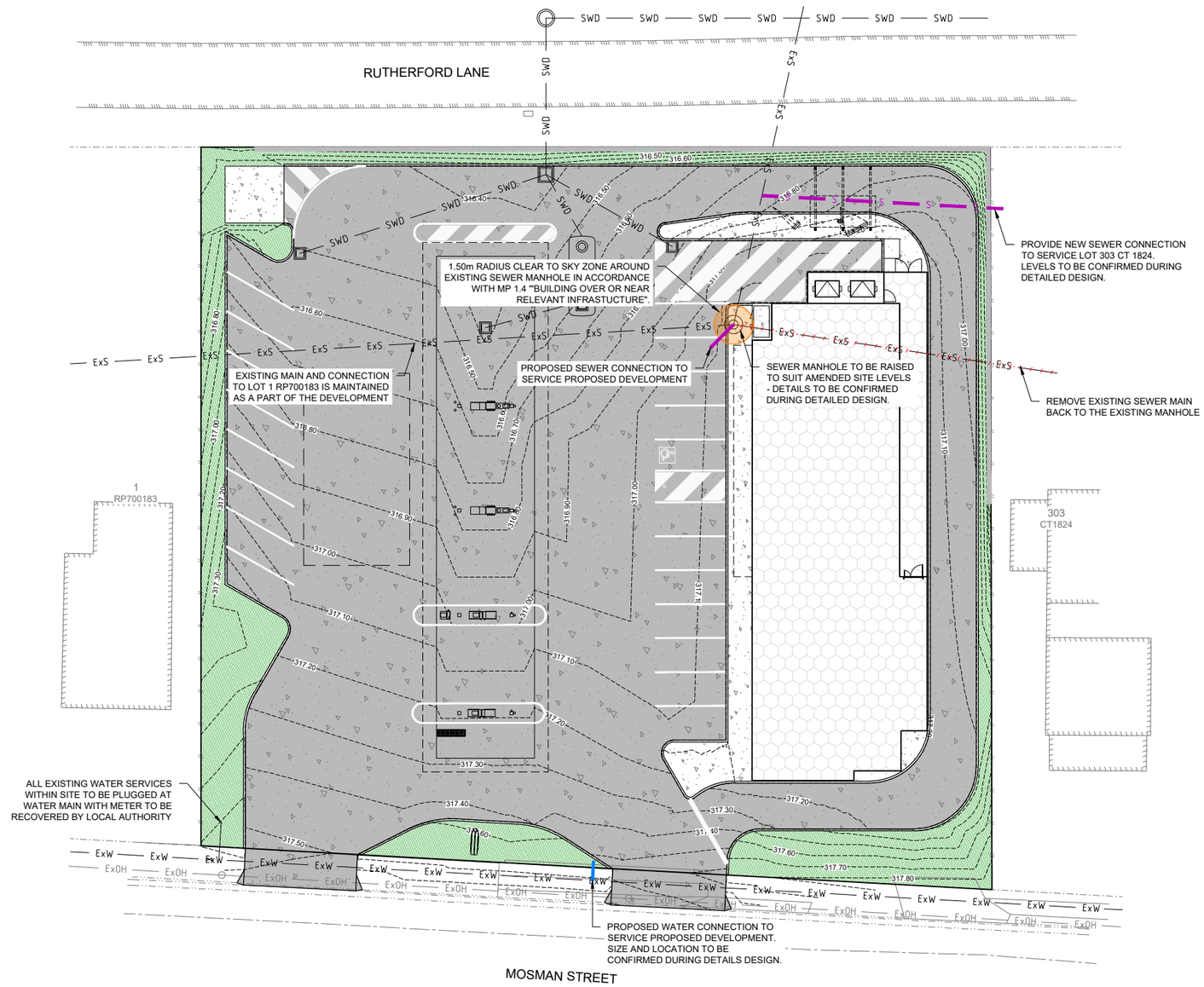
JOB No. 9970

DWG. No. SK002

REVISION A

## LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS)
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- EXISTING SEWERAGE
- EXISTING SEWER MAIN TO BE REMOVED
- EXISTING WATER
- EXISTING OVERHEAD ELECTRICITY
- DESIGN CONTOURS (AT 0.10m INTERVALS)
- PROPOSED STORMWATER
- PROPOSED SEWER CONNECTION
- PROPOSED WATER CONNECTION
- PROPOSED BUILDING BY OTHERS
- CONCRETE PAVEMENT EXTENT
- PROPOSED CONCRETE FOOTPATH
- PROPOSED LANDSCAPING
- PROPOSED SEWER EASEMENT




CHARTERS TOWERS REGIONAL COUNCIL

**PLANNING & DEVELOPMENT APPROVED**

**DATE:** 20 July 2023

**APPLICATION:** MCU2022/0005

FOR APPROVAL

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| C | ISSUED FOR APPROVAL | 15.06.23 | HF | AI |
| B | ISSUED FOR APPROVAL | 04.11.22 | HF | AI |
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP


Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359



SCALE BARS: 0 4 8 12m

SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT 112 MOSMAN STREET CHARTERS TOWERS QLD, 4820

DRAWING TITLE: CONCEPT SERVICES LAYOUT PLAN

DESIGNED: K.BETTERIDGE

9970 JOB No.

SK003 DWG. No.

C REVISION

CHARTERS TOWERS
REGIONAL COUNCIL

# Appeal Rights

*PLANNING ACT 2016 & THE PLANNING REGULATION 2017*

**Chapter 6 Dispute resolution**

**Part 1 Appeal rights**

**229 Appeals to tribunal or P&E Court**

(1) Schedule 1 of the *Planning Act 2016* states –
  (a) Matters that may be appealed to –
    (i) either a tribunal or the P&E Court; or
    (ii) only a tribunal; or
    (iii) only the P&E Court; and
  (b) The person-
  (c)
    (i) who may appeal a matter (**the *appellant***); and
    (ii) who is a respondent in an appeal of the matter; and
    (iii) who is a co-respondent in an appeal of the matter; and
    (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

(2) An appellant may start an appeal within the appeal period.
(3) The ***appeal period*** is –
  (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
  (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
  (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice us published under section 269(3)(a) or (4); or
  (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
  (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
  (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

  *Note –*
  *See the P&E Court Act for the court's power to extend the appeal period.*

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.
(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
(6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
  (a) the adopted charge itself; or
  (b) for a decision about an offset or refund-
    (i) the establishment cost of trunk infrastructure identified in a LGIP; or
    (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

**230 Notice of appeal**

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
  (a) is in the approved form; and
  (b) succinctly states the grounds of the appeal.
(2) The notice of appeal must be accompanied by the required fee.

(3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
  (a) the respondent for the appeal ; and
  (b) each co-respondent for the appeal; and
  (c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
  (d) for and appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
  (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
  (f) for an appeal to the P&E Court – the chief executive; and
  (g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.

(4) The *service period* is –
  (a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
  (b) otherwise – 10 business days after the appeal is started.

(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).

(6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

**231 Other appeals**

(1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.

(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.

(3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.

(4) In this section –
*decision* includes-
  (a) conduct engaged in for the purpose of making a decision; and
  (b) other conduct that relates to the making of a decision; and
  (c) the making of a decision or failure to make a decision; and
  (d) a purported decision ; and
  (e) a deemed refusal.
*non-appealable,* for a decision or matter, means the decision or matter-
  (a) is final and conclusive; and
  (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
  (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

**232 Rules of the P&E Court**

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.

(2) However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.

Simpson Engineering Group

Document title:

# Service Station, 112 & 118 Mosman Street, Charters Towers

Document Type:

## Noise Assessment

Prepared for:

## Shri Vikavas Mataji Pty Ltd

Document & Date issued:
220328D02.docx on Thursday, 10 November 2022

*Authorised and signed*

*by*:.....
Mark A Simpson *(Principal)*


***SEG Pty Ltd***

*31 Lionheart Street*
*Forestdale, Qld 4118*
*Ph: 61 7 31172468*
*Mobile: 0414383172*
*Email: mark@segroup.com.au*


| Revision: | Date: | Status: | Comment: |
|---|---|---|---|
| 220621D02 | 10 Nov 2022 | Draft | Review by client |

# Contents

# 1 Introduction

Shri Vikavas Mataji Pty Ltd (the Proponent) is undertaking an application for a service station located at 112 & 118 Mosman Street, Charters Towers known as the service station. SEG Consulting Engineers has been retained by the proponent to assess noise impacts associated with the proposed use.

This report provides:

- Environmental values to be protected
- Proposed noise goals
- 3D Noise modelling of the service station
- Noise mitigation recommendations

The report addresses normal operations as well as the noise aspects of bulk fuel delivery and waste removal.

Simpson Engineering Group is a consulting engineering group specialising in noise, vibration and air quality assessments. The principal of SEG is a consulting engineer with over 35 years consulting experience in Queensland.

## 1.1 Layout Site Description

The proposed layout 112 & 118 Mosman Street, Charters Towers is shown in Figure 1. The layout comprises a service station and five groups of bowsers. There are 21 car parks and a drive through for a food and drink outlet. The air/water point is situated at the southern/western boundary. There are dwellings on the northern and southern property boundaries as well as dwellings to the east on the opposite side of Rutherford Lane. There is a hotel to the east of the site. All adjoining buildings are low set buildings.


Figure 1: Proposed Revised Layout

## 2 Existing Noise Environment

A noise survey has not been carried out at this site. However, based on AS1055.3-1997 Estimated Average Background A-Weighted Sound Pressure Levels ($L_{A90,T}$) For Different Areas Containing Residences In Australia, the area would be considered to be R2, Areas with low density transportation. Thus, for conservatism the assumed background noise levels for the adjoining sites are contained in Table 2 and is based R2 during all periods.

Table 1: AS1055.3-1997 Estimated Background Noise Levels based on Traffic Zones

| Noise category | Description | Average Background Noise Levels LA90 | | |
|---|---|---|---|---|
| | | Day | Evening | Night |
| R1 | Areas with negligible transportation | 40 | 35 | 30 |
| R2 | Areas with low density transportation | 45 | 40 | 35 |
| R3 | Areas with medium density transportation or some commerce or industry | 50 | 45 | 40 |
| R4 | Areas with dense Transportation or with some commerce or industry | 55 | 50 | 45 |

Table 2; Assumed Background Noise Levels

| Day | Evening | Night |
|---|---|---|
| 45 | 40 | 35 |

# 3 Noise Criteria

The measurements of ambient noise exclude noise from the proposal and the measurements are considered representative of the noise levels at the nearby dwellings. These measurements help form an opinion regarding the environmental values to be preserved at the nearby dwellings.

## 3.1 Charters Towers Regional Council Noise Policy

The subject site is situated partially in Centre zone and partially in the General Residential zone.

The Specific benchmarks for assessment are contained in Table 3.

Table 3: General Noise Emission Criteria For Noise Generating Uses (Source Charters Towers Noise Policy)

| Performance outcomes | Acceptable outcomes |
|---|---|
| PO9<br><br>Development prevents or minimises the generation of any noise so that:<br><br>a) nuisance is not caused to adjoining premises or other nearby sensitive land uses; and<br>b) desired ambient noise levels in residential areas are not exceeded. | AO9<br><br>Development achieves the noise generation levels set out in the Environmental Protection (Noise) Policy 2008, as amended. |
| Acoustic and air quality | |
| PO14<br><br>Development minimises potential conflicts with, or impacts on, other uses having regard to vibration, odour, dust or other emissions. | AO14<br><br>Development achieves the air quality design objectives set out in the Environmental Protection (Air) Policy 2008, as amended.<br><br>Editor's note–To achieve compliance, development is planned, designed and managed to ensure emissions from activities achieve the appropriate acoustic objectives (measured at the receptor dB(A)). |
| PO15<br><br>Development prevents or minimises the generation of any noise so that:<br><br>(a) nuisance is not caused to adjoining premises or other nearby sensitive land uses; and<br><br>(b) desired ambient noise levels in residential areas are not exceeded. | AO15<br><br>Development achieves the noise generation levels set out in the Environmental Protection (Noise) Policy 2008, as amended. |

## 3.2 Environmental Protection Act 1994

The objective of the EP Act is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The EP Act states a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. This is termed the 'general environmental duty'.

Environmental harm is defined as any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

### 3.2.1 Mechanical Plant Noise

The Environmental Protection Act 1994 specifies criteria for pumps and air conditioning plant as follows:

*440T Pumps*

1. This section applies to premises at or for which there is a pump.
2. An occupier of the premises must not use, or permit the use of, the pump on any day
    (a) before 7a.m, if it makes an audible noise; or
    (b) from 7a.m. to 7p.m, if it makes a noise of more than 5dB(A) above the background level; or
    (c) from 7p.m. to 10p.m, if it makes a noise of more than 3dB(A) above the background level; or
    (d) after 10p.m, if it makes an audible noise.
3. Subsection (2)(a), (c) and (d) do not apply to a noise made at an educational institution, that is not more than 5dB(A) above the background level.
4. In this section Pump
    (a) means an electrical, mechanical or pneumatic pump; and Examples liquid pump, air pump, heat pump
    (b) includes a swimming pool pump and a spa blower.

*440U Air-conditioning equipment*

1. This section applies to premises at or for which there is air-conditioning equipment.
2. An occupier of the premises must not use, or permit the use of, the equipment on any day
    (a) before 7a.m, if it makes a noise of more than 3dB(A) above the background level; or
    (b) from 7a.m. to 10p.m, if it makes a noise of more than 5dB(A) above the background level; or
    (c) after 10p.m, if it makes a noise of more than 3dB(A) above the background level.

*440V Refrigeration equipment*

1. This section applies to a person who is

(a) an occupier of premises at or for which there is plant or equipment for refrigeration (refrigeration equipment); or
(b) an owner of refrigeration equipment that is on or in a vehicle, other than a vehicle used or to be used on a railway.

2. The person must not use, or permit the use of, the refrigeration equipment on any day
   (a) before 7a.m, if it makes a noise of more than 3dB(A) above the background level; or
   (b) from 7a.m. to 10p.m, if it makes a noise of more than 5dB(A) above the background level; or
   (c) after 10p.m, if it makes a noise of more than 3dB(A) above the background level.
3. In this section vehicle includes a trailer.

## 3.3 Environmental Protection (Noise) Policy 2019

The noise level goals for operations are informed from the Environmental Protection (Noise) Policy 2019 which seeks to achieve the object of the EP Act by:

- Identifying environmental values to be enhanced or protected
- Stating acoustic quality objectives for enhancing or protecting the environmental values
- Providing a framework for making consistent, equitable and informed decisions about the acoustic environment.

The EP Noise Policy identifies specific Acoustic Quality Objectives for sensitive receptors. Sensitive land uses/receptors identified in the policy include:

- a dwelling (detached or attached) including house, townhouse, unit, reformatory institution, caravan park or retirement village
- a library, child care centre, kindergarten, school, school playground, college, university, museum, art gallery or other educational institution, hospital, respite care facility, nursing home, aged care facility, surgery or other medical centre
- a community building including a place of public worship
- a court of law
- a hotel, motel or other premises which provides accommodation for the public
- a commercial (office) or retail facility
- a protected area, or an area identified under a conservation plan as a critical habitat or an area of major interest under the Nature Conservation Act 1992
- an outdoor recreational area (such as public park or gardens open to the public, whether or not on payment of a fee, for passive recreation other than for sport or organised entertainment) or a private open space.

The environmental values to be enhanced or protected under the EPP(Noise) are:

(a) the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and
(b) the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following-
   a. sleep;

b. study or learn;
c. be involved in recreation, including relaxation and conversation; and

(c) the qualities of the acoustic environment that are conducive to protecting the amenity of the community.

There are two main considerations namely:

1. Acoustic quality objective (noise levels that are conducive to human health and well-being, ensuring a suitable acoustic environment for individuals to sleep, study or learn, be involved in recreation, including relaxation and conversation; and preserve the qualities of the acoustic environment that are conducive to protecting the amenity of the community); and
2. Management Intent

### 3.3.1 Acoustic Quality Objectives

The 'Acoustic Quality Objectives' seek to protect the amenity of an acoustic environment. The indoor night-time goals effectively address sleep disturbance and sleep awakenings, while during the day it protects conversation. It should be noted that these are not strictly design limits for individual sources but objectives that are considered to provide acceptable health and wellbeing for the community

The acoustic quality objectives are expressed as indoor noise level goals for dwellings at Night (10pm to 7am) and outdoor noise level goals during the Day (7 am to 6 pm) and Evening (6 pm to 10 pm. These objectives are all contained in Table 4.

The indoor noise quality objective for dwellings is converted to an outdoor noise level by conservatively assuming that the windows of the dwellings are wide open. The equivalent external noise levels (for the dwelling indoor noise level goals in Table 4) measured at least 4 m from the dwelling would be 5 dB higher (to allow for the reduction of noise through the building envelope).

