PLEASE QUOTE
Your Ref:
Our Ref:

Enquiries: Planning Department

80 Wilson Street, Burnie Tasmania
PO Box 973, Burnie TAS 7320

ABN: 29 846 979 690
Phone: (03) 6430 5700
Email: burnie@burnie.tas.gov.au
Web: www.burnie.tas.gov.au

We value your feedback on our service.
Tell us about it at www.burnie.tas.gov.au/feedback

NOTICE OF APPLICATION FOR LAND USE PERMIT

(Section 57(3) Land Use Planning and Approvals Act 1993)

Advice to Adjoining Land Owner or Occupier

Application No: -	**DA 2025/83**
Development Site: -	**North West Regional Hospital**
	23 Brickport Road COOEE
Proposal: -	**Addition to Existing Hospital - Mental Health Facility**

Notice of the above application is served on you as an adjoining land owner or occupier.

The application may be viewed at -

Burnie City Council Customer Services Counter
Ground Floor, City Offices,
80 Wilson Street, Burnie

Between the hours of 8.45 am – 4.45 pm Monday to Friday inclusive (excluding public holidays) or on Council's website at www.burnie.tas.gov.au/permits

You are entitled to make representation in writing on any aspect of the proposal addressed to: -

General Manager,
Burnie City Council,
PO Box 973, Burnie 7320

or burnie@burnie.tas.gov.au by no later than 5.00 pm on **30 March 2026.** Council must have regard to any written representation received during the exhibition period when considering its decision on the application.

All persons who make representation will be notified within seven (7) days of the Council's decision. Any persons who made representation and is not satisfied with the Council decision may, under Section 61(5) of the *Land Use Planning and Approvals Act 1993*, lodge an appeal against that decision within fourteen (14) days of the date of that notice to: -

The Tasmanian Civil and Administrative Tribunal,
GPO Box 1311,
HOBART TAS 7001

Should you have any enquiries regarding this development proposal, please do not hesitate to contact the Planning Department on (03) 6430 5700.

Troy McCarthy
EXECUTIVE MANAGER – DEVELOPMENT SERVICES
Date of Notice**:** - **14 March 2026**

BURNIE CITY COUNCIL
PO Box 973, BURNIE, TASMANIA 7320.
Ph : (03) 6430 5700
Email : burnie@burnie.tas.gov.au

Land Use Planning and Approvals Act 1993

Tasmanian Planning Scheme

PERMIT APPLICATION

Office use only

Application No _____

Date Received _____

Permit Pathway - *Permitted/Discretionary*

Use or Development Site:

Street Address: North West Regional Hospital, 23 Brickport Road, Cooee

Certificate of Title Reference: CT 164516/1 & CT 125373/2

Applicant

First Name: 6ty Pty Ltd

Second Name:

Surname:

Postal Address:

Phone No:

Mobile:

Email Address:

I/we consent for all giving of information and the serving of notices in relation to this application to be delivered electronically to the above email address? **YES** (●) **NO** ( )

Applicants Signature: Ashley Brook

Owner (note – if more than one owner, all names must be indicated)

First Name: Crown land*

Second Name:

Surname: Administered by the Department of Health

Postal Address: GPO Box 125
Hobart TAS 7001

Phone No: 1300 135 513

Instruction for making a permit application

a) ***Use or development?***

The application must provide a full description of the proposed use and/or development and of the manner in which the use and/or development is to operate.

"Use" is the purpose or manner for which land is utilised. ‘‘Development" is any site works (including any change in natural condition or topography of land and the clearing or conversion of vegetation), and the construction, alteration, or removal of buildings, structures and signs, required in order to prepare a site for use or to change existing conditions within a site. Subdivision is development.

Clause 6.2 Tasmanian Planning Scheme provides the use classes by which all use or development must be described. Development must be categorised by reference to the use class it is to serve.

b) ***Required Information***

Adequate statements, plans and specifications must be included within the permit application to address and demonstrate compliance with all applicable requirements of the planning scheme, including any site analysis, impact report and recommendation, and advice, consent or determination required from a State agency or utility entity.

The application must clearly identify the documents relied upon for determination.

Section 51(1AC) *Land Use Planning and Approvals Act 1993* provides that a permit application is not valid unless it includes all of the information required by a planning scheme. Clause 6.1 Tasmanian Planning Scheme prescribes the minimum information that is necessary in order to complete a valid permit application.

S54 *Land Use Planning and Approvals Act 1993* provides that the planning authority may require the applicant to supply further information before it considers a permit application. If the planning authority requires further information to more particularly address one or more of the applicable requirements of the Tasmanian Planning Scheme, the statutory period for determination of a permit application does not run until that information is answered to the satisfaction of the planning authority

c) ***Applicable Provisions and Standards***

The permit application must be assessed against the applicable provisions and standards of the Tasmanian Planning Scheme. The

application is to identify by reference the clauses it relies upon to demonstrate compliance. (eg *clause 8.4.3 (A1 – A4, and P5*)

d) ***Discretionary Permits***

If a permit is discretionary the permit application must be notified for a period of 14 days to allow opportunity for any interested person to consider the proposed use and/or development and to provide comment on the discretionary matter.

If a permit application relies on performance criteria to satisfy an applicable standard or is discretionary under another provision of the interim planning scheme, the permit is discretionary only with respect to that standard.

The Council must have regard to all representations received during the notification period on a discretionary matter when determining whether to grant or refuse a permit.

e) ***If the applicant is not the landowner***

If the applicant is not the owner of the land in the use or development site, the applicant is required to notify all of the owners either prior to or within 7 days from the date of making the permit application.

The permit application must identify all of the landowners; and the applicant must sign the application form to acknowledge the obligation to advise such landowners that the permit application has been made.

If the site includes land owned or administered by the Burnie City Council or by a State government agency, the consent in writing from the Council or the Minister responsible for Crown land must be provided at the time of making the application.

f) ***Applicant declaration***

It is an offence for a person to do any act that is contrary to a compliance requirement created under the section 63 *Land Use Planning and Approvals Act 1993*. The applicant is required to complete a declaration that the information given in the permit application is true and correct.

g) ***Payment of Fees***

The Council is not required to take any action on the permit application until all the relevant fees have been paid.

Permit Information (NB If insufficient space, please attach separate document)

Proposed Use:

Use Class Hospital Services

Documents included with the permit application to describe the Use

Planning Report, proposal plans and other accompanying documents

Proposed Development

Use class to which the development applies Hospital Services

Documents included with the permit application to describe the Development

Planning Report, proposal plans and other accompanying documents

Provisions and Standards relied upon for grant of a Permit

Applicable standards in the provisions for the:

- Community Purpose Zone
- Parking and Sustainable Transport Code
- Road and Railway Assets Code
- Landslip Hazard Code
- Safeguarding of Airports Code

Includes the following performance criteria:

- Landslip Hazard Code
  - Clause C15.5.1 Use within a Landslip Hazard Area – P1.1, P1.2 and P2.

- Safeguarding of Airports Code
  - Clause C16.6.1 Buildings and Works within an Airport Obstacle Limitation Area – P2.

Value of use and/or development

Notification of Landowner/s

If land is not in applicant's ownership

I, Ashley Brook of 6ty Pty Ltd , declare that the owner/each of the owners of the land has been notified of the intention to make this permit application.

Signature of Applicant Ashley Brook Date 24 November 2025

If the permit application involves land owned or administered by the BURNIE CITY COUNCIL

Burnie City Council consents to the making of this permit application.

General Manager (Signature) Date

If the permit application involves land owned or administered by the CROWN

Refer to accomanying Agent Authority Appointment Form and Instrument of Delegation

I, the ~~Minister~~ responsible for the land, consent to the making of this permit application.

~~Minister~~ (Signature) Simon Dunne Date 11/12/2025

Applicant Declaration

I, Ashley Brook of 6ty Pty Ltd

declare that the information I have given in this permit application to be true and correct to the best of my knowledge.

Signature of Applicant Ashley Brook Date 24 November 2025

Office use only

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
164516	1
EDITION	DATE OF ISSUE
2	12-Aug-2013

SEARCH DATE : 29-May-2024
SEARCH TIME : 01.53 PM

DESCRIPTION OF LAND

City of BURNIE
Lot 1 on Sealed Plan 164516
Derivation : Part of Section 9 in the Emu Bay Block of 50,000 Acres Gtd. to The Van Diemens Land Company.
Prior CTs 164478/1 and 125373/1

SCHEDULE 1

C441882 & B562515 THE CROWN

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP164516 EASEMENTS in Schedule of Easements
D82426 BURDENING ELECTRICITY INFRASTRUCTURE EASEMENT with the benefit of a restriction as to user of land in favour of Aurora Energy Pty Ltd over the land marked Electricity Infrastructure Easement on Sealed Plan 164516 (Subject to Provisions) Registered 12-Aug-2013 at noon
M383290 Application by Aurora Energy Pty Ltd for Noting of a Notable Interest pursuant to Section 12(1) (2) (a) & (b) of the Electricity Wayleaves and Easement Act 2000 Registered 23-Aug-2012 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER The Crown

FOLIO REFERENCE FIR 164478-1 C.T.125373/1

GRANTEE Part of Section 9 in the Emu Bay Block of 50,000 Acres, Granted to the Van Diemens Land Company.

PLAN OF SURVEY

BY SURVEYOR Adrian Wade Eberhardt of PEACOCK, DARCEY & ANDERSON PTY LTD REGISTERED LAND SURVEYORS 6 QUEEN STREET, BURNIE

LOCATION CITY OF BURNIE

SCALE 1: 2500 | LENGTHS IN METRES | SURVEYORS REF. 15243

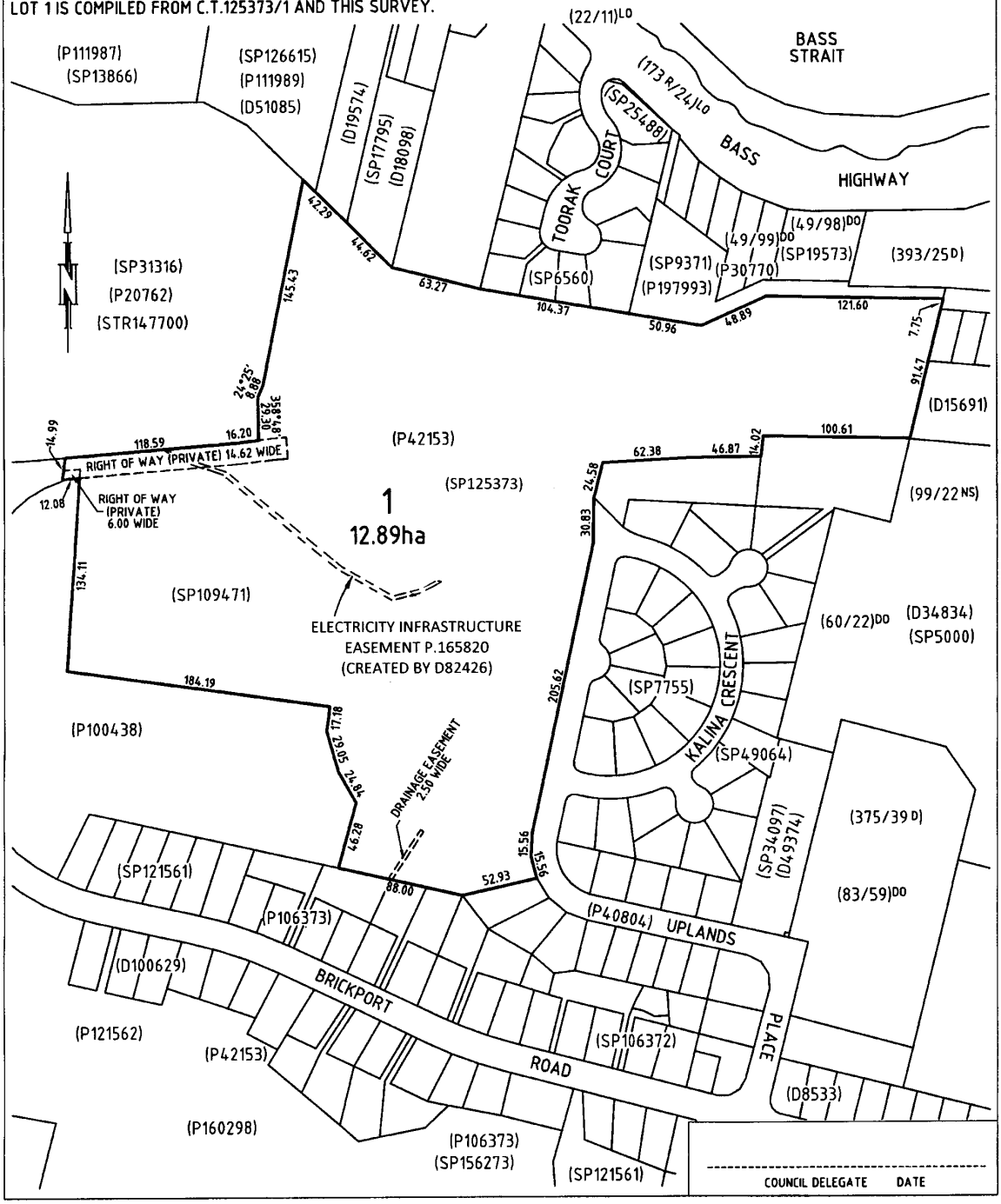
REGISTERED NUMBER **SP164516**

APPROVED EFFECTIVE FROM 23 OCT 2012

Alice Kava Recorder of Titles

MAPSHEET MUNICIPAL CODE No (4045-32) 103 | LAST UPI No FHY99 | LAST PLAN No SP125373 | ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 1 IS COMPILED FROM C.T.125373/1 AND THIS SURVEY.



SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	164516

PAGE 1 OF 1 PAGE/S

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easements or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Lot 1 on the Plan is subject to a right of carriageway over Right of Way (Private) 14.62 Wide, shown on the plan (appurtenant to Lot 1 on SP31316).

Lot 1 on the Plan is subject to a Right of Drainage over Drainage Easement 2.50 Wide, shown on the Plan (appurtenant to Lot 1 on SP106373).

Lot 1 on the Plan is subject to a Right of Carriageway (appurtenant to Lot 2 on SP109471) over Right of Way (Private) 6.00 Wide shown on the Plan.

Signed by **Andrew Geoffrey Roberts** being and as Manager, Crown Land Services pursuant to an Instrument of Authorisation dated the 27th Day of February 2012 in the presence of:

.....
Signature

.....
Signature of witness

ANDREW WELSH
Name of witness (block letters)

4/-134 MACQUARIE ST, HOBART
Address of witness

STATE SERVANT
Occupation

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: The Crown FOLIO REF: 125373/1 & 164478/1 SOLICITOR & REFERENCE: AZS 38514	PLAN SEALED BY: DATE: .... REF NO. ..... Council Delegate
NOTE: The Council Delegate must sign the Certificate for the purposes of identification.	

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
125373	2
EDITION	DATE OF ISSUE
1	04-Mar-1997

SEARCH DATE : 29-May-2024
SEARCH TIME : 01.52 PM

DESCRIPTION OF LAND

City of BURNIE
Lot 2 on Sealed Plan 125373
Derivation : Part of 50,000 Acres (Section 9) Gtd to The Van Diemens Land Company
Prior CTs 109471/1 and 109471/2

SCHEDULE 1

B562515 THE CROWN

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 125373 EASEMENTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER The Crown

FOLIO REFERENCE C.T. 109471 - 1 & C.T. 109471 - 2

GRANTEE Part of 50.000 Acres (Section 9) Gtd to The Van Diemens Land Company.

PLAN OF SURVEY

BY SURVEYOR B.J. Rollins of PEACOCK, DARCEY & ANDERSON P/L AUTHORISED SURVEYORS

LOCATION 91 MOUNT STREET - BURNIE

CITY OF BURNIE

SCALE 1: 3000 LENGTHS IN METRES

REGISTERED NUMBER

SP125373

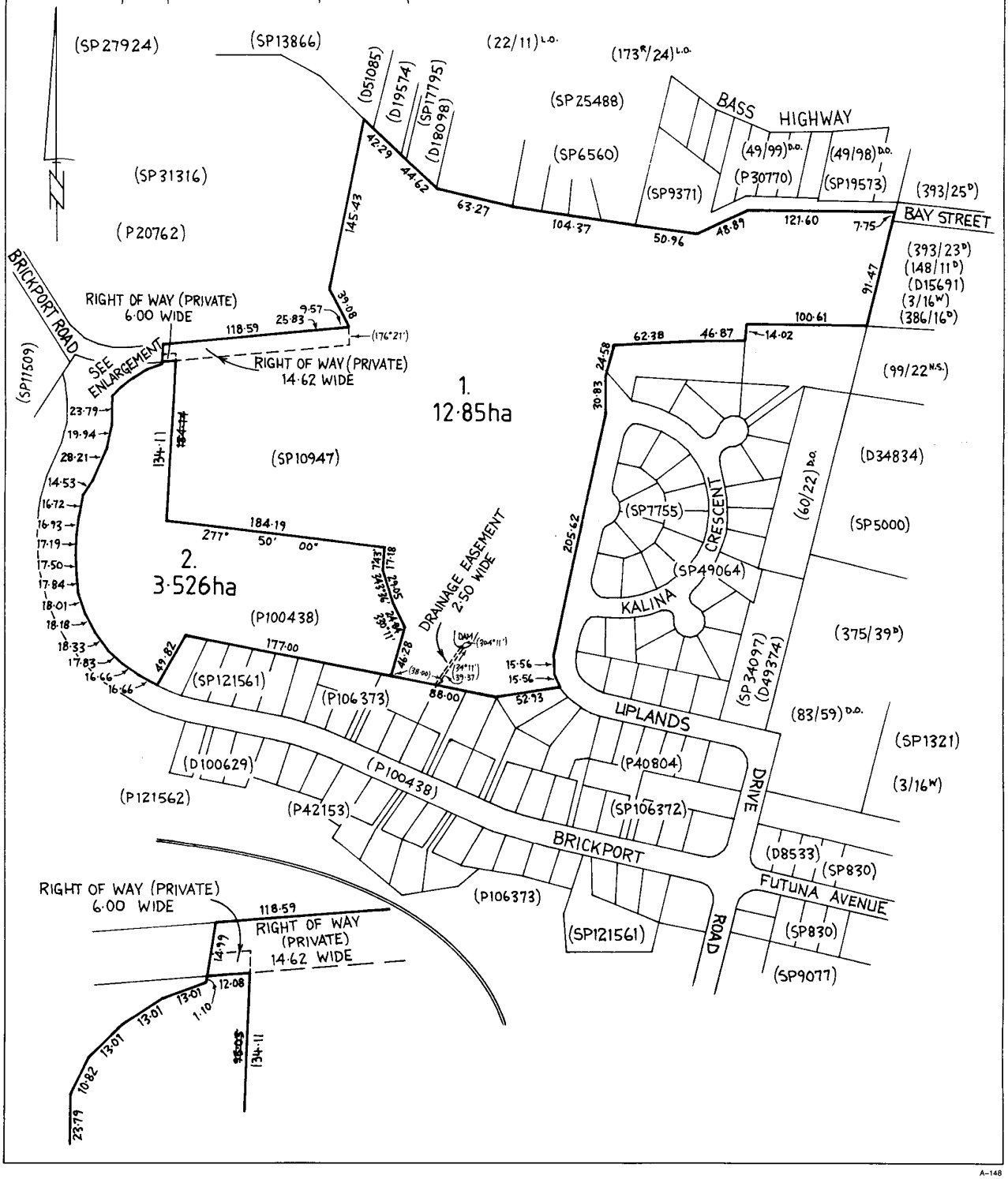
APPROVED

EFFECTIVE FROM - 4 MAR 1997

Recorder of Titles

MAPSHEET MUNICIPAL CODE No.	LAST UPI No. ~~4201881~~ 4210268 4210269	LAST PLAN No. SP109471	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN
103			

Lot 1 is compiled from C.T. 109471 - 1 & this survey.
Lot 2 is compiled from C.T. 109471 - 2 & this survey.



A-148

SCHEDULE OF EASEMENTS	REGISTERED NUMBER
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS AND MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP125373

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown in the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easement or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Lot 1 on the Plan is subject to a right of carriageway over Right of Way (Private) 14.62 wide shown on the Plan (appurtenant to Lot 1 on SP31316).

Lot 1 on the Plan is subject to a right of drainage over Drainage Easement 2.50 wide shown on the Plan (appurtenant to Lot 1 on SP106373).

Lot 1 on the Plan is subject to a right of carriageway (appurtenant to Lot 2 on SP 109471 ~~the Plan~~) over Right of Way (Private) 6.00 wide shown on the Plan.

Lot 2 on the Plan is together with a right of carriageway over Right of Way (Private) 6.00 wide shown on the Plan.

SIGNED by the **HONOURABLE PETER CURTIS LEIGH HODGMAN** being and as the Minister for the time being administering the *Crown Lands Act 1976* for and on behalf of the Crown in the presence of:-

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER :	PLAN SEALED BY :
FOLIO REF :	DATE:
SOLICITOR AND REFERENCE :	REF NO.

The Honourable P.C.L. Hodgman

NOTE: THE COUNCIL DELEGATE MUST SIGN THE CERTIFICATE FOR THE PURPOSE OF IDENTIFICATION.

Department of Health

GPO Box 125, HOBART TAS 7001, Australia
Web: www.health.tas.gov.au

Tasmanian Government

Burnie City Council
PO Box 973, Burnie, TASMANIA 7320

Attention: Troy McCarthy

Dear Troy,

Subject: Crown Consent

I confirm that I have held the position of Director, Programming and Delivery from Monday the 8th of December 2025.

The attached Instrument of Delegation confirms delegation of functions under section 52(1B) of the Land Use Planning Approval Act to the person for the time being holding the position of Director, Programming and Delivery.

Yours sincerely

Simon Dunne
Director, Programming and Delivery

10/12/25

Department of Health

LAND USE PLANNING AND APPROVALS ACT 1993

INSTRUMENT OF DELEGATION

I, Jeremy Rockliff MP, being the Minister for Health and a Minister of the Crown responsible for administering land administered or owned by the Crown, acting pursuant to section 52(1F) of the *Land Use Planning and Approvals Act 1993* and section 23AA(5A) of the *Acts Interpretation Act 1931*, hereby:

1. Give notice that the authority of the holders of the offices or positions of Director Asset Management Services (500686) and Manager Accommodation Planning (512742) to perform functions under s 52(1B) of *the Land Use Planning and Approvals Act* as delegated by the then Minister Michael Darrel Joseph Ferguson on 6 July 2018 pursuant to s 52(1F) is hereby terminated with immediate effect, and

2. Delegate my functions under section 52(1B) of the *Land Use Planning Approval Act* to the person or persons for the time being holding, occupying or acting in the offices or positions with the position number set out in Column 1 of the below Schedule and the office or position title set out in Column 2 of the below Schedule:

SCHEDULE	
Column 1	**Column 2**
	Secretary Department of Health
500309	Deputy Secretary Infrastructure
500686	Director – Asset Management Services
519709	Director Commercial Services
524943	Director – Programming and Delivery

Dated this 18 day of September 2022

Jeremy Rockliff MP

Minister for Health

Your Ref: DA 2025/83
Our Ref: 23.305

Measured form and function

10 February 2026

Troy McCarthy
Executive Manager – Development Services
Burnie City Council

Dear Troy,

PLANNING PERMIT APPLICATION DA 2025/83 – RESPONSE TO REQUEST FOR FURTHER INFORMATION

I refer to your letter dated 9 December 2025 requesting additional information regarding the above application. Our response comprises the documents accompanying this letter, as outlined below.

1 Crown Land

The accompanying documents include:

a. An amended Permit Application Form that has been signed by the person holding a relevant position with delegation under the *Land Use Planning and Approvals Act 1993*, being the Director – Programming and Delivery (Position Number 524943); and

b. A cover letter from this delegate (Simon Dunne).

2 Assessment of Car Parking Numbers and General Description of the Use

An amended Planning Report has been prepared to provide an updated assessment of the Acceptable Solutions under Clauses C2.5.1, C2.5.2 and C2.5.3, based on the proposed North West Mental Health Precinct being an intensification of an existing Hospital Services use.

3 Pedestrian Pathway for Existing Accommodation

Amended Architectural Drawings, particularly the Proposed Site Plan – Ground (Drawing Number AR003-0002-DA, Dated 4/02/2026), have been prepared to show existing footpaths to be retained adjacent to the accommodation buildings, along with a proposed footpath to accommodate one of the new rows of car parking spaces within the expanded on-grade parking area.

dlcs ISO 9001 certified

In addition, these drawings show updates to the proposed building, including:

- Updated main lobby entry;
- Addition of an area for solar panels on the roof; and
- Updated stairs to the roof, including a clerestory to provide natural light to the Level 1 stair.

The updates are shown as clouded on the drawings.

The changes are predominantly internal and do not affect the external building form, except for the solar panels and clerestory.

In this respect, it is noted that Clause 4.5.2 of the Planning Scheme provides an applicable exemption for roof-mounted solar energy installations. The only stipulation is that the exemption does not apply where the Local Historic Heritage Code applies, which is not the case for the site.

As identified in the amended Planning Report, while the roof associated with the clerestory will become the uppermost element of the building relative to the Australian Height Datum, at 94.337 metres AHD, it will remain below the view line identified in the North West Hospitals Masterplan. In addition, given that the clerestory roof is located centrally within the building footprint, and existing ground levels slope downward to the north, the maximum building height (measured vertically from existing ground level) will continue to relate to the northern part of the building.

4 Swept Paths

An amended Traffic Impact Assessment has been prepared, which contains updated swept paths at Appendix A, including:

- An updated ambulance drive-forward-in swept path demonstrating that access is achievable via a three-point manoeuvre, noting that ambulances are expected to only ever reverse into bays to unload and load from the rear; and
- Updated ambulance swept paths demonstrating circulation and manoeuvring with a waste vehicle parked in the loading bay, and vice versa, together with updated swept paths for standard passenger vehicles (B99 design vehicle) demonstrating circulation and manoeuvring with an ambulance and a waste vehicle parked in their respective bays.

5 Landslip Hazard

- An amended Landslide Risk Assessment has been prepared to reflect the current proposal and to address the relevant matters.

6 TasWater

- Hydraulic loading calculations and amended Civil Services Drawings have been prepared by Coordinated Engineering Services (CES) to address the relevant matters.

Please do not hesitate to contact me if there are any queries in relation to this response.

Yours faithfully
6ty° Pty Ltd

Ashley Brook

Ashley Brook
Planning Consultant

CES Coordinated Engineering Services
coengserv.com.au
L1,73 Paterson Street, Launceston TAS 7250
93-97 Campbell Street, Hobart TAS 7000
ABN: 79 651 045 715

246237-C8-01

Date: 05/02/2026

North West Mental Health Facility – RAI-TWDA 2025/01431-BCC

In response to the above referenced RAI please see detailed calculations below outline the load in the TasWater system from the proposed health Facility.

We note the existing water connections will be reused with connections to internal infrastructures. However it was agreed between CES and TasWater during the concept design stage via early TasWater consultation that a second sewer connection serving the new development would be acceptable in the proposed location provide we constructed a sewer manhole over the line to form the connection.

The 2 individual titles 164516/1 & 125373/2 are in the process of being consolidated under LTO reference number 188958 with lodgement being accepted on 07/01/2026 and completion of the process approximately 8 weeks after lodgement.

Please see below summary of loading calculations.

Water ET	115	units
Sewer ET	179	units
ADWF	538.67	L/s
PDWF	1968.55	L/s
GWI	0.33	L/s
RDI	12.40	L/s
Total Sewage Flow	1981.28	L/s
PSD (inc. FHR's)	8.77	L/s
Required Domestic Cold Water Residual Pressure	465	kPa
Peak Day Domestic Cold Water Usage	176392.98	L/day
Required Fire Flow	20	L/s
Required Fire Residual Pressure	566	kPa

The following tables show the calculations used to prepare numbers found in the summary.

Existing		Unit
AM01	Hospital	
Water	0.622	
Sewer	0.971	
	160	Bed

Water	99.52	ET
Sewer	155.36	ET

Proposed Additional Load		Unit
AM01	Hospital	
Water	0.622	
Sewer	0.971	
	24	Bed

Total Water Post Development	**114.45**	ET
Total Sewer Post Development	**178.66**	ET

Below sewer loadings are based on WSA 02-2014-3.1 Appendix C Flow estimation for undeveloped areas

Average Dry Weather Sewage Flow		
ADWF	ET*Loading Rate*0.0067	
Loading rate	450	L/ET/day
ADWF	538.67196	L/s

Peak Dry Weather Sewage Flow		
PDWF	d*ADWF	
d	0.01(log A)^4-0.19(log A)^3 + 1.4(log A)^2 -4.66(log A) +7.57	
Area Site	16.4316	Hectares (1 Hectare = 1/10000 sq m)
d	3.654442686	
PDWF	1968.545805	L/s

Groundwater Infiltration		
GWI	0.025*A*Portion Wet	
Area Site	16.4316	Hectares
Portion wet	**0.8**	default adopted
GWI	0.328632	L/s

Peak (Rainfall dependant) inflow infiltration		
RDI	0.028*A_Eff*C*I	
A_Eff	A*(1-.758*Portion Impervious)	
I	I1,2*Factor size*Factor containment	
Factor Size	(40/A)^0.12	
C	S aspect + N aspect	
Area Site	16.4316	Hectares
Area Impervious	0.24	Hectares (1 Hectare = 1/10000 sq m)
Portion Impervious	0.014606003	
A_Eff	16.24968	Hectares
I1,2	17.5	mm/h
Factor Size	1.112668047	
Factor Containment	1	For ARI of 2 Years based on table C3 WSA 02-2014-3.1 Appendix C
I	19.47169083	
S aspect	0.8	
N aspect	0.6	
C	1.4	

RDI	12.4032228	L/s

Total Sewer Flow	1981.277659	L/s

Below water loadings are based on TasWater supplement to WSA03-MRWA V2.0

Peak Day Domestic Cold Water Flow		
PD	2.25*Average Day Demand (General)	
Average Day Demand	685	L/ET/day (Only applicable for developments equal or larger than 100ET's)
PD	176392.98	L/day

Please do not hesitate to contact me if you have any queries regarding this project, I am more than happy to meet with over teams should you wish to discuss further.

Yours sincerely,



William Cameron
BEng(Hons)Civil, MIEAust, CPEng, NER
Principal – Structural Civil and Hydraulic Engineer

6ty°

Planning Report

North West Mental Health Precinct

23 Brickport Road, Cooee



Document Control Record

Document prepared by:

6ty° Pty Ltd
ABN 27 014 609 900

Document Control					
Report Title:	Planning Report				
Project Number:	23.305		**Project Name:**	North West Mental Health Precinct – 23 Brickport Road, Cooee	
Client:	ARTAS Architects			**Client Contact:**	Cameron Burbidge
Revision:	**Date:**	**Revision details:**		**Prepared by:**	**Reviewed by:**
0	26/03/2025	Draft		Ashley Brook	
1	24/10/2025	Draft		Ashley Brook	
2	24/11/2025	Application Lodgement		Ashley Brook	
3	9/02/2026	RFI Response		Ashley Brook	
Current revision:	**3**				

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1. Introduction

6ty° has been engaged by **ARTAS Architects** to provide town planning services in relation to the new North West Mental Health Precinct (NWMHP) proposed by the Department of Health (DoH) on the site of the North West Regional Hospital (NWRH) at 23 Brickport Road, Cooee.

The proposed NWMHP will comprise a new building in an undeveloped area that rises to the south of the NWRH main entrance and Hospital Street, above the existing accommodation buildings within the site. The recently constructed Burnie Ambulance Station is located further to the south-west.

The development of the NWMHP forms part of Stage 1 of the *North West Hospitals Masterplan*[1] (the "Masterplan"). The facility will provide a 22-bed Inpatient Unit, comprising 18 Low Care Unit beds, 4 High Care Unit beds, and associated spaces, including front-of-house and back-of-house areas.

Car parking for the facility will comprise a combination of spaces provided on the ground floor level of the building and within an expanded on-grade parking area located immediately to the north, behind the existing accommodation buildings. A landscaped forecourt with pedestrian footpaths will be developed between the building and the on-grade parking area.

1.1 Purpose of the Report

This Planning Report has been prepared to accompany a planning permit application (the "application") to the Burnie City Council (the "Council"), as the Planning Authority, for the proposed NWMHP. It provides a description of the proposal and a consideration of the provisions and standards in the *Tasmanian Planning Scheme – Burnie* (the "Planning Scheme").

1.2 Planning Overview

The matters summarised in Table 1 are described in greater detail throughout this Planning Report.