Table 4: Acoustic Quality Objectives for Dwellings During the Day (7 am to 6 pm), Evening (6 pm to 10 pm) and Night (10 pm to 7 am).

| Location | Time of Day | Acoustic Quality Objectives (Measured at the receptors) dB(A) | | | Environmental Value |
|---|---|---|---|---|---|
| | | $L_{Aeq, adj, 1 hr}$ | $L_{A10, adj, 1 hr}$ | $L_{A1, adj, 1 hr}$ | |
| Dwelling outdoors | Daytime & evening | 50 | 55 | 65 | Health and wellbeing |
| Dwelling indoors | Daytime & evening | 35 | 40 | 45 | Health and wellbeing |
| Dwelling indoors | Night-time | 30 | 35 | 40 | Health wellbeing in relation to the ability to sleep |

*Source: EPP (Noise) 2008*

### 3.3.2 Management Intent

It is intended that noise from an activity that affects or may affect an environmental value to be enhanced or protected under the EPP(Noise) be appropriately managed.

To the extent it is reasonable to do so, noise must be dealt with in a way that ensures-

a) the noise does not have any adverse effect, or potential adverse effect, on an environmental value under this policy; and
b) background creep in an area or place is prevented or minimised.

In the situation where existing noise levels exceed the Acoustic Quality objectives, to the extent it is reasonable to do so, noise at that sensitive place must be dealt with in a way that progressively improves the acoustic environment of the area or place.

Background creep, for noise in an area or place, is described as a gradual increase in the total amount of background noise in the area or place.

The EPP(Noise) does not provide any guidance nor limits regarding how to address background creep.

However, the guiding principles are:

i. Background creep in an area is to be prevented or minimised
ii. Any control requirements are to be reasonable

Background creep can be prevented by ensuring the noise from activity is always below the background noise level. However, this may be excessively onerous for many situations. The EPP(Noise) does not include any guidance regarding how to assess “reasonable” noise control. A work practice or abatement measure is feasible if it is capable of being put into practice or of being engineered and is practical to build given project constraints such as safety and maintenance requirements. Selecting reasonable measures from those that are feasible involves making a

judgement to determine whether the overall noise-reduction benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the noise abatement measure. To make such a judgement, consideration may be given to aspects such as noise level impacts, noise mitigation benefits, cost effectiveness and community views.

## 3.4 Sleep Disturbance WHO Guidelines

Research has shown that the ability to get to sleep and, when asleep, the probability of experiencing a change of sleep state or ultimately of awakening are related to both the ambient and maximum instantaneous noise levels at the ear of the sleeper and the number of events during the night-time period (WHO 1999).

In planning for short-term or transient noise events, for good sleep over eight hours, the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45dBA maxLpA more than 10-15 times per night. According to Guideline Ecoaccess Planning for Noise Control (EPA 2004), the corresponding external noise level, assuming partially closed windows, is 52dBA maxLpA ($L_{Amax}$), measured in the free field.

For larger number of event per night, the noise level goal is reduced by 10*log(Number of events/10). Hence if there are 100 events per night (over an 8 hour period) the external noise level goal would be 42 dB(A) free field and if there are 50 events per night (over an 8-hour period) the external noise level goal would be 45 dB(A) free field.

## 3.5 Summary of Adopted Noise Goals

### 3.5.1 Overall Noise Emissions

The amenity LAeq noise limits at the sensitive receptors comprise:

- Day 45 dB(A)+5 dB(A) = 50 dB(A) (variable noise)
- Evening 40 dB(A) + 3 dB(A) = 43 dB(A) (variable noise)
- Night 35 dB(A) + 3 dB(A) = 38 dB(A) (variable noise)
- Night 35 dB(A) = 35 dB(A) (continuous noise i.e. air conditioning) applied externally rather than internally

These noise level goals also comply with the EPP(Noise) requirements.

### 3.5.2 Sleep Disturbance

It is assumed there are 50 maximum noise level events at night associated with door slams and car starts. Consequently, the $L_{Amax}$ goal at night is 45 dB(A) outside all existing nearby dwellings.

### 3.5.3 Mechanical Plant

The noise level goals for air conditioners, mechanical plant and pumps blowers etc are contained in Table 5. The noise level goal for pumps at night is no audible noise. Typically noises with tonal or impulsive characteristics are audible at noise levels well below the background noise level, while broad-band noise (i.e. white noise) may not be audible even above background noise level. The design target at night is 5 dB(A) below background noise level and without any tonal or impulsive characteristics. The main pump noise source at a service station is the tyre inflation pump. This pump is usually be situated inside a building, not externally. The fuel bowsers are also pumps however the noise is usually only audible a few metres from the unit during use.

Table 5: Applicable Noise Level Goals $L_{Aeq(\ 1hour)}$ from Environmental Protection Act

| Noise Source | Before 7am and After 10pm | From 7am to 6pm | From 6pm to 10pm |
|---|---|---|---|
| Rating Background Noise Level (RBL) | 35 | 45 | 40 |
| Pumps (i.e. tyre inflation pump) | No audible noise | RBL + 5 = 50 | RBL + 3 = 43 |
| Air conditioning (including kitchen exhaust) | RBL + 3 = 38 | RBL + 5 = 50 | RBL + 5 = 45 |
| Refrigeration | RBL + 3 = 38 | RBL + 5 = 50 | RBL + 5 = 45 |

*Note: (a) It is usual to design all plant to the night noise level goal rather than the day or evening goals.*

# 4 Predicted Noise Levels

## 4.1 Noise Sources

The noise sources associated with a service station are associated with car and truck use, pedestrians, air conditioning and mechanical plant. Some noise sources such as door slams and car starts are short duration noises whereas driving over the site, air conditioning are longer duration noises. Short duration noises are assessed via short duration noise level goals while long-duration noises are assessed using noise level goals having a longer duration.

A summary of the noise levels is contained in Table 6. Each noise source is expressed in terms of both the $L_{Aeq(15\ minute)}$ and the $L_{Amax}$. For instance, a car start makes a noise level of approximately 65 dB(A) at 10m. However, the contribution to the $L_{Aeq(60\ minute)}$ is determined by the duration of the noise and after accounting for the short time of the event the $L_{Aeq(60\ minute)}$ becomes 32 dB(A).

Table 6: Source Noise Levels at 10m in dB(A)

| Noise Source | Source Noise Levels at 10m in dB(A) | |
|---|---|---|
| | $L_{Aeq(60\ minute)}$ | $L_{Amax}$ |
| Car idling (for 15 minutes) | 51 | 57 |
| Truck idling (for 15 minutes) (Including delivery trucks) | 57 | 63 |
| Car bypass (20 km/hr) 10 seconds | 32 | 58 |
| Truck bypass (10 km/hr) 10 seconds | 38 | 64 |
| Petrol pump pumping (for 15 minutes) | 44 | 50 |
| Air hiss during tyre fill (for 1 minute) | 44 | 62 |
| Car start | 32 | 65 |
| Truck start | 35 | 68 |
| Car and Truck door slam | n.a. | 65 |
| Tyre inflator beep (10 seconds) | 45 | 71 |
| Waste collection truck (dumping max) | n.a. | 75 |
| Bulk refuelling truck | n.a. | 68 |
| Air conditioning (Assuming sound power level of 70 dB(A)). (Operating for 15 minutes) | 36 | 42 |

Table 7 describes typical use of the service station. This data is used to develop a noise use profile. For instance, each access by a vehicle involves 1 car start, four door slams, 30 seconds of engine idling and travel over the subject site, refer to Appendix A: Noise Model of Service Station.

Bulk refuelling is carried out by gravity feed from the delivery trucks. This is a low noise generating activity since all truck engines are off during the bulk refuelling and the main noise is associated with the truck manoeuvring and parking. These noises have been included in the noise model.

Table 7: Peak Activities Per Hour During Day Evening and Night for Noise Modelling Purposes

| Activity | Day | Evening | Night |
|---|---|---|---|
| Vehicles accessing pumps | 50 | 25 | 12 |
| Truck accessing pumps | 4 | 2 | 2 |
| Tyre pressure checks | 3 | 2 | 1 |
| Car Idling (5 min periods) | 14 | 7 | 4 |
| Vehicles accessing drive through | 50 | 25 | 12 |
| Truck idling (e.g. delivery truck) (15 min period) | 1 | 0 | 0 |
| Waste collection truck | 1 | 0 | 0 |

The noise model includes a 2m high property boundary noise barrier along the northern, western and southern boundaries. The height is specified relative to the neighbouring property boundary or the site boundary whichever is the greater.

## 4.2 Calculated Noise Levels

The calculated noise levels are presented at an elevation of 1.5m above local ground levels and representative of the mid window height of ground floor rooms of nearby sensitive receptors.

The calculated maximum noise levels are contained in Figure 2 to Figure 4 being the typical maximum noise levels for the day, evening and night periods respectively for the ground floor (calculation plane 1.8m).

The calculated $L_{Aeq(1\ hour)}$ noise levels are contained in Figure 5 to Figure 7 being the $L_{Aeq(\ 60\ minute)}$ noise levels for the day, evening and night periods respectively for the ground floor (calculation plane 1.8m).

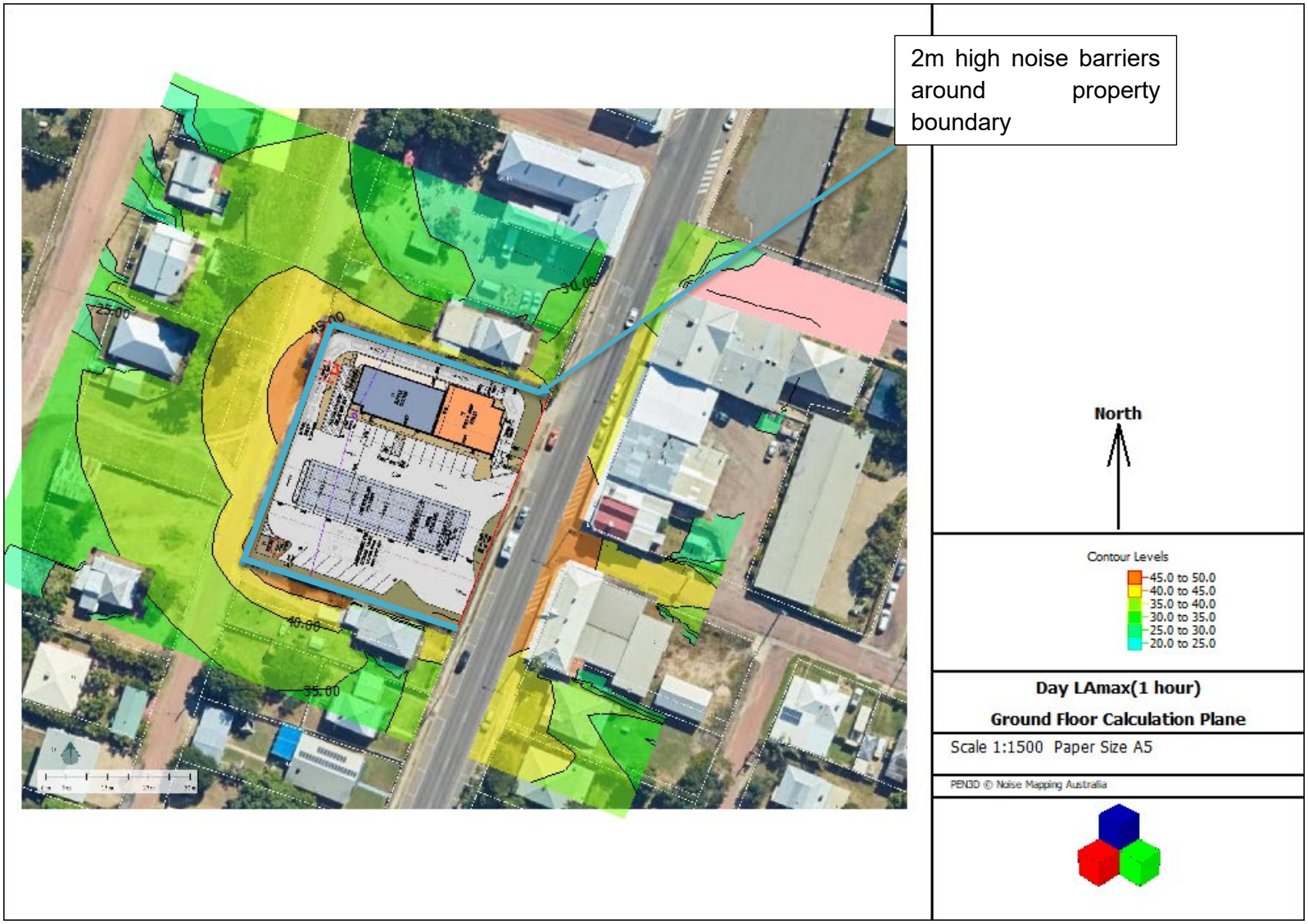



Figure 2: $L_{Amax(60\ min)}$ Day Noise Levels from Operations All Sources Including Waste Truck and Delivery Trucks – Ground Floor (with 2m Property Boundary Barriers)

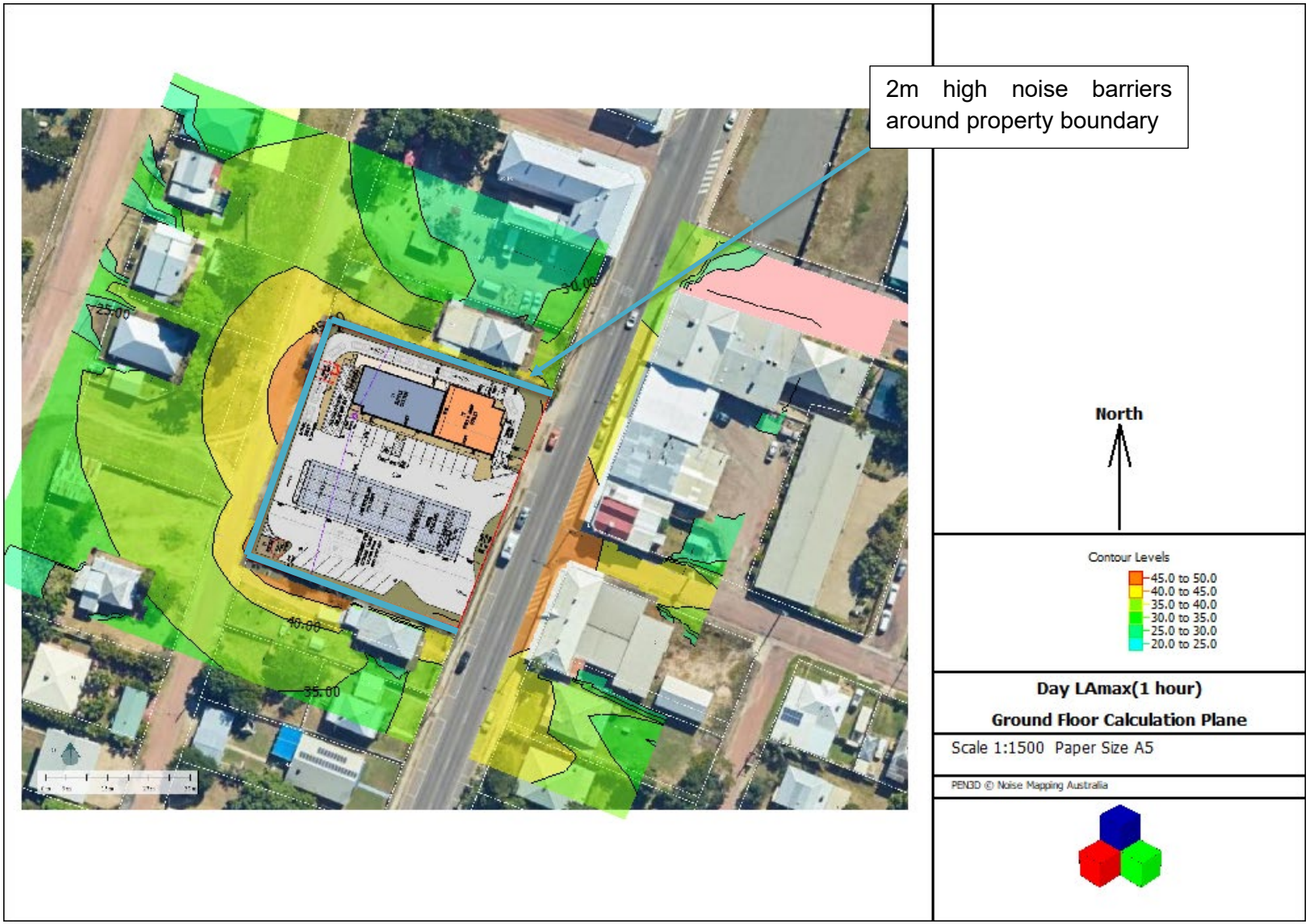



Figure 3: $L_{Amax(60\ min)}$ Evening Noise Levels from All Sources Including Waste Truck and Delivery Trucks – Ground Floor (with 2m Property Boundary Barriers)


Figure 4: $L_{Amax(60\ min)}$ Night Noise Levels from Operations All Sources Excluding Waste Truck and Delivery – Ground Floor (with 2m Property Boundary Barriers)

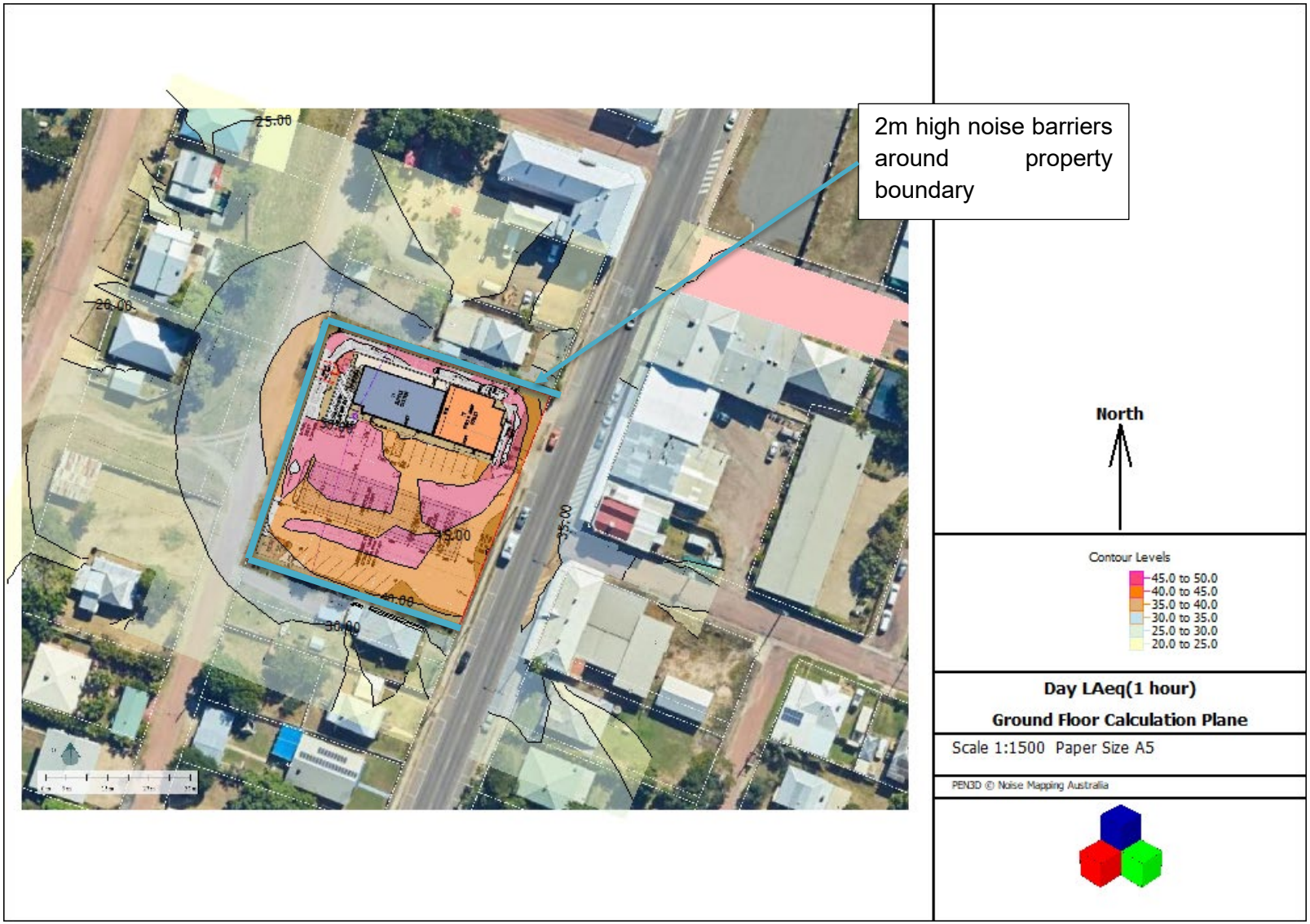



Figure 5: $L_{Aeq(1\ hour)}$ Day Noise Levels Service Station Including Delivery Trucks and waste removal – Ground Floor (with 2m Property Boundary Barriers)

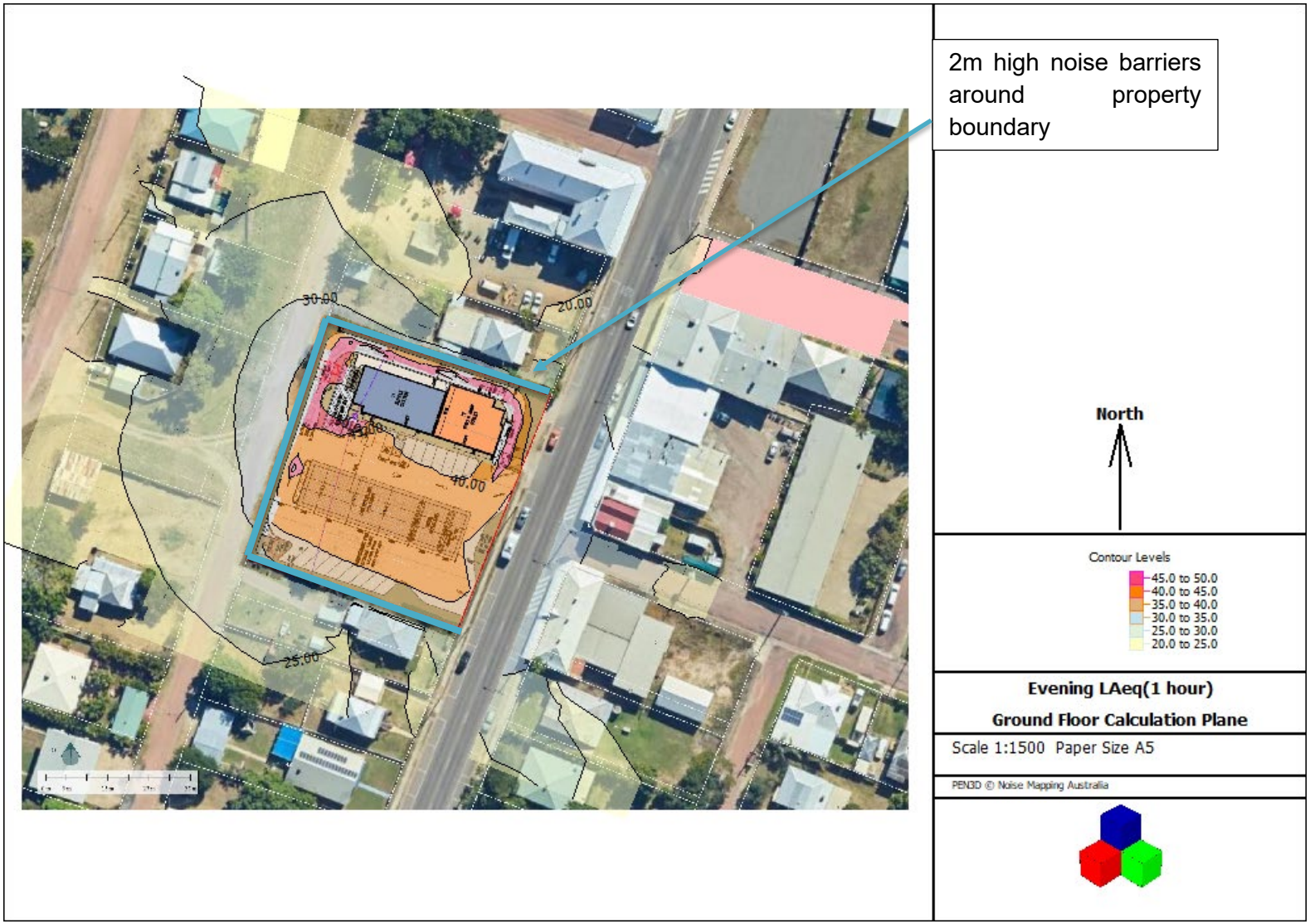



Figure 6: $L_{Aeq(1\ hour)}$ Evening from Service Station Excluding Delivery Trucks and Waste Removal – Ground Floor (with 2m Property Boundary Barriers)

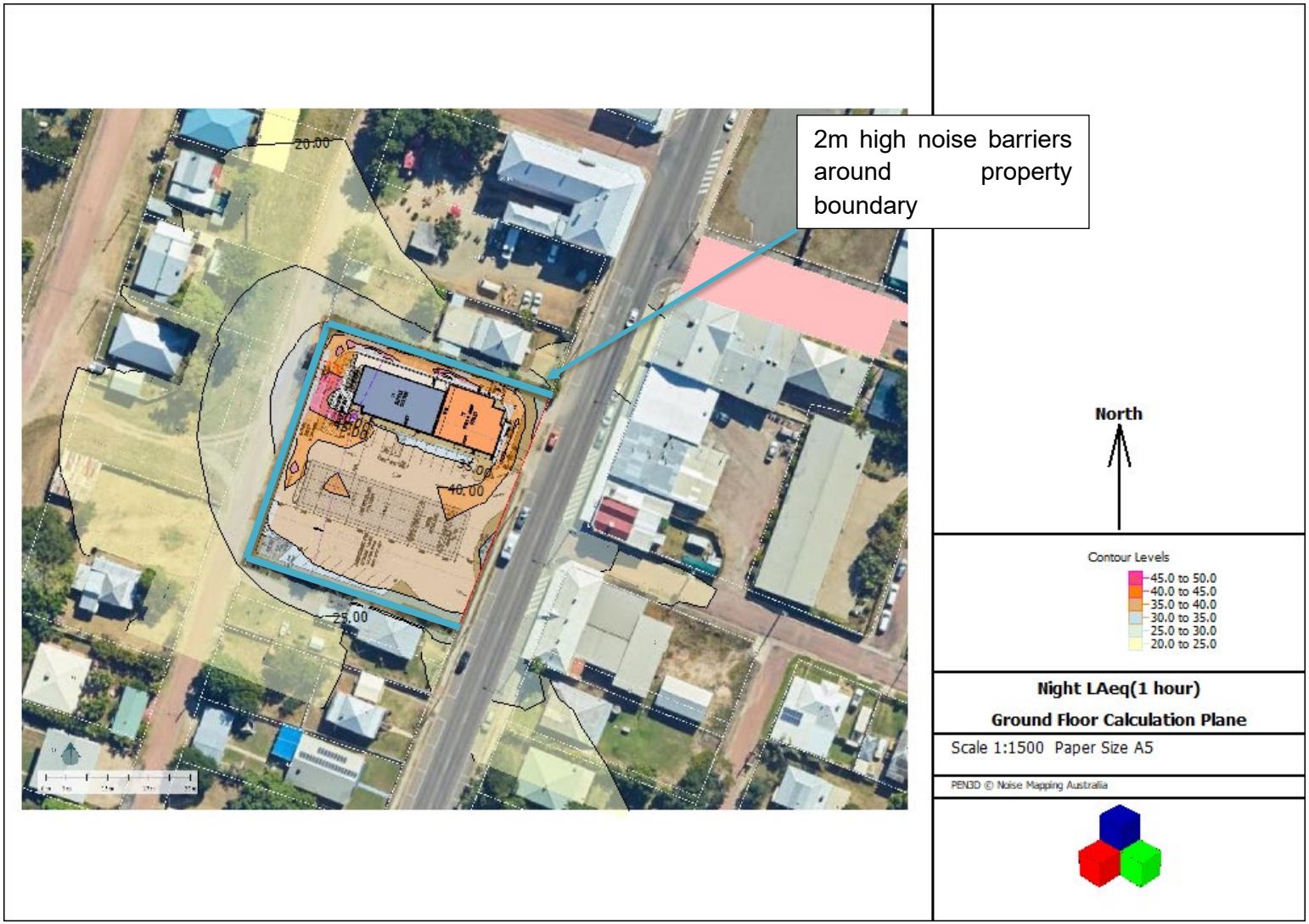



Figure 7: $L_{Aeq(1\ hour)}$ Night from Service Station Excluding Delivery Trucks and Waste Removal – Ground Floor (with 2m Property Boundary Barriers)

## 4.3 Assessment of Calculated Noise Levels

All nearby residences are shown in Figure 8. The calculated noise levels at each dwelling are shown in Table 8.


Figure 8: All Nearby Noise Sensitive Receptors

Table 8: Calculated $L_{AMax}$ and $L_{Aeq(60\ minute)}$ Noise Levels at Dwellings for Day, Evening and Night

| Dwelling | $L_{Aeq(60\ minutes)}$ in dB(A) | | | $L_{Amax}$ in dB(A) | | |
|---|---|---|---|---|---|---|
| | Day | Evening | Night | Day | Evening | Night |
| Noise Level Goal – Acoustic Amenity | 50 | 43 | 38 | | | |
| Sleep Disturbance | - | - | - | - | - | 45 |
| 108 Mosman Street | 32 | 29 | 26 | 43 | 43 | 41 |
| 122 Mosman Street | 34 | 31 | 28 | 45 | 45 | 45 |
| 111 King Street | 26 | 23 | 20 | 37 | 37 | 32 |
| 113 King Street | 28 | 25 | 22 | 38 | 38 | 33 |
| 115 King Street | 30 | 27 | 24 | 39 | 39 | 34 |
| 34 Rutherford Lane | 26 | 23 | 20 | 36 | 36 | 35 |

This model shows the maximum noise levels at night are likely to be below 45 dB(A) at all residences and comply with the WHO sleep disturbance goals for up to 50 maximum noise level events at night. The day calculated noise levels including noise from waste removal, the noisiest event and it evident that waste removal should not take place at night.

The $L_{Aeq(60\ minute)}$ is calculated to be below 38 dB(A) noise goal at all dwellings at night and below the day and evening noise level goals. These noise levels readily comply with all the noise goals during the day, evening and night at all relevant sensitive receptors.

The air conditioning and mechanical plant has not been selected at this stage. It is anticipated that the air compressor will be located within a solid structure to ensure inaudibility at night. The exhaust fans, air conditioning and refrigeration plant will be selected to comply with the nominated noise level goals for operation during the night, i.e. less than 35 dB(A).

# 5 Conclusions and Recommendations

The proposed service station was investigated to determine noise impacts. The subject site is currently comprises a single dwelling and an vacant lot.

The existing noise levels were estimated using and earlier version of AS1055 and based on a site with minimal traffic.

The proponent has provided plans and details of the development. The future noise levels from the use of the site have been assessed to the noise level goals contained in the Charters Towers Regional Council Noise Planning Policy, the Environmental Protection Act, EPP(Noise) and WHO standards to protect sleep.

It was determined that subject to the following recommendations the site readily complies with all noise goals for the proposed operating hours.

1. Provision of a 2m high acoustic fence on around the property boundary (north, west and south boundary). The acoustic barrier height is relative to the finished elevation of the site boundary or the neighbouring property, whichever is the greater.
2. Limit waste removal by skip between the hours of 7am to 10 pm and not during night since this potentially has the greatest impact on neighbouring properties at night.

Bulk refuelling is carried out by gravity feed from the delivery trucks. This is a low noise generating activity since all truck engines are off during the bulk refuelling. The hours of operation of bulk unloading may occur at any time.

It is expected that all vehicle access ramps should be smooth and free from discontinuities. If water channels are required in the pavement, the water grid should be bolted/clamped down to avoid rattling noise.

The air conditioning and mechanical plant has not been selected at this stage. It is anticipated that the air compressor will be located within a solid structure. The exhaust fans, air conditioning and refrigeration plant will be selected to comply with the nominated noise level goals, refer to the night goals from Table 5.

## Appendix A: Noise Model of Service Station

The service station is relatively complex to model via hand (or spreadsheet) calculations due to the complex motion of potential vehicles over the subject site and the interaction of the acoustic fences with the various noise sources. As a consequence, PEN3D environmental noise model was used to model the operation of the service station. SEG (incorporating Noise Mapping Australia) are the developers of PEN3D and it is a commercially available noise modelling package. A free viewer/editor of PEN3D noise models is available upon request.

The noise model was developed utilising the state government mapping. The development building and all surrounding buildings were accurately located relative to each other by aerial mapping from ArcGIS web mapping services and the Queensland Property Boundary Database.

To facilitate modelling using PEN3D a frequency spectrum representative of the relevant sources was adopted. PEN3D was configured for neutral meteorology. Typically, meteorological effects over short distances is minor. In the case of where there is a barrier effect, four potential noise paths are considered:

1. source, top of barrier, receiver;
2. source, reflection from ground (source side), top of barrier, receiver;
3. source, top of barrier, reflection from ground (receiver side), receiver, and;
4. source, reflection from ground (source side), top of barrier, reflection from ground (receiver side), receiver.

The reported attenuations associated with the barrier is determined by logarithmic combination of attenuations and is a conservative approach to the attenuation provided by noise barriers.