Table 1 – Overview of the Site and Applicable Planning Scheme Controls

Property Address:	North West Regional Hospital, 23 Brickport Road, Cooee	
Property Identification Number (PID):	PID 7842622	
Certificates of Title (CT):	**Volume**	**Folio**
	164516 125373	1 2
Owner:	The Crown (administered by the Department of Health)	
Area:	16.416 hectares	
Planning Instrument:	*Tasmanian Planning Scheme - Burnie*	
Use Class:	Hospital Services	
Proposed Development:	Construction of a building and associated works	
Zone:	Community Purpose	
Overlays:	Priority Vegetation Area Landslip Hazard Area Airport Obstacle Limitation Area	

[1] Department of Health, February 2024.

Applicable Codes:	Parking and Sustainable Transport Road and Railway Assets Landslip Hazard Safeguarding of Airports
Application Status:	Discretionary

1.3 Accompanying Plans and Documents

The Planning Report considers the proposal plans and other relevant documents that accompany the application, as listed in Tables 2 and 3. It should be read in conjunction with these accompanying plans and documents.

Table 2 – Current Proposal Plans

Drawing Title	Project Number	Drawing Number	Revision/ Issue	Date
Architectural Drawings by ARTAS Architects & Billard Leece Partnership				
Cover Sheet	241047	A000-0001-DA	C	4/02/2026
Site Context Plan	241047	AR002-0002-DA	D	4/02/2026
Proposed Site Plan – Roof	241047	AR003-0001-DA	E	4/02/2026
Proposed Site Plan – Ground	241047	AR003-0002-DA	E	4/02/2026
Plan – General Arrangement – Ground	241047	AR100-0001-DA	D	4/02/2026
Plan – General Arrangement – Level 1	241047	AR100-0101-DA	D	4/02/2026
Plan – General Arrangement – Level 2 (Plant)	241047	AR100-0201-DA	D	4/02/2026
Elevations – General Arrangement	241047	AR200-0001-DA	C	4/02/2026
Sections – General Arrangement	241047	AR210-0001-DA	C	4/02/2026
3d Visualisation	241047	AR450-0001-DA	C	4/02/2026
Civil Services Drawings by CES				
Civil Notes	246237	CV-1A-01	P10	3/02/2026
Locality Plan	246237	CV-2LP-01	P10	3/02/2026
Overall Existing Site Survey Plan	246237	CV-2E-01	P10	3/02/2026
Existing Survey Plan	246237	CV-2E-02	P10	3/02/2026
Bulk Earthworks Plan	246237	CV-2EB-01	P10	3/02/2026
Cut/Fill Analysis Plan	246237	CV-2CF-01	P10	3/02/2026
Civil Pavement Plan	246237	CV-2CP-01	P10	3/02/2026
Civil Works Plan	246237	CV-2CW-01	P10	3/02/2026
Long and Cross Section Key Plan	246237	CV-2LC-01	P10	3/02/2026
Long Section Sheet 1	246237	CV-3LC-01	P10	3/02/2026
Long Section Sheet 2	246237	CV-3LC-02	P10	3/02/2026
Cross Sections	246237	CV-3LC-03	P10	3/02/2026

Drawing Title	Project Number	Drawing Number	Revision/ Issue	Date
Civil Services Drawings by CES				
Hydraulic Services Plan	246237	CV-2HS-01	P10	3/02/2026
Existing Sewer Main Long Section	246237	CV-3LH-01	P10	3/02/2026
Stormwater Long Section Sheet 1	246237	CV-3LH-02	P10	3/02/2026
Stormwater Long Section Sheet 2	246237	CV-3LH-03	P10	3/02/2026

Table 3 – Accompanying Documents

Document Title	Consultant	Project Number	Revision/ Issue	Date
Landscape Development Application Package	Playstreet		1	November 2025
Traffic Impact Assessment	GHD	12655713	3	15/12/2025
Waste Management Plan	GHD	12655712	0	18/11/2025
Landslide Risk Assessment	Tasman Geotechnics	TG23212/1 - 02report	01	10/12/2025
Hydraulic loading calculations	CES	246237		5/02/2026

1.4 Background

1.4.1 North West Hospitals Masterplan

The Masterplan provides a framework to address issues identified with existing infrastructure and to meet the projected demand for clinical services across a 20-year horizon. Its scope includes the NWRH, Mersey Community Hospital, and Burnie Parkside Precinct. It has been informed by the *Long-Term Plan for Healthcare in Tasmania 2040*[2], *Tasmanian Health Service – North West Clinical Services Profile*[3], and stakeholder engagement, including community consultation. A diagram illustrating the projects identified in the Masterplan for the NWRH is reproduced in Figure 1.

[2] Department of Health, June 2023.
[3] Department of Health, June 2023.

Figure 1 – Proposed NWRH Masterplan Precincts[4]



[4] Source: Figure 3 in the *North West Hospitals Masterplan*, Department of Health, February 2024

1.4.2 North West Mental Health Precinct

A priority identified in the Masterplan is the development of a new, purpose-built mental health precinct at the NWRH, identified as Precinct M in Figure 1. This will replace the service currently operating out of the existing Spencer Clinic. The new facility will support contemporary, best-practice models of mental health care that reflect current design standards and enable the provision of safe, therapeutic, and recovery-orientated care.

The proposed NWMHP will feature open spaces, healing gardens, and therapeutic outdoor areas to promote a calm environment for both consumers and staff. The facility is intended to have its own identity within the site, while maintaining connection to a future central circulation spine, including a link bridge extending across Hospital Street from near the NWRH main entrance.

The link bridge forms part of a later development in Stage 1 of the Masterplan and is not included in the current application. It will provide a connection to other planned hospital expansion to the south of Hospital Street. Over time, this expansion will replace the existing accommodation buildings downslope of the proposed NWMHP, with purpose-built accommodation planned near Uplands Place.

The Masterplan recognises existing parking challenges at the NWRH, including issues of access, location and proximity to key destinations, and seeks to address these. Accordingly, the proposed NWMHP will provide its own dedicated car parking, including a convenient drop-off point.

The Masterplan also acknowledges the residential context surrounding the NWRH and the potential for inappropriately sited or designed buildings to negatively affect the visual amenity of the area. It identifies the need to maintain key view lines from residential boundaries along the site's southern edge. The relevant view line for the new mental health precinct is discussed further in Section 3.2.1 of this Planning Report.

2. Location

2.1 Site Details

The site of the NWRH is located at 23 Brickport Road, Cooee (PID 7842622). It includes two lots comprised in the following titles:

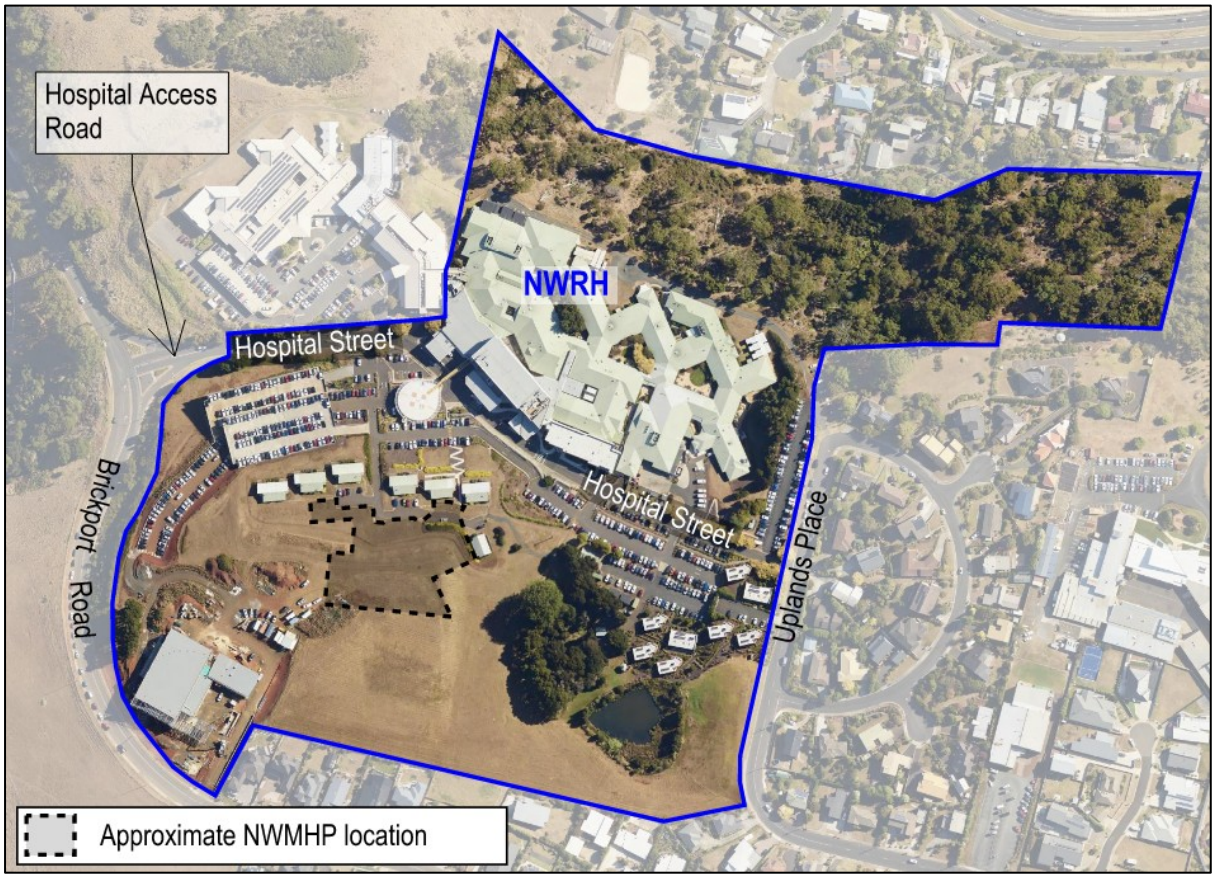
- CT 164516/1 – 12.89 hectares; and
- CT 125373/2 – 3.526 hectares.

These lots are in the process of being consolidated into a single title, as shown on a sealed plan (reference 188958), which is expected to be registered with the Land Titles Office in the near future.

The site has a combined area of 16.416 hectares. It is owned by The Crown and is administered by the Department of Health.

As shown in Figure 2, the NWRH has frontages to Brickport Road and Hospital Access Road to the west, and to Uplands Place to the east. Hospital Street is an internal access way that runs through the site.

Figure 2 – Aerial Image of the Site[5]



[5] Source: Base image and data from TheLIST, https://maps.thelist.tas.gov.au/listmap/app/list/map, State of Tasmania.

2.2 Site Characteristics

2.2.1 Existing Land Use

The NWRH is a 160-bed facility servicing North West Tasmania and is the largest hospital in the region. It provides health care and services across medical, surgical and allied health specialties through both inpatient and outpatient departments. The hospital includes a built connection with the adjoining North West Private Hospital, located to the north-west of the site.

The NWRH contains an associated helipad, which is planned to be relocated within the site in the long-term, as identified in the North West Hospitals Masterplan. Part of the site is subject to an Airport Obstacle Limitation Area, as shown on the overlay maps that form part of the Burnie Local Provisions Schedule (the "LPS") of the Planning Scheme. The extent of the overlay within the site is shown in Figure 3. The overlay applies to the operational airspace within the inbound and outbound flight path for rotary wing aircraft (helicopters) using the helipad in its current location. Parts of the landscaped forecourt and on-grade parking in the north-east of the proposed NWMHP location will extend into this overlay.

Figure 3 – Airport Obstacle Limitation Area Overlay[6]



The southern part of the site is relatively undeveloped, although it contains the recently constructed Burnie Ambulance Station. Overall, the NWRH, including the land to the south within the site boundaries, is zoned Community Purpose.

[6] Source: Base image and data from TheLIST, https://maps.thelist.tas.gov.au/listmap/app/list/map, State of Tasmania.

2.2.2 Topography

The site has existing ground levels, relative to the Australian Height Datum (AHD), ranging from approximately 30 metres AHD in the north to 92 metres AHD in the south. The NWRH is located above a coastal escarpment, where the northern part of the site features relatively steep slopes. Previous construction activities associated with the NWRH have involved excavations into the sloping land, which rises gradually towards the south.

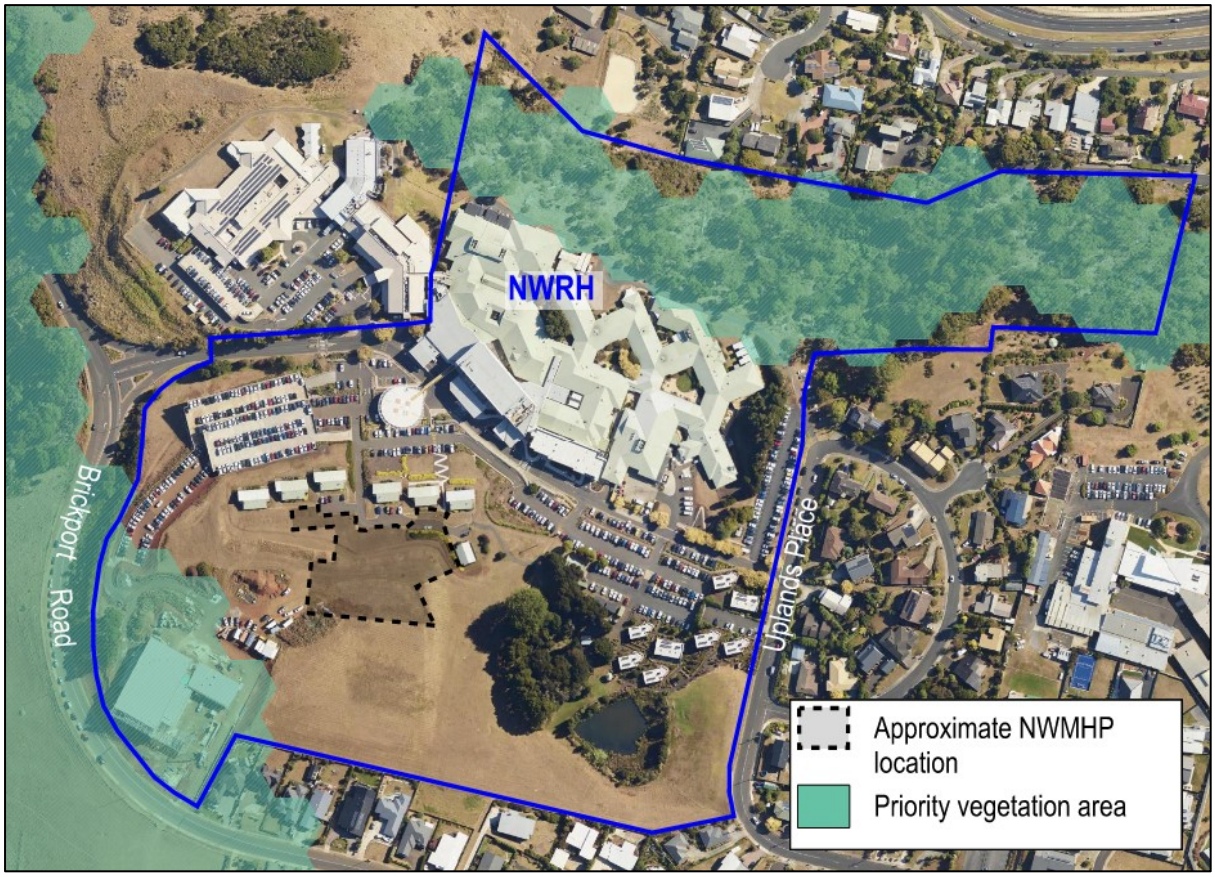
The building footprint of the proposed NWMHP will be situated on land at an approximate elevation of 84 to 87 metres AHD. Associated works will be undertaken on land ranging from approximately 77 to 90 metres AHD.

2.2.3 Natural Assets

The site mostly comprises modified land, according to TASVEG 4.0 mapping[7]. The relevant vegetation community codes associated with this mapping are FAG (agricultural land) and FUR (Urban areas). In addition, the relatively steeper slopes in the northern part of the site contain a *Eucalyptus obliqua* wet forest (undifferentiated) (WOU) native vegetation community.

This native vegetation, along with part of an existing cleared area in the south-western part of the site, is shown within a Priority Vegetation Area overlay on the Burnie LPS maps. As shown in Figure 4, the proposed NWMHP is located outside this overlay.

Figure 4 – Priority Vegetation Area Overlay[8]



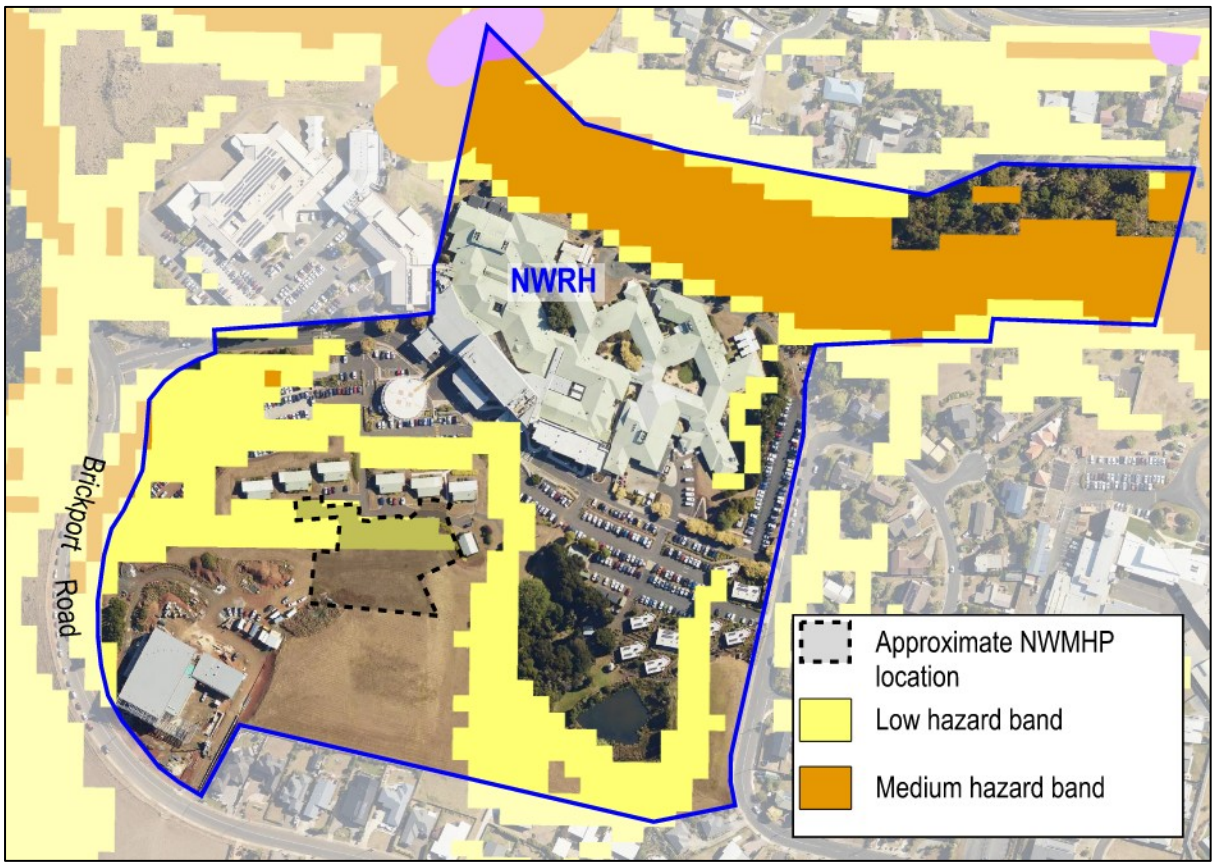
[7] *Tasmanian Vegetation Monitoring and Mapping Program*, Natural Values Conservation Branch of the Department of Primary Industries, Parks, Water and Environment, May 2020.

[8] Source: Base image and data from TheLIST, https://maps.thelist.tas.gov.au/listmap/app/list/map, State of Tasmania.

2.2.4 Natural Hazards

The Burnie LPS maps identify that parts of the site are subject to a Landslip Hazard Area overlay, including low, medium, and medium-active hazard bands based on susceptibility mapping. The medium hazard band primarily corresponds to the relatively steeper slopes in the northern part of the site. As shown in Figure 5, the proposed NWMHP extends partly into the overlay, within a low hazard band.

Figure 5 – Landslip Hazard Area Overlay[9]



The nearest known landslides, as identified in the Landslide Risk Assessment (LRA) accompanying the application, relate to areas in the northern part of the site, associated with the coastal escarpment. There are no known landslides within the proposed NWMHP location.

2.2.5 Heritage

The site is not subject to the Local Historic Heritage Code in the *State Planning Provisions* (the "SPPs") of the Planning Scheme and is not entered on the Tasmanian Heritage Register.

An Aboriginal Heritage Property Search[10] has not identified any registered Aboriginal relics or apparent risk of impacting registered Aboriginal relics.

[9] Source: Base image and data from TheLIST, https://maps.thelist.tas.gov.au/listmap/app/list/map, State of Tasmania.

[10] Aboriginal Heritage Tasmania, *Aboriginal Heritage Property Search*, Accessed 23 October 2025.

2.2.6 Service Infrastructure

Vehicle Access

The NWRH is accessed from Brickport Road and Uplands Place. Access from Brickport Road is via Hospital Access Road, which extends to the site boundary. The junction includes a right-turn entry lane in Brickport Road and splitter islands for both left-turn entry and exit movements.

Brickport Road is a sub-arterial road, while Hospital Access Road and Uplands Place are local roads. All three roads are administered by Council.

Hospital Access Road continues as an internal access way within the site, administered by the DoH and known as Hospital Street. The access way extends through to Uplands Place, providing two-way connectivity, and distributes traffic internally via other access ways and parking aisles.

Hydraulic Services

The NWRH is serviced by multiple connections to the reticulated water supply system and is also connected to the reticulated sewerage and public stormwater systems.

Other Utilities

The NWRH has connections to electricity and telecommunications infrastructure.

2.3 Site Context

The NWRH is located approximately 3.6 kilometres west of the town centre of Burnie, in the coastal suburb of Cooee. Brickport Road provides a connection to the Bass Highway to the north, which extends parallel to the coast. The Bass Highway is a Category 1 Trunk Road in the State Road Hierarchy.

The North West Private Hospital is located on land also zoned Community Purpose, adjoining the NWRH to the north-west. Part of Hospital Street is subject to a right of way that provides vehicle access to the private hospital.

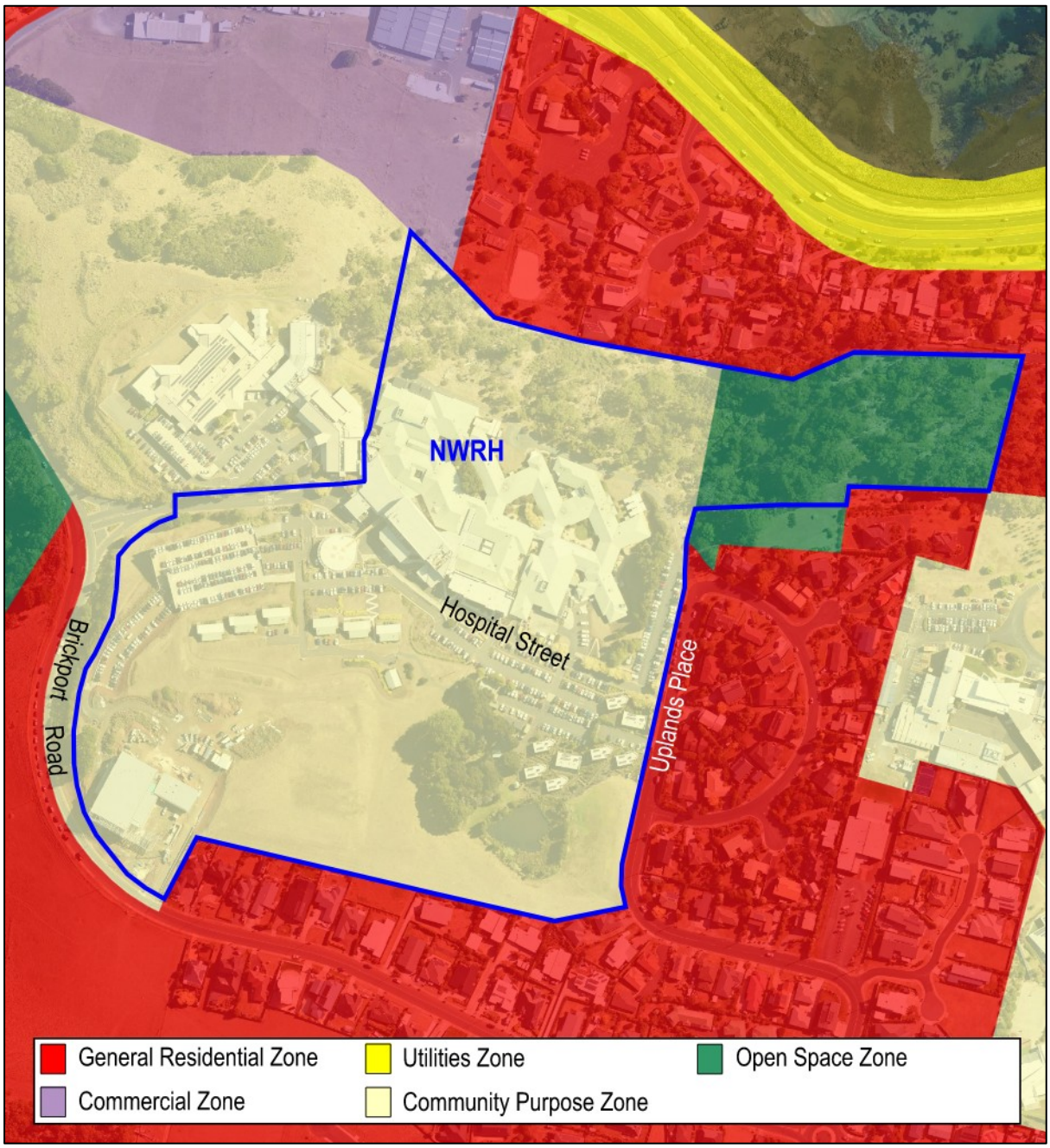
Land adjoining the NWRH directly to the north, off the Bass Highway, is predominantly zoned General Residential. This zoning also applies to adjacent land to the east, on the opposite side of Uplands Place, and to adjoining land to the south along Brickport Road. The residential properties to the south, which are upslope from the NWRH, contain a mix of one- to two-storey detached dwellings.

Adjoining land to the north of Uplands Place includes a Council reserve that is within an Open Space Zone. This zoning extends into the north-east corner of the NWRH site.

Land to the north of the private hospital, and also partly adjoining the NWRH site in this direction, is zoned Commercial. Existing development within this zone are located downslope adjacent to the Bass Highway.

A zoning map for the area encompassing the site and adjacent properties is provided in Figure 6.

Figure 6 – Zoning Map Encompassing the Surrounding Area[11]



[11] Source: Base image and data from TheLIST, https://maps.thelist.tas.gov.au/listmap/app/list/map, State of Tasmania.

3. Proposal

3.1 Proposed Use

The proposed North West Mental Health Precinct will provide mental health care and services, including a 22-bed Inpatient Unit. It will comprise 18 Low Care Unit beds, four (4) High Care Unit beds, and associated support spaces.

The facility will provide short- to medium-term assessment and treatment services for people experiencing acute episodes of mental illness. It will primarily support adult consumers aged 18–64 years, under voluntary or involuntary care in accordance with the *Mental Health Act 2013*, along with older persons aged 65 years and over. While child and adolescent mental health services will be provided at another facility, persons aged 15–17 years may be accommodated from time to time. Other vulnerable groups may include, but are not limited to, mothers and babies, LGBTQIA+ persons, and people with disabilities.

The estimated workforce within the facility is seven (7) medical practitioners and 37 other employees (FTEs[13]).

3.2 Proposed Development

The development of the proposed NWMHP will comprise the construction of a building and associated works, including earthworks, provision of retaining walls, vehicle access and parking, landscaping and service infrastructure.

3.2.1 Construction of a Building

The Low and High Care Units will be located on Level 1, which will sit below existing ground level along most of rear of the building footprint. This level will be situated at 86 metres AHD and will have a floor area of 2,256 m^2. It will also include staff areas and external courtyards.

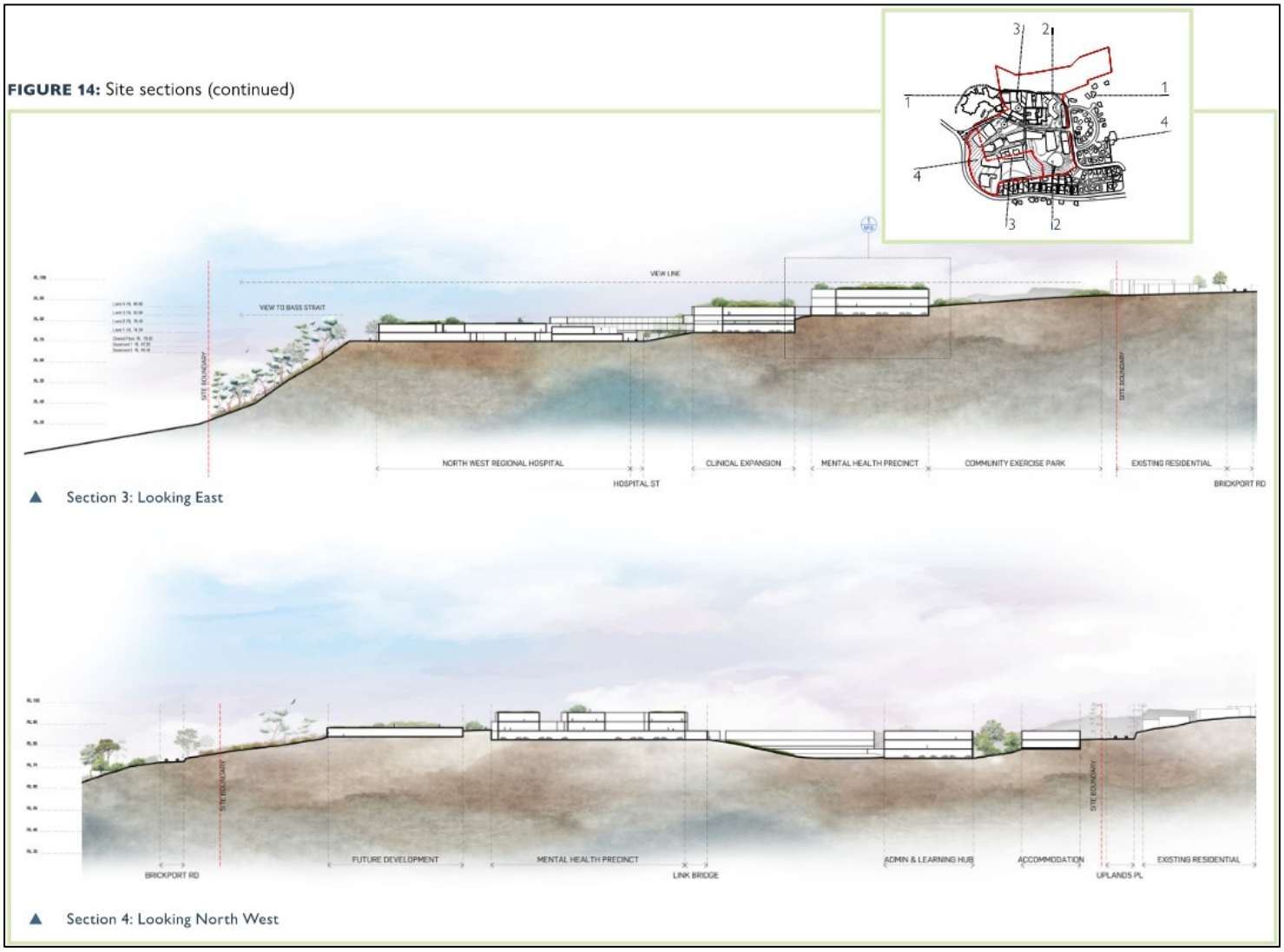
The ground floor level of the building will encompass an area of approximately 980 m^2 and will contain the main entry to the NWMHP, including a covered portion of the landscaped forecourt, as well as back-of-house areas such as storage and some vehicle parking. It will be excavated into the slope and supported by retaining walls, with excavations reaching a depth of up to approximately 6.142 metres. The ground floor will be situated at 81 metres AHD, which is roughly three storeys higher than the NWRH ground floor, accounting for the slope rising to the south.

Relevant site sections in the North West Hospitals Masterplan, reproduced in Figure 7, indicate slightly higher levels for the facility, being 82.6 metres AHD for the ground floor and 86.8 metres AHD for the level above. The Masterplan also anticipated a third storey with a flat roof, which is not proposed in the development. As illustrated in the diagram reproduced in Figure 7, the view line from residential boundaries along the site's southern edge passes over the roof of this higher, three-storey facility.