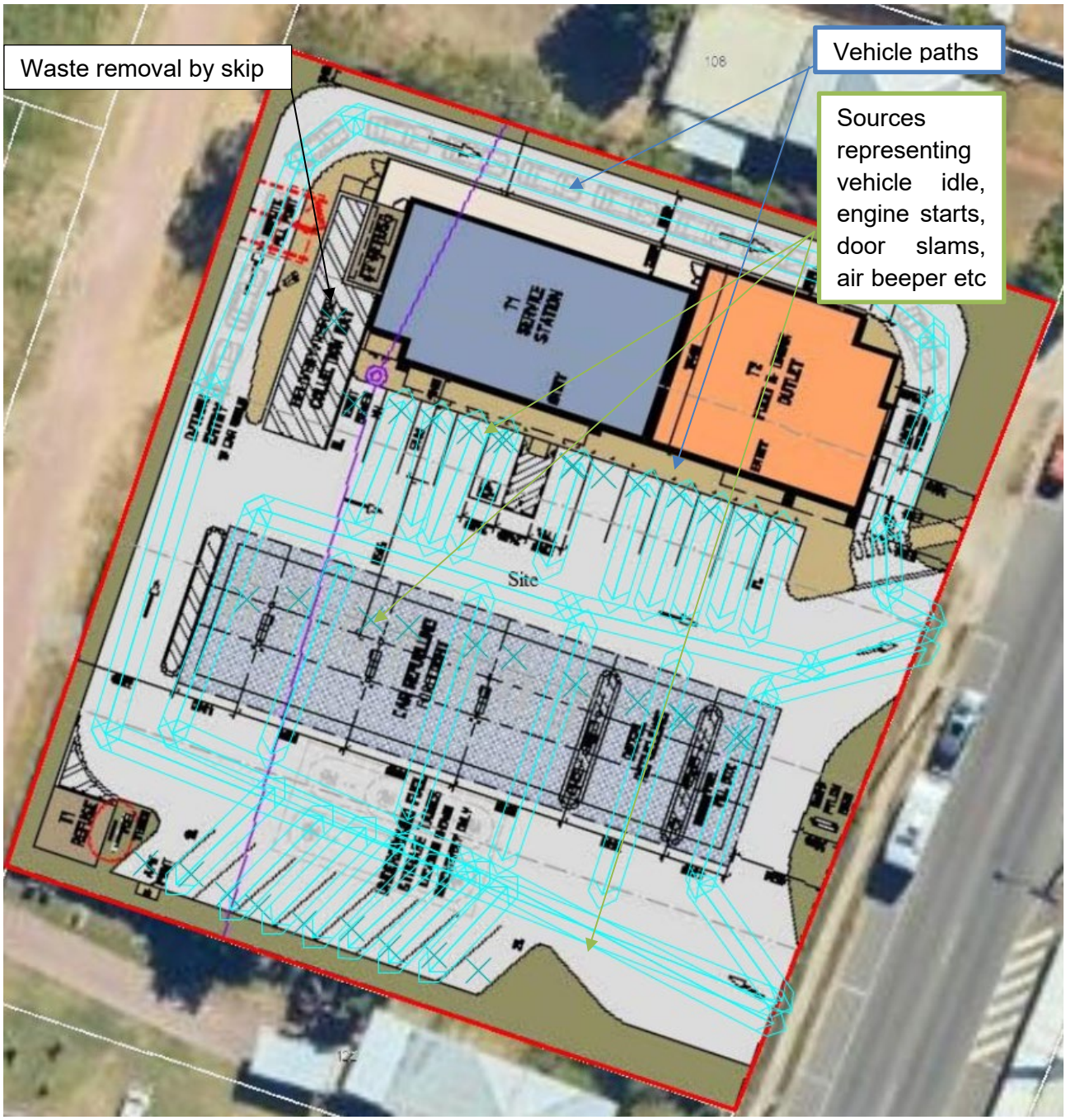


Figure 9: Noise Model Layout


# Engineering Services Report

## Viva Property Group

112-118 Mosman Street

Charters Towers

Job Reference Number – 9970

Date: 18 March 2022

## Document Status

| Rev No | Author | Reviewer | Approved for Issue | | | |
|---|---|---|---|---|---|---|
| | | | Name | Signature | Date | RPEQ # |
| 0 | P. Cezar | A. Ieverse | Emma Clements |  | 18/03/2022 | 8614 |
| | | | | | | |
| | | | | | | |

## Distribution

| Rev No | Date | Issue | Issued To | Format |
|---|---|---|---|---|
| 0 | 18/03/2022 | For Approval | Viva Property Group | PDF/E |
| | | | | |
| | | | | |

# TABLE OF CONTENTS

# APPENDICES

APPENDIX A – ARCHITECTURAL SITE PLANS

APPENDIX B – SURVEY PLAN

APPENDIX C – CIVIL WORKS DRAWINGS

APPENDIX D –CHARTERS TOWERS REGIONAL TOWN PLAN – FLOOD HAZARD OVERLAY MAP

# 1 Introduction

## 1.1. Purpose and Scope

Inertia Engineering has been commissioned by Viva Property Group to prepare an Engineering Services Report for the proposed residential development at 112-118 Mosman Street, Charters Towers (the subject site). This report will support the development application submitted for the proposed development. The site layout and elevations are shown on the architectural plans in Appendix A.

This report addresses stormwater management during the construction and operational phases of the proposed development. It also demonstrates conceptually how the development can be serviced by water, sewer and other infrastructure such as electricity and telecommunications.

The required detailed design for the service infrastructure will be subject to the conditions (if any) attached to the Development Approval to be provided by Council and any nominated referral agencies.

This report has been prepared in accordance with the *State Planning Policy* (SPP, 2017), and *Queensland Urban Drainage Manual Fourth Edition 2018* (QUDM, 2018).

Throughout this report the developable area is referred to as the 'subject site', which are Lots 304-308 CT1824.

## 1.2. Report Limitations

This report has been prepared by Inertia Engineering Pty Ltd for Viva Property Group and may only be used and relied on by Viva Property Group for the purpose agreed between Inertia Engineering and Viva Property Group as detailed within this report.

Inertia Engineering otherwise disclaims responsibility to any person other than Viva Property Group arising in connection with this report. Inertia Engineering also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by Inertia Engineering in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Inertia Engineering has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by Inertia Engineering described in this report. Inertia Engineering disclaims liability arising from any of the assumptions being incorrect.

Inertia Engineering has prepared this report on the basis of information provided by Viva Property Group and others who provided information to Inertia Engineering (including Government authorities), which Inertia Engineering has not independently verified or checked beyond the agreed scope of work. Inertia Engineering does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

# 2 Site Characteristics

The land contained within the site is described as follows:

| | |
|---|---|
| Title Details: | Lots 304-308 CT1824 |
| Street Address: | 112-118 Mosman Street, Charters Towers |
| Area: | Total: 3,325 $m^2$ |

## 2.1. Location

The subject site is located at 112-118 Mosman Street, Charters Towers. The site lies within the Centre Zone according to Charters Towers Regional Town Plan Zone Map. The site is bound by Mosman Street to the east, Rutherford Lane to the west and residential lots to the south and north.


*Figure 2-1 – Location Plan (Nearmap, 2022)*

## 2.2. Topography

The subject site generally grades from Mossman Street down to Rutherford Street. . Ground levels on the site range from RL 317.94m AHD on the north-eastern boundary to RL 315.43 m AHD in the north-western boundary. With an average grade across the site of 4.4%.

For further details refer to Hansen Surveys, *Detail & Contour Survey (ref: 211161) included as* Appendix B.

# 3 Proposed Development

Based on the information received from Viva Property Group, the proposed development consists of a service station and a drive-through food and drink outlet. See Figure 3-1 for the proposed development layout.

For further details on the proposed architectural layout refer to Verve Building Design, Proposed Site *Plan* (ref: 21197-DA02) included as Appendix A.

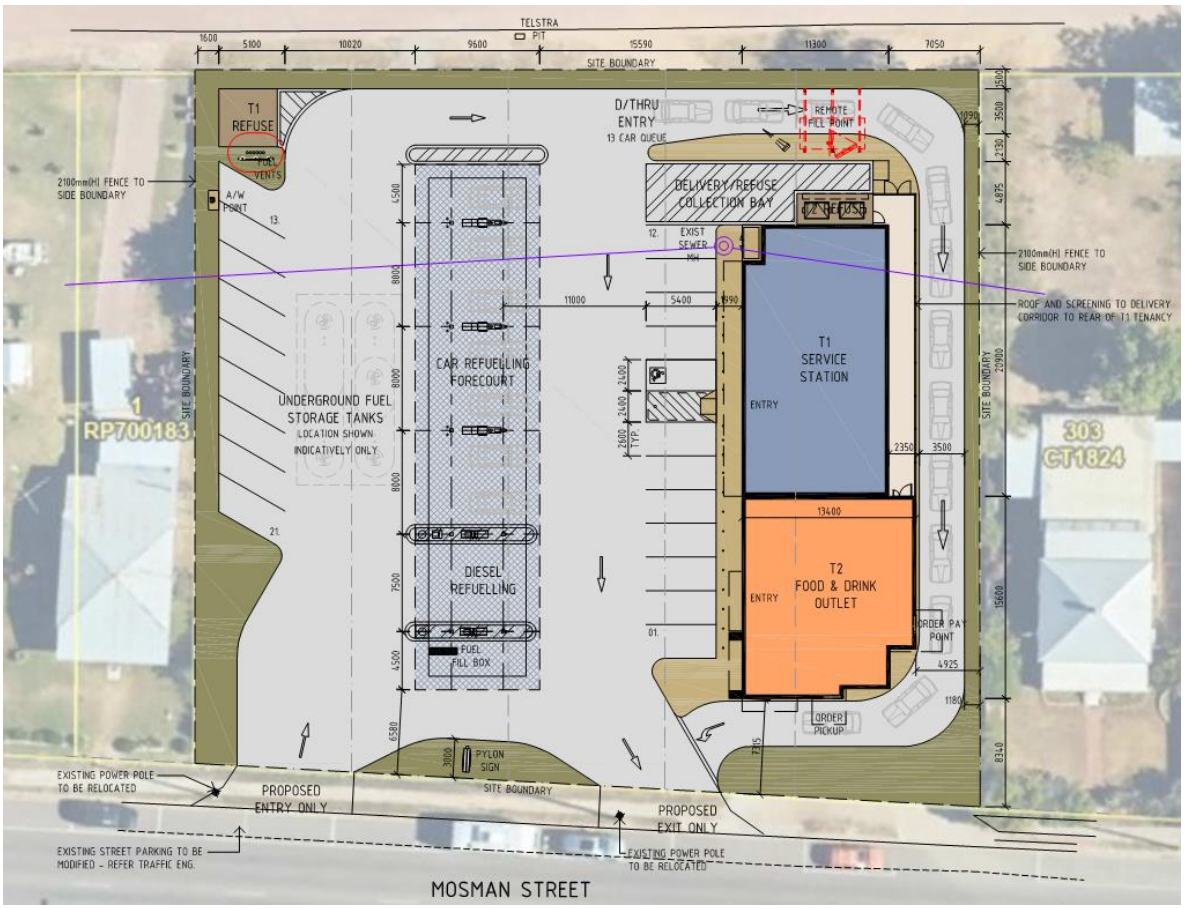



*Figure 3-1 – Development Layout*

# 4 Services, Works and Infrastructure

## 4.1. Sewerage Reticulation

An existing 150mm diameter sewer reticulation main is currently situated within the property. The existing sewer main may be subject to a future build over asset application as it will be situated underneath the future building.

An existing manhole is situated within the subject site, which will be required to be lifted to tie in with the proposed levels on-site. A future connection will be made to this existing sewer main to service the proposed development.

It is not expected that any additional upstream connections will be required to be serviced.

Note that the suitability of this proposed connection point will be confirmed with the hydraulic consultant during the future Operational Works stage.

For further details refer to Concept Services Layout Plan (ref: 9970-SK003-A) included in Appendix C.

## 4.2. Water Reticulation

There is an existing water reticulation main within Mosman Street, at the subject site frontage. The proposed development will require a new water service connection to this water main, with each of the existing water services plugged at water main and the meters recovered by the local authority.

Note that the location and size of the proposed water connection will be confirmed with the hydraulic consultant during the future Operational Works stage.

For further details refer to Concept Services Layout Plan (ref: 9970-SK003-A) included in Appendix C.

## 4.3. Electricity, Communications and Gas

Electricity and telecommunication infrastructure is available in the near vicinity of the subject site. The appropriate consultants should be engaged to assess the available capacity in the network to service the development. The location of the existing electricity and communication should be confirmed via potholing prior to construction. Based on current DBYD records, there is no GAS within the vicinity of the site.

# 5 Filling and Excavation

## 5.1. Earthworks

It is proposed that after adequate pre-construction sediment and erosion control measures have been implemented, the required demolition will occur with the safe removal of any material off site.

Filling is proposed along Rutherford Lane and excavation along Mosman Street to achieve a flat building pad of approx. 317.30 AHD. Earthworks for the proposed development will occur with batters preferred (where possible) in place of retaining walls. Batters within the landscape areas will be utilised to ensure that no retaining walls on-site are greater than 1.0m.

For further details of the proposed earthworks refer to Inertia Engineering Pty Ltd, Concept Bulk Earthworks Layout Plan (ref: 9970-SK002 - Rev A) included as Appendix C.

In all situations where earthworks are proposed and any ground is disturbed by construction works, sediment and erosion control measures will be implemented in accordance with the following documents:

- Relevant CTC sediment and erosion control guidelines;
- International Erosion Control Association (IECA) Sediment and Erosion Control Guidelines; and
- Australian Standards AS 3798-2007.

## 5.2. Erosion and Sediment Control Measures

### 5.2.1 Pre-Development

Prior to construction, the following sediment and erosion control measures will be implemented to minimise disturbance and ensure water quality is maintained;

- Set out transport routes to ensure minimal vegetation disturbance;
- Construct entry/exit areas that comprise a designed gravel pad or hardwood logs in accordance with the IECA (2001);
- Install sediment fences around the proposed bulk earthworks site (along toe of batter alignment); and
- Install dust control fences adjacent to the proposed bulk earthworks site.

### 5.2.2 Bulk Earthworks

- Earthworks areas are to be protected against wind and water erosion;
- Silt fences are to be erected around the base of the earthworks and material stockpiles;
- Stockpiles and construction material are not permitted to be stored within the road reserve; and,
- Diversion drains to be provided at upstream catchments to reduce flows onto earthworks areas.

### 5.2.3 Construction

The following measures will be undertaken to mitigate water quality impacts during the construction phase:

- Sediment fences to be erected at the base of all batters and stockpiles to prevent sediment transportation off site;
- Grass filter strips to be placed along all road verges;
- Re-vegetation of all disturbed areas within two weeks of completion;
- All sediment control structures to be maintained in an effective manner and inspected after each storm event. No structure is to accumulate sediment above 40% of its capacity;
- Dust producing areas to be swept to remove silt/dust and wetting of roads is only permitted where sweeping has failed;
- At least one bin or litter trap is to be provided for waste material.

### 5.2.4 Post-Development-Maintenance Period

Silt fences are to remain in place during the maintenance period until the landscaping has established and accepted "On-Maintenance" by Charters Towers Regional Council.

## 5.3. Performance Objectives and Indicators

The State Planning Policy (2017) states that stormwater runoff during the construction phase must be in accordance within the concentration ranges shown in the following table.

*Table 5-1 – Construction Phase Pollutant Objectives*

| Pollutant | Criteria |
|---|---|
| Total Suspended Solids | < 50mg/L |
| pH | 6.5 – 8.5 |
| Turbidity | Not > 10% receiving waters turbidity |
| Hydrocarbons | No visible sheen on receiving waters |
| Litter | No visible litter washed from site |
| Cations and anions | No visible films or odours |

## 5.4. Monitoring and Maintenance

The following monitoring and maintenance procedures are to be undertaken by the site supervisor during all phases of the development:

- Restrict all work activities to designated construction areas;
- Earthworks and site cleaning are undertaken in accordance with the Erosion and Sediment Control plans;

- Inspections of Stormwater and Sediment and Erosion Controls are to be conducted at the end of each construction day and after each rainfall event (>25mm); and
- Any failure to the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site.

# 6 Stormwater Management

## 6.1. Objectives

Detailed survey by Hansen Surveys, 'Dial Before You Dig' (DBYD) data and as-constructed data covering the existing infrastructure services and utilities for the site and surrounding area has been obtained to determine any infrastructure required for the development. This existing infrastructure is outlined in the following sections.

The hydrologic objectives have been set in accordance with QUDM (2018) and the Charters Towers Regional Town Plan *(2020)*, including but not limited to:

- The proposed development shall ensure that all stormwater drainage is directed to a lawful point of discharge in accordance with QUDM Section 3.4 (2018);
- No adverse impact on adjoining or downstream properties; and
- Best practice solution with regards to water quality has been designed and certified by an RPEQ.

## 6.2. Lawful Point of Discharge

The lawful point of discharge (LPOD) for the site's stormwater runoff is the existing swale drain located to the west of Rutherford Road. This existing swale drain conveys runoff from the upstream catchment has been classified as 'Significant Hazard Area – QRA Level 2 with 1%' on Council's Flood Hazard Overlay Map. Figure 6.1 show an extract of this overlay and please refer to Appendix D for further details.


*Figure 6-1 – Flood Hazard Overlay Map*

## 6.3. Stormwater Quantity Calculations

The Rational Method was used to estimate the site flow for both the existing and developed site conditions.