The proposed building will be one level lower than the facility illustrated in the Masterplan. Its upper level (Level 2) will comprise a 233 m^2 plant deck located within part of the roof space. The proposed roof, made up of several pitched sections, will reach a maximum elevation of 94.337 metres AHD, with this uppermost element relating to a clerestory serving a centrally located stairwell. This remains below the view line identified in the Masterplan.

[13] Full time equivalents.

Figure 7 – Relevant Masterplan Site Sections[14]



[14] Source: Figure 14 (Site Sections 3 and 4) in the *North West Hospitals Masterplan*, Department of Health, February 2024.

In accordance with the Planning Scheme definition, building height[15] is measured vertically from existing ground level. As the ground levels within the footprint of the proposed building will be lowered through excavation, the maximum height, associated with the northern part of the building where it presents as two storeys, will be 8.048 metres. The existing ground levels slope downward to the north, while the clerestory roof is located centrally within the building footprint and will have a maximum height of approximately 7.25 metres when measured vertically from existing ground level.

The exterior of the building will predominantly feature patterned brickwork, complemented by extensive glazing to maximise natural light. Solid aluminium sunshades will be installed on the east, north, and west facing windows at Level 1 to provide solar protection and enhance visual interest. The roof will be finished with aluminium profiled sheeting, selected for durability and consistency with the building's contemporary design.

3.2.2 Vehicle Access and Parking

The parking area on the ground floor level will provide five (5) car parking spaces, including a drop-off space and two (2) accessible spaces for persons with a disability. These spaces will be located directly adjacent to the main entry to the NWMHP and connected by a pedestrian footpath with a minimum width of 2 metres and an appropriate gradient.

The ground floor will also accommodate three (3) bicycle parking spaces within a bike cage, two (2) motorcycle spaces, an enclosed ambulance bay, and a loading dock. A portion of the forecourt adjacent to the main entry, covered by Level 1 above, will include two (2) bicycle hoops providing parking for four (4) additional bicycles.

In addition, the existing open-air, on-grade parking area to the north of the NWMHP, located behind the existing accommodation buildings, will be expanded to provide 28 additional car parking spaces allocated to the facility. An existing access way extending from Hospital Street, which services this parking area, will be extended to also provide access to the parking area on the ground floor of the building.

Accordingly, the proposal will provide a total of 31 car parking spaces, two (2) accessible spaces, and seven (7) bicycle parking spaces.

3.2.3 Landscaping

A landscaped forecourt will be developed between the on-grade parking area and the proposed building, incorporating pedestrian footpaths that provide both stepped and ramped access routes through native plantings. Vegetation will also be planted around the building to enhance privacy. A footpath will encircle the building, featuring seating in various locations. Additionally, a fence will be provided along the sides and rear of the building within the landscaped area to prevent public access.

3.2.4 Other Service Infrastructure

It is proposed to construct new connections to the existing site domestic and fire water supplies, to an existing sewer main located to the east of the proposed building, and to the site's stormwater system. The development will also include the installation of stormwater pollutant treatment measures.

3.3 Waste Management

Waste during the construction phase, including from excavation, and operational phase of the proposed NWMHP will be managed, transported and treated/disposed in accordance with the Waste Management Plan accompanying the application.

[15] Table 3.1 of the Planning Scheme defines the term building height as the vertical distance from existing ground level at any point to the uppermost part of a building directly above that point, excluding protrusions such as aerials, antennae, solar panels, chimneys and vents.

4. Planning Controls

4.1 Categorisation of Use

Clause 6.2.1 in the *State Planning Provisions* of the Planning Scheme requires that each use or development be categorised into one of the use classes that are in Table 6.2.

The applicable use class for the proposal is Hospital Services, the definition of which is reproduced below.

> ***Hospital Services***
>
> *use of land to provide health care (including preventative care, diagnosis, medical and surgical treatment, rehabilitation, psychiatric care and counselling) to persons admitted as inpatients. If the land is so used, the use includes the care or treatment of outpatients.*

The proposed North West Mental Health Precinct, which will be associated with the North West Regional Hospital, will provide mental health care and services to persons admitted as inpatients.

4.2 General Provisions

There are no General Provisions in Clause 7.0 of the Planning Scheme that area applicable to the application.

4.3 Community Purpose Zone

4.3.1 Zone Purpose

The purpose statements for the zone in Clause 27.1 in the SPPs of the Planning Scheme are reproduced below.

> *The purpose of the Community Purpose Zone is:*
>
> *27.1.1 To provide for key community facilities and services including health, educational, government, cultural and social facilities.*
>
> *27.1.2 To encourage multi-purpose, flexible and adaptable social infrastructure.*

The zoning is applied because the site contains the existing NWRH, the largest hospital in North West Tasmania, which provides more specialist and complex acute services than the Mersey Community Hospital.

The proposed NWMHP will assist in meeting projected demand for future clinical services associated with the NWRH. It will be able to accommodate a mix of needs, from perinatal to older persons and other vulnerable groups. The proposal represents flexibility and adaptability in the provision of social and community infrastructure, consistent with the purpose of the zone.

4.3.2 Use Table

The Hospital Services use class is identified as **Permitted** in Clause 27.2 Use Table of the zone provisions in the Planning Scheme.

However, the assessment which follows identifies that the proposal relies on performance criteria to demonstrate compliance with applicable standards in the zone and code provisions. The application therefore seeks a **Discretionary** permit in accordance with Clause 6.8.1 of the Planning Scheme and Sections 51 and 57 of the *Land Use Planning and Approvals Act 1993*.

4.3.3 Use Standards

Standard		Assessment	Compliance
Clause 27.3.1 Non-Residential Use			
A1	*Hours of operation of a use, excluding Emergency Services, Hospital Services, Natural and Cultural Values Management, Passive Recreation or Utilities, within 50m of a General Residential Zone, Inner Residential Zone or Low Density Residential Zone, must be within the hours of:* *(a) 8.00am to 8.00pm Monday to Friday;* *(b) 9.00am to 6.00pm Saturday; and* *(c) 10.00am to 5.00pm Sunday and public holidays.*	The standard does not apply to a Hospital Services use.	Not Applicable
A2	*External lighting for a use, excluding Natural and Cultural Values Management, Passive Recreation and Utilities and flood lighting of Sports and Recreation facilities, on a site within 50m of a General Residential Zone, Inner Residential Zone, or Low Density Residential Zone, must:* *(a) not operate between 9:00pm and 6:00am, excluding any security lighting; and* *(b) if for security lighting, must be baffled so that direct light does not extend into the adjoining property.*	The site of the NWRH, which encompasses 16.416 hectares of land, is within 50 metres of properties a General Residential Zone. The proposed NWMHP will include external lighting, which will primarily be for security purposes and will be baffled. The facility and its associated works will be located at least 70 metres from the adjoining residential properties to the south. Accordingly, direct light associated with the proposal will not extend beyond the property boundaries.	Complies with Acceptable Solution
A3	*Flood lighting of Sports and Recreation facilities on a site within 50m of a General Residential Zone, Inner Residential Zone or Low Density Residential Zone, must not operate between 9.00pm and 6.00am.*	The proposal does not involve a Sports and Recreation facility.	Not Applicable

Standard		Assessment	Compliance
Clause 27.3.1 Non-Residential Use			
A4	*Commercial vehicle movements and the unloading and loading of commercial vehicles for a use, excluding Emergency Services or Hospital Services, within 50m of a General Residential Zone, Inner Residential Zone or Low Density Residential Zone, must be within the hours of:* *(a) 7.00am to 6.00pm Monday to Friday; and* *(b) 9.00am to 5.00pm Saturday, Sunday and public holidays.*	The standard does not apply to a Hospital Services use.	Not Applicable

4.3.4 Development Standards for Buildings and Works

Standard		Assessment	Compliance
27.4.1 Building Height			
A1	*Building height must be not more than 10m.*	The maximum building height of the proposed NWMHP will be 8.048 metres. Building height is measured from existing ground level, which slopes downward to the north and will be lowered to accommodate the proposed building. The maximum height therefore corresponds to the northern façade, which will present as two storeys and face towards the existing NWRH.	Complies with Acceptable Solution
27.4.2 Setbacks			
A1	*Buildings must have a setback from a frontage of:* *(a) not less than 5m; or* *(b) not more or less than the maximum and minimum setbacks of the buildings on adjoining properties,* *whichever is the lesser.*	The location of the proposed NWMHP within the site ensures that it will be setback well over 5 metres from the road frontages (Brickport Road, Hospital Access Road and Uplands Place). The minimum frontage setback will be 119.8 metres, from Brickport Road to the west.	Complies with Acceptable Solution

Standard		Assessment	Compliance
27.4.2 Setbacks			
A2	*Buildings must have a setback from side and rear boundaries adjoining a General Residential Zone, Inner Residential Zone or Low Density Residential Zone not less than:* *(a) 3m; or* *(b) half the wall height of the building,* *whichever is the greater.*	The proposed building will be setback a minimum of 85 metres from the adjoining properties within a General Residential Zone.	Complies with Acceptable Solution
A3	*Air extraction, pumping, refrigeration systems, compressors or generators must be separated a distance of not less than 10m from a General Residential Zone, Inner Residential Zone, or Low Density Residential Zone.*	The proposed NWMHP, including associated mechanical services, will not be within 10 metres of land within a General Residential Zone.	Complies with Acceptable Solution
27.4.3 Fencing			
A1	*No Acceptable Solution.*	The standard deals with fencing within 4.5 metres of a frontage. No such fencing forms part of the proposed NWMHP.	Not Applicable
27.4.4 Outdoor Storage Areas			
A1	*Outdoor storage areas, excluding for the display of goods for sale, must not be visible from any road or public open space adjoining the site.*	The proposal does not involve the establishment of permanent outdoor storage areas.	Not Applicable

4.3.5 Development Standards for Subdivision

The standards do not apply because the application does not seek approval for a subdivision.

4.4 Code Applicability Overview

The applicability of the codes in the Planning Scheme is considered below.

Clause	Code Application	Assessment	Applicability
C1.0	**Signs Code**		
C1.2.1	*Unless otherwise stated in a particular purpose zone, this code applies to all development for signs, unless the following clauses apply:* *(a) C1.4.2; or* *(b) C1.4.3.*	The application does not seek approval for signage. Clause C1.4.2 provides an exemption for any sign that will not be able to be seen from outside the proposed building or the site of the NWRH.	Not Applicable

Clause	Code Application	Assessment	Applicability
C1.0	**Signs Code**		
C1.4.1	*A sign listed in Table C1.4 is exempt from this code, provided it complies with the relevant requirements.*	The proposed NWMHP will include regulatory signs, as required for traffic management purposes, and statutory signs as required in accordance with the National Construction Code. These sign types are listed in Table C1.4, with no associated requirements, and are therefore exempt.	Exempt
C2.0	**Parking and Sustainable Transport Code**		
C2.2.1	*Unless stated otherwise in a particular purpose zone, or sub-clause C2.2.2, C2.2.3 or C2.2.4, this code applies to all use and development.*	The code requires consideration in relation to all types of use and development.	**Applicable**
C3.0	**Road and Railway Assets Code**		
C3.2.1	*This code applies to a use or development that:*		
	(a) will increase the amount of vehicular traffic or the number of movements of vehicles longer than 5.5m using an existing vehicle crossing or private level crossing;	The Traffic Impact Assessment (TIA) accompanying the application identifies that the proposed NWMHP will result in an increase in vehicle movements using the existing accesses associated with the site to and from Council's surrounding road network.	**Applicable**
	(b) will require a new vehicle crossing, junction or level crossing; or	The proposal does not include a new vehicle crossing, junction, or level crossing.	Not Applicable
	(c) involves a subdivision or habitable building within a road or railway attenuation area if for a sensitive use.	The proposal does not include a subdivision or habitable building within a Road or Railway Attenuation Area. The site is not within 50 metres of a Category 1, 2 or 3 road as defined in the State Road Hierarchy (e.g. Bass Highway), or a major road as listed in the Burnie LPS. It is not within 50 metres of the rail network.	Not Applicable
C4.0	**Electricity Transmission Infrastructure Protection Code**		
C4.2.1	The code has applicability to specified developments within an Electricity Transmission Corridor, Communications Station Buffer Area or Substation Facility Buffer Area.	The site is not shown within an Electricity Transmission Corridor, Communications Station Buffer Area or Substation Facility Buffer Area on the Burnie LPS overlay maps.	Not Applicable

Clause	Code Application	Assessment	Applicability
C5.0	**Telecommunications Code**		
C5.2.1	*Unless otherwise stated in a particular purpose zone, this code applies to all development for telecommunication facilities.*	The proposal does not involve a telecommunications facility.	Not Applicable
C6.0	**Local Historic Heritage Code**		
C6.2.1	This code has applicability to development within a Local Heritage Place, Local Heritage Precinct, Local Historic Landscape Precinct, excavation within a Place or Precinct of Archaeological Potential or lopping, pruning, removal or destruction of a Significant Tree.	The site is not identified in any list of Local Heritage Places, Local Heritage Precincts, Local Historic Landscape Precincts, Places or Precincts of Archaeological Potential or Significant Trees.	Not Applicable
C7.0	**Natural Assets Code**		
C7.2.1	*This code applies to development on land within the following areas:*		
	(a) a waterway and coastal protection area;	The site is not shown within a Waterway and Coastal Protection Area on the Burnie LPS overlay maps.	Not Applicable
	(b) a future coastal refugia area; and	The site is not subject to a Future Coastal Refugia Area overlay.	Not Applicable
	(c) a priority vegetation area only if within the following zones: *(vii) Community Purpose Zone;*	The site is partly subject a Priority Vegetation Area overlay. However, the proposed NWMHP is located outside this overlay.	Not Applicable
C8.0	**Scenic Protection Code**		
C8.2.1	This code has applicability to development within a Scenic Protection Area or Scenic Road Corridor if within specified zones (excludes the Community Purpose Zone).	The site is not shown within a Scenic Protection Area or Scenic Road Corridor on the Burnie LPS overlay maps, and in any event is zoned Community Purpose.	Not Applicable
C9.0	**Attenuation Code**		
C9.2.1	*This code applies to:*		
	(a) activities listed in Tables C9.1 and C9.2;	The proposal is not for an activity listed in Tables C9.1 and C9.2.	Not Applicable
	(b) sensitive uses; and	While hospital is a sensitive use[18], the site has not been identified as being within an Attenuation Area from an activity listed in Tables C9.1 and C9.2.	Not Applicable

[18] In accordance with the definition in Table 3.1, a sensitive use means a residential use or a use involving the presence of people for extended periods except in the course of their employment such as a caravan park, childcare centre, dwelling, hospital or school.

Clause	Code Application	Assessment	Applicability
C9.0	**Attenuation Code**		
	(c) subdivision if it creates a new lot where a sensitive use could be established, within an attenuation area.	The proposal does not include a subdivision.	Not Applicable
C10.0	**Coastal Erosion Hazard Code**		
C10.2.1	*This code applies to:*		
	(a) use and development of land within a coastal erosion hazard area; or	The site is not shown within a Coastal Erosion Hazard Area on the Burnie LPS overlay maps.	Not Applicable
	(b) development identified in a report, that is lodged with an application, or required in response to a request under section 54 of the Act, as located on an actively mobile landform within the coastal zone.	The site does not contain an actively mobile landform as referenced in the State Coastal Policy.	Not Applicable
C11.0	**Coastal Inundation Hazard Code**		
C11.2.1	*This code applies to use and development of land within a coastal inundation hazard area.*	The site is not shown within a Coastal Inundation Hazard Area on the Burnie LPS overlay maps.	Not Applicable
C12.0	**Flood-Prone Areas Hazard Code**		
C12.2.1	*This code applies to development of land within a flood-prone hazard area.*	The site is not shown within a Flood-Prone Hazard Area on the Burnie LPS overlay maps.	Not Applicable
C13.0	**Bushfire-Prone Areas Code**		
C13.2.1	This code has applicability to subdivision or a vulnerable or hazardous use within a bushfire-prone area.	The site is not shown within a Bushfire-Prone Area on the Burnie LPS overlay maps.	Not Applicable
C14.0	**Potentially Contaminated Land Code**		
C14.2.1	This code has applicability to specified uses, including a sensitive use or specified uses in the Passive Recreation and Sports and Recreation use classes, or development on potentially contaminated land.	The site has not been identified as potentially contaminated land, as defined in the code.	Not Applicable

Clause	Code Application	Assessment	Applicability
C15.0	**Landslip Hazard Code**		
C15.2.1	This code has applicability to use or development within a Landslip Hazard Area.	A part of the proposed NWMHP location is shown within a Landslip Hazard Area (low hazard band) on the Burnie LPS overlay maps.	**Applicable**
C15.4.1	*The following use or development is exempt from this code:*		
	(a) use of land within a low or medium landslip hazard band, excluding for a critical use, hazardous use or vulnerable use;	The Hospital Services use class is identified in the code definition for a critical use. The relevant issues are considered in the accompanying Landslide Risk Assessment.	
	(d) development (including subdivision) on land: *(i) within a low landslip hazard band, if for:* *a. building work or plumbing work as defined in the Building Act 2016 including significant works related to the building work and plumbing work, or*	The proposed development within the landslip hazard area (low hazard band) is related to building and plumbing works as defined in the *Building Act 2016*, and therefore does not require assessment against the code standards. However, the LRA includes a consideration of the performance criteria requirements that are relevant to development in Clause C15.6.1 P1.1–P1.3. The relevant issues will be further addressed though the building approval process.	Exempt
C16.0	**Safeguarding of Airports Code**		
C16.2.1	This code has applicability to sensitive use within an Airport Noise Exposure Area or development within an Airport Obstacle Limitation Area.	While the site is not shown to be subject to an Airport Noise Exposure Area on the Burnie LPS overlay maps, it is partly within an Airport Obstacle Limitation Area. Parts of the landscaped forecourt and on-grade parking to the north-east of the proposed NWMHP will extend into this overlay. The relevant obstacle limitation height for the site, as specified on the overlay maps, is 77.2 metres. However, the proposed NWMHP location relates to land with a minimum elevation of 77 metres AHD.	**Applicable**
C16.4.1	*The following use or development is exempt from this code:* *(a) development that is not more than the AHD height specified for the site of the development in the relevant airport obstacle limitation area.*		

4.5 Parking and Sustainable Transport Code

An assessment of the applicable standards in the Code is provided below.

4.5.1 Use Standards

Standard		Assessment	Compliance
C2.5.1 Car Parking Numbers			
A1	*The number of on-site car parking spaces must be no less than the number specified in Table C2.1, less the number of car parking spaces that cannot be provided due to the site including container refund scheme space, excluding if:*	Table C2.1 specifies the following requirement for a use within the Hospital Services use class: *1 space per 4 beds + 1 space per doctor + 1 space per 2 other employees.* As identified in the accompanying Traffic Impact Assessment, based on bed, medical practitioner, and other employee numbers within the NWMHP, the relevant number specified is 31 car parking spaces. The proposal will provide 31 car parking spaces for the facility. However, consideration of matters (a) to (d) is also required.	Satisfies sub-clause A1(d)(ii) for compliance with the Acceptable Solution
	(a) the site is subject to a parking plan for the area adopted by council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;	The site is not subject to a parking plan adopted by Council.	Not Applicable
	(b) the site is contained within a parking precinct plan and subject to Clause C2.7.	The site is not shown within a Parking Precinct Plan on the Burnie LPS overlay maps. It is therefore not subject to the associated provisions in Clause C2.7.	Not Applicable
	(c) the site is subject to Clause C2.5.5; or	Clause C2.5.5 deals with the number of car parking spaces within the General Residential Zone and Inner Residential Zone. The proposal will not be in either of these zones.	Not Applicable

Standard		Assessment	Compliance
C2.5.1 Car Parking Numbers			
	(d) it relates to an intensification of an existing use or development or a change of use where:	As the proposal involves an intensification of an existing Hospital Services use, A1(d) applies.	
	(i) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is greater than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case no additional on-site car parking is required; or	The proposal relies on sub-clause A1(d)(ii).	Not Applicable
	(ii) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is less than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case on-site car parking must be calculated as follows: *N = A + (C - B)* *N = Number of on-site car parking spaces required* *A = Number of existing on-site car parking spaces* *B = Number of on-site car parking spaces required for the existing use or development specified in Table C2.1* *C = Number of on-site car parking spaces required for the proposed use or development specified in Table C2.1.*	While the NWMHP will replace the existing Spencer Clinic, the precise net increase in doctors and other staff cannot be quantified with certainty at this stage. The Spencer Clinic is not proposed to be re-purposed as an ongoing staffed facility and is anticipated to be used only intermittently as decant space associated with future hospital upgrades. Notwithstanding this, and having regard to the existing parking constraints identified in the North West Hospitals Masterplan, the parking requirement for the proposal has been assessed on the basis of the total number of beds, doctors, and other employees associated with the proposed NWMHP. This approach exceeds the minimum requirement that would otherwise apply under A1(d)(ii), which is based on net increases associated with an intensification of use. The proposal does not result in a reduction in parking elsewhere on the site and therefore represents a conservative and compliant response to the Acceptable Solution.	Complies with Acceptable Solution

Standard		Assessment	Compliance
C2.5.2 Bicycle Parking Numbers			
A1	*Bicycle parking spaces must:* *(a) be provided on the site or within 50m of the site; and* *(b) be no less than the number specified in Table C2.1.*	Table C2.1 specifies the following requirement for a use within the Hospital Services use class: *1 space per 10 beds.* As identified in the accompanying TIA, based on bed numbers within the NWMHP, the relevant number specified is three (3) bicycle parking spaces. The proposal will provide seven (7) bicycle parking spaces for the facility. Noting that the proposal involves an intensification of an existing Hospital Services use, the facility will exceed the relevant requirement.	Complies with Acceptable Solution
C2.5.3 Motorcycle Parking Numbers			
A1	*The number of on-site motorcycle parking spaces for all uses must:* *(a) be no less than the number specified in Table C2.4; and* *(b) if an existing use or development is extended or intensified, the number of on-site motorcycle parking spaces must be based on the proposed extension or intensification, provided the existing number of motorcycle spaces is maintained.*	As identified in the TIA, based on car parking requirements under Table C2.1, the relevant number specified under Table C2.4 is one (1) motorcycle parking space. The proposal will provide two (2) motorcycle parking spaces for the facility. Noting that the proposal involves an intensification of an existing Hospital Services use, the facility will exceed the relevant requirement.	Complies with Acceptable Solution
C2.5.4 Loading Bays			
A1	*A loading bay must be provided for uses with a floor area of more than 1,000m^2 in a single occupancy.*	Clause C2.2.3 lists a limited range of use classes to which the standard applies. The Hospital Services use class is not listed. Therefore, the standard is not applicable to the proposal. However, a loading bay will be provided within the proposed NWMHP.	Not Applicable

4.5.2 Development Standards for Buildings and Works

Standard		Assessment	Compliance
C2.6.1 Construction of Parking Areas			
A1	*All parking, access ways, manoeuvring and circulation spaces must:* *(a) be constructed with a durable all weather pavement;* *(b) be drained to the public stormwater system, or contain stormwater on the site; and* *(c) excluding all uses in the Rural Zone, Agriculture Zone, Landscape Conservation Zone, Environmental Management Zone, Recreation Zone and Open Space Zone, be surfaced by a spray seal, asphalt, concrete, pavers or equivalent material to restrict abrasion from traffic and minimise entry of water to the pavement.*	The new parking areas will be constructed with a durable all weather pavement, surfaced with an appropriate material to restrict abrasion, and drained to the stormwater system.	Complies with Acceptable Solution
C2.6.2 Design and Layout of Parking Areas			
A1.1	*Parking, access ways, manoeuvring and circulation spaces must either:* *(a) comply with the following:* *(i) have a gradient in accordance with Australian Standard AS 2890 – Parking facilities, Parts 1-6.* *(ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces;* *(iii) have an access with no less than the requirements in Table C2.2;* *(iv) have car parking space dimensions which satisfy the requirements in Table C2.3;*	The accompanying TIA demonstrates that the proposed parking and access layout has been designed to meet the requirements specified in A1.1(a).This is subject to the end bays within the expanded on-grade parking area being marked as no-standing spaces to facilitate turn-around manoeuvres.	Complies with Acceptable Solution

Standard		Assessment	Compliance
C2.6.2 Design and Layout of Parking Areas			
	(vi) have a vertical clearance of not less than 2.1m above the parking surface level; and *(vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or* *(b) comply with Australian Standard AS 2890 Parking facilities, Parts 1-6.*		
A1.2	*Parking spaces provided for use by persons with a disability must satisfy the following:* *(a) be located as close as practicable to the main entry point to the building;* *(b) be incorporated into the overall car park design; and* *(c) be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6: 2009 Parking facilities, Off-street parking for people with disabilities.*[20]	As identified in the accompanying TIA, based on car parking requirements, the proposed NWMHP requires one (1) accessible parking space in accordance with the National Construction Code. The proposal will provide two (2) accessible car parking spaces on the ground floor level of the facility. These spaces are located in close proximity to the main entry and have been incorporated into the overall car park design. The TIA demonstrates that the accessible spaces comply with the requirements specified in A1.2(c).	Complies with Acceptable Solution
C2.6.3 Number of Accesses for Vehicles			
A1	*The number of accesses provided for each frontage must:* *(a) be no more than 1; or* *(b) no more than the existing number of accesses,* *whichever is the greater.*	The TIA confirms that the proposal complies with the acceptable solution. The number of existing vehicle accesses, at each frontage, will remain unchanged.	Complies with Acceptable Solution
A2	*Within the Central Business Zone or in a pedestrian priority street no new access is provided unless an existing access is removed.*	The site is not within the Central Business District Zone and is not shown as being in a Pedestrian Priority Street on the Burnie LPS maps.	Not Applicable

[20] Requirements for the number of accessible car parking spaces are specified in part D3 of the *National Construction Code 2016*.

Standard		Assessment	Compliance
C2.6.5 Pedestrian Access			
A1.1	*Uses that require 10 or more car parking spaces must:* *(a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by:* *(i) a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or* *(i) protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and* *(b) be signed and line marked at points where pedestrians cross access ways or parking aisles.*	The accompanying TIA demonstrates that the proposed NWMHP complies with A1.1, taking into account the pedestrian footpaths within the landscaped forecourt. It recommends the installation of 10 km/h shared zone signage at the entry and exit point to the ground floor parking area, together with pedestrian crossing signage near the entry.	Complies with Acceptable Solution
A1.2	*In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building.*	The TIA demonstrates that the proposed NWMHP complies with A1.2, including the pedestrian footpath between the accessible spaces and main entry.	Complies with Acceptable Solution
C2.6.6 Loading Bays			
A1	*The area and dimensions of loading bays and access way areas must be designed in accordance with Australian Standard AS 2890.2–2002, Parking facilities, Part 2: Off--street commercial vehicle facilities, for the type of vehicles likely to use the site.*	The TIA demonstrates that the proposed NWMHP complies with the acceptable solution. The loading bay and associated access way areas will be able to accommodate small rigid vehicles (SRVs) and Veolia rear lift waste vehicles.	Complies with Acceptable Solution
A2	*The type of commercial vehicles likely to use the site must be able to enter, park and exit the site in a forward direction in accordance with Australian Standard AS 2890.2 – 2002, Parking Facilities, Part 2: Parking facilities - Off-street commercial vehicle facilities.*	The swept path assessment in the TIA, undertaken for Veolia waste vehicles and ambulance vehicles, demonstrates compliance. As SRVs are smaller than Veolia vehicles, they will be able to make the same manoeuvres. The TIA recommends that loading activities within the facility occur outside of peak operating times, to minimise vehicle conflict risks.	Complies with Acceptable Solution

4.6 Road and Railway Assets Code

An assessment of the applicable standards in the Code is provided below.

4.6.1 Use Standards

Standard		Assessment	Compliance
C3.5.1 Traffic Generation at a Vehicle Crossing, Level Crossing or New Junction			
A1.1	*For a category 1 road or a limited access road, vehicular traffic to and from the site will not require:* *(a) a new junction;* *(b) a new vehicle crossing; or* *(c) a new level crossing.*	The proposal does not involve any access to a Category 1 Trunk Road (e.g. Bass Highway) as defined in the State Road Hierarchy or a limited access road declared under the *Roads and Jetties Act 1935*. Brickport Road, Hospital Access Road and Uplands Place form part of the road network administered by Council's road authority.	Not Applicable
A1.2	*For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority.*	The proposal does not include a new vehicle crossing, junction or level crossing.	Not Applicable
A1.3	*For the rail network, written consent for a new private level crossing to serve the use and development has been issued by the rail authority.*	The proposal does not involve the rail network.	Not Applicable
A1.4	*Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than:* *(a) the amounts in Table C3.1; or* *(b) allowed by a license issued under Part IVA of the Roads and Jetties Act 1935 in respect to a limited access road.*	The accompanying TIA demonstrates that the increase in traffic generated by the proposed NWMHP will be below the thresholds in Table C3.1 and therefore complies with A1. Notwithstanding this, the TIA undertakes further assessment using SIDRA intersection analysis, as detailed in Section 7 of the document.	Complies with Acceptable Solution
A1.5	*Vehicular traffic must be able to enter and leave a major road in a forward direction.*	The adjoining roads are not identified in the Burnie LPS as being Major Roads. In any event, the site layout ensures that vehicular traffic will continue to be able to enter and leave the site in a forward direction.	Not Applicable

4.7 Landslip Hazard Code

An assessment of the applicable standards in the Code is provided below.

4.7.1 Use Standards

Standard		Assessment	Compliance
C15.5.1 Use within a Landslip Hazard Area			
A1	*No Acceptable Solution.*	The acceptable solution contains no requirement for consideration, and the proposal therefore relies on the associated performance criteria.	**Relies on Performance Criteria**
A2	*No Acceptable Solution.*	The acceptable solution is applicable to a critical use as defined in Table C15.3.1 of the Code, which includes uses within the Hospital Services use class.	**Relies on Performance Criteria**

4.8 Safeguarding of Airports Code

An assessment of the applicable standards in the code is provided below.

4.8.1 Use Standards

Standard		Assessment	Compliance
C16.6.1 Buildings and Works within an Airport Obstacle Limitation Area			
A1	*Buildings and works within an airport obstacle limitation area associated with a Commonwealth-leased airport that exceed the specified height limit shown on the airport obstacle limitation area overlay applicable for the site of the development must have approval from the relevant Commonwealth department under the Airports Act 1996 (Commonwealth).*	The NWRH helipad is not a Commonwealth-leased airport.	Not Applicable
A2	*No Acceptable Solution.*	The acceptable solution contains no requirement for consideration, and the proposal therefore relies on the associated performance criteria.	**Relies on Performance Criteria**

5. Performance Criteria Assessment

5.1 Landslip Hazard Code

5.1.1 Clause C15.5.1 Use within a Landslip Hazard Area – Performance Criteria P1.1, P1.2 and P2

C15.5.1 Use within a Landslip Hazard Area	
Objective: *That uses, including critical, hazardous or vulnerable use, can achieve and maintain a tolerable risk from exposure to a landslip for the nature and intended duration of the use.*	
Performance Criteria	**Assessment**
P1.1 *A use, including a critical use, hazardous use, or vulnerable use, within a landslip hazard area achieve and maintain a tolerable risk from exposure to landslip, having regard to:* *(a) the type, form and duration of the use; and* *(b) a landslip hazard report that demonstrates that:* *(i) any increase in the level of risk from landslip does not require any specific hazard reduction or protection measure; or* *(ii) the use can achieve and maintain a tolerable risk for the intended life of the use.*	The accompanying Landslide Risk Assessment constitutes a landslip hazard report. It demonstrates that the proposal complies with the performance criteria. It concludes that the proposed use can achieve and maintain a tolerable risk from landslide, and no management plan is required.
P1.2 *If landslip reduction or protection measures are required on land beyond the boundary of the site, the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the landslip reduction or protection measures.*	The LRA demonstrates that the proposal complies with the performance criteria. It concludes that no landslip reduction or protection measures will be required beyond the boundaries of the site.

C15.5.1 Use within a Landslip Hazard Area	
Performance Criteria	**Assessment**
P2 *In addition to the requirements in clause C15.5.1 P1.1, a critical use within a landslip hazard area must achieve and maintain a tolerable risk from landslip, having regard to:*	The critical use (Hospital Services) will commence when construction of the proposed development is completed. The relevant landslide hazards therefore are those that will exist post- construction. The accompanying LRA considers the relevant hazards and demonstrates that the proposal complies with the performance criteria.
(a) the impact on the ability of the use to respond to a landslip event;	The LRA concludes that, if a new deep-seated landslide was initiated at the site over the course of the use, it would occur slowly enough that a response could be implemented to minimise any impact. Any such response could include a management and remediation strategy. The document recommends designing the proposal in accordance with good hillside construction practices.
(b) the impact on ability of the use to function and maintain service during the landslip and recovery period;	The sudden unexpected severing of utility services is considered highly unlikely. Nevertheless, designing services to accommodate possible movement, or using above ground entry points, will ensure that services can be maintained.
(c) any interruption to the operation of the critical use in locations external to the immediate impact of the landslip event;	There is unlikely to be interruption to the operation due to any landslide event on adjoining land.
(d) the creation of risk to the health or safety of people from damage or disruption to: *(i) a water supply service;* *(ii) an energy supply; or* *(iii) the drainage and treatment of waste water;*	The health and safety of people will not be at risk.
(e) any advice contained in a landslip hazard report; and *(f) any advice from a State authority, regulated entity or a council.*	The LRA, which has been prepared by a geotechnical practitioner, provides relevant advice.

5.2 Safeguarding of Airports Code

5.2.1 Clause C16.6.1 Buildings and Works Within an Airport Obstacle Limitation Area – Performance Criteria P2

C16.6.1 Buildings and Works within an Airport Obstacle Limitation Area	
Objective: *That buildings and works do not interfere with safe aircraft operations in the vicinity of an airport and on land within an airport obstacle limitation area.*	
Performance Criteria	**Assessment**
P2 *Buildings and works within an airport obstacle limitation area associated with a non-Commonwealth-leased airport that exceed the specified height limit shown on the airport obstacle limitation area overlay applicable for the site of the development must not create an obstruction or hazard for the operation of aircraft, having regard to any advice from:* *(a) Airservices Australia;* *(b) the Civil Aviation Safety Authority; and* *(c) the airport operator.*	The proposed landscaped forecourt and on-grade parking, to the extent that they extend partially into the overlay, will be below or slightly above existing ground level. These works will be undertaken downslope and remain well below the height of the building accommodating the proposed NWMHP. Accordingly, they are not expected to create any obstruction or hazard to helicopter operations associated with the NWRH helipad. The development will be carried out in accordance with advice from the helipad operator. Accordingly, the proposal is considered compliant with the performance criteria.

6. Conclusion

The application seeks planning approval for the new North West Mental Health Precinct proposed by the Department of Health on the site of the North West Regional Hospital at 23 Brickport Road, Cooee. The proposed NWMHP forms part of Stage 1 of the *North West Hospitals Masterplan*.

This Planning Report demonstrates that the proposal complies with the applicable standards in the provisions for the:

- Community Purpose Zone;
- Parking and Sustainable Transport Code;
- Road and Railway Assets Code;
- Landslip Hazard Code; and
- Safeguarding of Airports Code.

This includes the performance criteria in the relevant zone and code provisions listed below.

- Landslip Hazard Code
  - Clause C15.5.1 Use within a Landslip Hazard Area – Performance Criteria P1.1, P1.2 and P2.
- Safeguarding of Airports Code
  - Clause C16.6.1 Buildings and Works within an Airport Obstacle Limitation Area – Performance Criteria P2.

It is therefore submitted that a Discretionary permit can be issued in accordance with Clause 6.8.1 of the Planning Scheme and Sections 51 and 57 of the *Land Use Planning and Approvals Act 1993*.



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North West Regional Hospital Mental Health Precinct

Waste Management Plan

Artas Pty Ltd

18 November 2025

→ The Power of Commitment



Project name		12655712 - Launceston General Hospital Mental Health TIA					
Document title		North West Regional Hospital Mental Health Precinct | Waste Management Plan					
Project number		12655712					
File name		12655713-REP-NWRH Mental Health Precinct Waste Management Plan.docx					
Status Code	**Revision**	**Author**	**Reviewer**		**Approved for issue**		
			Name	**Signature**	**Name**	**Signature**	**Date**
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1. Introduction

GHD Pty Ltd (GHD) was engaged by Artas Pty Ltd to prepare this Waste Management Plan (WMP) for the proposed Mental Health Precinct (MHP) at the existing North West Regional Hospital (NWRH). This site-specific WMP describes the environmental strategy, methods, controls and legislative and approval requirements relating to construction and operational waste management to be implemented for the MHP.

1.1 Purpose of this report

The purpose of this WMP is to:

- Identify key waste streams and likely waste type during construction and operation
- Estimate waste quantities and storage requirements
- Outline the strategies and procedures for managing waste
- Ensure compliance with relevant regulations, minimises environmental impact, and promotes sustainable waste management practices.

1.2 Objectives

The WMP is developed with the following objectives:

- Minimise waste generation through efficient resource use
- Maximise waste recovery, recycling, and reuse
- Ensure proper disposal of hazardous and non-hazardous waste
- Comply with national and local waste management regulations
- Promote staff awareness and training on waste management best practices

1.3 Site location

The proposed MHP is located at 23 Brickport Road, Cooee, on a vacant portion of the NWRH on the southern side of Hospital Street. The site is located within Community Purpose Zone in the Burnie City Council area.



Figure 1 NWRH Mental Health Services Precinct site and context

1.4 The Mental Health Precinct

The new MHP will provide inpatient services aligned with the Statewide Clinical Services Plan. The scope of the MHP include:

– Ground floor: lobby, drop off, loading, store rooms and ambulance bay
– First floor: 22 inpatient beds and staff areas

1.5 Scope

GHD has undertaken the following works as part of this WMP:

– Review of controls, legislative and approval requirements including:
  - Waste management regulatory framework in Tasmania
  - Relevant waste management policies and guidelines particularly on clinical waste
– Review of the development documents including proposed layout design and architectural plans
– Assessment of key likely waste quantities and classifications during construction and operation
– Identification of construction phase waste management measures including reuse/recycle based on architectural plans
– Identification of potential operational waste measures based on the identified waste streams and quantities
– Development of a high-level on-site management and controls including roles and responsibilities
– Preparation of a Waste Management Plan (for DA purposes) with consideration of the relevant waste management legislation, policies and guidelines that covers construction and operational waste management of the proposed MHP

1.6 Limitations

This report: has been prepared by GHD for Artas Pty Ltd and may only be used and relied on by Artas Pty Ltd for the purpose agreed between GHD and Artas Pty Ltd as set out in Section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Artas Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD 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. GHD 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 GHD described in this report (refer Section 1.7 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

GHD has prepared this report on the basis of information provided by Artas Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD 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.

1.7 Assumptions

The information is based on referenced documentation and is current at the time of writing this report. It is not intended to restrict or limit the design and is subject to clarification or change as the design develops.

2. Legislative requirements and guidelines

This section provides a description of the regulatory requirements and strategic guidelines applicable to the proposed development, as well as how the proposed development aligns with these.

2.1 Land Use Planning and Approvals Act 1993

The *Land Use Planning and Approvals Act 1993* (LUPA Act) is the overarching planning legislation in Tasmania. The objectives of the LUPA Act include promoting the sustainable development of natural and physical resources and establishing a system of planning instruments for setting the objectives, policies and controls for the use, development and protection of land. The Act includes the provisions for state and local planning, including the information required and the requirements for public exhibition.

Schedule 1, Section 1e of the Act aims to promote sharing the responsibility of resource management across the Government, community and industry. The proposed development would foster the collaboration between Government and the industry in resource recovery as it is part of the Tasmanian Government's NWRH Masterplan and would utilise local and private waste handling services and facilities for construction and operational waste.

2.2 Environmental Management and Pollution Control Act 1994

The *Environmental Management and Pollution Control Act 1994* (EMPCA) is the principle environmental protection legislation in Tasmania that addresses waste. It sets out the waste types, licensing requirements and other regulatory controls that would be applicable to waste generated by the proposed development. It provides a range of controls about waste management requirements including the means of processing, handling, moving, storage and disposal of materials. The EMPCA defines and classifies offences relating to waste and sets penalties.

The EMPCA regulates waste management and specifies licensing requirements for activities including generation, storage and transport of controlled waste.

2.3 Environmental Management and Pollution Control (Waste Management) Regulations 2020

The Environmental Management and Pollution Control (Waste Management) Regulations 2020 sets out the requirements for the management of controlled wastes, which include various substances that are potentially hazardous. The Regulation sets out the conditions for production, storage, treatment and disposal of controlled waste, and the disposal of general waste.

The proposed development will involve the disposal of controlled waste including asbestos, which would need to be carried out in accordance with the Regulations.

2.4 The Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010

The Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010 sets out the process of registering handlers, tracking movement and tracking of controlled waste. The Regulation outlines the requirements for waste handling registration and the obligations of controlled waste handlers in managing the production, transportation, and facility operation related to controlled wastes.

Clinical and related waste is a known controlled waste that will be generated during operation. Any controlled wastes generated by the proposed development will be handled in accordance with this Regulation.

2.5 National Waste Policy 2018

The *National Waste Policy 2018* (Commonwealth of Australia, 2018) provides a national framework for waste and resource recovery in Australia. It outlines roles and responsibilities for collective action by businesses, governments, communities and individuals. The policy identifies five overarching principles underpinning waste management in a circular economy. These include:

– Avoid waste
– Improve resource recovery
– Increase use of recycled material and build demand and markets for recycled products
– Better manage material flows to benefit human health, the environment and the economy
– Improve information to support innovation, guide investment and enable informed consumer decisions.

The proposed development will contribute to the objectives of resource recovery and recycling by identifying opportunities to recycle and recover construction and operational waste generated from the works.

2.6 Draft Waste Action Plan

The Draft Waste Action Plan 2019 (DPIPWE, 2019) is an overarching waste strategy for Tasmania, with a focus on reducing traditional disposal methods and adopting more opportunities to further implement the Circular Economy model and reusing waste as a resource at different lifecycles of a product. The plan has been developed with collaboration between the Tasmanian Government, local government, and industry. The plan is structured around seven priority themes, or Focus Areas as referred to in the plan, with associated actions. The themes are:

– Moving to a Circular Economy
– Governance
– Data, targets, and innovation networks
– Infrastructure planning
– Support for the Resource Recovery Industry
– Education and community engagement
– State and National Policy and Regulatory setting

The waste management approach for construction and operational wastes generated by the proposed development will be managed in accordance with the Plan.

2.7 Tasmanian Waste and Resource Recovery Strategy 2023-2026

The Tasmanian Waste and Resource Recovery Strategy 2023-2026 (Tasmanian Waste and Resource Recovery Board, 2023) informs the reform of waste management in Tasmania to promote greater rates of waste recovery, reuse, repair, and diversion from landfill through economic investment. The strategy aims to identify the opportunities for investment, circular networks and purpose of the Tasmanian Waste and Resource Recovery Board in promoting resource recovery across Tasmania. The actions put forward in the strategy is divided into four ‘pillars’ which are:

– Integrated Planning and Action
– Strategic Investment
– Prioritise Circularity
– Engagement and Partnership.

Opportunities for waste diversion from landfill and recycling and recovery will be implemented as part of the proposed development.

2.8 Landfill Sustainability Guide

The Landfill Sustainability Guide (DPIWE, 2004) provides a framework for the siting, design, operation and after-care of landfills in Tasmania. The guide defines the following waste types.

– Solid inert material: waste which will not degrade in the short term and has a negligible risk to the environment including inert building and construction waste, clean fill, wood, bricks, concrete.
– Potentially contaminated materials: materials that may contain metals, organic substances or other wastes that will have a harmful effect on the environment if disposed of in an inappropriate manner
– Putrescible waste: waste containing major components able to be decomposed by bacterial action, often resulting in offensive odours including food waste, paper and cardboard and green waste
– Controlled waste: as defined in section 3 of the EMPCA including asbestos, tyres, clinical and related waste

2.9 Controlled waste category codes

The Environment Protection Authority (EPA) Tasmania governs the waste categories and codes of controlled wastes (EPA Tasmania, n.d.). The identification of controlled waste into accurate categories is the responsibility of the waste handler. The controlled wastes and their categories likely to be applicable to the proposed development are outlined in Table 1. The full list of controlled waste is provided in Appendix A, with their categories and characteristics provided in Appendix B.

Table 1 Controlled waste categories (EPA Tasmania, n.d.)

Waste Code	Description
R100	Clinical and related wastes
R120	Waste pharmaceuticals, drugs and medicines

2.10 Bulletin 105, Classification and Management of Contaminated Soil for Disposal

Information Bulletin No. 105, *Classification and Management of Contaminated Soil for Disposal* (EPA Tasmania, 2018) published by EPA Tasmania provides guidance on appropriate disposal, management and the application process for disposal approval. The bulletin encourages soil waste handlers and their contractors to consider on-site remediation, treatment and/or re-use of soil prior to taking soils to landfill.

Any unexpected contaminated soils encountered during construction works would be required to be classified in accordance with this bulletin.

2.11 Construction and Demolition Waste Guide – Recycling and Re-use across the supply chain

The *Construction and Demolition Waste Guide – Recycling and Re-use across the Supply Chain* (Commonwealth of Australia, 2012) describes opportunities for construction and demolition (C&D) waste to be re-used as a resource and ways for the construction industry to profit from C&D waste. The guide identifies the international move towards this approach of C&D waste re-use. It presents 15 different case studies of businesses and local governments implementing this approach across Australia. Materials with re-use potential identified in the guide include concrete and bricks, asphalt, metals, timber, plastics, plasterboard, rock and excavation stone, and soil and sand.

The proposed MHP will consider opportunities to re-use and recycle construction waste.

2.12 Approved Management Method for Clinical and Related Waste 2007

The *Approved Management Method for Clinical and Related Waste 2007* (AMM) (DTAE, 2007) sets out the minimal requirements for the safe identification, segregation, handling, storage, transport, treatment and disposal of clinical and related wastes which may be hazardous to the environment or human health and safety. This WMP has been developed in accordance with the AMM.

2.13 Standard Precautions: A guide for healthcare workers

This guide (Department of Health, 2024) emphasises practices such as waste segregation at the point of generation and proper containment, which are crucial for operational waste management in healthcare facilities. The proposed MHP will incorporate these safety practices into its waste management.

2.14 Tasmanian Health Service Protocol: Waste Management

The protocol (Tasmanian Health Service, 2024) has been developed in line with Commonwealth and state legislative requirements and evidence-based practices to ensure that waste products are disposed of safely, protecting the health of patients, staff, the public, and the environment. The WMP is prepared in accordance with this protocol.

2.15 Victorian Framework for handling and disposal of pharmaceutical waste 2020

This Framework (Victorian Therapeutic Advisory Group, 2020) provides guidance for the identification, segregation, handling, storage and disposal of pharmaceutical waste generated by health services. This waste includes (but is not limited to) pharmaceuticals that have expired, residues from preparations no longer required for patient treatment, or no longer required by the health service.

While the Framework is primarily intended for use by Victorian health services, the WMP for the new MPH has been developed with consideration of this Framework.

3. Waste management during construction

3.1 Waste quantities and classification

The key waste streams expected to be generated during demolition and construction are:

– Excess spoil from excavation and construction of retaining wall
– Excess construction materials during construction
– Waste packaging
– General waste and sewage from construction site offices and amenities.

Table 2 provides a summary of the key waste streams that may be generated from construction activities and likely waste classification.

Table 2 Summary of construction waste quantities and waste classification

Waste type	Description	Estimated quantity	Likely waste classification
Timber/wood	Timber offcuts, packaging (pallets and crates)	TBC at detailed design	Non-controlled waste (solid inert waste)
Plasterboard	Plasterboard waste	TBC at detailed design	
Bricks	Broken brick and tiles	TBC at detailed design	
Concrete	Excess concrete	TBC at detailed design	
Metal	Metal scraps	TBC at detailed design	
Plastic	Plastic packaging material including wrap and sheeting; excess PVC pipes and fittings	TBC at detailed design	
Electrical waste	Wire and cable offcuts, broken light fixtures and fittings	Minimal	
Vegetation	Tree branches, shrubs, and grass removed during site preparation	Minimal	Non-controlled waste (putrescible waste)
Hazardous material	Hazardous material such as concrete and concrete washings, excess paints, tyres	Minimal	Controlled waste
General waste	General waste from construction staff such as food waste, beverage containers, disposable PPE, office waste	TBC at detailed design	Non-controlled waste (putrescible waste)
			Non-controlled waste (solid inert waste)
Excess spoil	Excavated soil and rock from site preparation	18,000 m^3	Non-controlled waste (solid inert waste)
Sewage	Sewage from site amenities	TBC at detailed design	Non-controlled waste (sewage)

3.2 Potential construction waste impacts

The potential impacts associated with aspects of waste generation and management during construction are summarised in Table 3.

Table 3 Potential impacts associated with construction waste generation and management

Aspect of waste management	Potential impacts
Generation of waste	– Dust from construction, excavation, handling and movement of waste – Erosion and sedimentation due to runoff from exposed surfaces – Sediment laden runoff entering stormwater collection system

Aspect of waste management	Potential impacts
	– Noise from plant and equipment movement – Human health risks due to handling of hazardous materials
Storage and segregation of waste on site	– Odours and dust from stockpiling/storage of waste – Human health risks due to improper storage of hazardous materials – Sediment laden runoff, which could impact stormwater quality – Waste build up from irregular or disrupted collections – Cross contamination of waste due to improper segregation and storage – Attracting pests and disease vectors.
Waste transportation	– Dust from loading waste onto vehicles and movement of waste on haul roads – Road traffic noise from waste collection vehicles and movement of spoil and construction waste – Traffic generated by haulage of waste to reuse/disposal facilities – Odours from loading waste onto vehicles and movement of waste collection vehicles to disposal or recycling facilities – Mud tracking on road from waste collection vehicles – Unlawful transport and disposal
Non-classified or incorrectly classified waste transport and disposal	– Regulatory non-compliance – Contamination of resource recovery and disposal facilities – Contamination of soils, groundwater and surface water – Unlicensed waste contractors transporting waste
Unlicensed waste contractors transporting waste	– Regulatory non-compliance – Potential illegal dumping of waste – Potential for disposal at unlawful unlicensed receival sites.

Construction waste management activities are not expected to have a significant impact on the environment or human health, assuming the mitigation and management measures identified in Section 3.3 are implemented.

3.3 Waste management

3.3.1 Management approach

The proposed approach to managing construction waste to facilitate segregation and prevent cross contamination is summarised in Table 4.

Table 4 Management approach for waste types

Waste type	Management
General construction waste (concrete, plasterboard, asphalt, road base, timber, bricks, roof tiles, scrap metals, etc)	General construction waste would be managed in accordance with Tasmanian waste and recycling strategies and directed to a waste management facility that is lawfully permitted to accept that type of waste. Local services specialising in recycling specific waste types will be engaged, as per Section 3.3.2.
Vegetation	As far as practicable, cleared vegetation material would be chipped, mulched, and stockpiled for reuse on-site as part of rehabilitation or landscaping works. If unable to be reused on site, the material would be removed off-site for reuse or sent to a suitably licensed facility.
Excess spoil	Excess spoil would be reused on site for construction of laydown areas and for roadworks. Remaining spoil will be transported offsite and reused as clean fill. Any unexpected contaminated fill would be managed in accordance with Bulletin 105, Classification and Management of Contaminated Soil for Disposal (EPA Tasmania, 2018)
General waste from construction staff	Labelled and colour coded receptacles would be provided at the site office/s for general waste from construction personnel to ensure source separation of recyclable

Waste type	Management
	materials and residual landfill waste. These wastes would be collected on a regular basis by authorised and appropriately licensed waste collection contractors for offsite recycling or disposal.
Litter	Daily site inspections would be undertaken to identify and collect litter and investigate the cause to reduce the potential for the issue to occur in the future. Litter prevention strategies would include: – Ensuring sufficient number of bins and waste receptacles are available to avoid littering outside bins. – Covering all bins to ensure that wastes cannot be blown out during windy conditions. This would also apply to relevant stocks of materials to be used during construction. Litter management personnel would be nominated, undertaking regular inspections of sites and surrounds and litter collection.
Dust	Dust from waste storage, transport and collection would be controlled within the subject site by applying management measures such as using dust suppression sprays to minimise the impacts on the environment.
Hazardous material	Hazardous material would be properly identified, documented and safely handled, segregated, transported, treated and/or disposed of in accordance with EPA regulations. Hazardous material would be transported with appropriate documentation, as listed in Section 3.3.6, and only licensed transporters would be allowed to handle these materials. Treatment may be required before disposal at licensed facilities. Emergency response procedures and ongoing compliance monitoring would be implemented to minimise risks to health and the environment.

3.3.2 Waste handling, storage and collection

A waste storage and laydown area will be established on-site. The designated area should provide sufficient space for waste collection vehicles and ensures vehicles can enter and exit the site in a forward direction via Hospital Street. The layout shown in Figure 2 is indicative and may be redefined during detailed construction planning.

Waste stored onsite would be located or screened to minimise the impact on views into the site from adjoining road or public open space.



Figure 2 *Indicative waste storage area*

The recommended storage and management approach for each waste type identified in Section 3.1 is summarised in Table 5. The destination for each waste type will be confirmed during detailed construction planning.

Table 5 *Construction waste storage and destination*

Waste	Management	Storage	Potential destinations
Timber/wood	Recycle	Skip bin or stockpile	Burnie Waste Management Centre / DWM landfill
Plasterboard	Recycle	Skip bin or stockpile	Burnie Waste Management Centre / DWM landfill
Bricks	Recycle	Skip bin or stockpile	Burnie Waste Management Centre / DWM landfill
Concrete	Recycle	Skip bin or stockpile	Burnie Waste Management Centre / DWM landfill
Metal	Recycle	Temporary stockpile	OneStop Metal Recycling
Plastic	Recycle	Skip bin or stockpile	Burnie Waste Management Centre / DWM landfill
Electrical waste	Dispose	Stored in designated bin	Burnie Waste Management Centre / DWM landfill
Vegetation	Recycle	Stockpile	Dulverton Organic Treatment Facility
Hazardous material	Dispose	Stored in designated bin	Burnie Waste Management Centre / DWM landfill

Waste	Management	Storage	Potential destinations
General waste	Recycle / dispose	Mobile waste bins located at the site office	Burnie Waste Management Centre / DWM landfill
Excess spoil	Reuse	Stockpile	TBC with civil team
Sewage	Dispose	To be collected directly from portable toilet by tanker	Round Hill (Burnie) STP

3.3.3 Waste planning

Waste planning activities will include:

– Implementing weather protection for stored materials on site, to maximise their usability and minimise deterioration or waste
– Encouraging bulk handling and use of reusable and returnable packaging materials
– At the time of tendering, advise contractors and sub-contractors and suppliers of the requirements to minimise waste on site
– Include provision in the tender documentation for the client to monitor the use of waste and recycling bins on site.

3.3.4 Onsite controls

The onsite controls for appropriate management of construction wastes will include:

– Segregating wastes generated on site, using different skip bins for recycling and waste, with separate bins or stockpiles for different recyclable materials
– Discuss the site's waste management and recycling policies and practices with employees and subcontractors during site inductions and toolbox talks
– Ensuring all waste disposal bins are clearly marked
– Waste tracking, record keeping and reporting requirements including keeping records of quantities of waste and recycled materials disposed of, and the destinations of these materials
– Ensuring that wastes are only disposed to licenced facilities lawfully able to accept the waste type.

3.3.5 Waste disposal and recycling facilities

The Burnie Waste Management Centre (289 Mooreville Road, Burnie) is located approximately five kilometres south of the site. Landfilling activities at the facility ceased in 2012. Waste materials are processed at the centre, where reusable and recyclable materials are separated before the residual waste is transported to the Dulverton Waste Management (DWM) landfill.

The DWM landfill is located at 145 Dawsons Siding Rd, Latrobe, 65 kilometres southeast of the site. It is licensed to accept a maximum of 80,000 tonnes of waste materials in accordance with Environment Protection Notice (EPN) No. 7158/3. This includes:

– Inert waste
– Clean fill, building materials and clean waste
– Putrescible waste
– Controlled waste

Dulverton Organic Treatment Facility is located adjacent to the DWM landfill. The facility is licensed to produce a maximum of 25,000 tonnes of compost or mushroom substrate per annum under PCE No. 10889.

OneStop Metal Recycling is a recycling facility located at 3 Cambria Street, Cooee, approximately one kilometre west of the site. The facility is permitted under EPN 10949/1 (EPA Tasmania, 2022) to receive up to 20,000 tonnes per year of scrap metal. A limit of 2,000 tonnes of waste metal may be stored at the subject site at any one time.

3.3.6 Waste tracking

All controlled waste being transported must be accompanied by the following information, where applicable.

Part 1: To be supplied by the waste producer

- Description of the waste(s) [Use proper shipping name/technical name if applicable for Dangerous Goods]
- The physical nature of the waste
- Waste code(s)
- UN Number(s) and code(s)
- Dangerous Goods Class(es) (UN Class(es)) [and Subsidiary Risk if applicable for Dangerous Goods]
- Packaging Group number
- Amount of waste(s)
- Type of package (e.g. bulk) [and number of packages of each type if applicable for Dangerous Goods]
- Facility name and address
- Facility licence number
- State/Territory of destination
- Name of waste producer
- Address of waste source
- Producer's telephone number
- Emergency contact number in the event of accident or spillage
- Consignment authorisation number
- Producer identification number
- Date of dispatch

Part 2: To be supplied by the transporter

- Name of transporter(s)
- Address of transporter(s)
- Vehicle registration number(s)
- Name(s) of transit State(s)/Territory or Territories
- Transport licence number(s)
- Date of transport
- Type of transport e.g. train, truck

Part 3: To be supplied by the facility operator

- Type of treatment at facility
- Date of receipt at facility
- Any discrepancies noted in information provided in parts 1 and 2 Schedule B should be reported as required by the relevant agency in the jurisdiction in which the facility is located.

4. Waste management during hospital operation

This section outlines procedures for the safe handling, storage, transportation, and disposal of clinical and related waste in compliance with the *Approved Management Method for Clinical and Related Waste 2007* developed by the Department of Tourism, Arts and the Environment (DTAE), Tasmania.

4.1 Waste management hierarchy

The waste management hierarchy (DTAE, 2007) serves as a guiding framework for prioritising waste management strategies in this WMP. This hierarchy establishes an order of preference for waste management actions, aiming to minimise environmental impact, enhance resource efficiency, and reduce costs associated with waste disposal.

The primary objective of the waste management hierarchy is to reduce potential hazards to human health and the environment by avoiding or minimising waste generation wherever possible.

Secondary objectives include:

– Promoting the efficient use and conservation of resources
– Reducing the need for disposal through waste recovery and recycling
– Enhancing cost efficiency by lowering waste disposal expenses and material procurement costs

Table 6 Waste hierarchy and implementation at the MHP

Waste hierarchy	Implementation
Waste avoidance	Waste avoidance can be achieved through product substitutions, product modification, and procedural changes where clinically appropriate. The following practices would be explored and implemented during operation: – Implement inventory management to prevent over-ordering of medical supplies, pharmaceuticals, and consumables – Choose reusable medical instruments over single-use items where clinically appropriate – Review housekeeping and purchasing policies periodically to avoid excessive waste, without compromising work standards or environmental outcomes. – Consult the manufacturer and supplier to determine if toxic product can be substituted by non-toxic product or modified. – Request the manufacturer and supplier to reduce unnecessary packaging or replace polystyrene foam with recyclable or biodegradable fillers. – Minimise the variety of products used and streamline product selection helps prevent shelf-life issues and reduces the number of partially used containers that require disposal. – Purchase appropriately sized containers and buy chemical products in container sizes suited to actual usage can be more cost-effective than purchasing larger volumes at a lower unit cost, which may lead to wastage and disposal of unused portions. – Reduce hazardous material inventory and keep hazardous materials inventory to a minimum and implement a stock rotation system, ensuring older containers are used first. This will help prevent the disposal of expired, unused materials.
Reuse	– Reusable items would be prioritised over disposable alternatives when clinically appropriate and practical. – Encourage the use of washable gowns, linens, and food trays instead of disposable options.
Recycling	– Establish recycling systems for waste streams generated onsite including: • Paper and cardboard • Bottles and cans • Packaging and plastics – Ensure signage on recycling bins or in recycling areas to promote correct recycling practice – Use color-coded waste bins to separate general, recycling and clinical hazardous waste streams – Provide regular information and education to staff on appropriate usage and recycling bins

Waste hierarchy	Implementation
	– Investigate alternative uses for organic waste that cannot be reduced or reused (i.e. composting) – Explore opportunities for recycling waste types not included in the main waste stream separation (i.e. batteries, coffee cups, e-waste, etc.)
Energy recovery	– Explore facilities that convert non-recyclable waste into energy where feasible, although clinical and related waste from the MHP may not be suitable for this purpose.
Treatment	– Consider sterilisation and/or chemical treatment to safely treat hazardous waste before disposal
Disposal/ containment	– Ensure waste is disposed of in accordance with the WMP – Partner with licensed waste disposal contractors for appropriate treatment of clinical and related waste

4.2 Waste definitions and classification

'Clinical Waste' means waste generated in a clinical setting that is comprised of materials in one or more of the categories described in Table 7, except where one or more of the listed exclusions applies. It includes:

– Pathology and sampling waste directly involved in laboratory testing
– Human anatomical waste
– Blood and body fluids and materials or equipment containing human blood or body fluids
– Animal tissue, carcasses or other associated animal waste arising from laboratory investigation, or from medical or veterinary research or treatment
– Discarded sharps (i.e. an object capable of cutting or penetrating the skin).

'Related Waste' means waste generated in a clinical or similar setting that constitutes, or is contaminated with, cytotoxic, pharmaceutical, chemical or radioactive material as described in Table 7, except where one or more of the listed exclusions applies. It includes:

– Cytotoxic
– Pharmaceuticals
– Chemical
– Radioactive waste.

All clinical and related wastes are classified as 'controlled waste' under the provisions of the EMPCA.

Table 7 Clinical and related waste definitions and exclusions

Classification	Description	Exclusions
Clinical waste		
Pathology and sampling waste	– All specimens and associated wastes directly involved in specimen processing. This category includes tissues, disposable bench protectors, gloves and aprons, vials, test strips and cards, solid wastes from auto-analysers, specimen collection containers, suspensions of micro-organisms in tissue culture, discarded blood and blood products, cultures and contaminated material such as growth media (nutrient agars, broths), used culture dishes and so on.	– Urine & faecal specimens discharged directly to sewer. – Hair, nails and teeth (unless contaminated with free-flowing blood) – Cultures prepared for consumption in the food industry – Effluent from laboratory auto-analysers where discharged directly to sewer (with prior approval from the relevant sewerage authority)
Human anatomical waste	– Human tissue, organs, limbs, biopsy specimens, foetuses and placentae.	– Hair, nails and teeth (unless contaminated with free-flowing blood) – Foetuses requested by parents for private burial

Classification	Description	Exclusions
		– Placentae requested for home retention – Corpses
Blood and body fluids	– Blood and blood products (such as sera and plasma) and other body fluids including excretions, exudates, suction fluids, fluid wastes emanating from dialysis, cerebrospinal, pleural, pericardial, peritoneal and amniotic fluids, and any fluid visibly contaminated with blood. – Materials and equipment heavily saturated with blood or body fluids, or containing free-flowing or expressible blood or body fluids. May include disposable gowns, dressings, gauze sponges, lavage tubes, drainage sets, surgical gloves and so on.	– Blood and body fluids disposed directly to sewer. – Sanitary waste (Such as tampons, sanitary napkins, nappies, incontinence pads), unless from a person with, or suspected of having, a communicable disease, or undergoing cytotoxic drug therapy.
Animal tissue and carcasses	– Tissue, carcasses, bedding materials and other waste arising from animals used in chemical, drug or microbiological laboratory investigation, or for medical or veterinary research or treatment. This includes animal waste contaminated with infectious organisms or chemical residues, and materials contaminated with urine, faeces and/or vomitus where the animal has been in contact with an infectious organism.	– Animals used in educational institutions for dissection purposes.
Sharps	– Discarded items capable of cutting or penetrating the skin and includes syringes, needles, lancets, and scalpel blades, 'spikes' of intravenous sets, pasteur pipettes, microscope slides and coverslips, and broken glass. Hard plastic items such as broken plastic pipettes are also classified as 'sharps' waste. – This category includes sharps generated in the home or public places commonly referred to as 'Community Sharps'.	– Sharps contaminated with cytotoxic substances are to be managed as: Cytotoxic Waste. – Sharps contaminated with radioactive material are to be managed as: Radioactive Waste.
Related waste		
Cytotoxic	– Material that is, or may be, contaminated with a cytotoxic drug (that is, one capable of impairing, injuring or killing cells) during the preparation, transport, or administration of chemotherapy. Includes cytotoxic drugs, vials, materials or equipment contaminated with cytotoxic drugs, as well as the sanitary waste from any person undergoing treatment with cytotoxic drugs.	– Urine, faeces and/or vomitus from patients undergoing cytotoxic drug therapy.
Pharmaceutical	Includes antibiotics, endocrine disruptors, medications, whether in vial, ampoule, tablet, inhaler or capsule form, arising from: – Pharmaceuticals that are returned by patients or discarded by the public; – Pharmaceuticals that are past their expiry date; – Pharmaceuticals discarded by the manufacturer due to failed quality control specifications or contaminated packaging; – Pharmaceuticals that are no longer wanted or required by the facility; – Waste generated during pharmaceutical manufacture and administration, and – Waste otherwise contaminated by pharmaceuticals	– Non-hazardous materials such as, normal saline, dextrin, nutrient solutions and any intravenous fluids that do not have hazardous additives. – Materials containing trace quantities of pharmaceutical – for example, used plastic syringes with sharps removed; used intravenous sets with 'spikes' removed (managed as 'sharps') and empty pill bottles. – Urine, faeces and/or vomitus containing low levels of pharmaceutical or associated metabolic by-products from patients undergoing therapy
Chemical waste	– Waste generated from the use of chemicals in medical and dental clinics, funeral parlours, veterinary, and laboratory procedures, including waste mercury and amalgams, waste solvents, waste chemical reagents, embalming and preserving fluids, spent photographic developing and fixing	– No exclusions

Classification	Description	Exclusions
	solutions (such as from X-rays), waste disinfectants and sterilising solutions.	
Radioactive waste	– Waste which is also a radioactive material as defined in section 6(3) of the *Radiation Protection Act 2005*.	– No exclusions

General waste refers to any waste that is not a 'controlled waste' and is not contaminated with a 'controlled waste' (such as clinical and related waste). List of key general waste streams that would be generated from the MHP are provided in Table 8.