### 6.3.1 Existing Conditions

The subject site consists of four catchments:

- EX1 – 3,325m2 (approx. 9% impervious)

The total fraction impervious for the existing catchment is 9%. Note that the existing catchment includes the site only and does not include any external areas.

Table 6-1 – Existing Site Flows

| Parameters | Units | Design Storm Event (AEP%) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 63 | 39 | 18 | 10 | 5 | 2 | 1 |
| Catchment Area | ha | 0.333 | | | | | | |
| Time of Concentration | min | 12.0 | | | | | | |
| Runoff Coefficient (Cy) | | 0.53 | 0.56 | 0.63 | 0.66 | 0.69 | 0.76 | 0.79 |
| Rainfall Intensity (Iy) | mm/hr | 106.46 | 135.22 | 166.36 | 184.32 | 209.41 | 242.50 | 267.97 |
| Peak Flow | L/s | 51.9 | 70.1 | 96.3 | 112.4 | 134.0 | 170.0 | 196.0 |

### 6.3.2 Developed Conditions

Underdeveloped conditions, there are two internal catchments:

- C1 – Service station, food & drink outlet and carparking – 2,900m$^2$ (100% impervious)
- C2 – Landscaping areas – 425m$^2$ (0% impervious)

The total fraction impervious of the developed catchment is 87%. Note that the developed catchment includes the site only and does not include any external areas.

*Table 6-2 – Developed Site Flows*

| Parameters | Units | Design Storm Event (AEP %) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 63 | 39 | 18 | 10 | 5 | 2 | 1 |
| Catchment Area | ha | 0.333 | | | | | | |
| Time of Concentration | min | 6.0 | | | | | | |
| Runoff Coefficient (Cy) | | 0.70 | 0.74 | 0.83 | 0.87 | 0.91 | 1.00 | 1.00 |
| Rainfall Intensity (Iy) | mm/hr | 126.04 | 160.27 | 197.59 | 219.27 | 249.40 | 289.14 | 319.79 |
| Peak Flow | L/s | 81.0 | 109.5 | 150.8 | 176.2 | 210.4 | 267.1 | 295.4 |

## 6.4. Stormwater Detention Requirements

The proposed development will increase the peak stormwater runoff from site as a result of the increase in impervious area. Stormwater detention to decrease the peak flows back to existing conditions in this case will not be appropriate, as the site discharges directly into an existing flood prone swale drain. Delaying the peak runoff from the site using a detention system will have a greater adverse impact on the downstream properties, as it could likely result in the site's runoff coinciding closer to the greater catchments peak flow.

## 6.5. Stormwater Quality Requirements

The operational phase of the management plan focuses on appropriate consideration of Stormwater Quality Improvement Devices and Water Sensitive Urban Design (WSUD) principles to be incorporated into the total water cycle management of the developed site.

The SPP (2017) states for a proposed MCU development that involves a site area greater than 2500m$^2$ and results in an impervious area greater than 25% of the net developable area then a water quality treatment design solution is required to achieve the applicable water quality objectives (WQOs).

The stormwater quality treatment requirements set out within the SPP may be waived if the proposed development is situated within Western Queensland and has a population centre less than 25,000 persons. As per the current census data, Charters Towers population centre is less than 25,000 and therefore no additional stormwater quality treatment requirements will be required.

As the proposed development is for a service station, all rainfall captured within the fuel dispensing area (FDA) will be captured and contained by a waterproof bund. Contaminated FDA flows are then piped to the hydrodynamic separator. Oily water are treated by the separator to meet the relevant requirements before being discharge to the LPOD. A SPEL *Puraceptor®* (or approved equivalent) is fitted with an automatic closure device which ensures that discharge from the separator is shut off when the concentration of oil based contaminates is unacceptable to leave the device.

Additional 'best practice' water quality treatment methods are proposed where implementation is easily achieved.

# 7 Conclusions and Recommendations

This Engineering Services Report has assessed the stormwater management, earthworks and service infrastructure for the proposed residential development at 112-118 Mosman Street, Charters Towers.

Earthworks, erosion and sediment control solutions required on site can be performed using common and accepted methods. It is noted that the proposed earthworks will trigger retaining works which will have to be constructed according to Charters Towers Regional Town Plan.

The stormwater management strategy has the following components:

- The proposed lawful point of discharge for the site will be the existing swale drain to the west of Rutherford Road..
- Stormwater runoff will be collected on site and directed to the lawful point of discharge through the construction of new on-site drainage infrastructure;
- As the development discharges directly into a designated swale drain, stormwater detention will not be appropriate to implement to decrease the likelihood of the outgoing flows coinciding with the greater catchments peak flows
- Stormwater quality treatment measures will be incorporated only where practical as a best practice.

Service supply points for water and sewer reticulation, electricity, and telecommunications are located within close proximity to the proposed development and should not present any major connection issues.

This report has demonstrated that the proposed development proposal provides an acceptable solution for all engineering services and has been designed to comply with the *Charters Towers Regional Town Plan (2020).*

# 8 References

AS/NZS (2003) Australian Standards/New Zealand Standards, 'Plumbing and Drainage – Part 1: Water Services', 2003

AS/NZS (2003) Australian Standards/New Zealand Standards, 'Plumbing and Drainage – Part 2: Sanitary Plumbing and Drainage', 2003

Charters Towers Regional Town Plan Version 2

- Earthworks Code
- Infrastructure Code

IPWEA (2063), Queensland Urban Drainage Manual Fourth Edition 2016

Department of State Development, Infrastructure and Planning (2017), State Planning Policy

Hansen Surveys (2021), *Detail & Contour Survey (ref: 211161)*

Institute of Public Works Engineering Australasia, Queensland Division (2016), Queensland Urban Drainage Manual Fourth Edition 2016.

# Appendices

# Appendix A – Architectural Site Plans

# ARCHITECTURAL

## PROPOSED MIXED US

## 112 & 118 MOSMAN STREET, CH

PRELIMINARY


NOTE: INTERNAL LAYOUT SHOWN INDICATIVE ONLY.
FINAL LAYOUT TO BE FINALISED ONCE FOOD RETAILER IS CONFIRMED.

## PROPERTY DESCRIPTION

LOT 304-308 on CT1824
COUNTY: DAVENPORT

COUNCIL: CHARTERS TOWERS REGIONAL

## T1 BUILDING USE AREAS

- SHOP/SALES - 98m²
- FUEL CONSOLE - 32m²
- STAFF/OFFICE - 27m²
- STORAGE/BACK OF HOUSE - 25m²
- DRINKS COLDROOM - 40m²
- PUBLIC AMENITIES - 10m²

AREA USE TOTAL - 232m²

## T2 BUILDING USE AREAS

- INDOOR DINING - 60m²
- BACK OF HOUSE - 102m²
- PUBLIC AMENITIES - 20m²
- COLDROOM/FREEZER - 16m²

AREA USE TOTAL - 198m²

## BUILDING SERVICES

- DELIVERY CORRIDOR - 52m²

Consulting Engineer

VERVE BUILDING DESIGN CO.
BUILDING DESIGNERS LICENCE No. 1002212 PH. 07 3857 0942
OFFICE 2, LEVEL 1, 488 LUTWYCHE ROAD, LUTWYCHE QLD 4030 E: info@vervebd.com.au

imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion



Revision and approvals

| Code | Date | Drn | Description | Chkn |
|---|---|---|---|---|
| P1 | 04.03.2022 | TD | DRAFT DA ISSUE | |

Project Description
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

Drawing Title
PROP. FLOOR PLAN

Scale
1:50 @ A1 / 1:100 @A3

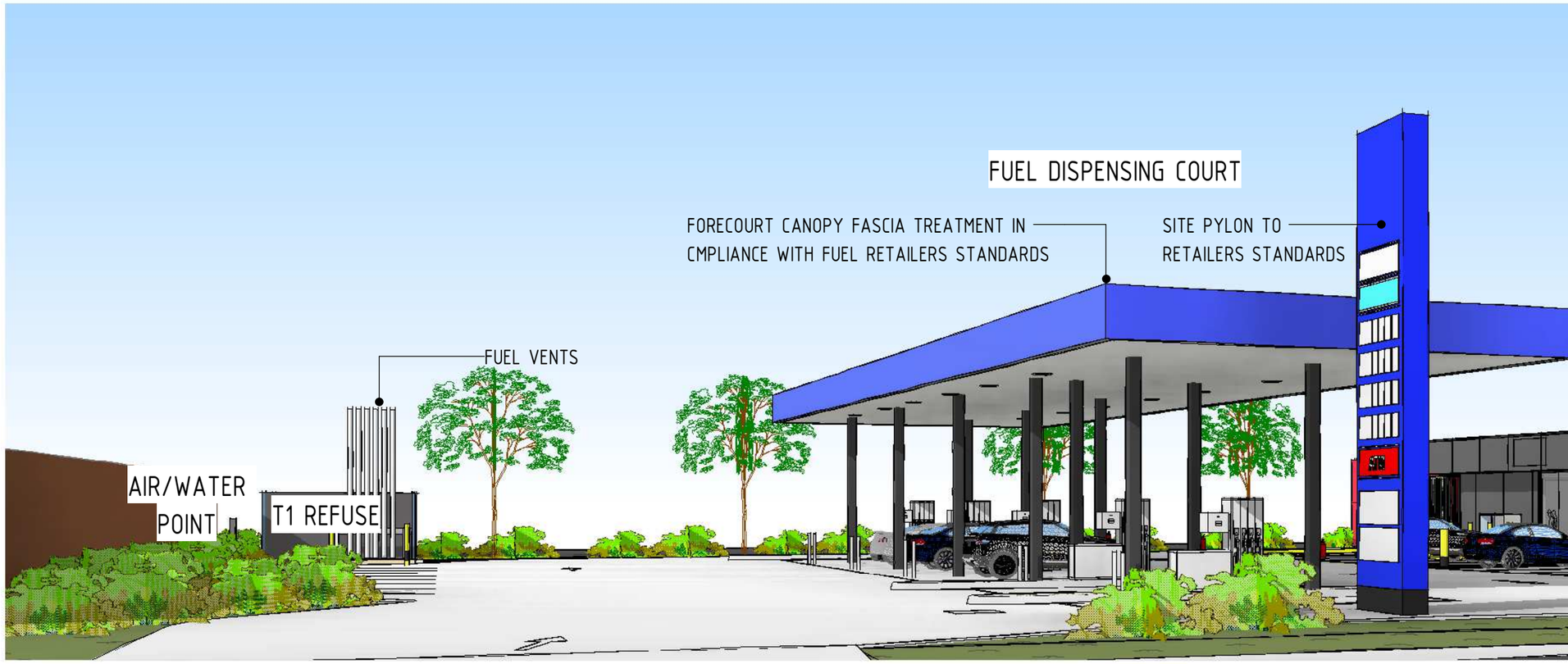
Drawn

Approved

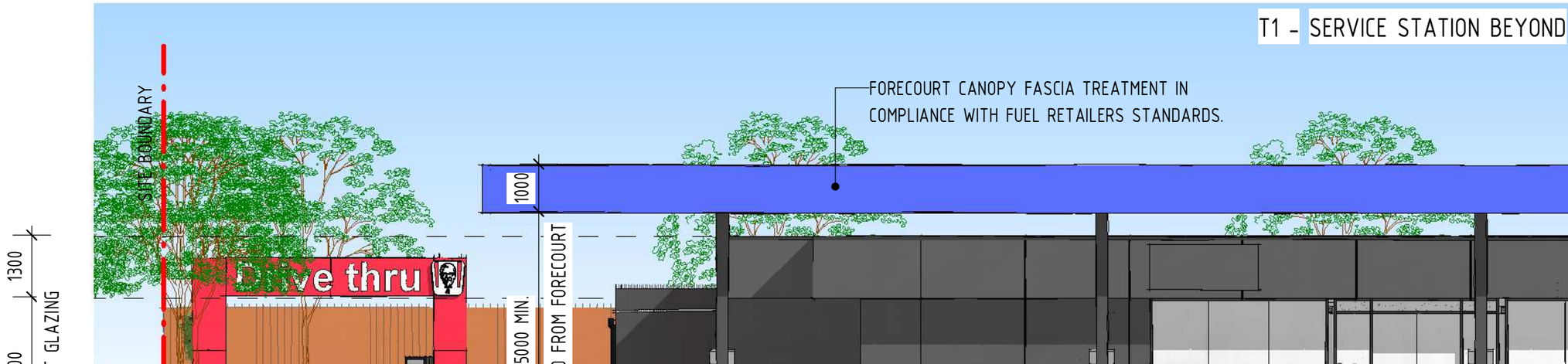
Issued

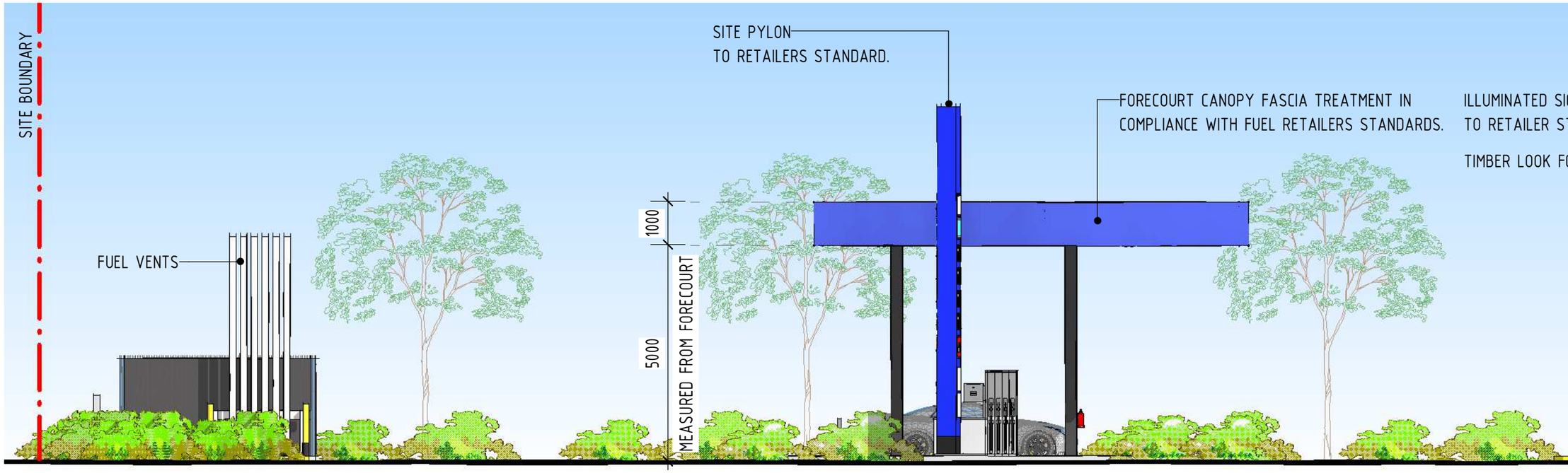
Drawing Number
21197-DA03

Revision
P1



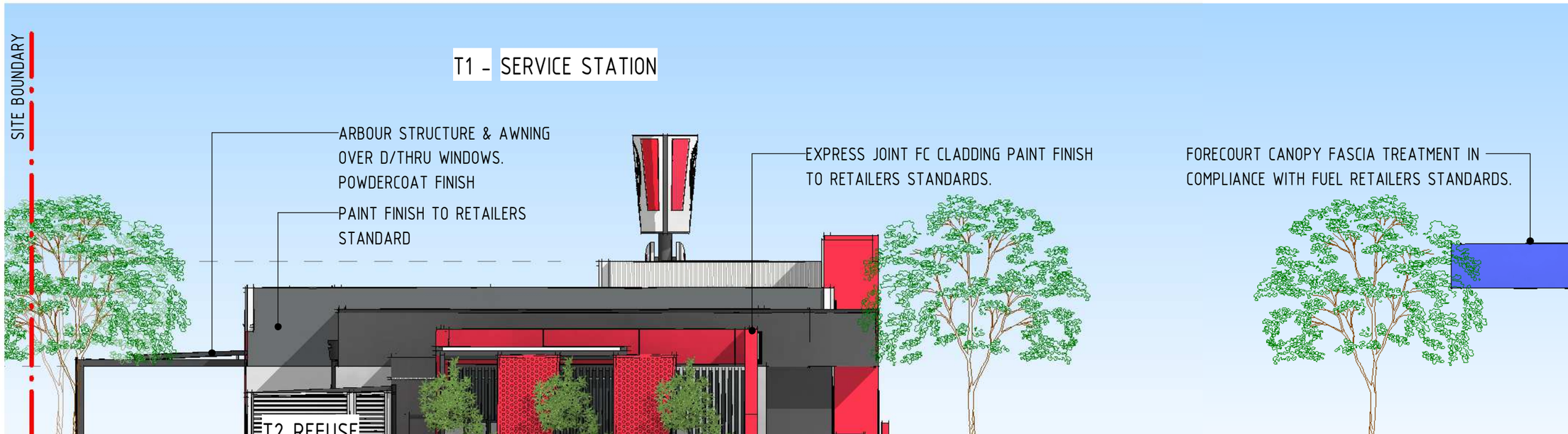

1 PERSPECTIVE 1






1 ELEVATION EAST

1 : 100



PRELIMINARY


## PROPERTY DESCRIPTION

LOT 304-308 on CT1824
COUNTY: DAVENPORT
COUNCIL: CHARTERS TOWERS REGIONAL

## DEVELOPMENT ASSESSMENT

| | |
|---|---|
| TOTAL SITE AREA | - 3,325m$^2$ |
| LANDSCAPE AREA | - 425m$^2$ |
| SITE COVER<br>INCLUDES ALL ROOFED AREAS | - 28.2% |