Table 8 General waste definitions and exclusions

Classification	Description	Exclusions
Sanitary	– Disposable nappy and incontinence product waste as well as feminine hygiene sanitary products such as tampons and sanitary pads. Includes bulk sanitary waste generated from public areas or commercial premises, provided an appropriate disposal system is used.	– Sanitary waste from patients with, or suspected of having, a communicable disease must be segregated and managed as clinical waste. – Sanitary waste from any person receiving cytotoxic drugs must be segregated and managed as cytotoxic waste
Plastics	– Such as single-use syringe barrels, drained dialysis bags and tubing sets, naso-gastric feeding tubing, bed liners and intravenous drip equipment not containing 'sharps'.	– Plastics contaminated with pharmaceutical, cytotoxic, radioactive or chemical material must be segregated and managed accordingly.
Miscellaneous	– Waste materials including paper, flowers, cardboard, textiles, packaging waste and organic waste such as garden waste, food, vegetable matter, wood fibre and other non-contaminated material.	– Medical records must be labelled 'Confidential' and managed through appropriate security measures.

4.3 Waste management overview and management strategies

4.3.1 Waste types and generation

The new MHP is expected to generate general waste and typical clinical and related waste during operation. The waste generation has been estimated based on the waste data identified from the existing mental health unit. The key waste streams and their associated hazards are summarised in Table 9.

Table 9 Key waste streams

Waste streams	Source of waste	Estimated generation (m^3/wk)	Waste classification	Potential hazard
Clinical waste	– Used dressings, swabs, and bandages – Used personal protective equipment (PPE) – Syringes, needles, and other sharps – Bodily fluids and contaminated items – Contaminated linens and beddings	0.8	Controlled waste	– Risk of transmission of diseases through contact with blood, bodily fluids, and contaminated items – Sharps can cause injuries and transmit infections – Improper handling or disposal can spread pathogens

Waste streams	Source of waste	Estimated generation (m^3/wk)	Waste classification	Potential hazard
Pharmaceutical waste	– Expired or unused medications (e.g., tablets, capsules, injectables) – Partially used vials and ampoules – Empty medication blister packs – IV bags and tubing containing medication residue – Narcotic and controlled drugs for destruction – Inhalers and medicated patches	0.01	Controlled waste	– Accidental ingestion or exposure to medications – Improper disposal can contaminate water and soil – Exposure to certain medications can cause adverse reactions
Cytotoxic waste	– Cytotoxic waste is unlikely to be generated at the MHP	NA	Controlled waste	NA
Radioactive waste	– Radioactive waste is unlikely to be generated at the MHP	NA	Controlled waste	NA
Recyclables	– Plastic bottles and containers – Glass bottles – Aluminium cans – Clean metal and plastic packaging	0.3	Non-controlled waste	– Broken glass, metal cans, and plastic edges can cause cuts and punctures – Cross contamination if mixed with clinical and related waste
Cardboard	– Cardboard packaging – Paperboard	2.2	Non-controlled waste	– Cross contamination if mixed with clinical and related waste
Paper waste	– Office paper – Newspapers and magazines – Paper packaging	0.1	Non-controlled waste	– Cross contamination if mixed with clinical and related waste – Leaking of confidential information if not securely stored or disposed of
General waste	– Non-recyclable packaging materials – Non-contaminated PPE – Disposable cups, cutlery, and napkins	13.7	Non-controlled waste	– Cross contamination if mixed with clinical and related waste
Organic waste	– Food waste – Garden organics	0.2	Non-controlled waste	– Food waste can cause odour and attract rodents and insects if not stored properly
Secure paper	– Confidential waste including patient records and reports	0.5	Non-controlled waste	– Leaking of confidential information if not securely stored or disposed of
Sanitary waste	– Sanitary pads, tissues and wipes, and incontinence products	0.2	Non-controlled waste	– Cross contamination if mixed with clinical and related waste

4.3.2 Waste management audit

A baseline waste management audit would be conducted at the new MHP to assess performance in terms of safety, efficiency, environmental impact, costs and regulatory compliance. Subsequent audits would be conducted annually or as needed to evaluate their effectiveness and identify further opportunities for improvement.

The waste management audit would include at least the following:

– Types, volumes and/or weight and composition of waste generated

- Hazard assessment
- In-house procedures or processes generating waste (to identify potential elimination options)
- Points of generation, collection and storage sites
- Waste segregation and packaging methods
- Waste storage and transport methods and records
- Treatment and disposal methods and records
- Documented contracts for waste collection, removal and disposal
- Incidence and severity of waste handling injuries
- Incidence and nature of spills and leaks
- Costs of waste packaging, internal and external transport, treatment and disposal
- Effectiveness of current waste segregation procedures
- Effectiveness of education programs
- The response mechanisms/procedures for spills and accidents
- The relationship to current benchmarks or best practice management
- Quality improvement mechanisms.

4.3.3 Staff responsibilities

Staff are responsible for effective waste management at the new MHP. Their key responsibilities would include:

NWRH operations management team

- Develop and implement the hospital's waste management plan
- Ensure compliance with local regulations and hospital policies
- Monitor waste generation and disposal practices, identifying areas for improvement
- Provide resources and training to staff on proper waste handling and disposal procedures
- Engage with waste disposal contractors and oversee waste collection schedules

Facility management team

- Oversee daily waste collection, segregation, and disposal
- Ensure proper functioning of waste management equipment such as bins, bags and trolleys
- Conduct routine audits to ensure compliance with waste management protocols
- Manage the inventory of waste disposal supplies (e.g. bins, liners)
- Maintain records of waste generation and disposal for reporting and compliance

Medical and nursing staff

- Segregate waste at the point of generation (e.g. general, recycling, clinical)
- Ensure proper use of colour-coded bins for different waste types
- Follow OH&S guidelines for handling hazardous waste
- Report any issues with waste management such as overflowing bins, incorrect segregation and contamination in bins
- Manage pharmaceutical waste, including expired or unused medications
- Ensure proper documentation and disposal of controlled substances
- Follow protocols for the return of unused medications where applicable

Housekeeping staff

- Collect and transport waste from clinical and non-clinical areas to central waste storage
- Ensure proper waste segregation and disposal according to guidelines

– Maintain cleanliness of waste disposal areas
– Segregate food waste and recyclables

All staff would be required to follow hospital waste management policies and procedures and report any incidents or non-compliance related to waste management.

4.3.4 Waste management committee

A waste management committee would be established at the MHP under the NWRH Operations Management Team to support effective waste management. The committee would consist of representatives from key operational areas to ensure a comprehensive approach to waste management. This includes but not limits to clinical practice, facility management, procurement, health and safety management.

The committee will report to the NWRH Operations Management Team. A detailed terms of reference will be developed prior to the operation of the MHP.

The key objectives of the committee include purchasing, environmental, communication and training.

Table 10 Waste management committee objectives

Objectives	Description
Purchasing policy	– Promote purchasing of products with minimal packaging and longer shelf life – Encourage the use of recyclable and environmentally friendly materials – Minimise single-use items where possible
Environmental policy	– Reduce the environmental footprint by improving waste segregation and recycling rates – Ensure compliance with local environmental regulations – Promote waste reduction through source control and reuse initiatives
Communication	– Provide regular updates to hospital staff on waste management performance and improvements – Establish a feedback mechanism for staff to report issues or suggest improvements – Engage with waste contractors and local authorities to ensure best practices
Education and training	– Develop and implement a staff training program covering waste segregation, handling and disposal – Include waste management awareness in staff induction – Conduct refresher training sessions to address common issues and update staff on policy changes

The committee will be responsible for the following:

– Develop and oversee the WMP to ensure alignment with hospital policies and regulatory requirements
– Monitor waste generation and disposal to identify trends and opportunities for improvement
– Review and implement waste minimisation strategies, including recycling and reduction initiatives
– Ensure proper segregation and handling of clinical, hazardous, and general waste
– Review incident reports related to waste management and recommending corrective actions
– Ensure compliance with environmental and occupational health and safety standards
– Engage with external waste contractors to optimise collection and disposal services
– Conduct waste audits to measure performance and inform improvement initiatives
– Develop training and education programs to improve staff awareness and compliance

4.4 Waste segregation and packaging

The objectives of waste segregation and packaging include:

– Proper segregation of all waste streams at the point of generation
– Minimise waste to landfill by increasing recycling and recovery rates
– Reduce contamination in recyclable waste by ensuring accurate segregation
– Promote safe handling and disposal of hazardous and clinical waste

– Comply with local environmental regulations and industry best practices
– Educate and train staff to improve awareness and participation in waste segregation practices

The new MHP targets to achieve 100% compliance in waste segregation and zero incidents from waste handling.

General procedures for waste segregation including:

– Implement color-coded systems and proper labelling to differentiate waste types, outlined in Table 11.
– Ensure waste is stored securely to prevent contamination.
– Waste receptacles are designated for specific materials based on the colour and/or symbols/wording on the receptacle. No receptacle will be used for any material other than for which it has been designated.
– Clear signage will be placed to assist to advise on the waste stream for which the bin is intended.
– All waste collection areas (including ward/office areas) will be clearly identified so that waste can be stored correctly.
– All small waste receptacles will be cleaned regularly to minimise odour and address infection control requirements.
– Operating procedures and safety advice will be provided and posted in areas as required, including any mechanical waste equipment such as a compactor or bin lifter.
– Containers and bags would be filled to a maximum of two-thirds of their capacity, or 6kg, whichever is the lesser, and sufficient air space is permitted for the container or bag to be securely sealed once capacity is reached. Staples or other closure devices with sharp protuberances or edges would not be used to seal containers or bags.
– Spill kits for clinical waste would be located in the collection areas as required.

Table 11 Colour coding and labelling of wastes

Waste stream	Comments	Container colour	Container type	Marking and sign
Clinical	Foetuses knowingly obtained through medical procedures, regardless of appearance, and visually recognisable body tissues; such as limbs; not requiring legal burial; would be specifically packaged and labelled.	Yellow	Plastic bag	Black biological hazard and clearly labelled as 'Biohazard'  
Sharps	MHP would use sharps containers that comply with either AS 4031-1992 *Non-Reusable Containers for the Collection of Sharp Medical Items used in Healthcare Areas*, or AS/NZS: 4261-1994 *Reusable Containers for the Collection of Sharp Items used in Human or Animal Medical Applications*. Waste collection companies who supply, collect and/or service, reusable sharps containers should ensure compliance with AS/NZS 4478-1997 *Guide to the Reprocessing of Reusable Containers for the Collection of Sharp Items used in Animal Clinic/Medical Applications*.	Yellow	Rigid-walled sharps container meeting appropriate Australian Standard	
Chemical	Chemical waste would be retained in their original labelled containers. If materials have been removed from their original containers, the receiving container must be compatible with the intended contents and must be fully labelled with specific chemical details, together with appropriate warning symbols.	Blue	Rigid plastic bins	-
Pharmaceutical	Pharmaceutical waste would be collected into tamper-proof containers designed to resist impact-rupture, capture spills, and prevent the removal of waste, once disposed.	Blue / yellow	Tamperproof containers	-

Waste stream	Comments	Container colour	Container type	Marking and sign
Recycling	Recyclables would be collected and disposed into small waste receptacles located at staff rooms, patient rooms, public areas and near vending machines before transferring to the mobile garbage bins (MGB).	Black or dark green bins with red lid	Plastic bins	
General waste	General waste would be collected and disposed into small waste receptacles located at staff rooms, patient rooms, public areas and near vending machines before transferring to the mobile garbage bins.	Black or dark green bins with yellow lid	Plastic bins	
Organic waste	Food waste would be collected separately and disposed of in food waste receptacles located in dining areas, using biodegradable bin liners for bagging. Garden waste will be collected by gardeners and placed in food organics and garden organics (FOGO) bins.	Black or dark green bins with green lid	Plastic bins	-
Secure paper	Secure paper would be disposed of in the secure paper bins. The bins would remain locked at all times.	Blue bins with blue lid	Plastic bins	-
Sanitary waste	Sanitary waste would be disposed of in designated sanitary waste bins located in the bathroom facilities. These bins will be serviced by a licensed sanitary waste contractor in accordance with regulatory requirements.	-	Plastic bins	-

Cytotoxic and radioactive waste are unlikely to be generated at the MHP.

Further actions would include ongoing staff training and education, enhancing infrastructure based on audit findings as well as investigating new technologies for onsite waste compaction and recycling.

4.5 Waste storage

4.5.1 Storage requirements

Waste, particularly clinical and related waste, that cannot be immediately removed for treatment or disposal would be stored in a manner that:

– Prevents spills and contamination.
– Controls noxious odours and avoids public offence.
– Ensures waste is contained securely in appropriate containers to prevent accidental leakage.

4.5.2 Storage area

The waste storage area is located on ground floor of the MHP, shown in Figure 3. The waste storage area would feature the following prior to operation:

– Have an impervious base to prevent liquid penetration.
– Be bunded (with continuous base and walls) to prevent spills and wastewater run-off.
– Be constructed free of gaps and cracks to ensure structural integrity.
– Be covered to protect from weather exposure.

The storage area should:

– Be located away from patient and public access areas, dining areas and air conditioning intakes and windows.
– Be segregated from areas used to store other materials such as cleaning supplies, consumables.

– Be able to be locked to prevent access by unauthorised persons.
– Display appropriate signage, including:
  - "Clinical Waste" and the biohazard symbol (black).
  - Clear separation for waste destined for different treatment methods (e.g., incineration, recycling).
– Have adequate lighting and ventilation to prevent odours and maintain hygiene.
– Include adequate spill containment (e.g., bunding or sumps) to prevent off-site migration of spills.
– Be equipped with spill kits that are easily accessible in all storage and waste handling areas.
– Be designed and fitted out to:
  - Facilitate cleaning and disinfection.
  - Maintain hygiene and support post-spill decontamination.
– Be vermin-proof and maintained in a clean and tidy condition.

Table 12 provides the proposed bin configuration for the new MHP, including bin sizes, number of bins, collection frequency and bin footprint.

Table 12 Waste storage and proposed bin configuration

Waste streams	Estimated generation (m^3/wk)	Bin size (L)	Number of bins required	Collection frequency	Bin area required (m^2)
Clinical waste	0.8	240	1	Five times per week	0.43
Pharmaceutical waste	0.01	Various	2	Weekly	Minimal
Recyclables	0.3	240	2	Weekly	0.85
Cardboard	2.2	1,100	1	Three times per week	1.71
Paper waste	0.1	240	1	Weekly	0.43
General waste	13.7	1,100	3	Five times per week	5.12
Organic waste	0.2	240	1	Weekly	0.43
Secure paper	0.5	240	2	Weekly	0.85
Sanitary waste	0.2	20	One per cubicle	Weekly	Minimal, within bathroom facilities
Total	**17.8**	**-**	**12**	**-**	**9.81**

The designated waste area is appropriately sized to accommodate the required waste storage and to allow safe and efficient bin manoeuvring. Appendix C sets up the indicative plan of the bins, including the calculated bin room sizing and the recommended bin types.

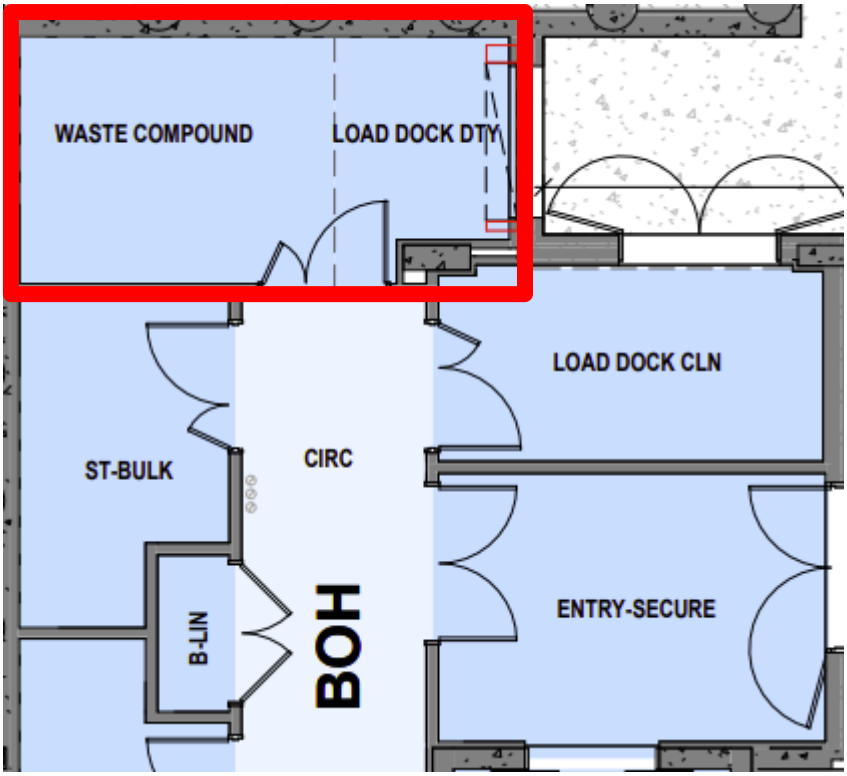


Figure 3 Designated waste storage area on ground floor

4.5.3 Waste storage controls

- Clinical and related waste should not be stored for extended periods at ambient temperatures to avoid odours and contamination.
- Storage area should have adequate PPE to ensure staff safety during handling and storage.
- Spill kits should be:
  - Strategically placed at waste generation points and storage areas.
  - Maintained in working order and regularly restocked.
  - Staff should be trained in the use of spill kits and spill containment procedures.
- Storage of small waste volumes can be achieved using:
  - Suitable, labelled, rigid-walled containers.
  - Containers should be kept in a secured area with restricted access.
- Workplace Standards Tasmania should be consulted to determine the applicability of Dangerous Goods legislation for the storage of chemicals and pharmaceutical waste.

4.5.4 Future actions

Future actions include regular inspections to ensure compliance with safety and hygiene standards, ongoing staff training on waste segregation, handling, and storage procedures as well as performance review to identify and address gaps or inefficiencies.

4.6 Waste transport

Effective waste transport at the MHP is critical to ensure that waste is moved safely, securely, and in compliance with regulatory requirements.

4.6.1 Objectives and targets

The key objectives of the waste transport strategy are to:

– Ensure all waste is transported in a safe and secure manner to avoid spills, contamination, and health risks.
– Comply with the *Dangerous Goods Act 1998 (Tasmania)* and the Australian Code for the Transport of Dangerous Goods by Road and Rail.
– Minimise environmental impact by reducing waste transport distances and optimising logistics.
– Maintain clear documentation and tracking of waste movement to ensure accountability and compliance.

It targets to achieve 100% compliance with transport safety standards and environmental regulations, minimise the risks and reduce incidents (spills, leaks) to zero.

4.6.2 Transport safety

Housekeeping staff would be responsible for moving waste from the point of generation or initial storage to the centre storage area using solid-base garbage trolleys. The trolleys would be designed to prevent leakage and reduce the need for manual handling. Clinical and related waste must be contained during transit in purpose-designed containers such as bags, boxes and bins. Clinical and related waste must not be compacted during transport, and must be clearly marked as clinical and related waste for transport to the receival facilities.

MHP would only engage approved controlled waste transporter for waste collection and inform the nature of the waste being transported. MHP would also ensure that all waste transport staff are trained in handling clinical and related waste.

4.6.3 Waste tracking

All controlled waste including clinical and related waste being transported must be accompanied by the following information, where applicable.

Part 1: To be supplied by the waste producer

– Description of the waste(s) [Use proper shipping name/technical name if applicable for Dangerous Goods]
– The physical nature of the waste
– Waste code(s)
– UN Number(s)
– UN Code(s)
– Dangerous Goods Class(es) (UN Class(es)) [and Subsidiary Risk if applicable for Dangerous Goods]
– Packaging Group number
– Amount of waste(s)
– Type of package (e.g. bulk) [and number of packages of each type if applicable for Dangerous Goods]
– Facility name
– Facility address
– Facility licence number
– State/Territory of destination
– Name of waste producer
– Address of waste source
– Producer’s telephone number
– Emergency contact number in the event of accident or spillage
– Consignment authorisation number
– Producer identification number
– Date of dispatch

Part 2: To be supplied by the transporter

– Name of transporter(s)

– Address of transporter(s)
– Vehicle registration number(s)
– Name(s) of transit State(s)/Territory or Territories
– Transport licence number(s)
– Date of transport
– Type of transport e.g. train, truck

Part 3: To be supplied by the facility operator

– Type of treatment at facility
– Date of receipt at facility
– Any discrepancies noted in information provided in parts 1 and 2 Schedule B should be reported as required by the relevant agency in the jurisdiction in which the facility is located.

4.6.4 Future actions

Future actions would include:

– Conduct regular training for staff and contractors on waste transport procedures, safety measures, and documentation requirements.
– Review and upgrade transport vehicles and equipment to meet changing regulatory requirements and best practices.
– Conduct regular waste management audits to monitor transport performance and compliance and address any identified gaps or inefficiencies in transport practices.
– Explore options for optimising waste transport routes to reduce travel time, costs, and environmental impact.

4.7 Waste treatment and disposal

General waste generated from the MHP would be delivered to Burnie Waste Management Centre before transported to the DWM landfill for disposal.

The DWM landfill is located in 145 Dawsons Siding Rd, Latrobe, 65 kilometres southeast of the site. It is licensed to accept a maximum of 80,000 tonnes of waste materials in accordance with Environment Protection Notice (EPN) No. 7158/3.

Commingled recyclables, paper and cardboard including shredded secure paper would be collected and recycled at a recycling facility operated by Veolia (18 Kelcey Tier Rd, Spreyton), which is located approximately 50 kilometres to the east of the MHP. The facility processes approximately processes 9,200 tonnes of material per annum.

Organics materials including food organics and garden organics would be collected and delivered to Dulverton Organic Treatment Facility for composting.

Clinical and related waste would be collected and transported to Cleanaway's clinical waste treatment facility at 47 Crooked Billet Drive, Bridgewater (PCE No. 10967). The treatment facility is located approximately 300 kilometres to the southeast of the MHP and is licensed to accept a maximum of 1,800 tonnes of clinical waste per annum. Treatment of clinical waste includes autoclave, penetrative steam, offsite treatment/incineration, with treated waste transported offsite for disposal.

Alternative treatment and disposal options would be evaluated on a regular basis to improve efficiency and ensure compliance with regulations.

Figure 4 provides the flowchart of required waste treatment measures (EPA Victoria, 2004).

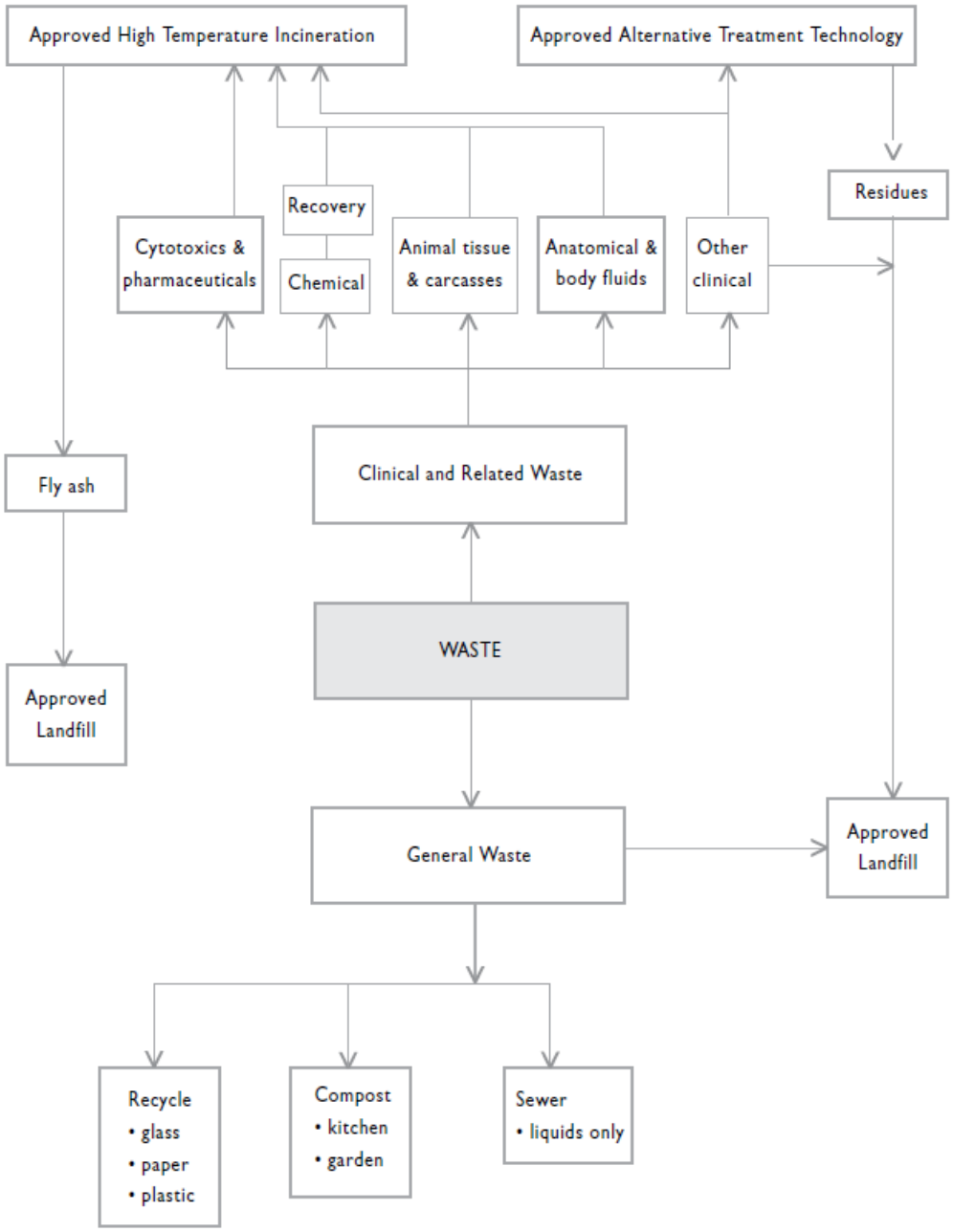


Figure 4 *Waste treatment options flowchart (EPA Victoria, 2004)*

4.8 OH&S training and awareness

All personnel involved in waste management activities must be equipped with appropriate PPE and follow established procedures to prevent accidents and exposure to hazardous materials.

The following PPE will be mandatory for all waste handling activities:

- High-visibility vests
- Safety gloves
- Safety boots with steel caps
- Safety goggles or face shields (when handling clinical and related waste)
- Respirators or masks (when handling materials that produce dust or fumes)
- Hearing protection (when working in high-noise areas)

Standard Operating Procedures (SOPs) for waste segregation, handling, transport and disposal will be developed and accessible to all employees.

A structured training and awareness program will be implemented prior to operation of the MHP to ensure all personnel are knowledgeable about OH&S requirements and waste management procedures. This would consist of trainings covering:

– Site-specific hazards and safety procedures
– Correct use of PPE
– Emergency response protocols
– Waste segregation, handling, transport and disposal requirements.

4.9 Complaint response, contingency and emergency planning

4.9.1 Key contacts

Table 13 provides the list of key staff involved in waste management and emergency response at the MHP. This includes the waste manager, facility manager, OH&S officer and emergency coordinator.

Contact details for waste contractors will also be maintained for quick coordination in terms of waste removal, transportation and emergency support. Table 14 lists the current waste contractors and will be reviewed on a regular basis.

Table 15 provides the contact number of all relevant external agencies.

All lists will be maintained and accessible to all staff members.

Table 13 Key contact details – MPH waste management and emergency response

Position	Name	Phone number	Email
Waste manager	TBC prior to operation		
Facility manager			
OH&S officer			
Emergency coordinator			

Table 14 Waste contractor details - waste management and emergency response

Waste contractor	Contact person	Phone number	Email
Veolia	TBC prior to operation		
Cleanaway			
Launceston Waste Centre			

Table 15 External agencies - emergency response

External agencies	Contact number
Ambulance – Non-urgent Calls	1800 008 008
BOC Gases Emergency Resupply	1800 653 572
City of Burnie (Emergency line)	6430 5700
Environmental Protection Authority	1800 005 171
Fire Communication Centre	6477 7250
Police – Non-urgent Calls	131 444
Radiation Protection Unit	6166 7256

External agencies	Contact number
TasGas (Gas Emergencies & Outages)	180 2111
TasWater	136 992
WorkSafe Tasmania Hotline	1300 366 322

4.9.2 Complaint management protocol

A structured complaint management process will be implemented to ensure that complaints from staff, patients and the public are handled professionally and efficiently. Steps for complaint management are shown in Table 16.

Table 16 Complaint management protocol

Steps	Description
Receive complaint	– Record the complaint in the Complaint Register. – Acknowledge receipt of the complaint within 24 hours.
Investigate complaint	– Assign the complaint to the relevant manager for investigation. – Assess the validity and nature of the complaint (e.g., noise, odour, waste spillage).
Implement Corrective Action	– Identify the cause and implement corrective measures promptly. – Engage with contractors and staff to resolve the issue.
Communicate resolution	– Provide the complainant with a summary of the investigation and resolution within 5 business days. – If further action is required, communicate a timeline for resolution.
Monitor and review	– Monitor the effectiveness of the corrective action. – Record the outcome in the Complaint Register for future reference.

If the complaint is not resolved within the initial response timeframe or is of a serious nature, it will be escalated to the NWRH Operations Management Team for further investigation and resolution.

A complaint register would be maintained onsite and reviewed regularly. Table 17 provides an example complaint register.

Table 17 Complaint register - blank

Complaint number	Date received	Complainant name	Nature of complaint	Assigned manager	Action taken	Date resolved	Outcome

4.9.3 Incident response and spill management plans

Hazardous material leak/spill would be categorised as medial risk in the emergency risk assessment. Immediate actions for hazardous substance spill / leak / release include:

– In the case of life-threatening situations, or a large spill contact the Fire Service by externally dialling 000
– Ensure persons are removed from immediate harm and cordon off the area based on the nature of the substance and size of the spill. Use product safety information to assist in this process.
– Isolate the immediate area, ensure doors are closed as necessary
– Dial ‘222’ and state location, nature of and type of spill and substance name; and request to be put through to the Emergency Management Coordinator
– Where the incident involves specific infrastructure i.e. gases, request support from Building & Engineering, and if issue involves any of the radioactive material on site then contact the Radiation Safety Officer through the Switchboard
– If able to safely do so determine what has been spilled/leaked and how it has occurred
– Seek advice from a relevant subject matter expert were available i.e. Safety Officer
– Obtain the substance’s Safety Data Sheet (SDS) from Chem-Alert or via the areas Chem-Alert information folder and follow the recommended course of action applicable for the incident outlined in the SDS

- In the case of a small spill follow the clean-up instructions on the SDS using the areas Spill Kit
- If a fire, explosion or toxic environment risk exists, evacuate the immediate area as per the Code Orange procedures
- If occupants are exhibiting signs of substance exposure evacuate the immediate area, and organise fire and ambulance service assistance immediately
- If the substance HAZCHEM code is visible and ends in an “E” evacuate the area immediately
- Where environmental or wastewater system contamination has occurred, ensure Environment Protection Authority and/or TasWater is contacted as soon as possible

Chemical spill kits would be located around the MHP where there is a potential for a hazardous chemical spill. These kits contain materials to assist in managing substance spills/leaks.

First aid kits would be available in most non-clinical areas and are to be used to implement immediate first aid measures if someone is injured. Use of this equipment should be documented when submitting an incident report. Where first aid is not available the senior staff member present must take measures to ensure the injured person receives appropriate treatment. All first aid kits are recorded on a register and should be serviced on a six-monthly basis by the OH&S officer.

4.10 Review, monitoring and reporting

To ensure the WMP remains effective and compliant with relevant regulations, a structured review, monitoring, and reporting process will be implemented:

- **Regular reviews**: the WMP will be reviewed annually or as needed to assess the effectiveness of waste handling, complaint management, and incident response processes.
- **Performance monitoring**: request waste contractor to provide data on waste quantities of each stream. Key waste data including waste quantities, contaminations, complaints and incidents will be recorded and tracked. Regular waste audits would be conducted to evaluate effectiveness.
- **Incident and complaint management**: all incidents and complaints will be documented in the Complaint Register. A summary of findings and corrective actions will be provided to the NWRH Operations Management Team for review on an annual basis or as needed.
- **Continuous improvement**: recommendations for improving waste management procedures and complaint handling will be integrated into the WMP as part of the review process.

5. Conclusion

This WMP provides a structured approach to minimising waste impact during the construction and operation of the MHP.

Construction phase

The major waste types generated by the construction activities will include C&D materials from excavation during site preparation as well as from construction of new buildings.

As long as all identified wastes are managed, transported, and disposed of in full compliance with relevant legislative and recommended requirements, and the suggested best site practices and mitigation measures are effectively implemented, no significant environmental impact is anticipated during the construction phase.

Operation phase

During the operation phase, the key waste types generated will include general waste and clinical waste from hospital activities within the precinct.

As long as all wastes are managed, transported, and treated/disposed of in full compliance with relevant legislative requirements, and the recommended mitigation measures are effectively implemented, no significant environmental impact is anticipated during the operation phase.

6. References

ANZECC. (1997). *Identification of PCB-Containing Capacitors -An information Booklet for Electricians and Electrical Contractors.* ANZECC.

ARTAS Architects & Billard Leece Partnership. (2024). Launceston General Hospital Mental Health Precinct Concept Report. Launceston , Tasmania.

Blue Environment and the Department of the Environment and Energy. (2019). Australian hazardous waste data and reporting standard.

City of Launceston. (2024). *Waste Centres*. Retrieved from City of Launceston: https://www.launceston.tas.gov.au/Natural-Environment-and-Waste/Waste-Centres

Commonwealth of Australia. (2012, January). *Construction and Demolition Waste Guide - Recycling and Re-use Across the Supply Chain.* Retrieved from https://www.dcceew.gov.au/sites/default/files/documents/case-studies.pdf

Commonwealth of Australia. (2018). *National Waste Policy 2018, Less Waste More Resources.* Retrieved from https://www.dcceew.gov.au/sites/default/files/documents/national-waste-policy-2018.pdf

Department of Health. (2024). Standard Precautions: A guide for healthcare workers. Hobart.

DPIPWE. (2019, June). *Draft Waste Action Plan Consultation Draft June 2019.* Retrieved from https://nre.tas.gov.au/Documents/Draft%20Waste%20Action%20Plan.pdf

DPIWE. (2004). *Landfill Sustainability Guide 2004.* Retrieved from EPA Tasmania: https://epa.tas.gov.au/Documents/Landfill_Sustainability_Guide_2004.pdf

DTAE. (2007). Approved Management Method for Clinical and Related Waste. Hobart, Tasmania.

EPA Tasmania. (2011). *Environment Protection Notice No. 8638/1.*

EPA Tasmania. (2017). *Environment Protection Notice 9161/2.* Launceston: Tasmanian Government.

EPA Tasmania. (2018). *Classification and Management of Contaminated Soil for Disposal.* Retrieved from https://epa.tas.gov.au/Documents/Information%20Bulletin%20105%20-%20Classification%20of%20Contaminated%20Soils%20(IB105)%20V3_2018.pdf

EPA Tasmania. (2022). *Environment Protection Notice No. 10949/1.*

EPA Tasmania. (n.d.). *Controlled Waste Category Codes*. Retrieved from EPA Tasmania: https://epa.tas.gov.au/business-industry/regulation/waste-management/controlled-waste/controlled-waste-category-codes

EPA Victoria. (2004). Draft Guidelines for the Management of Clinical and Related Waste in Victoria.

Office of Parliamentary Counsel and the Department of Sustainability, Environment, Water, Population and Communities. (1998). National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998. Canberra, Canberra.

SafeWork Australia. (2020). *Model Code of Practice: How to safely remove asbestos.* SafeWork Australia.

Tasmania, E. (n.d.). *The Waste Management Hierarchy.*

Tasmanian Health Service. (2024). Tasmanian Health Service Protocol: Waste Management. Hobart, Tasmania.

Tasmanian Waste and Resource Recovery Board. (2023, October). *Tasmanian Waste and Resource Recovery Strategy 2023-2026.* Retrieved from https://wrr.tas.gov.au/Documents/Tasmanian%20Waste%20and%20Resource%20Recovery%20Strategy%202023-2026.pdf

Victorian Therapeutic Advisory Group. (2020). *Victorian Framework for handling and disposal of Pharmaceutical Waste.*

Appendix A

Controlled Waste Category Codes

The following list provides Tasmanian controlled waste category codes and descriptions. The list is based on the 73 controlled waste categories and codes listed in Appendix F of the *Australian hazardous waste data and reporting standard, 2019* (Blue Environment and the Department of the Environment and Energy, 2019).

Table 18 Controlled waste category codes

Waste Code	Waste Category Description
A100	Waste resulting from surface treatment of metals and plastics
A110	Waste from heat treatment and tempering operations containing cyanides
A130	Cyanides (inorganic)
B100	Acidic solutions or acids in solid form
C100	Basic solutions or bases in solid form
D100	Metal carbonyls
D110	Inorganic fluorine compounds excluding calcium fluoride
D120	Mercury; mercury compounds
D130	Arsenic; arsenic compounds
D140	Chromium compounds (hexavalent and trivalent)
D150	Cadmium; cadmium compounds
D160	Beryllium; beryllium compounds
D170	Antimony; antimony compounds
D180	Thallium; thallium compounds
D190	Copper compounds
D200	Cobalt compounds
D210	Nickel compounds
D220	Lead; lead compounds
D230	Zinc compounds
D240	Selenium; selenium compounds
D250	Tellurium; tellurium compounds
D270	Vanadium compounds
D290	Barium compounds (excluding barium sulphate)
D300	Non toxic salts
D310	Boron compounds
D330	Inorganic sulfides
D340	Perchlorates
D350	Chlorates
D360	Phosphorus compounds excluding mineral phosphates
DEADF	Waste that is derived or arises from fish that have died or been killed in the course of finfish farming
E100	Waste containing peroxides other than hydrogen peroxide
E120	Waste of an explosive nature not subject to other legislation
F100	Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish
F110	Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives
G100	Ethers
G110	Organic solvents excluding halogenated solvents

Waste Code	Waste Category Description
G150	Halogenated organic solvents
G160	Waste from the production, formulation and use of organic solvents
H100	Waste from the production, formulation and use of biocides and phytopharmaceuticals
H110	Organic phosphorus compounds
H170	Waste from manufacture, formulation and use of wood-preserving chemicals
J100	Waste mineral oils unfit for their original intended use
J120	Waste oil/water, hydrocarbons/water mixtures or emulsions
J160	Waste tarry residues arising from refining, distillation, and any pyrolytic treatment
K100	Animal effluent and residues (abattoir effluent, poultry and fish processing waste)
K110	Grease trap waste
K130	Sewage sludge, sewage residue, nightsoil or sludge from an on-site waste water management system
K140	Tannery wastes (including leather dust, ash, sludges and flours)
K190	Wool scouring waste
M100	Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCBs), polychlorinated naphthalenes (PCNs), polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs)
M150	Phenols, phenol compounds including chlorophenols
M160	Organohalogen compounds - other than substances referred to in this list
M170	Polychlorinated dibenzo-furan (any congener)
M180	Polychlorinated dibenzo-p-dioxin (any congener)
M210	Cyanides (organic)/nitriles
M220	Isocyanate compounds
M230	Triethylamine catalysts for setting foundry sands
M250	Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials
M260	Highly odorous organic chemicals (including mercaptans and acrylates)
M270	Per-and poly-fluoroalkyl substances (PFAS) contaminated materials, including waste PFAS containing products and contaminated containers
N100	Containers which are contaminated with residues of substances referred to in this list
N120	Soils contaminated with a controlled waste
N140	Fire debris and fire washwaters
N150	Fly ash excluding fly ash generated from Australian coal fired power stations
N160	Encapsulated, chemically-fixed, solidified or polymerised wastes (referred to in this list)
N190	Filter cake contaminated with residues of substances referred to in this list
N205	Residues from industrial waste treatment/disposal operations
N220	Asbestos
N230	Ceramic-based fibres with physico-chemical characteristics similar to those of asbestos
R100	Clinical and related wastes
R120	Waste pharmaceuticals, drugs and medicines
R140	Waste from the production and preparation of pharmaceutical products
T100	Waste chemical substances arising from research and development or teaching activities including those which are not identified and/or are new and whose effects on human health and/or the environment are not known.

Waste Code	Waste Category Description
T120	Waste from the production, formulation and use of photographic chemicals and processing materials
T140	Tyres

Appendix B

Controlled Waste Categories and Characteristics

The following lists provides waste categories and characteristics of controlled wastes, based on the *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998* (Office of Parliamentary Counsel and the Department of Sustainability, Environment, Water, Population and Communities, 1998).

Table 19 Schedule A List 1: Waste categories

Waste stream or wastes having as constituents:
Acidic solutions or acids in solid form
Animal effluent and residues (abattoir effluent, poultry and fish processing waste)
Antimony; antimony compounds
Arsenic; arsenic compounds
Asbestos
Barium compounds (excluding barium sulphate)
Basic solutions or bases in solid form
Beryllium; beryllium compounds
Boron compounds
Cadmium; cadmium compounds
Ceramic-based fibres with physico-chemical characteristics similar to those of asbestos
Chlorates
Chromium compounds (hexavalent and trivalent)
Clinical and related wastes
Cobalt compounds
Containers which are contaminated with residues of substances referred to in this list
Copper compounds
Cyanides (inorganic)
Cyanides (organic)/nitriles
Encapsulated, chemically-fixed, solidified or polymerised wastes referred to in this list
Ethers
Filter cake contaminated with residues of substances referred to in this list
Fire debris and fire washwaters
Fly ash, excluding fly ash generated from Australian coal fired power stations
Grease trap waste
Halogenated organic solvents
Highly odorous organic chemicals (including mercaptans and acrylates)
Inorganic fluorine compounds excluding calcium fluoride
Inorganic sulfides
Isocyanate compounds
Lead; lead compounds
Mercury; mercury compounds
Metal carbonyls
Nickel compounds
Non toxic salts
Organic phosphorus compounds

Waste stream or wastes having as constituents:
Organic solvents excluding halogenated solvents
Organohalogen compounds - other than substances referred to in this list
Oxidising agents
Perchlorates
Phenols, phenol compounds including chlorophenols
Phosphorus compounds excluding mineral phosphates
Polychlorinated dibenzo-furan (any congener)
Polychlorinated dibenzo-p-dioxin (any congener)
Reactive chemicals
Reducing agents
Residues from industrial waste treatment/disposal operations.
Selenium; selenium compounds
Soils contaminated with a controlled waste
Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials
Tannery wastes (including leather dust, ash, sludges and flours)
Tellurium, tellurium compounds
Thallium; thallium compounds
Triethylamine catalysts for setting foundry sands
Tyres
Vanadium compounds
Waste chemical substances arising from research and development or teaching activities including those which are not identified and/or are new and whose effects on human health and/or the environment are not known
Waste containing peroxides other than hydrogen peroxide
Waste from heat treatment and tempering operations containing cyanides
Waste from the manufacture, formulation and use of wood-preserving chemicals
Waste from the production, formulation and use of biocides and phytopharmaceuticals
Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish
Waste from the production, formulation and use of organic solvents
Waste from the production, formulation and use of photographic chemicals and processing materials
Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives
Waste from the production and preparation of pharmaceutical products
Waste mineral oils unfit for their original intended use
Waste oil/water, hydrocarbons/water mixtures or emulsions
Waste pharmaceuticals, drugs and medicines
Waste resulting from surface treatment of metals and plastics
Waste tarry residues arising from refining, distillation, and any pyrolytic treatment
Waste, substances and articles containing or contaminated with polychlorinated biphenyls (PCBs), polychlorinated naphthalenes (PCNs), polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs)
Waste of an explosive nature not subject to other legislation
Wool scouring waste
Zinc compounds

Table 20 Schedule A List 2: Characteristics of controlled wastes

Dangerous Goods Class (UNClass*)	UN Code	
1	H1	Explosive
		An explosive substance or waste is a solid or liquid substance or waste(or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.
3	H3	Flammable Liquids
		The word “flammable” has the same meaning as “inflammable”. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off flammable vapour at temperatures of not more than 60.5 degrees Celsius, closed-cup test, or not more than 65.6 degrees Celsius, open-cup test. (Since the results of open-cup tests and of closed cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowances for such differences would be within the spirit of the definition.)
4.1	H4.1	Flammable solids
		Solids or waste solids, other than those classified as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.
4.2	H4.2	Substances or wastes liable to spontaneous combustion
		Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up in contact with air, and being then liable to catch fire.
4.3	H4.3	Substances or wastes which, in contact with water, emit flammable gases
		Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.
5.1	H5.1	Oxidising
		Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause or contribute to, the combustion of other materials.
5.2	H5.2	Organic peroxides
		Organic substances or wastes which contain the bivalent-O-O-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.
6.1	H6.1	Poisonous (acute)
		Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.
6.2	H6.2	Infectious substances
		Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.
8	H8	Corrosives
		Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.
9	H10	Liberation of toxic gases in contact with air or water
		Substances or wastes which, by liberation with air or water, are liable to give off toxic gases in dangerous quantities.
9	H11	Toxic (delayed or chronic)
		Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.
9	H12	Ecotoxic

Dangerous Goods Class (UNClass*)	UN Code	
		Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems.
9	H13	Capable of yielding another material which possesses H1-H12
		Capable by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.
		Other Reasons Potential to have a significant adverse impact on ambient air quality. Potential to have a significant adverse impact on ambient marine, estuarine or fresh water quality.
*UN Class and Code relates to the hazard classification system included in the United Nations Recommendations on the Transport of Dangerous Goods as used in Australia.		

Appendix C

Bin room layout and bin configuration

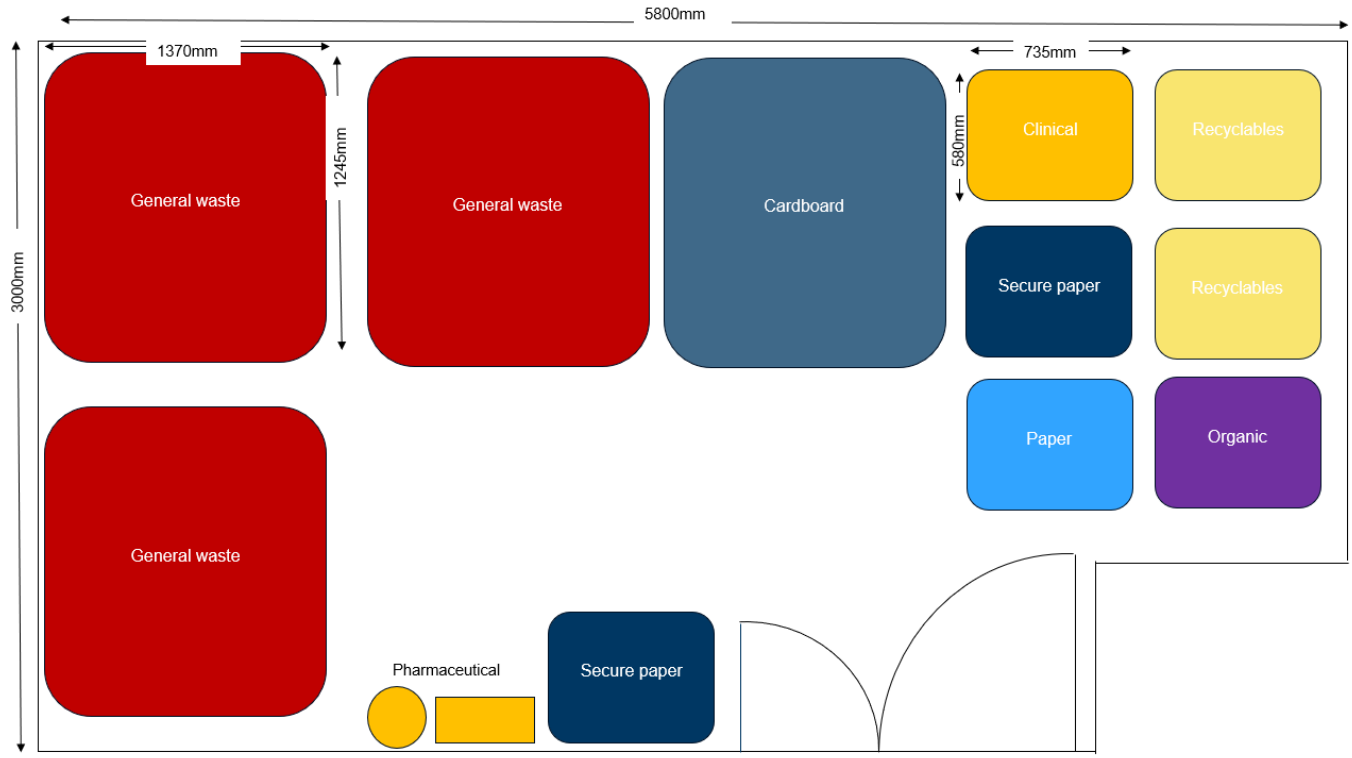


Figure 5 *Indicative waste room sizing and bin configuration*



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Your Ref: DA 2025/83
Our Ref: 23.305

Measured form and function

6ty°

6ty Pty Ltd
ABN 27 014 609 900

10 February 2026

Troy McCarthy
Executive Manager – Development Services
Burnie City Council

Dear Troy,

PLANNING PERMIT APPLICATION DA 2025/83 – RESPONSE TO REQUEST FOR FURTHER INFORMATION

I refer to your letter dated 9 December 2025 requesting additional information regarding the above application. Our response comprises the documents accompanying this letter, as outlined below.

1 Crown Land

The accompanying documents include:

a. An amended Permit Application Form that has been signed by the person holding a relevant position with delegation under the *Land Use Planning and Approvals Act 1993*, being the Director – Programming and Delivery (Position Number 524943); and

b. A cover letter from this delegate (Simon Dunne).

2 Assessment of Car Parking Numbers and General Description of the Use

An amended Planning Report has been prepared to provide an updated assessment of the Acceptable Solutions under Clauses C2.5.1, C2.5.2 and C2.5.3, based on the proposed North West Mental Health Precinct being an intensification of an existing Hospital Services use.

3 Pedestrian Pathway for Existing Accommodation

Amended Architectural Drawings, particularly the Proposed Site Plan – Ground (Drawing Number AR003-0002-DA, Dated 4/02/2026), have been prepared to show existing footpaths to be retained adjacent to the accommodation buildings, along with a proposed footpath to accommodate one of the new rows of car parking spaces within the expanded on-grade parking area.

dlcs ISO 9001 certified

In addition, these drawings show updates to the proposed building, including:

- Updated main lobby entry;
- Addition of an area for solar panels on the roof; and
- Updated stairs to the roof, including a clerestory to provide natural light to the Level 1 stair.

The updates are shown as clouded on the drawings.

The changes are predominantly internal and do not affect the external building form, except for the solar panels and clerestory.

In this respect, it is noted that Clause 4.5.2 of the Planning Scheme provides an applicable exemption for roof-mounted solar energy installations. The only stipulation is that the exemption does not apply where the Local Historic Heritage Code applies, which is not the case for the site.

As identified in the amended Planning Report, while the roof associated with the clerestory will become the uppermost element of the building relative to the Australian Height Datum, at 94.337 metres AHD, it will remain below the view line identified in the North West Hospitals Masterplan. In addition, given that the clerestory roof is located centrally within the building footprint, and existing ground levels slope downward to the north, the maximum building height (measured vertically from existing ground level) will continue to relate to the northern part of the building.

4 Swept Paths

An amended Traffic Impact Assessment has been prepared, which contains updated swept paths at Appendix A, including:

- An updated ambulance drive-forward-in swept path demonstrating that access is achievable via a three-point manoeuvre, noting that ambulances are expected to only ever reverse into bays to unload and load from the rear; and
- Updated ambulance swept paths demonstrating circulation and manoeuvring with a waste vehicle parked in the loading bay, and vice versa, together with updated swept paths for standard passenger vehicles (B99 design vehicle) demonstrating circulation and manoeuvring with an ambulance and a waste vehicle parked in their respective bays.

5 Landslip Hazard

- An amended Landslide Risk Assessment has been prepared to reflect the current proposal and to address the relevant matters.

6 TasWater

- Hydraulic loading calculations and amended Civil Services Drawings have been prepared by Coordinated Engineering Services (CES) to address the relevant matters.

Please do not hesitate to contact me if there are any queries in relation to this response.

Yours faithfully
6ty° Pty Ltd



Ashley Brook
Planning Consultant

Mental Health Precinct – North West Regional Hospital

Traffic Impact Assessment

Artas Pty Ltd

15 December 2025

→ **The Power of Commitment**



Project name		North West Regional Hospital Mental Health TIA					
Document title		Mental Health Precinct – North West Regional Hospital | Traffic Impact Assessment					
Project number		12655713					
File name		12655713-REP-4_Mental_Health_Precinct_NWRH_Traffic_Assessment.docx					
Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	A. Ye	T. Maywald		M. Rumbold		10/04/2025
S4	1	A. Ye	T. Maywald		M. Rumbold		29/04/2025
S4	2	T. Maywald	M. Rumbold		M. Rumbold		17/10/2025
S4	3	T. Maywald C O'Brien	M. Rumbold		M. Rumbold		19/10/2025
S5	4	T. Maywald C O'Brien	M. Rumbold		M. Rumbold		15/12/2025

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1. Introduction

GHD was engaged by Artas Pty Ltd to undertake a Traffic Impact Assessment on the proposed Mental Health Precinct at 23 Brickport Rd, Cooee. The proposed development forms part of the North West Regional Hospital (NWRH) Master Plan.

1.1 Purpose of this report

The purpose of this report is to document the traffic and transport impacts of the proposed Mental Health development on the surrounding road network and to address the relevant sections of the *State Planning Provisions*.

1.2 Scope and limitations

This report: has been prepared by GHD for Artas Pty Ltd and may only be used and relied on by Artas Pty Ltd for the purpose agreed between GHD and Artas Pty Ltd as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Artas Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD 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. GHD 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 GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

GHD has prepared this report on the basis of information provided by Artas Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD 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.

GHD has prepared the SIDRA Models ("Model") for, and for the benefit and sole use of, Artas Pty Ltd to support understanding of development traffic impacts on the intersections assessed and must not be used for any other purpose or by any other person.

The Model is a representation only and does not reflect reality in every aspect. The Model contains simplified assumptions to derive a modelled outcome. The actual variables will inevitably be different to those used to prepare the Model. Accordingly, the outputs of the Model cannot be relied upon to represent actual conditions without due consideration of the inherent and expected inaccuracies. Such considerations are beyond GHD's scope.

The information, data and assumptions ("Inputs") used as inputs into the Model are from publicly available sources or provided by or on behalf of Artas Pty Ltd (including possibly through stakeholder engagements). GHD has not independently verified or checked Inputs beyond its agreed scope of work. GHD's scope of work does not include review or update of the Model as further Inputs become available.

The Model is limited by the mathematical rules and assumptions that are set out in the Report or included in the Model and by the software environment in which the Model is developed.

The Model is a customised model and not intended to be amended in any form or extracted to other software for amending. Any change made to the Model, other than by GHD, is undertaken on the express understanding that GHD is not responsible, and has no liability, for the changed Model including any outputs.

1.3 Assumptions

The report has been prepared on the basis of a number of assumptions documented in the report, including the following:

- Crash data obtained from the Department of State Growth is complete
- Traffic volumes obtained from the Department of State Growth, and Matrix Traffic and Transport data are representative of actual volumes on a typical day
- The traffic growth in the network is expected to grow at a linear rate

1.4 References

Several documents and materials have been referred to during the preparation of this report including the following:

- North West Mental Health Precinct (NWMHP) Schematic Design drawings received 17th November 2025:
  - *NWMHP-AR003-0002-DA-[A]-PLAN - SITE PLAN - GROUND PROPOSED*, Artas & BLP
- Ambulance vehicle specifications provided by Ambulance Tasmania via email on 28 March 2025
- Veolia National Equipment Matrix Brochure, May 2023
- AS2890.1 (2004), Parking facilities: Off-street car parking
- Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections
- Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling
- Draft North West Hospital Master Plan
- North West Regional Hospital Parking Study, Pitt & Sherry, June 2022
- Guide to Transport Impact Assessment Version 1.1, Transport for NSW, May 2024
- Traffic survey data, collected by Matrix Traffic and Transport Data
- Five-year crash history, Department of State Growth
- Tasmanian Planning Scheme – State Planning Provisions
- Traffic volumes within the Drakewell portal, Department of State Growth
- Near map arial imagery

2. Existing conditions

2.1 Site overview

The proposed Mental Health Precinct site (subject site) will be located at 23 Brickport Rd, Cooee as shown in Figure 1. The subject site is located within the existing Nort West Regional Hospital (NWRH) site, to the south of the existing hospital and medical centre buildings.

The site is bounded by Brickport Road on the south and west, and by Uplands Place on the east.



Figure 1 Subject site

Source: THELIST Map © State of Tasmania (Date accessed: 24/01/2025)

Access to the site is currently provided via uncontrolled intersections from Brickport Road and Uplands Place. A two-way internal road named Hospital Street provides connection between these external roads and distributes traffic internally through the site. The intersection of Brickport Road and Hospital Street consists of a separate right turn entry lane at Brickport Road and includes splitter islands for both left turn entry and exit movements.

An aerial imagery of the site is presented in Figure 2.



Figure 2 Aerial imagery of the subject site

Source: Nearmap – Imagery (Date captured:14/12/2024, Date extracted: 24/01/2025)

2.2 Planning zones

The project site is currently located in a Community Purpose Zone, as defined by the Burnie Local Provisions Schedule and shown in Figure 3. Land uses to the east and south of the site are generally residential zones, whilst zones to the north and west consist of commercial and light industrial uses, respectively.

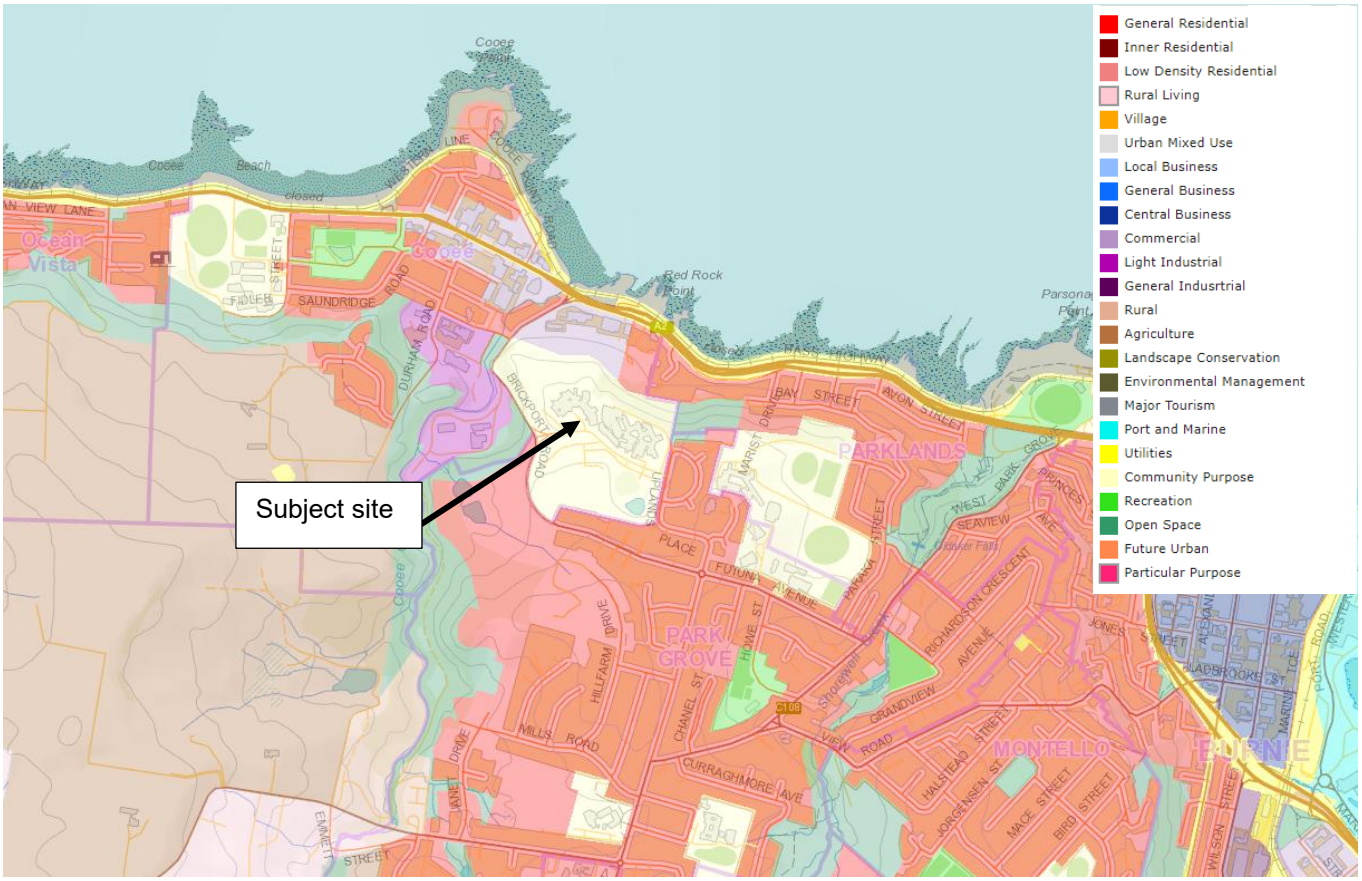


Figure 3 Planning zones surrounding subject site

Source: THELIST Map © State of Tasmania (Date accessed: 16/10/2025)

2.3 Road network

The road network in the vicinity of project site comprises of the following roads:

- Brickport Road;
- Uplands Place; and
- Hospital Street

2.3.1 Brickport Road

Brickport Road is a sub-arterial road managed by Burnie City Council. The western site access to the NWRH site connects to Brickport Road, providing connection to Bass Highway in the north and residential land to the south.

Brickport Road operates as a two-lane two-way road as shown in Figure 4. On-road parking is restricted on both sides of the Brickport Road abutting the site access. Further south of the site access, on-road parking is available on west side of Brickport Road.

A footpath is provided on the east side of the road, abutting the NWRH site access. Footpaths are available on both sides of the road from approximately 150 m south of the NWRH site access.

A posted speed limit of 60 km/hr applies along Brickport Road, adjacent to subject site.



Figure 4 Brickport Road facing north, adjacent to site access

Source: GHD Image capture (20/03/2024)

2.3.2 Uplands Place

Uplands Place is a Local Road managed by Burnie City Council. The eastern site access to the NWRH site connects to Uplands Place via a two-way crossover.

Uplands Place operates as a two-lane two-way road, as shown in Figure 5Figure 5. On-road parking is available on both sides of Uplands Place with 2P restrictions between 7:00 AM-7:00 PM during weekdays and between 7:00 AM-5:00 PM during weekends. A footpath is available on the east side of the road abutting the site access.

A residential speed limit of 50 km/hr applies along Uplands Place, adjacent to subject site.



Figure 5 Uplands Place facing north, adjacent to site access

Source: GHD Image capture (20/03/2024)

2.3.3 Hospital Street

Hospital Street is a local access street managed by Department of Health. Hospital Street provides access to all on-site parking spaces and loading services.

Hospital Street operates as a two-lane two-way road, as shown in Figure 6.Figure 6 Footpaths are available on both sides of the street.

A posted speed limit of 25 km/hr applies along Hospital Street.



Figure 6 Hospital Street facing south east

Source: GHD Image capture (20/03/2024)

2.4 Crash analysis

The road crash history within the vicinity of the project site has been extracted for the latest available five-year period between August 2020 and August 2025.The summarised crash data sourced from Department of State Growth website is presented in Figure 7 and summarised in Table 1.