### IMPERVIOUS AREA

| | |
|---|---|
| • EXISTING (APPROX) | - 300m$^2$ |
| • PROPOSED | - 2,900m$^2$ |

### BUILDING AREAS (APPROX)

| | |
|---|---|
| • DWELLING | - 160m$^2$ |
| • SHED | - 100m$^2$ |

Consulting Engineer

VERVE BUILDING DESIGN CO.
BUILDING DESIGNERS LICENCE No. 1002212 PH. 07 3857 0942
OFFICE 2, LEVEL 1, 488 LUTWYCHE ROAD, LUTWYCHE QLD 4030 E: info@vervebd.com.au
imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion



Revision and approvals

| Code | Date | Drn | Description | Dwn |
|---|---|---|---|---|
| P1 | 04.03.2022 | TD | DRAFT DA ISSUE | |

Project Description
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

Drawing Title
EXIST. / DEMO. SITE PLAN

Scale: 1:200 @ A1 / 1:400 @A3
Drawn:
Approved:
Issued:

Drawing Number: 21197-DA01
Revision: P1

PRELIMINARY


## PROPERTY DESCRIPTION

LOT 304-308 on CT1824
COUNTY: DAVENPORT
COUNCIL: CHARTERS TOWERS REGIONAL

## DEVELOPMENT ASSESSMENT

| | |
|---|---|
| TOTAL SITE AREA | - 3,325m² |
| LANDSCAPE AREA | - 425m² |
| SITE COVER (INCLUDES ALL ROOFED AREAS) | - 28.2% |

### IMPERVIOUS AREA

| | |
|---|---|
| • EXISTING (APPROX) | - 300m² |
| • PROPOSED | - 2,900m² |

### BUILDING AREAS

| | |
|---|---|
| • T1 - SERVICE STATION | - 232m² |
| • T2 - FOOD & DRINK OUTLET | - 198m² |
| TOTAL BUILDING GFA | - 430m² |

### MISCELLANEOUS STRUCTURES

| | |
|---|---|
| • CAR FUEL FORECOURT (UNENCLOSED BUILDING FOOTPRINT) | - 389m² |
| • T1 REFUSE ENCLOSURE | - 20m² |
| • T2 REFUSE ENCLOSURE | - 14m² |
| • SERVICE CORRIDOR | - 52m² |
| TOTAL MISC. STRUCTURES AREA | - 475m² |

### CAR PARKING

| | |
|---|---|
| • PARKING REQUIRED | - 26 (TBC) |
| • PARKING PROVIDED | - 21 |
| • CAR REFUELLING POSITIONS | - 7 |
| • TRUCK REFUELLING POSITIONS | - 2 |

Consulting Engineer

VERVE BUILDING DESIGN CO.
BUILDING DESIGNERS LICENCE No. 1002212 PH. 07 3857 0942
OFFICE 2, LEVEL 1, 488 LUTWYCHE ROAD, LUTWYCHE QLD 4030 E: info@vervebd.com.au
imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion



Revision and approvals

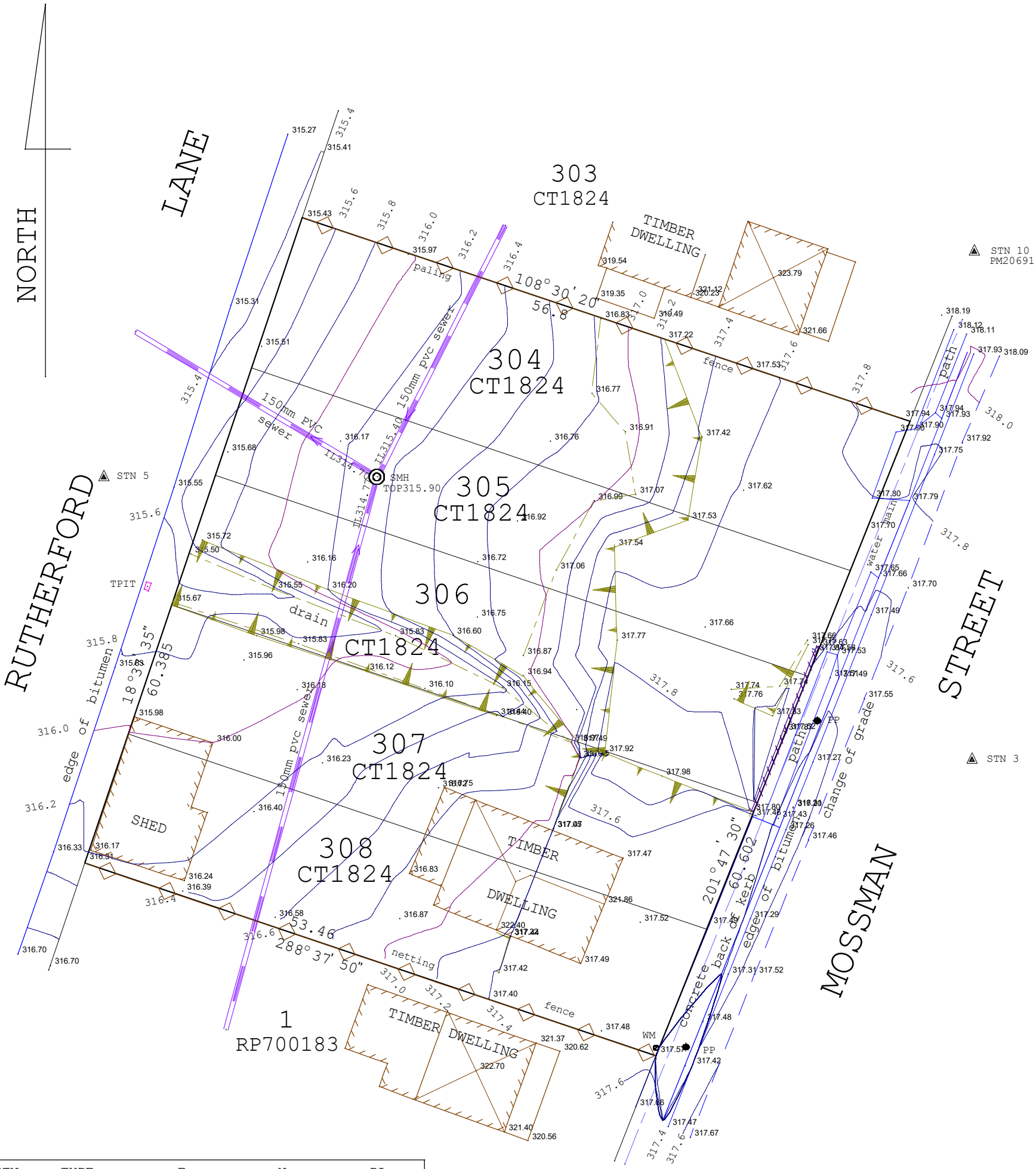
| Code | Date | Drn | Description | Dwn |
|---|---|---|---|---|
| P3 | 04.03.2022 | TD | DRAFT DA ISSUE | |
| P2 | 18.01.2022 | GN | PRELIMINARY ISSUE FOR COMMENT | |

Project Description
PROPOSED MIXED USE DEVELOPMENT
112 & 118 MOSMAN STREET,
CHARTERS TOWERS, QLD 4820

Drawing Title
PROPOSED SITE PLAN

Scale 1:200 @ A1 / 1:400 @A3
Drawn
Approved
Issued
Drawing Number 21197-DA02
Revision P3

# Appendix B – Survey Plan




| STN | TYPE | E | N | RL | |
|---|---|---|---|---|---|
| 3 | Nail on Kerb | 422258.435 | 7779758.677 | 317.267 | |
| 5 | Bolt | 422181.466 | 7779783.568 | 315.517 | |
| 10 | Bench Mark | 422258.600 | 7779803.630 | 318.288 | No.20691 |

NOTE: SEWER INFORMATION COMPILED FROM COUNCIL RECORDS
SHEET: S 200/241 RevB

0 10 20 30 40 50m

SCALE

HANSEN SURVEYS
22 QUEEN STREET
NORTH WARD,Q4810
TEL: 07 4724 2114
MOB: 04 2916 4683
EMAIL:gehansen@iprimus.com.au

# DETAIL & CONTOUR SURVEY
# LOTS 304-308 on CT1824
# 112-118 MOSSMAN STREET

LOCALITY: CHARTERS TOWERS CITY
LOCAL AUTHORITY: CHARTERS TOWERS REGIONAL COUNCIL

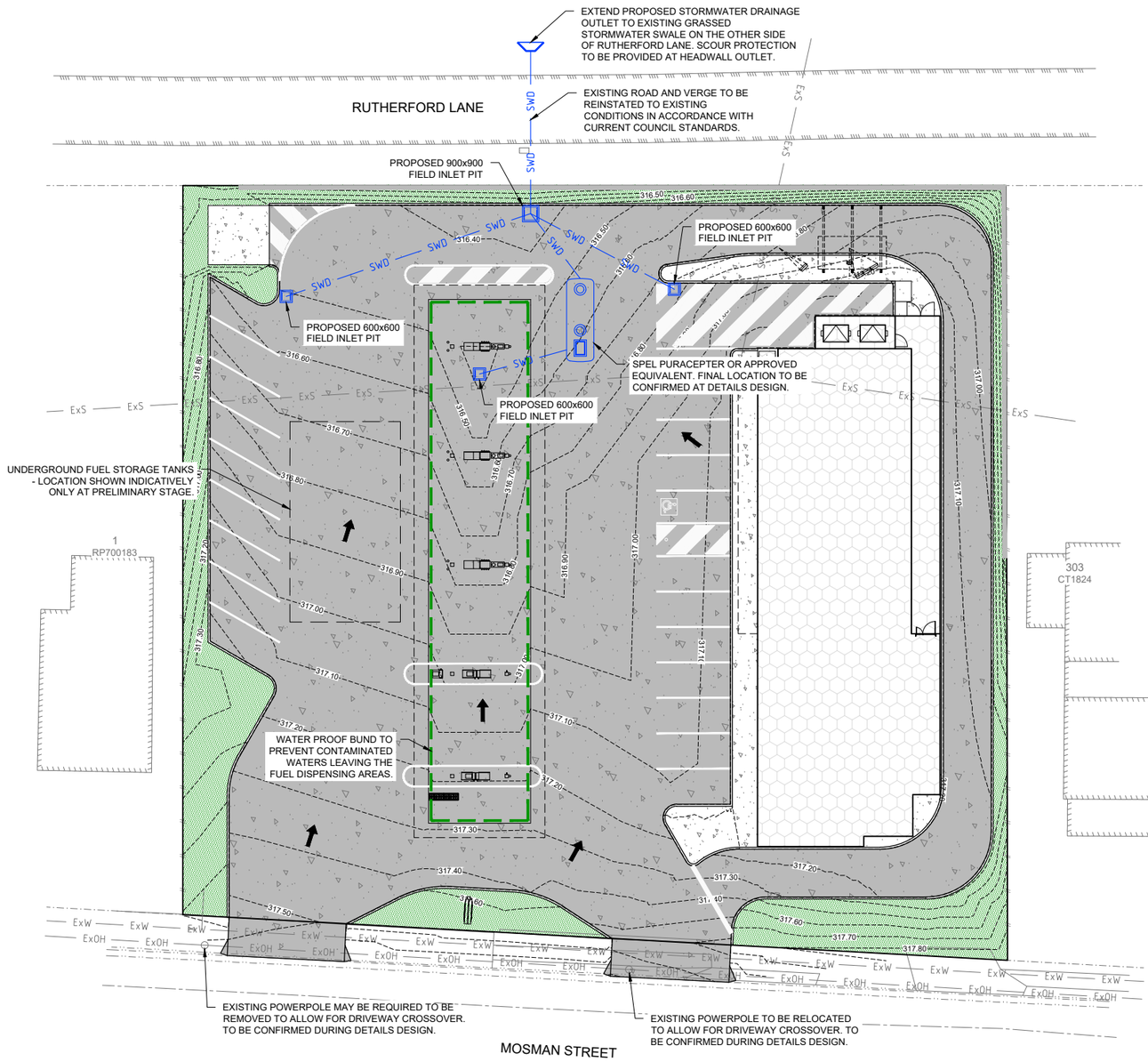
SCALE 1:400 at A3
DATE: DECEMBER 2021
MERIDIAN: MGA Zone 55
HEIGHT DATUM: AHD
CONTOUR INTERVAL: 0.2m

REF: 211161

# Appendix C – Civil Works Drawings

## LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS)
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- EXISTING SEWERAGE
- EXISTING WATER
- EXISTING OVERHEAD ELECTRICITY
- DESIGN CONTOURS (AT 0.10m INTERVALS)
- PROPOSED WATER PROOF BUND
- PROPOSED STORMWATER
- SURFACE FLOW DIRECTION
- PROPOSED BUILDING BY OTHERS
- CONCRETE PAVEMENT EXTENT
- PROPOSED CONCRETE FOOTPATH
- PROPOSED LANDSCAPING




PRELIMINARY

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP

Inertia
ABN 82 115 498 023 Phone: 3857 7868
E-mail: info@inertiaeng.com.au Fax: 3262 7359


SCALE BARS: 0 4 8 12m
SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT 112 MOSMAN STREET CHARTERS TOWERS QLD, 4820

DRAWING TITLE: CONCEPT STORMWATER DRAINAGE LAYOUT PLAN

DESIGNED: K.BETTERIDGE

9970 JOB No.

SK001 DWG. No.

A REVISION

## LEGEND

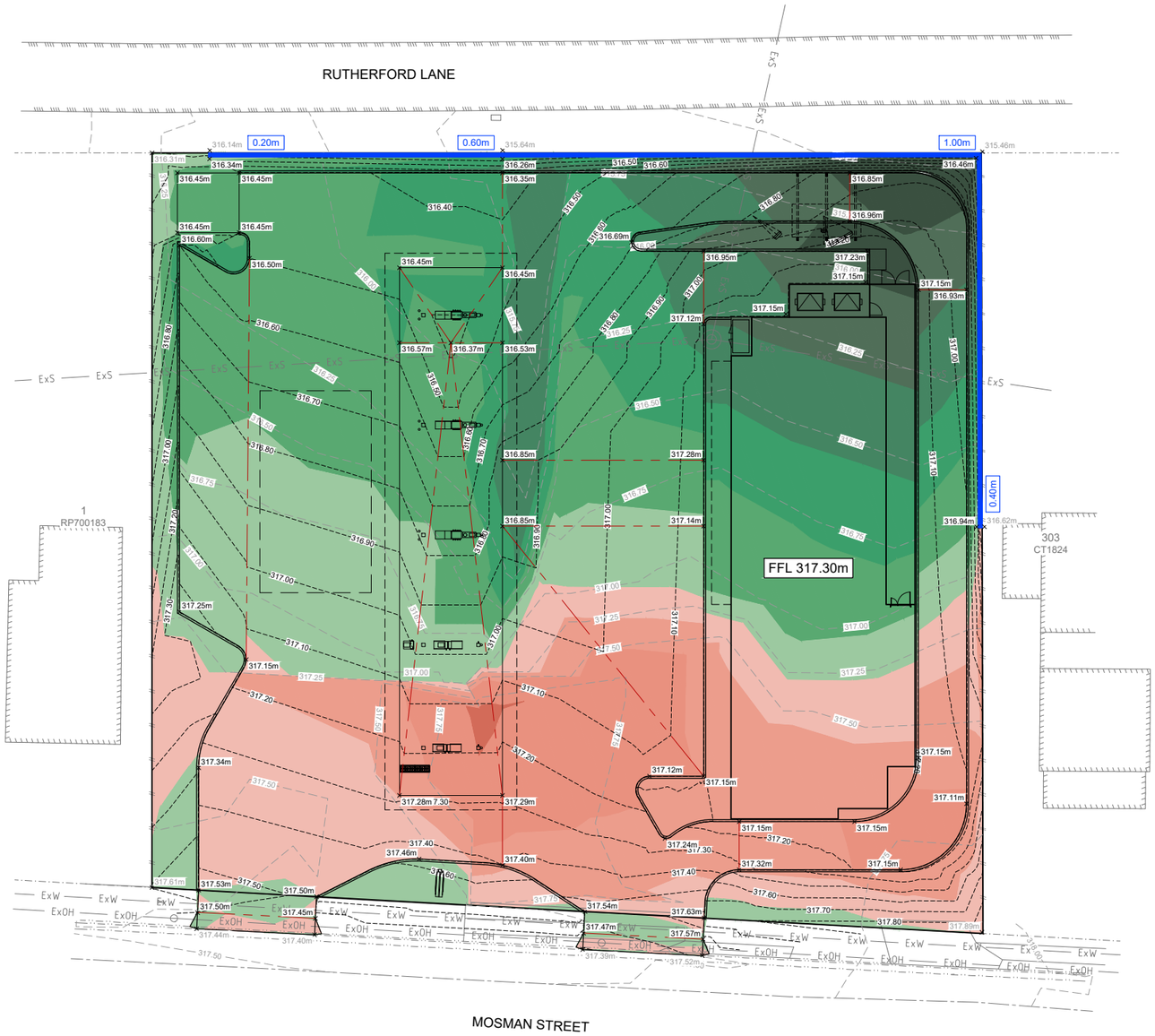
- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS) — XX.XX
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- EXISTING SEWERAGE — ExS
- EXISTING WATER — ExW
- EXISTING OVERHEAD ELECTRICITY — ExOH
- DESIGN CONTOURS (AT 0.10m INTERVALS) — XX.XX
- PROPOSED CHANGE OF GRADE
- PROPOSED RETAINING WALL
- XX.XXm × — FINISHED SURFACE ELEVATION LABEL
- XX.XXm × — EXISTING SURFACE ELEVATION LABEL
- X.XXm — PROPOSED RETAINING WALL HEIGHT
- FFL XXX.XXm — PROPOSED FINISHED FLOOR LEVEL

## CUT & FILL LEGEND

| EXCAVATION | FILLING |
|---|---|
| 0.01m - 0.25m | 0.01m - 0.25m |
| 0.25m - 0.50m | 0.25m - 0.50m |
| 0.50m - 0.75m | 0.50m - 0.75m |
| 0.75m - 1.00m | 0.75m - 1.00m |
| 1.00m -1.25m | 1.00m - 1.25m |
| 1.25m -1.50m | 1.25m - 1.50m |

## NOTES

- AREAS NOT REQUIRING EARTHWORKS ARE TO REMAIN UNDISTURBED.
- CUT/FILL IS TO ULTIMATE FINISHED INCLUDING TOPSOIL AND ROAD SURFACE AND DOES NOT CONSIDER EXCAVATION NEEDED FOR ROAD PAVEMENTS, TOPSOIL ETC.
- FINAL EXTENTS OF CUT/FILL ARE TO BE DETERMINED BY THE CONTRACTOR ON SITE IN CONJUNCTION WITH THE EARTHWORKS DESIGN.




PRELIMINARY

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP

Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359


SCALE BARS: 0 4 8 12m
SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT
112 MOSMAN STREET
CHARTERS TOWERS
QLD, 4820

DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN

DESIGNED: K.BETTERIDGE

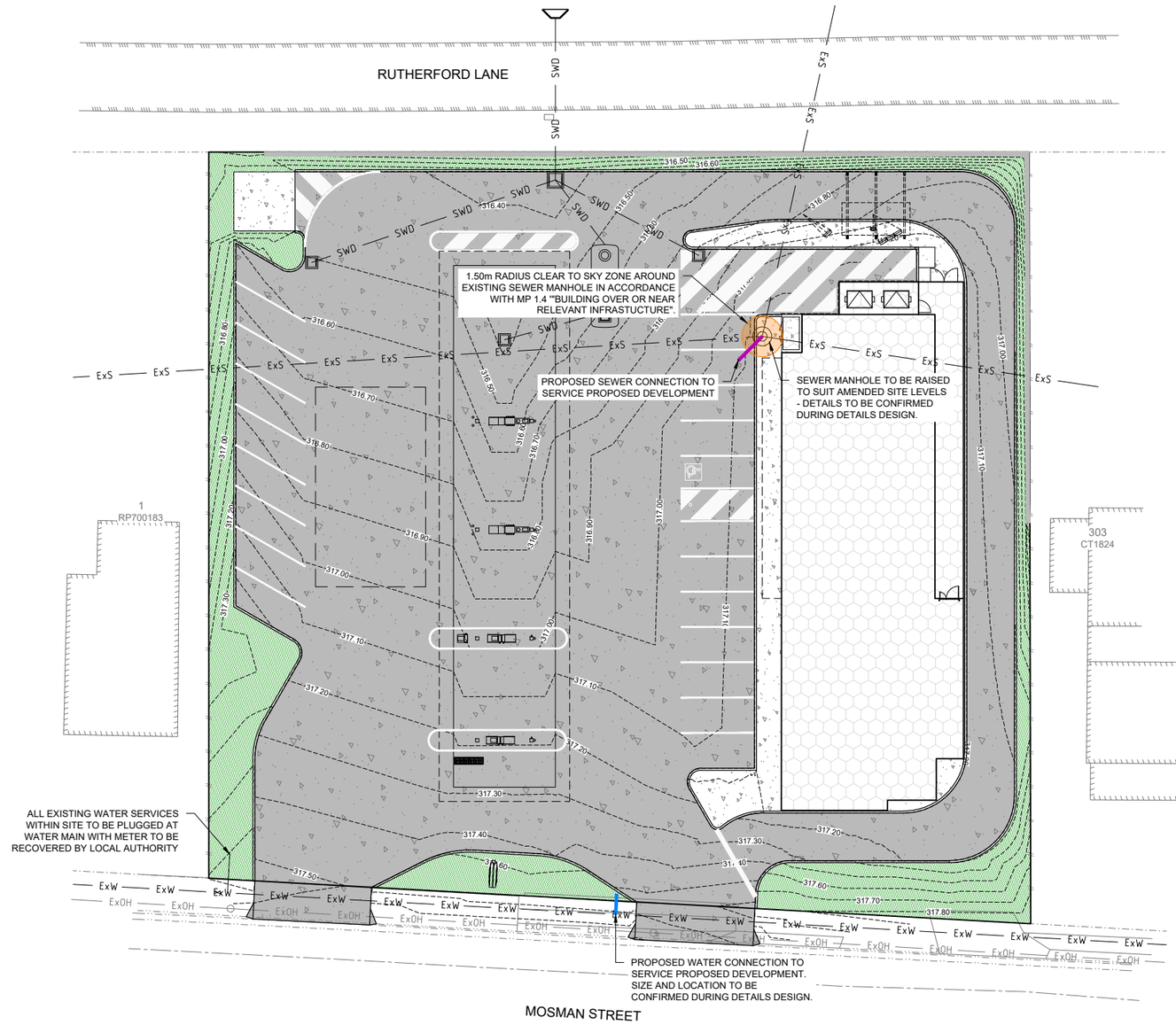
9970 JOB No.

SK002 DWG. No.

A REVISION

## LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS)
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- ExS — EXISTING SEWERAGE
- ExW — EXISTING WATER
- ExOH — EXISTING OVERHEAD ELECTRICITY
- DESIGN CONTOURS (AT 0.10m INTERVALS)
- SWD — PROPOSED STORMWATER
- S — PROPOSED SEWER CONNECTION
- W — PROPOSED WATER CONNECTION
- PROPOSED BUILDING BY OTHERS
- CONCRETE PAVEMENT EXTENT
- PROPOSED CONCRETE FOOTPATH
- PROPOSED LANDSCAPING
- PROPOSED SEWER EASEMENT




PRELIMINARY

| REV | DESCRIPTION | DATE | DRAWN | REVIEWED |
|---|---|---|---|---|
| A | PRELIMINARY ISSUE | 16.03.22 | KB | AI |

NORTH POINT:

ARCHITECT: VERVE

CLIENT: VIVA PROPERTY GROUP


Inertia
ABN 82 115 498 023 Phone: 3857 7868
E-mail: info@inertiaeng.com.au Fax: 3262 7359



SCALE BARS: 0 4 8 12m
SCALE 1:200 @ A1

PROJECT: PROPOSED DEVELOPMENT 112 MOSMAN STREET CHARTERS TOWERS QLD, 4820

DRAWING TITLE: CONCEPT SERVICES LAYOUT PLAN

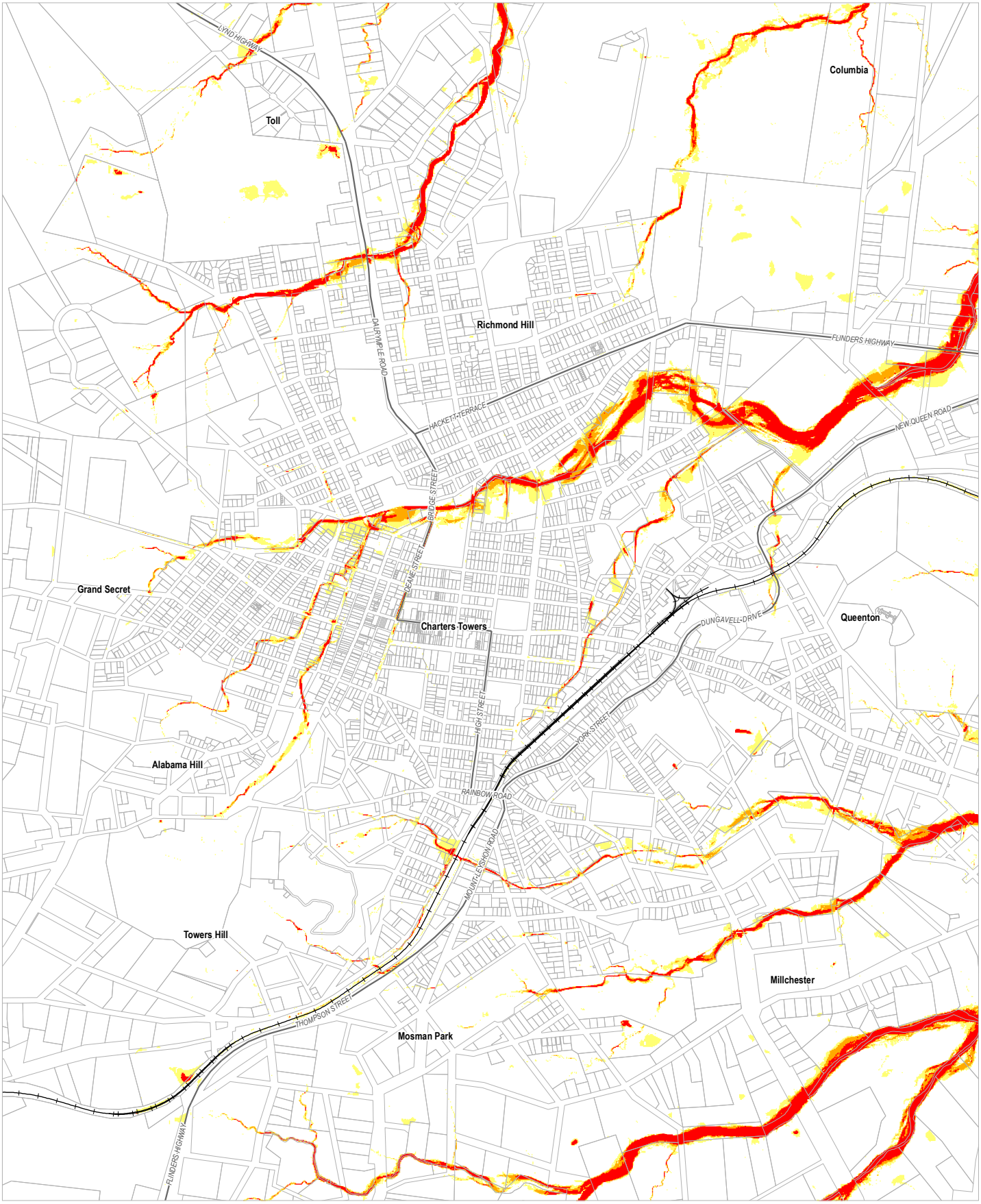
DESIGNED: K.BETTERIDGE

JOB No. 9970

DWG. No. SK003

REVISION A

# Appendix D – Charters Towers Regional Town Plan – Flood Hazard Overlay Map




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

Refer to State Goverment mapping for the latest version of the overlay if applicable.

Geocentric Datum of Australia (GDA94)

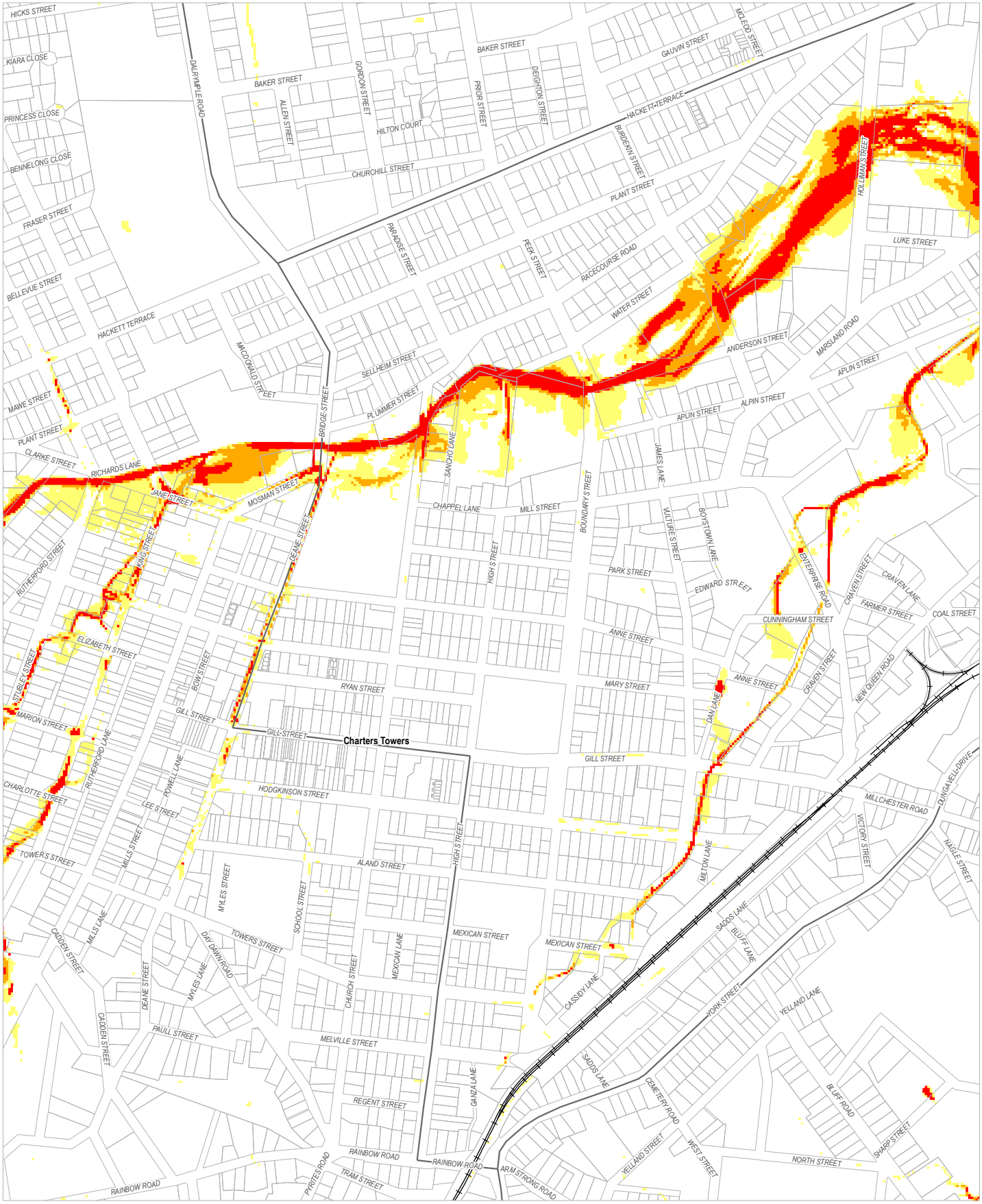
29/12/2019

Approx Scale @ A3 1:20,000

0 0.55 1.1

km

**Flood Hazard Overlay - OM3.2 Charters Towers Urban Area**




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

Refer to State Goverment mapping for the latest version of the overlay if applicable.