In total, there were 30 crashes recorded in the study area, none of which were fatal. The majority of crashes resulted in either minor injuries or property damage. More than 80% of the recorded crashes occurred under daylight conditions.

There was one serious injury crash within the study area over the past five years. The accident occurred on Hospital Street and involved a vehicle-pedestrian crash.

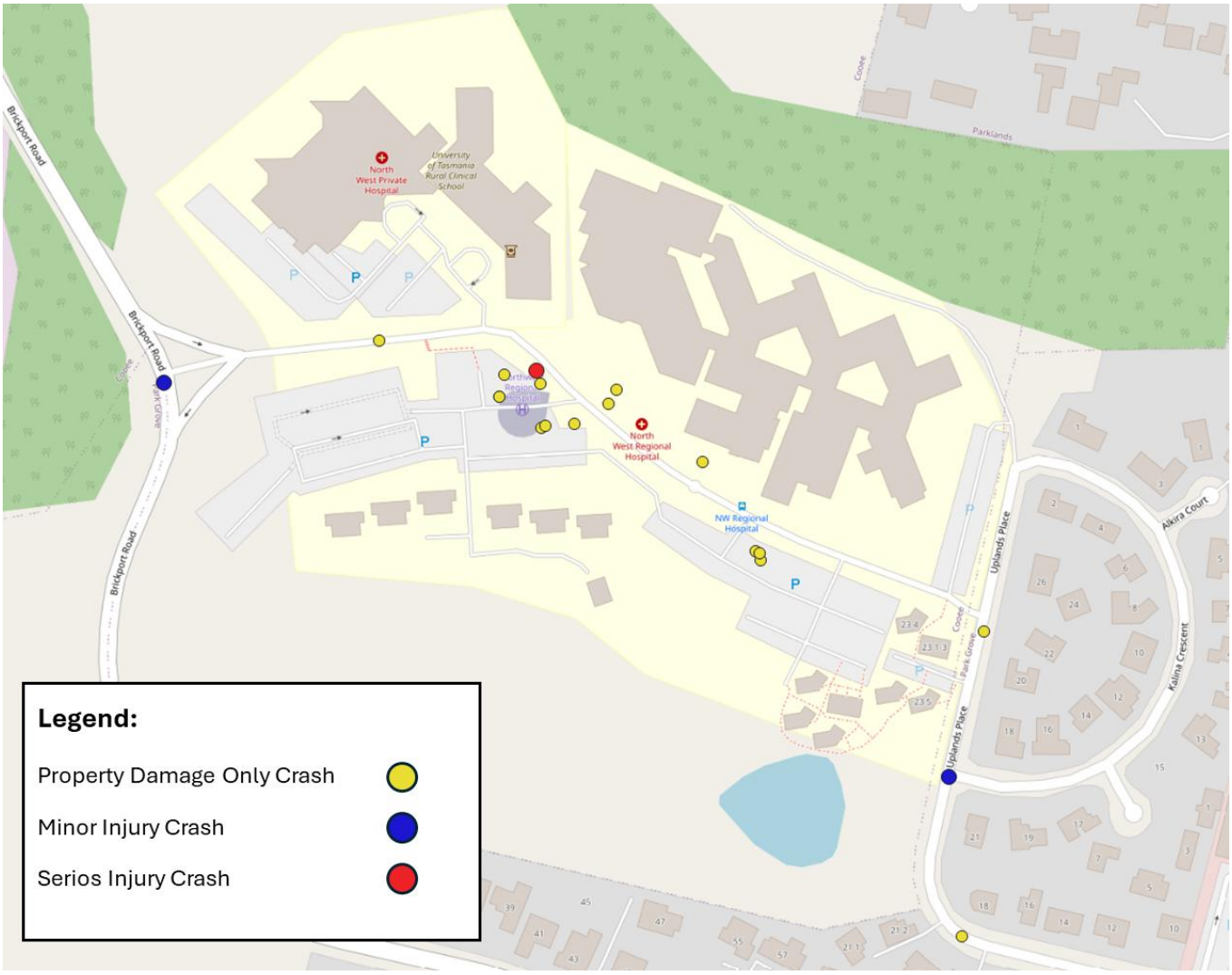


Figure 7 Location of crashes within the last five years

Crash data source: Spatial Data Selector website - Department of State Growth, Image source: OpenStreetMap, (Date extracted: 16/10/2025)

Table 1 Crash history (August 2020 to August 2025)

Location	Number of crashes				Crash type(s)
	Serious	Minor	PDO	Total	
Midblock					
Uplands Place	0	0	2	2	Other on path (2)
Hospital Street and carparks	1	1	23	25	Other manoeuvring (17), Unknown (5), Parking vehicles only (2), Other pedestrian (1)
Intersection					
Uplands Place/Kalina Crescent	0	1	0	1	Off end of road T junctions/intersection (1)
Brickport Road/ Hospital Street	0	2	0	2	Parked (1), Right Through (1)
Total	***1***	***4***	***25***	***30***	

2.5 Public transport

The public transport network in the vicinity of the project site is shown in Figure 8. The nearest bus stop is located within the hospital precinct on Hospital Street. The bus stop is serviced by routes 194 and 195, which are the Burnie city circular loop service. The loop service provides connection to the Hospital, Shorewell Plaza, Upper Burnie and surrounding land uses. Generally, the frequency of each route is one (1) service per hour and combining both routes equates to two (2) services per hour.

Relevant public transport services have been described in Table 2.

Table 2 Bus routes

Route no.	Route description	Peak hour frequency (one-way)
194	Cattley St > Upper Burnie > Acton (Thorne St) > Shorewell Plaza (Wiseman St) > Hellyer College > Hospital > Park Grove > Cattley St	One (1) service per hour. Provides service between 6:30 AM-7:00 PM during weekdays and between 8:30 AM-7:00 PM on Saturday. On Sunday, service is limited between 10:00 AM-6:40 PM.
195	Cattley St > Park Grove > Hospital > Hellyer College > Shorewell Plaza (Wiseman St) > Acton (Thorne St) > Upper Burnie > Cattley St	One (1) service per hour. Provides service between 7:00 AM-6:40 PM during weekdays and between 9:00 AM-6:40 PM on Saturday. On Sunday, service is limited between 9:00 AM-5:25 PM.



Figure 8 Burnie network map

Source: Burnie network map

2.6 Active transport

2.6.1 Pedestrian network

The pedestrian network in the vicinity of the subject site consists of sealed footpaths along Brickport Road and Uplands Place, each providing pedestrian access to the NWRH site. The pedestrian network surrounding the site is shown in Figure 9.



Figure 9 *Pedestrian network surrounding NWRH*

Source: Nearmap – Imagery (Date captured:14/12/2024, Date extracted: 24/01/2025)

2.6.2 Bicycle network

The bicycle network in the vicinity of the NWRH largely consists of informal provisions. There are no separated on-road or off-road cycling infrastructure on Brickport Road and Uplands Place. Instead, cyclists need to ride within vehicular traffic lanes throughout the surrounding road network to access the site. In the wider network, there is an on-road bicycle path available along Bass Highway which ends at Bass Highway and Brickport Road intersection.

The cycling network surrounding NWRH is presented in Figure 10.

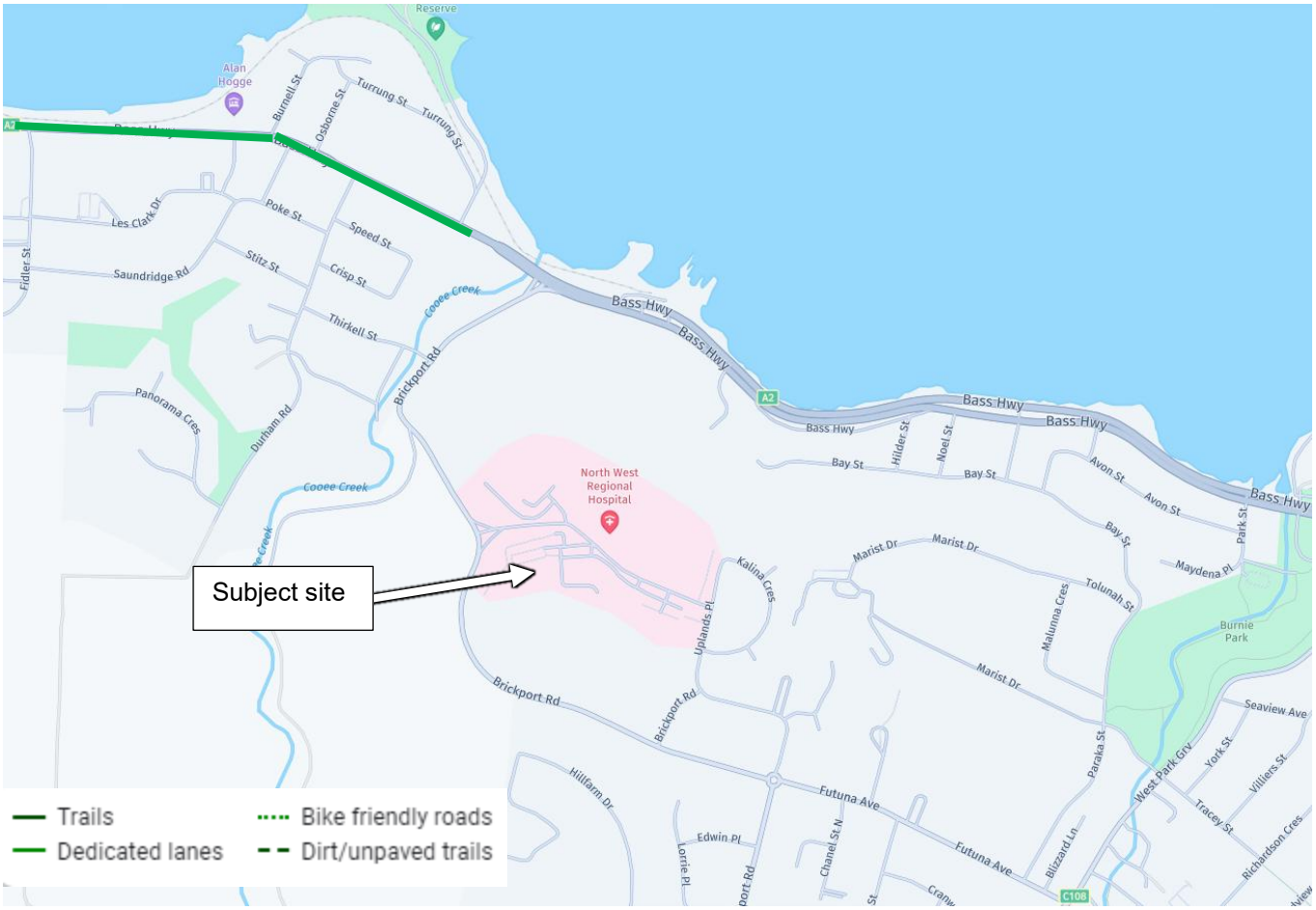


Figure 10 Cycling paths surrounding NWRH

Source: Nearmap – Imagery (Date captured:14/12/2024, Date extracted: 24/01/2025)

2.7 Car parking

On-site and off-site parking areas in the vicinity of the subject site are shown in Figure 11.

Pitt & sherry were previously engaged by Department of Health to carry out a parking study for NWRH. In the parking study report, it was indicated that NWRH accommodates a total of 637 on-site car parking spaces. Brickport Road and Uplands Place provide approximately 135 and 52 on-road car parking spaces in the vicinity of NWRH, respectively.

It is noted that there are also additional car parking spaces within the North West portion of the broader NWRH site. These serve the private hospital and medical centre.



Figure 11 Available parking facility around NWRH

Source: Nearmap – Imagery (Date captured:14/12/2024, Date extracted: 24/01/2025)

2.8 Traffic surveys

GHD engaged Matrix Traffic and Transport Data to conduct intersection movement count surveys at Brickport Road/Hospital Street and Hospital Street/Uplands Place intersections. The survey was conducted between 6:00 AM to 6:00 PM on Thursday, 26 October 2023.

The AM and PM peak intersection turning movements at Brickport Road/Hospital Street occurred during 8:00 AM-9:00 AM and 2:30 PM-3:30 PM, respectively. At Hospital Street/Uplands Place, peak AM and PM turning movements occurred between 6:45 AM-7:45 AM and 2:15 PM-3:15 PM, respectively.

Figure 12 and Figure 13 summarise the peak hour traffic volume of Brickport Road/Hospital Street and Hospital Street/Uplands Place intersections, respectively.

In addition to the peak turning movements at each intersection, Table 3 shows the peak periods of traffic generation to/from the existing NWRH site.

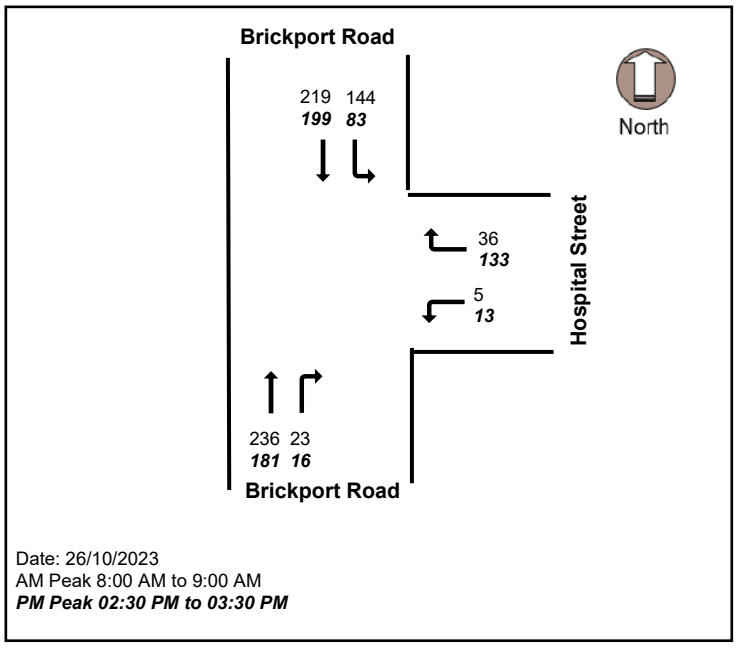


Figure 12 Brickport Road and Hospital Street peak hour traffic volume

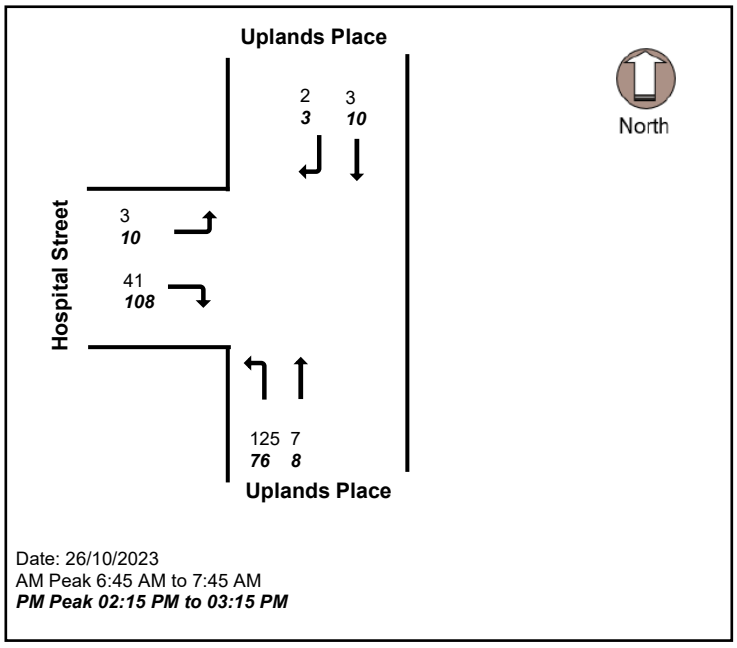


Figure 13 Hospital Street and Uplands Place peak hour traffic volume

Table 3 Peak NWRH site traffic generation

Peak period	Access	IN	OUT	Total
AM (07:30-08:30)	Brickport Road	205	45	420
	Uplands Place	139	31	
PM (14:45-15:45)	Brickport Road	95	167	448
	Uplands Place	53	133	

3. Proposed development

It is proposed to construct a 'Mental Health Precinct' (MHP) building at NWRH. The MHP building is proposed to be located south of the main hospital building, with a schedule of accommodation as summarised in Table 4.

The development proposes to provide:

- A total of 31 car parking spaces, including two (2) DDA spaces
- Two (2) drop-off spaces
- Two (2) bicycle hoops providing four (4) bicycle spaces for public use and two (2) bicycle spaces within the nominated bike cage for use by staff
- Two (2) motorcycle spaces

The provisions above are identified in Figure 14 and Figure 15.

Table 4 Schedule of development

Type	Number of beds	Estimated number of FTE	Notes
High Care	4	Maximum of seven (7) medical practitioners and 37 other employees at a given period*	Considered Hospital Services
Low Care	18		
Total	**22 beds**	**44 Staff**	

*advised by artas in consultation with DoH.

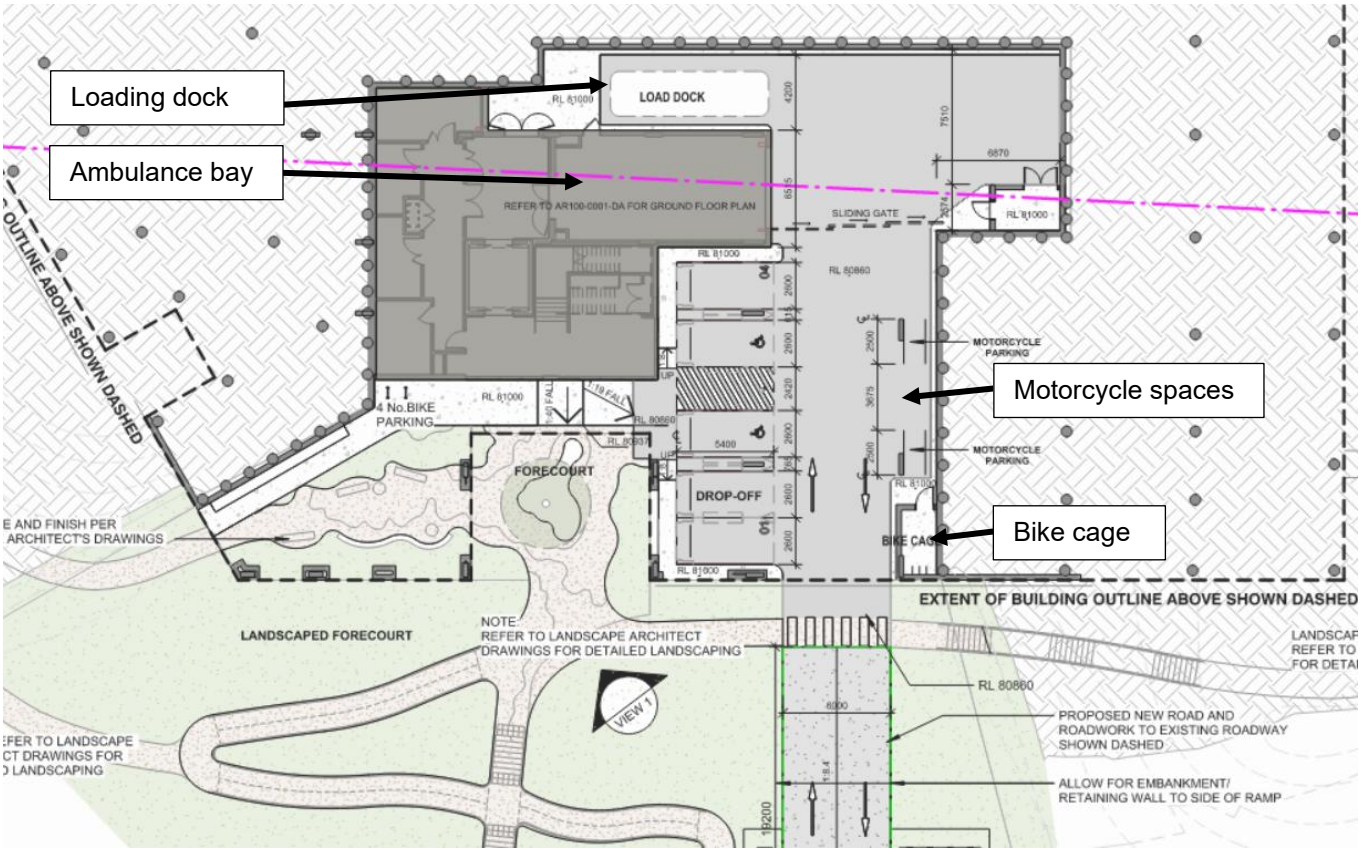


Figure 14 Proposed MHP building ground floor plan

Image source: North West Mental Health Precinct (NWMHP) Schematic Design, Artas & BLP

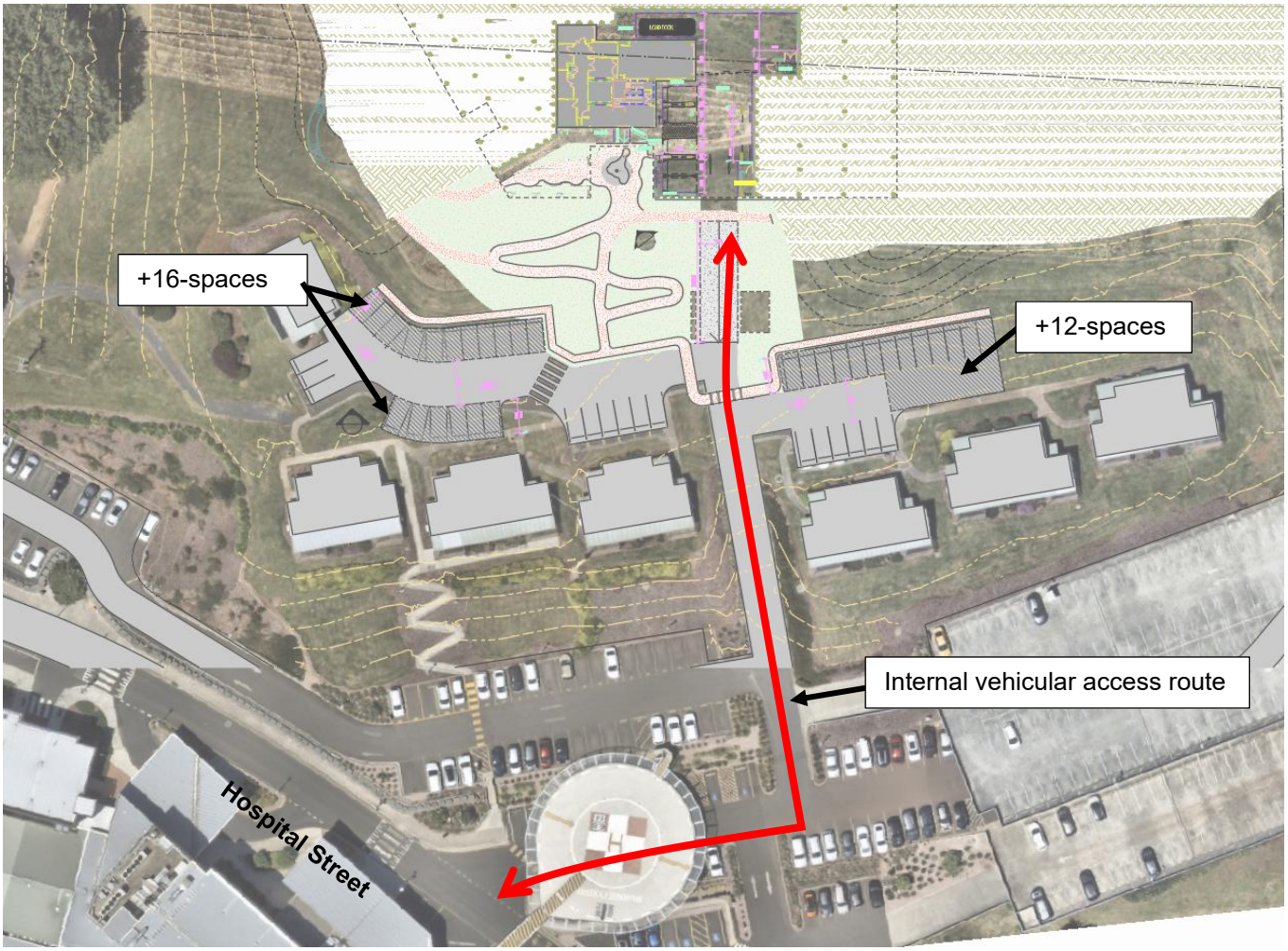


Figure 15 Proposed MHP site plan

Image source: North West Mental Health Precinct (NWMHP) Schematic Design, Artas & BLP

4. Traffic generation

4.1 Methodology

The proposed development will generate new trips proportional to the activity of the future MHP areas. On this basis, the traffic generation of the proposed development has been assessed by applying rates within the RTA's Guide to Transport Impact Assessment (TfNSW, 2024).

It is acknowledged that recent surveys of North West Regional Hospital (26 October 2023) could also be used as a basis to drive future traffic generation based on new hospital GFA. However, the existing uses within the NWRH precinct include both inpatient and outpatient services. The proposed development consists of inpatient services only. On this basis, the RTA's Guide to Transport Impact Assessment (TfNSW, 2024) has been applied in this instance.

4.2 Summary of trip generation

The RTA's *Guide to Transport Impact Assessment* (TfNSW, 2024) includes indicative trip generation rates for hospitals based on the number of staff during the main day shift at the hospital (S) and number of beds (B), as determined by surveys undertaken between 2007 and 2011. These rates and the resultant expected MHP trip generation are shown in Table 5.

Table 5 Trip generation rates for medical centres – TfNSW 2024

Period	Vehicle Trips	Resultant trip generation for NWRH MHP
Morning peak	0.34 (S) + 0.32 (B)	22 veh/hr
Evening peak	0.39 (S) + 0.33 (B)	25 veh/hr
Daily Peak	*Not specified* *Assumed as Peak*9.5*	232 veh/hr

Source: RTA Guide to Transport Impact Assessment, TfNSW 2024

4.3 Assessment of traffic generation

Clause C3.5.1-A1.4 of the State Planning Provisions states the following:

> *"Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than:*
>
> *(a) the amounts in Table C3.1; or*
>
> *(b) allowed by a licence issued under Part IVA of the Roads and Jetties Act 1935 in respect to a limited access road."*

Table C3.1 of the State Planning Provisions is replicated in Table 6.

Table 6 Extract from Table C3.1

Location of vehicular traffic	Amount of acceptable increase in annual average daily traffic to and from the site (total of ingress and egress)	
	Vehicles up to 5.5 m long	Vehicles longer than 5.5 m long
Vehicle crossing on major roads and private level crossings	10% or 10 vehicle movements per day, whichever is the greater	10%
Vehicle crossings on other roads	20% or 40 vehicle movements per day, whichever is the greater	20% or five (5) vehicle movements per day, whichever is the greater

The increase in traffic due to the proposed development has been estimated to be 232 vehicle movements throughout the day with 22 and 25 vehicle movements during the AM and PM commuter peak hours, respectively. This equates to approximately one vehicle movements every two (2) minutes during the peak hour. This is an increase to existing peak hour traffic to/from NWRH of approximately 6%, which satisfies the conditions within Clause C3.5.1-A1.4 of the State Planning Provisions. This traffic will be distributed between the two NWRH site accesses and is not expected to have significant impact to the surrounding road network.

Notwithstanding, the traffic impact is investigated further by the application of appropriate SIDRA intersection analyses in section 7 of this report.

5. Access assessment

5.1 Vehicle access

The proposed development seeks to utilise existing internal connections to Hospital Street to support vehicle access to/from the development.

Clause C2.6.3-A1 of the State Planning Provisions sets out the requirements for the number of access points and states the following:

> *"The number of accesses provided for each frontage must:*
>
> *(a) be no more than 1; or*
>
> *(b) no more than the existing number of accesses, whichever is the greater."*

The proposed development plans to make use of existing frontage access points to North West Regional Hospital. On this basis, the proposal complies with the acceptable solution C2.6.3-A1.

Vehicle access routes to/from the subject site within NWRH grounds are shown in Figure 16.

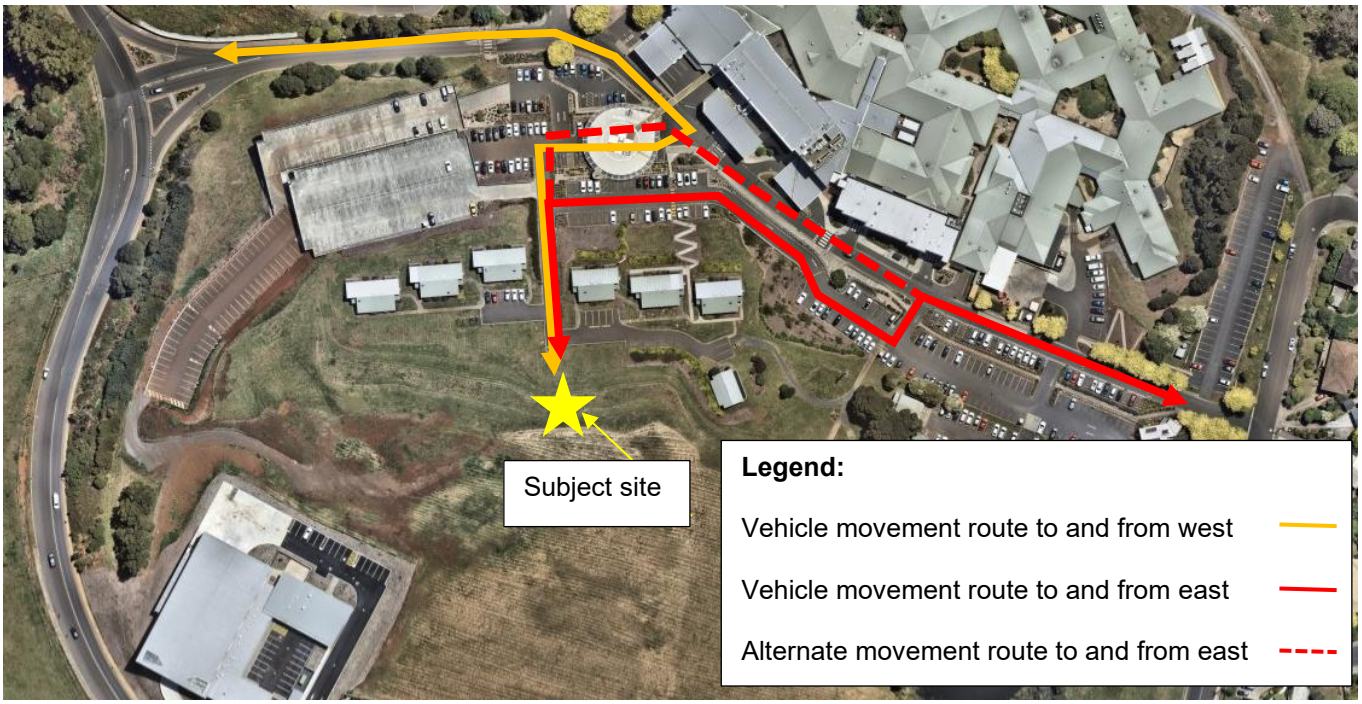


Figure 16 Access routes to and from subject site

Image source: Nearmap – Imagery (Date captured: 14/12/2024, Date extracted: 24/01/2025)

Vehicles will have to pass through internal parking access aisles and pedestrian crossings in order to access the proposed MHP site. This may increase instances of vehicle and pedestrian conflicts throughout the day and create a circuitous access strategy. As such, it is noted that:

- Parking aisles within the identified vehicle access routes maintain minimum 5.5 m width in all locations, based on desktop assessment in Nearmap. This satisfies the minimum accessway width requirement of 5.5 m to accommodate two-way movements as per Australian Standard 2890.1 (2004) and Tasmanian Planning Scheme – State Planning Provisions table C2.2.
- Access on the above basis may be restrictive to larger vehicles, e.g., loading, waste and emergency. This has been assessed by way of a swept path assessment for the largest relevant design vehicle. Refer to section 6.3 for details.
- Appropriate directional signage should be provided to guide drivers between the NWRH site accesses and the MHP. This should be considered in any broader Master Plan wayfinding strategy.

5.2 Pedestrian access

Clause C2.6.5 of the State Planning Provisions sets out the requirements for pedestrian access and states the following:

> *"A1.1 Uses that require 10 or more car parking spaces must:*
>
> *(a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by:*
>
> *(i) a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or*
>
> *(ii) protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and*
>
> *(b) be signed and line marked at points where pedestrians cross access ways or parking aisles.*
>
> *A1.2 In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building."*

The proposed development provides footpath connections between proposed parking spaces and the building entry that are generally separated from the vehicular carriageways as shown in Figure 17. The route connecting to the DDA parking spaces has minimum width of 2m, whilst the stepped/ramped route to the new parking spaces varies in width from 1.2m to 2m.