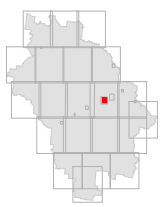
Geocentric Datum of Australia (GDA94)

29/12/2019

Approx Scale @ A3 1:8,000

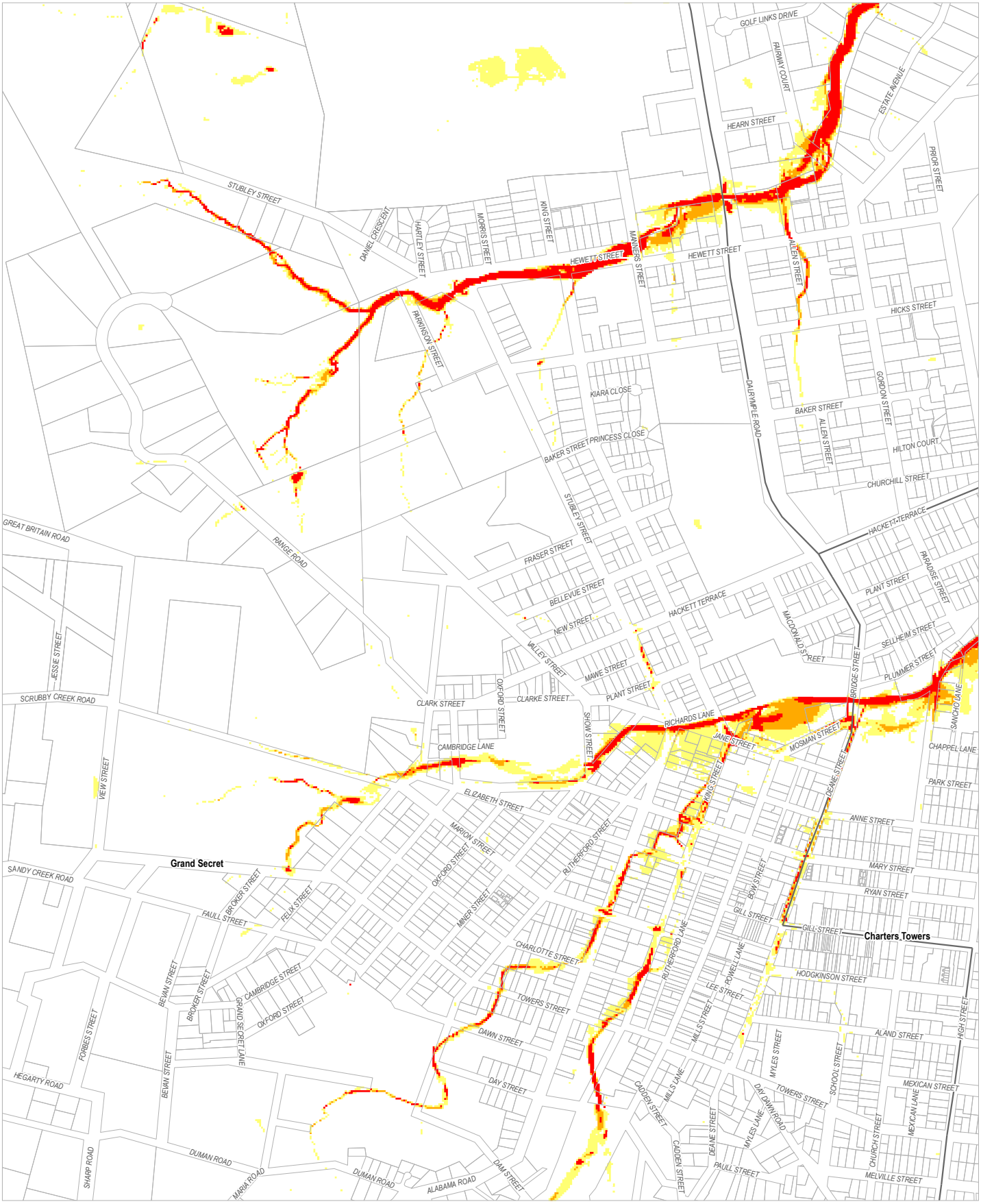
0 0.2 0.4

km



**Flood Hazard Overlay - OM3.3 Charters Towers Centre**

Document Set ID: 4634271
Version: 1, Version Date: 07/04/2022




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

Refer to State Goverment mapping for the latest version of the overlay if applicable.

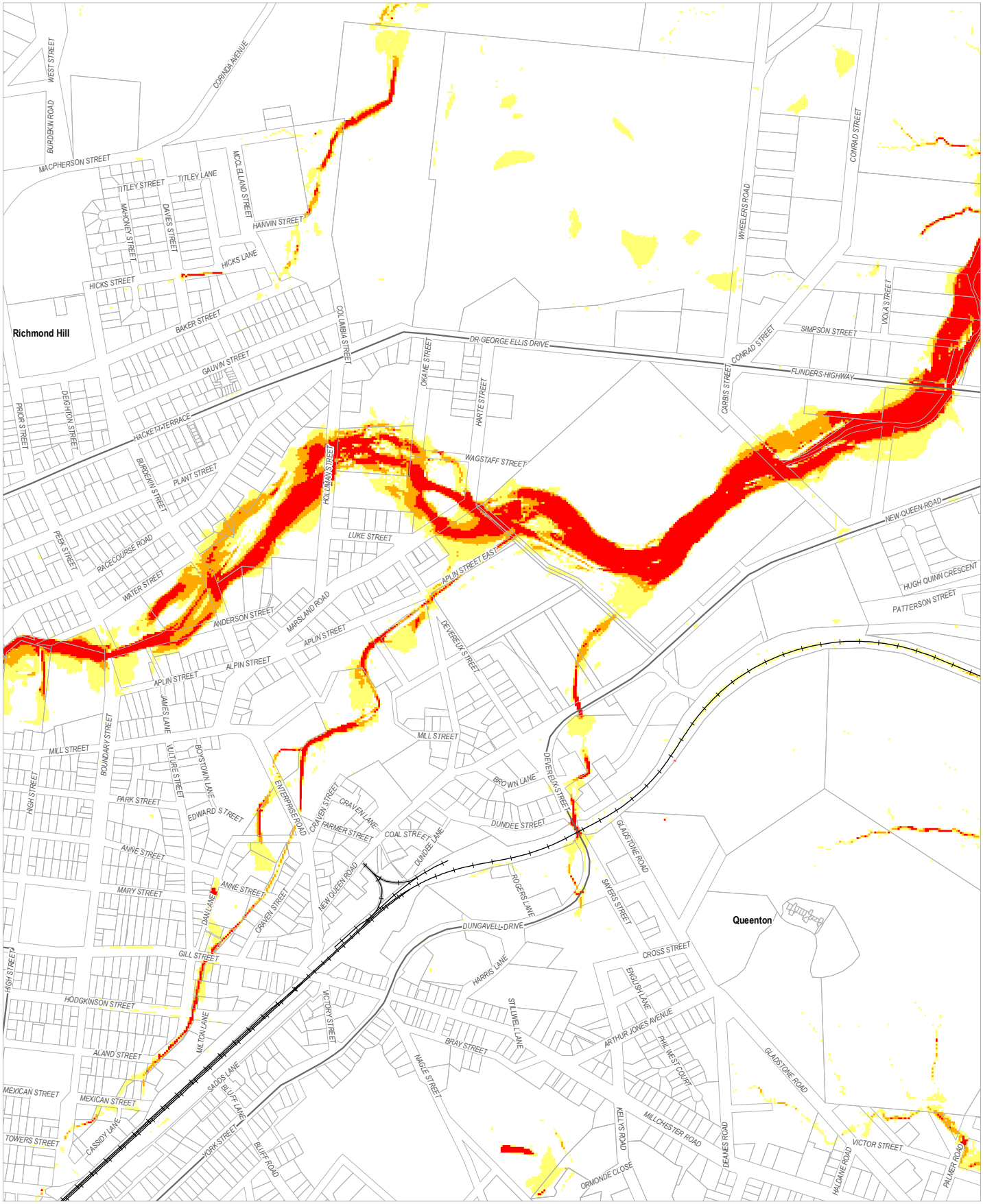
Geocentric Datum of Australia (GDA94)

29/12/2019

Approx Scale @ A3 1:10,000

0 0.25 0.5 km

**Flood Hazard Overlay - OM3.4 Charters Towers Inset 1**




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

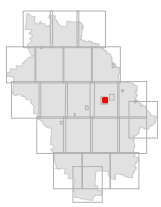
Refer to State Goverment mapping for the latest version of the overlay if applicable.

Geocentric Datum of Australia (GDA94)

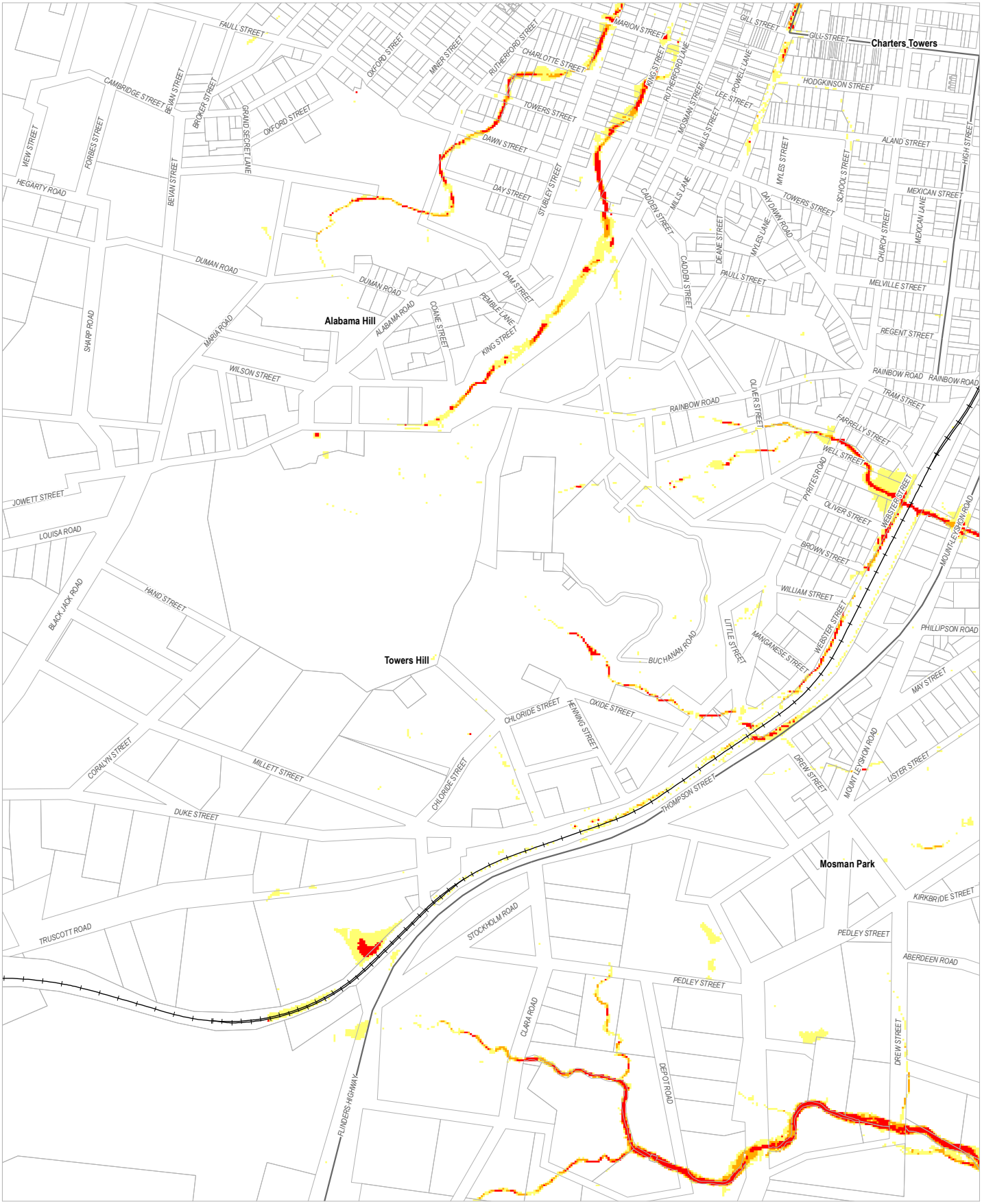
29/12/2019

Approx Scale @ A3 1:10,000

0 0.25 0.5 km



**Flood Hazard Overlay - OM3.5 Charters Towers Inset 2**




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

Refer to State Goverment mapping for the latest version of the overlay if applicable.

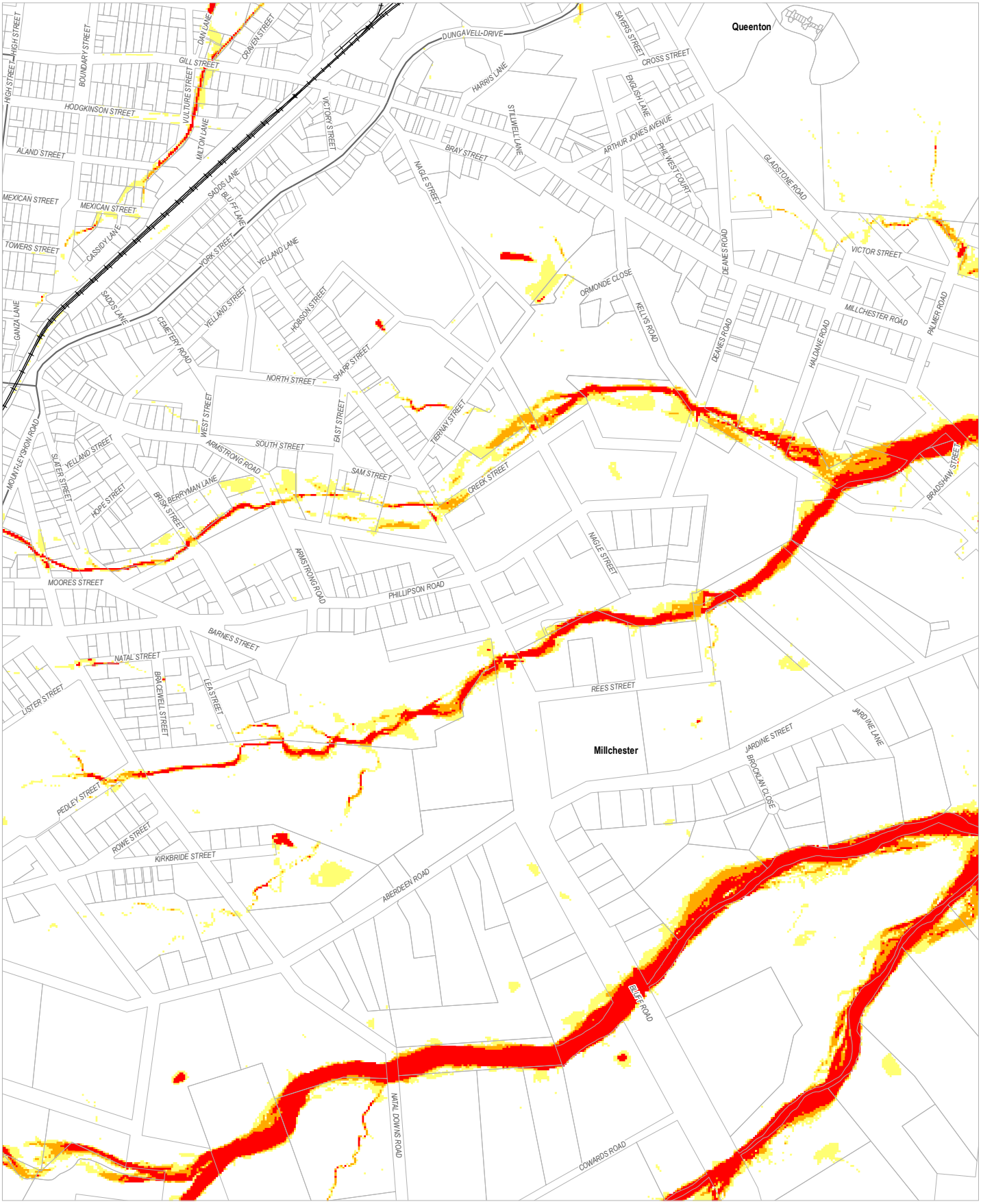
Geocentric Datum of Australia (GDA94)

29/12/2019

Approx Scale @ A3 1:10,000

0 0.25 0.5 km

**Flood Hazard Overlay - OM3.6 Charters Towers Inset 3**




CHARTERS TOWERS REGIONAL COUNCIL

**Charters Towers Regional Town Plan Flood Hazard Overlay Map**

**Flood Prone Areas**

- Flood Hazard Area - QRA Level 1
- Significant Hazard Area – QRA Level 2 with 1% AEP
- High Hazard Area – QRA Level 2 with 1% AEP
- Extreme Hazard Area – QRA Level 2 with 1% AEP

**Other Map Layers**

- Cadastral Boundary
- Local Government Boundary
- Waterway
- Railway Network
- Major Roads



Cadastral boundaries as at December 2019 sourced from QSpatial. Floodplain Assessment Overlay, Queensland Reconstruction Authority (QRA) as at 17/10/2013, sourced from QSpatial. Localised Flood Hazard 1% AEP (QRA Level 2) for Charters Towers, Pentland and Sellheim supplied by QRA August and November 2018. Localised Flood Hazard Study Areas are indicative only.

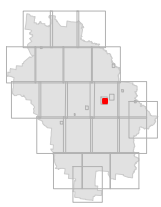
Refer to State Goverment mapping for the latest version of the overlay if applicable.

Geocentric Datum of Australia (GDA94)

29/12/2019

Approx Scale @ A3 1:10,000

0 0.25 0.5 km



**Flood Hazard Overlay - OM3.7 Charters Towers Inset 4**

Document Set ID: 4634271
Version: 1, Version Date: 07/04/2022

INERTIA ENGINEERING PTY LTD

P I 07 3857 7868 F I 07 3262 7359 E I info@inertiaeng.com.au