Existing '10 km/hr shared zone' signage is present in various locations throughout the existing broader NWRH car parking areas. For consistency and to support pedestrian safety within the car park of this site, this signage should be provided at the entry and within this car park.

Signage should also be provided at the at the car park entry to warn drivers of the pedestrian crossing at the top of the ramp. Site lines for drivers entering the car park may be reduced due to the ramp gradient.

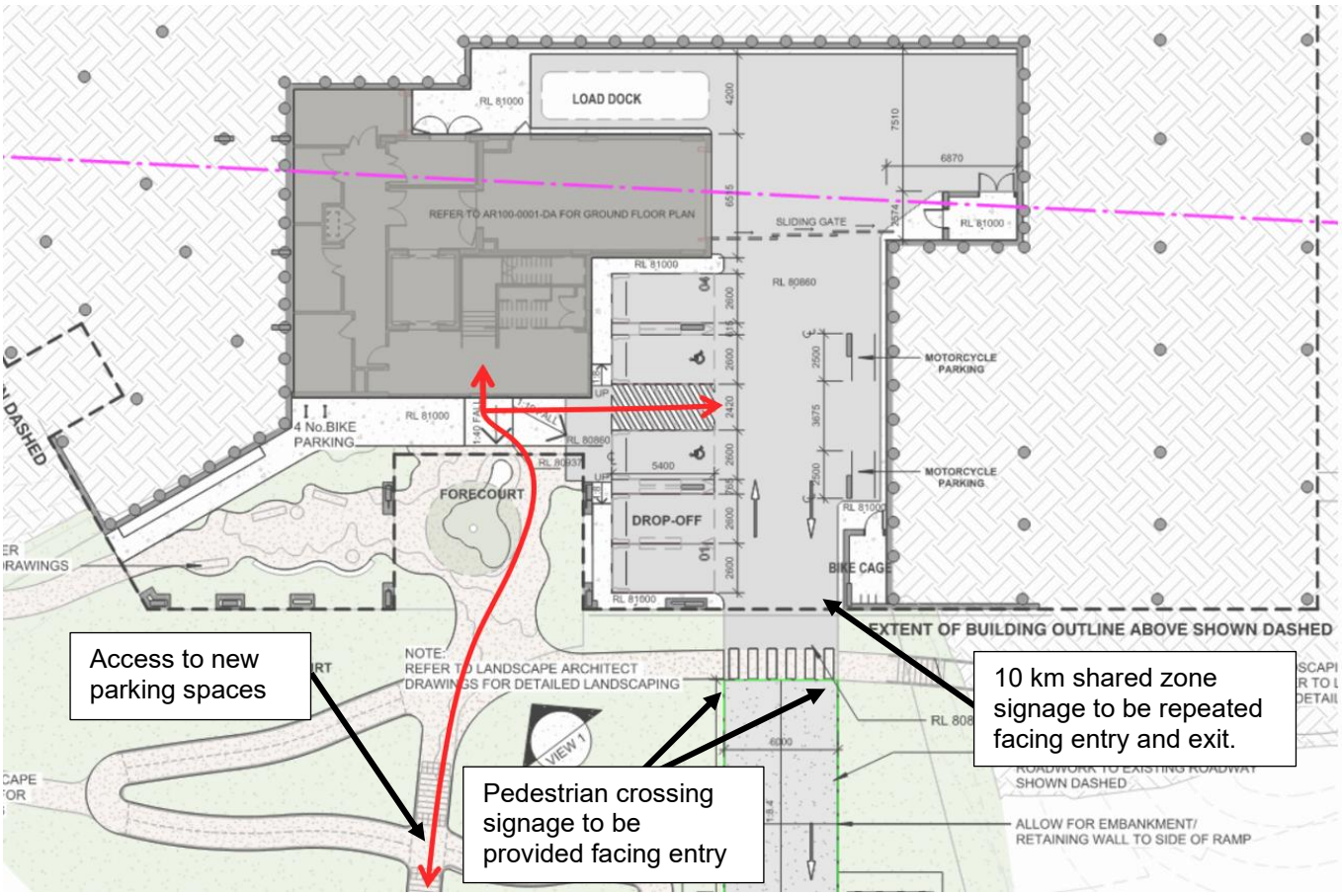


Figure 17 Proposed pedestrian access on-site

Image source: North West Mental Health Precinct (NWMHP) Schematic Design, Artas & BLP

The proposed connection between the Mental Health Precinct and existing North West Regional Hospital wards / the site boundary is presented in Figure 18. This path consists of substantial level changes that are supported by circuitous ramps and stairs, which would not support access or patient transfers between the two sites for those who require mobility support.

On this basis, a strategy is required to facilitate an accessible pedestrian connection between the proposed MHP and the broader NWRH site. For example, if a wheelchair user arrives to NWRH by bus there is no route that would safely support their access between their bus stop and the MHP. It is acknowledged that significant development is expected to occur within the NWRH in future and that opportunities may arise that would facilitate this connection. However, these future opportunities do not form part of this proposed development. NWRH should therefor consider the implementation of an on-demand shuttle service, until such time that a suitable design solution is identified. If an on-demand shuttle service is provided it is important to consider:

- It is unlikely that the service would be highly utilised, given the majority of trips to/from the MHP will be via car and that only a proportion of those that are not will require mobility support
- The availability of the shuttle service would require careful advertisement, such that those who would need to use it are aware of its existence and how to request a ride.

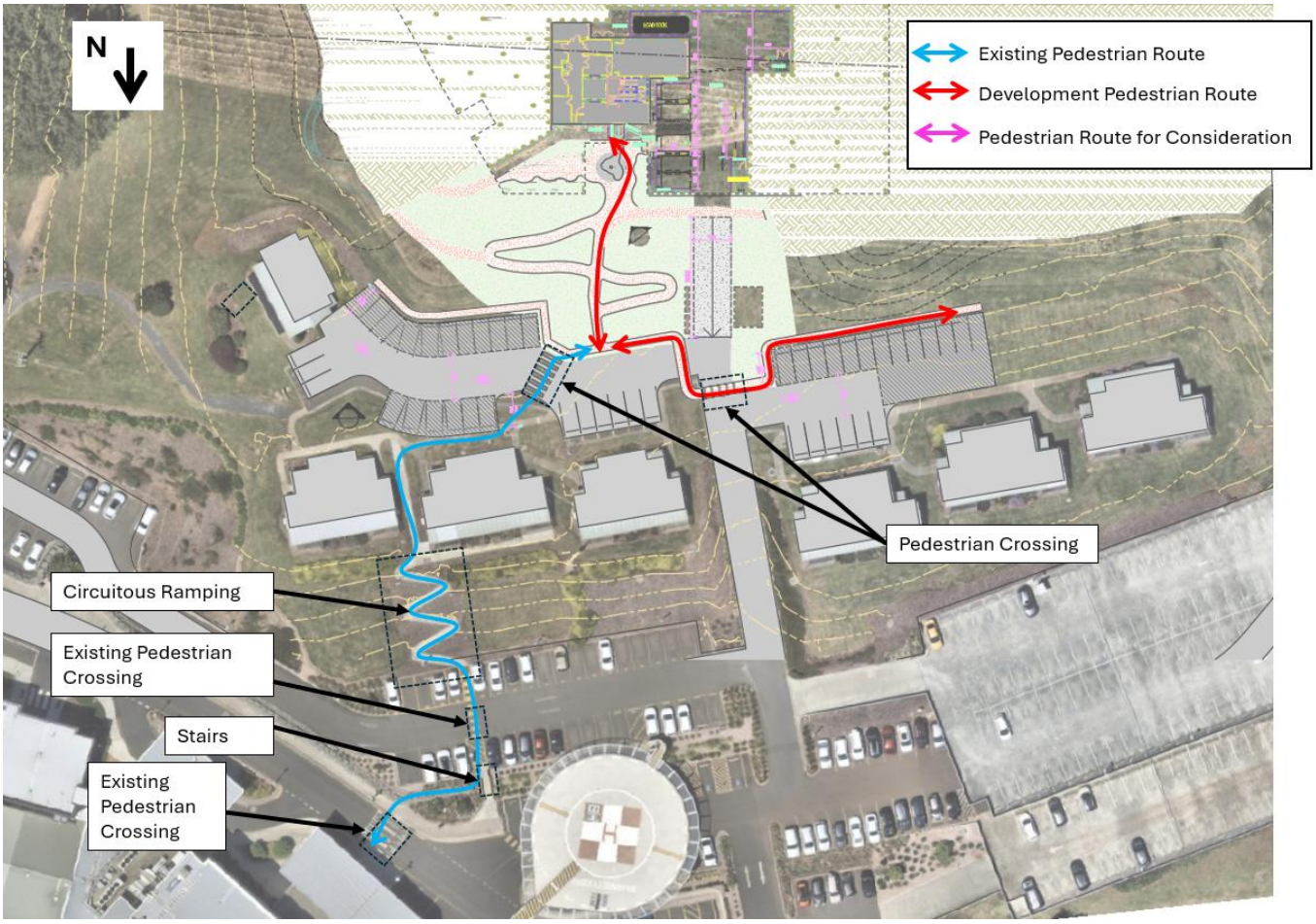


Figure 18 Pedestrian connections within the broader NWRH precinct

Image source: North West Mental Health Precinct (NWMHP) Schematic Design Site Plan, Artas & BLP

6. Parking assessment

6.1 Parking requirement for hospital services

Table C2.7.1 in *Tasmania State Planning Provisions* provides car and bicycle parking requirements for different land uses. The development aligns with the "Hospital Services" use class within the Planning Scheme, which is defined as:

"Use of land to provide health care (including preventative care, diagnosis, medical and surgical treatment, rehabilitation, psychiatric care and counselling) to persons admitted as inpatients. If the land is so used, the use includes the care or treatment of outpatients."

The car and bicycle parking requirement for the proposed development as per Tasmania State planning provision is summarised in Table 7.

Table 7 Planning Scheme parking requirement

Proposed	Land use	Schedule	Parking requirements		Spaces required
			Car	Bicycle	
Mental Health Precinct	Hospital	Seven (7) medical practitioners and 37 other employees 22 beds	One (1) space per four (4) beds + one (1) space per doctor + one (1) space per two (2) other employees	One (1) space per 10 beds	31 car spaces Three (3) bicycle spaces

In addition to above, Table C2.4 in Tasmania State planning provisions provides motorcycle parking requirements as follows:

- For 0-20 car parking spaces, no motorcycle parking is required;
- For 21-40 car parking spaces, one (1) motorcycle space is required;
- For 41 or more car parking spaces, one (1) motorcycle space for every additional 20 car parking spaces is required

Clause C2.5.4-A1 of the State Planning Provisions states:

"A loading bay must be provided for uses with a floor area of more than 1000m² in a single occupancy."

The proposed development has a combined floor area more than 1,000 m² the threshold of the requirement to provide a loading bay, and therefore, warrants provision of a loading bay on-site.

Application of the above rates to the proposed MHP equates to a requirement of 31 car spaces, three (3) bicycle spaces, one (1) motorcycle space and a designated loading bay.

It is noted that draft Master Plan identifies an existing shortfall in car parking within the existing NWRH site. On this basis, the parking provision for the MHP identified above should be provided in addition to the existing parking spaces within the NWRH development site.

Based on the above calculations, the proposed parking provision of 31 new car parking spaces, six (6) bicycle spaces, two (2) motorcycle spaces and a loading bay is sufficient to satisfy the planning scheme requirements.

6.2 Design of parking facilities

Clause C2.6.2-A1 of the State Planning Provisions sets out the requirements for the design of parking facilities and states the following:

"A1.1 Parking, access ways, manoeuvring and circulation spaces must either:

(a) comply with the following:

(i) have a gradient in accordance with Australian Standard AS 2890 – Parking facilities, Parts 1-6;

(ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces;

(iii) have an access width not less than the requirements in Table C2.2;

(iv) have car parking space dimensions which satisfy the requirements in Table C2.3;

(v) have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces;

(vi) have a vertical clearance of not less than 2.1m above the parking surface level; and

(vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or

(b) comply with Australian Standard AS 2890-Parking facilities, Parts 1-6."

Table 8 summarises the review of Planning Scheme requirements for an acceptable solution for the internal accessway widths and car parking space dimensions.

Table 8 Clause C2.6.2 – Acceptable solution assessment

State Planning Provisions requirement	Comments
A1.1 a)	Parking, access ways, manoeuvring and circulation spaces
Have a gradient in accordance with Australian Standard AS 2890 – Parking facilities, Parts 1-6	**Satisfied**: All car parking areas are proposed to be relatively flat with allowance for drainage, despite the overall slope of the site. All driveway gradients shown to have gradients less than the maximum allowances defined within AS/NZS 2890.1(2004) *Parking facilities, Part 1: Off-street car parking* and AS/NZS 2890.2(2018) *Parking facilities, Part 2: Off-street commercial vehicle facilities.*
Provide for vehicles to enter and exit the site in a forward direction where providing for more than four (4) parking spaces	**Satisfied**: All vehicles can enter and exit each carpark in a forward direction. Refer section 6.3 for detailed swept path assessments of relevant circulation paths.
Have an access width not less than the requirements in Table C2.2	**Satisfied**: The accessway widths are at least 6.0 m and are greater than the minimum requirement of 5.5 m, thus exceeds the requirements of the State Planning Provisions.
Have car parking space dimensions which satisfy the requirements in Table C2.3	**Satisfied**: Car parking spaces have been designed in accordance with the State Planning Provisions requirements or AS/NZS 2890.1(2004) *Parking facilities, Part 1: Off-street car parking* to provide comfortable parking.
Have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are three (3) or more car parking spaces	**Satisfied**: The access aisles for car parking spaces have been designed in accordance with the State Planning Provisions requirements or AS/NZS 2890.1(2004) *Parking facilities, Part 1: Off-street car parking* to provide comfortable parking.
Have a vertical clearance of not less than 2.1 m above the parking surface level	**Satisfied**: The vertical clearance is greater than 2.1 m and there are no overhead obstructions for the open-air parking.
Excluding a single dwelling, be delineated by line marking or other clear physical means	**Satisfied**: All car parking spaces are shown to be delineated by line marking.

6.2.1 Accessible car parking

Clause C2.6.2-A1.2 of the Planning Scheme states:

"Parking spaces provided for use by persons with a disability must satisfy the following:

(a) be located as close as practicable to the main entry point to the building;

(b) be incorporated into the overall car park design; and

(c) be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities"

The footnote to C2.6.2 states that *"Requirements for the number of accessible car parking spaces are specified in part D3 of the National Construction Code 2016."* It is noted that the 2016 version of the Code has been superseded by the 2019 and 2022 versions.

The building is a Class 9a (hospitals) building, as determined using the National Construction Code 2022 (NCC). For a Class 9a building, the requirement for accessible car parking is one (1) space for every 100 car parking spaces or part thereof for non-outpatient areas. Given a total of 34 parking spaces are proposed to be provided, a minimum of one (1) accessible space is required.

Two (2) accessible car parking spaces are proposed to be provided in close proximity to the main entry point of the building. These have been designed with dimensions and an adjacent shared area that comply with AS 2890.6, thus meeting the requirements set out in Clause C2.6.2-A1.2 of the planning scheme.

6.3 Swept path assessment

An assessment of key vehicle accessibility to/from and within the subject site has been undertaken using the 'AutoTURN' software. Outcomes of these assessments are provided in Appendix A to this report. Key points are summarised below.

6.3.1 Car parking access

It was found that the appropriate design vehicle(s) will be able to enter and exit the site in a forwards direction, including if there is a need to turn-around at the end of the aisle when the five spaces in front of the MHP are full.

It is noted that the new car parking aisles proposed to be provided north of the development include a no-standing space as depicted in Figure 19. This is to facilitate turn-around manoeuvres at the end of these blind aisles. Line marking should indicate that no parking is allowed in these end bays.



Figure 19 Extension of blind aisles to support vehicle turn-around

6.3.2 Ambulance loading access

Access into the proposed ambulance loading bay has been tested using a 7.3 m Mercedes Benz Sprinter 519 Bariatric profile, as provided by Ambulance Tasmania. The assessment demonstrates this vehicle (and therefore, smaller ambulances) would also be able to circulate within the two-way portion of the site and enter the designated ambulance via a reverse-in drive-out manoeuvre.

6.3.3 Other loading access

It is our understanding that the loading bay and ground level parking area is designed to provide 4m head clearance. This clearance supports 6.4m small rigid vehicles (SRV's) as defined within *AS2890.2:2018 Off-street commercial vehicle facilities.* This clearance also supports the Veolia rear lift waste vehicles that are expected to service this development, as specified in Figure 20.

The 4m clearance is not suitable for Medium Rigid Vehicles (MRV) or larger vehicles which require at least 4.5m head clearance. The Department of Health should confirm that no larger vehicles will require access to this car parking and loading space.

VEHICLE SPECIFICATIONS	MEASUREMENTS
Length	9.8m
Travel height	3.4m
Working height	3.4 m
Turn circle Diameter	18.0m

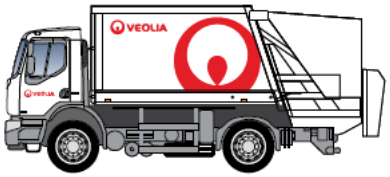


Figure 20 Rear lift waste vehicle - Veolia National Equipment Matrix Brochure 2023

Swept path assessments demonstrate that the Veolia waste vehicles will be able to circulate within the two-way portion of the site and enter the designated loading dock via a reverse-in drive-out manoeuvre. SRVs are smaller than this and are therefore expected to be able to make the same manoeuvres.

The Veolia vehicle swept paths also demonstrate that the vehicles can circulate through the existing NWRH carpark, underneath the existing Helipad, in order to access the NWMHP site. However, this would require use of the full two-way carriageway during turning manoeuvres along this route. Any loading activity within the NWMHP should occur outside of peak operating times, to reduce the likelihood of vehicle conflicts.

7. Traffic impacts

In order to assess the impacts of the proposed development on traffic efficiency at key intersections, SIDRA Intersection 9 has been used to model the following intersections:

- Hospital Street/Brickport Road
- Hospital Street/ Uplands Place

7.1 Future year base volumes

A review of the traffic growth based on previous traffic volume data obtained from the Drakewell portal revealed that the growth in traffic along the Bass Highway increases at approximately 1.0% per annum. Background traffic growth within the vicinity of the project site has been assumed to be generally consistent with this pattern. 1% p.a. growth has been applied to the surveyed 2023 volumes defined in section 2.8 of this report.

The resultant 2035 volumes presented in Figure 21 have been considered the base future case volumes.

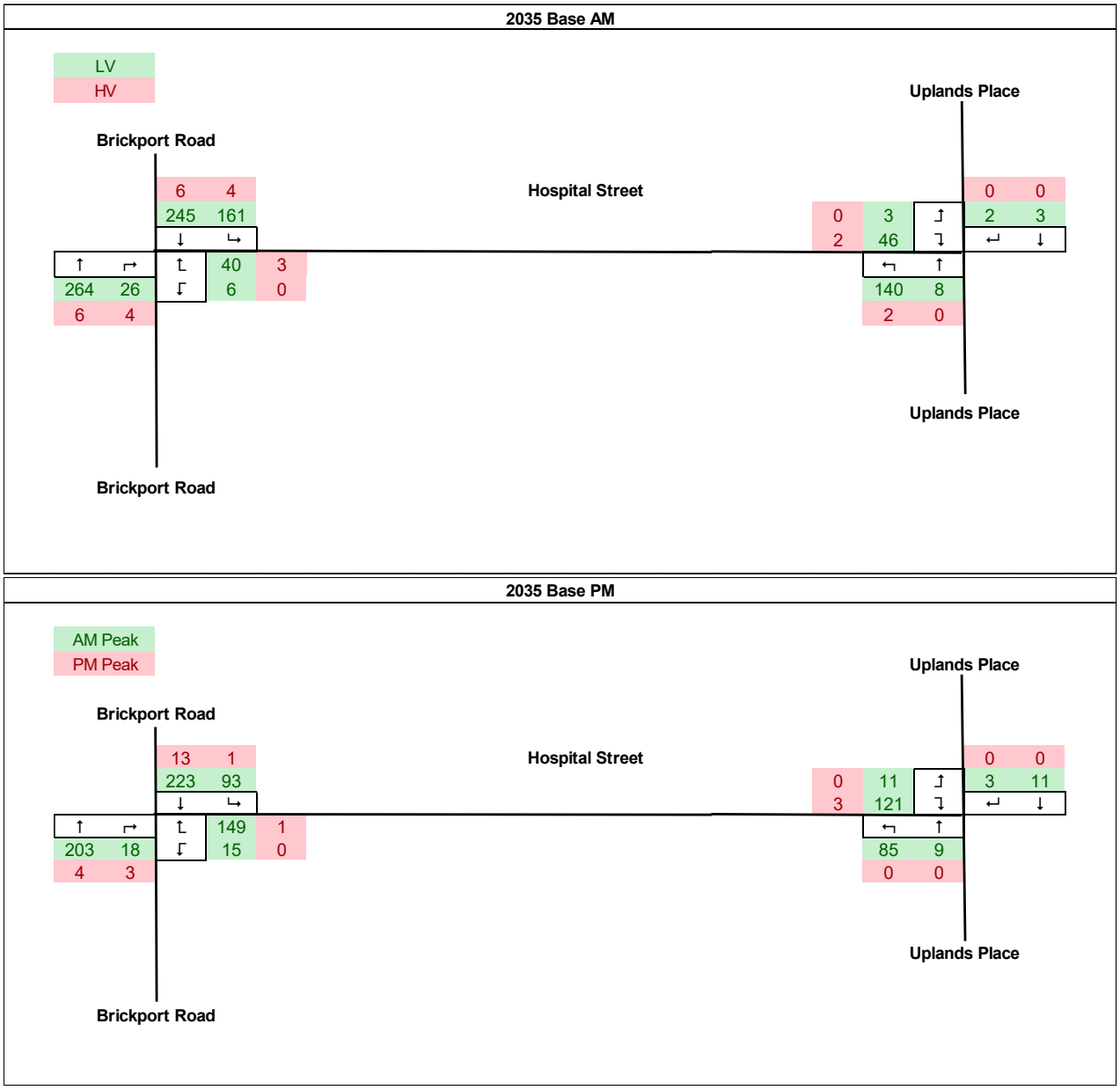


Figure 21 2035 base case peak hour traffic volumes considered

7.2 Development traffic trip distribution

The base case volumes presented in Figure 21 show that approximately 56% of the traffic generated by the proposed development travels west towards/from the Brickport Road, whilst the other 44% of traffic generated by the proposed development travels east towards/from Uplands Place to the east of the site. It is assumed that future traffic generated by the proposed development will continue to follow this trend.

7.3 Post development traffic volumes

The proposed development is expected to generate approximately 232 additional vehicle movements per day and up to 22 and 25 vehicle movements in the AM and PM peak periods respectively, as defined in Section 4.2 of this report.

Applying these volumes to the surrounding road network on the basis of the distribution assumptions defined in section 7.2 results in the turning movement volumes presented in Figure 22. These volumes have been used in the traffic modelling undertaken using SIDRA Intersection 9.1.



Figure 22 Post development peak hour traffic volumes at the intersections in close proximity of the subject site

7.4 SIDRA modelling

SIDRA is a computer software program that was developed based on research by the Australian Road Research Board (ARRB) to design and analyse the performance of both signalised and unsignalised intersections. The parameters used to assess the intersections are summarised below.

- **Degree of Saturation** (D.O.S.) is a ratio of arrival (or demand) flow to capacity. Degrees of saturation above 1.00 represent oversaturated conditions. At sign-controlled intersections, typically, and an upper limit degree of saturation of 0.8 is considered acceptable.
- The **95th percentile queue length** (95%ile queue) is the value below which 95 percent of all observed cycle queue lengths fall, or 5 percent of all observed queue lengths exceed. Typically, it is considered acceptable if this queue length does not extend back to impede any other intersection.
- **Average Delay** is the average time, in seconds, that vehicles can be expected to wait at an intersection. A Level of Service (LoS) classification is assigned based on the delay calculated. These ratings are shown in Table 9. Typically a LoS C/D is considered acceptable, however, it is most important to assess any change between existing and future figures.

Table 9 Delay based Level of Service classification (give-way controlled intersections)

Average Delay per Vehicle (D) in seconds Unsignalised Intersections	Level of Service	Rating
D ≤ 10	LOS A	Excellent
10 < D ≤ 15	LOS B	Very Good
15 < D ≤ 25	LOS C	Good
25 < D ≤ 35	LOS D	Acceptable
35 < D ≤ 50	LOS E	Poor
50 < D	LOS F	Very Poor

Table source: AustRoads Guide to Traffic Management Part 3

7.4.1 AM peak hour conditions

The SIDRA modelling results at the intersection of Hospital Street and Brickport Road during the AM peak are presented in Table 10, while the results for the intersection of Hospital Street and Uplands Place are presented in Table 11.

The modelling results of the post development future conditions are presented next to the existing and the future base case conditions in order to provide a direct comparison of traffic impact at the intersections due to the traffic generated by the proposed development during the AM peak period.

Table 10 Modelling results – Hospital Street and Brickport Road (AM peak period)

Approach	Existing conditions (2023)				Future base case conditions (2035)				Post-development future conditions (2035)			
	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service
South	0.129	0.6 m	0.2 s	N/A	0.145	0.7 m	0.2 s	N/A	0.145	0.7 m	0.2 s	N/A
East	0.070	1.9 m	5.5 s	LOS A	0.086	2.3 m	6.2 s	LOS A	0.093	2.5 m	6.3 s	LOS A
North	0.120	2.9 m	2.3 s	LOS A	0.134	3.3 m	2.3 s	LOS A	0.134	3.5 m	2.4 s	LOS A
Overall	**0.129**	**2.9 m**	**1.7 s**	**N/A**	**0.145**	**3.3 m**	**1.7 s**	**N/A**	**0.145**	**3.5 m**	**1.8 s**	**N/A**

Based on the comparison of the AM peak traffic modelling results presented in the table above, the intersection of Hospital Street and Brickport Road is considered to perform similarly to existing conditions under future conditions (both base case and post-development scenarios) during AM peak. The east and north approaches remain at LOS A during AM peak with minor increases in delay and queuing.

Table 11 Modelling results – Hospital Street and Uplands Place (AM peak period)

Approach	Existing conditions (2023)				Future base case conditions (2035)				Post-development future conditions (2035)			
	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service
South	0.075	0.0 m	4.4 s	N/A	0.084	0.0 m	4.3 s	N/A	0.089	0.0 m	4.4 s	N/A
North	0.003	0.1 m	2.1 s	N/A	0.003	0.1 m	2.1 s	N/A	0.003	0.1 m	2.2 s	N/A
West	0.039	0.9 m	1.8 s	LOS A	0.043	1.0 m	1.8 s	LOS A	0.045	1.1 m	1.8 s	LOS A
Overall	**0.075**	**0.9 m**	**3.7 s**	**N/A**	**0.084**	**1.0 m**	**3.7 s**	**N/A**	**0.089**	**1.1 m**	**3.7 s**	**N/A**

Based on the comparison of the AM peak traffic modelling results presented in the table above, the intersection of Hospital Street and Uplands Place is considered to perform similarly to existing conditions under future conditions (both base case and post-development scenarios) during AM peak. The west approach remains at LOS A during AM peak with no material change in delay and queuing.

7.4.2 PM peak hour conditions

The SIDRA modelling results at the intersection of Hospital Street and Brickport Road during the PM peak are presented in Table 12, while the results for the intersection of Hospital Street and Uplands Place are presented in Table 13.

Table 12 Modelling results – Hospital Street and Brickport Road (PM peak period)

Approach	Existing conditions (2023)				Future base case conditions (2035)				Post-development future conditions (2035)			
	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service
South	0.099	0.4 m	0.2 s	N/A	0.111	0.5 m	0.2 s	N/A	0.111	0.5 m	0.2 s	N/A
East	0.205	5.8 m	4.5 s	LOS A	0.247	7.2 m	5.1 s	LOS A	0.262	7.9 m	5.3 s	LOS A
North	0.112	1.6 m	1.7 s	LOS A	0.125	1.8 m	1.7 s	LOS A	0.125	1.9 m	1.8 s	LOS A
Overall	**0.205**	**5.8 m**	**1.9 s**	**N/A**	**0.247**	**7.2 m**	**2.0 s**	**N/A**	**0.262**	**7.9 m**	**2.1 s**	**N/A**

Based on the comparison of the PM peak traffic modelling results presented in the table above, the intersection of Hospital Street and Brickport Road is considered to perform similarly to existing conditions under future conditions (both base case and post-development scenarios) during PM peak. The east and north approaches remain at LOS A during PM peak with minor increases in delay and queuing.

Table 13 Modelling results – Hospital Street and Uplands Place (PM peak period)

Approach	Existing conditions (2023)				Future base case conditions (2035)				Post-development future conditions (2035)			
	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service	D.O.S.	95th %ile queue	Avg. delay	Level of Service
South	0.047	0.0 m	4.1 s	N/A	0.053	0.0 m	4.1 s	N/A	0.056	0.0 m	4.2 s	N/A
North	0.007	0.1 m	1.2 s	N/A	0.008	0.1 m	1.1 s	N/A	0.008	0.1 m	1.1 s	N/A
West	0.101	2.5 m	1.7 s	LOS A	0.113	2.8 m	1.7 s	LOS A	0.120	3.0 m	1.7 s	LOS A
Overall	**0.101**	**2.5 m**	**2.6 s**	**N/A**	**0.113**	**2.8 m**	**2.6 s**	**N/A**	**0.120**	**3.0 m**	**2.7 s**	**N/A**

Similarly to the AM peak, the intersection of Hospital Street and Uplands Place is considered to perform similarly to existing conditions under future conditions (both base case and post-development scenarios) during the PM peak. The west approach remains at LOS A during with no material change in delay and queuing.

7.4.3 Modelling summary

On the basis of the SIDRA modelling results for the AM and PM peak hours above, the traffic generated by the proposed development can be accommodated within the surrounding road network and is considered acceptable. Detailed SIDRA results are presented in Appendix B of this report.

7.5 Impact to road safety

No significant detrimental road network safety impacts are foreseen for the project; this is based on the following:

- The existing crash history does not indicate any specific road safety deficiencies in the external road network that might be exacerbated by the additional traffic generated by the proposed redevelopment
- The traffic generated by the proposed development can be readily absorbed by the surrounding road network, as indicated in the SIDRA Intersection assessment

7.6 Impact to the surrounding walking and cycling networks

There are not expected to be any detrimental impacts to pedestrians, cyclists or public transport networks as a result of the proposed development. The existing pedestrian network is of a high quality, with footpaths provided on all roads in the surrounding area. Walking, cycling and public transport are all considered valid modes of transport for access to and from the proposed development site. The proposed development maintains walking access to local bus stops in the immediate surrounding area.

Internally to the NWRH site, vehicle access to the NWMHP runs through existing car parking aisles which may increase pedestrian-vehicle conflict risk. To mitigate this risk, the following should be noted:

- The “10 km/hr shared zone” signage should continue to be enforced
- Separated pedestrian paths and marked pedestrian crossings are already provided in the vicinity of the parking aisles though which traffic will increase. These should be maintained.
- Loading activities within the NWMHP site should occur outside of peak hospital operating hours

8. Planning Scheme assessment

The relevant clauses of the Tasmanian Planning Scheme have been addressed in this Transport Impact Assessment report as outlined in Table 14.

Table 14 Assessment against Tasmanian Planning Scheme

Clause	Response	Reference
C2.0 Parking and Sustainable Transport Code		
C2.5.1 Car parking numbers	Complies with A1	Section 6.1
C2.5.2 Bicycle parking numbers	Complies with A1	Section 6.1
C2.5.3 Motorcycle parking numbers	Complies with A1	Section 6.1
C2.5.4 Loading bays	Complies with A1	Section 6.1
C2.6.2 Design and layout of parking areas	Complies with A1, assuming the end bays provided to facilitate turn-around manoeuvres are line marked as no-standing spaces.	Section 6.2 and Section 6.3
C2.6.3 Number of accesses for vehicles	Complies with A1	Section 5.1
C2.6.5 Pedestrian access	Complies with A1.1 and A1.2	Section 5.2
C2.6.6 Loading bays	Complies with A1 for SRV's and 9.8m Veolia rear loader only.	Section 6.3.3

9. Conclusions

This Traffic Impact Assessment report has investigated the opportunities and constraints associated with the proposed Mental Health Precinct (MHP) within the North West Regional Hospital Site at 23 Brickport Rd, Cooee.

Key findings are summarised as follows:

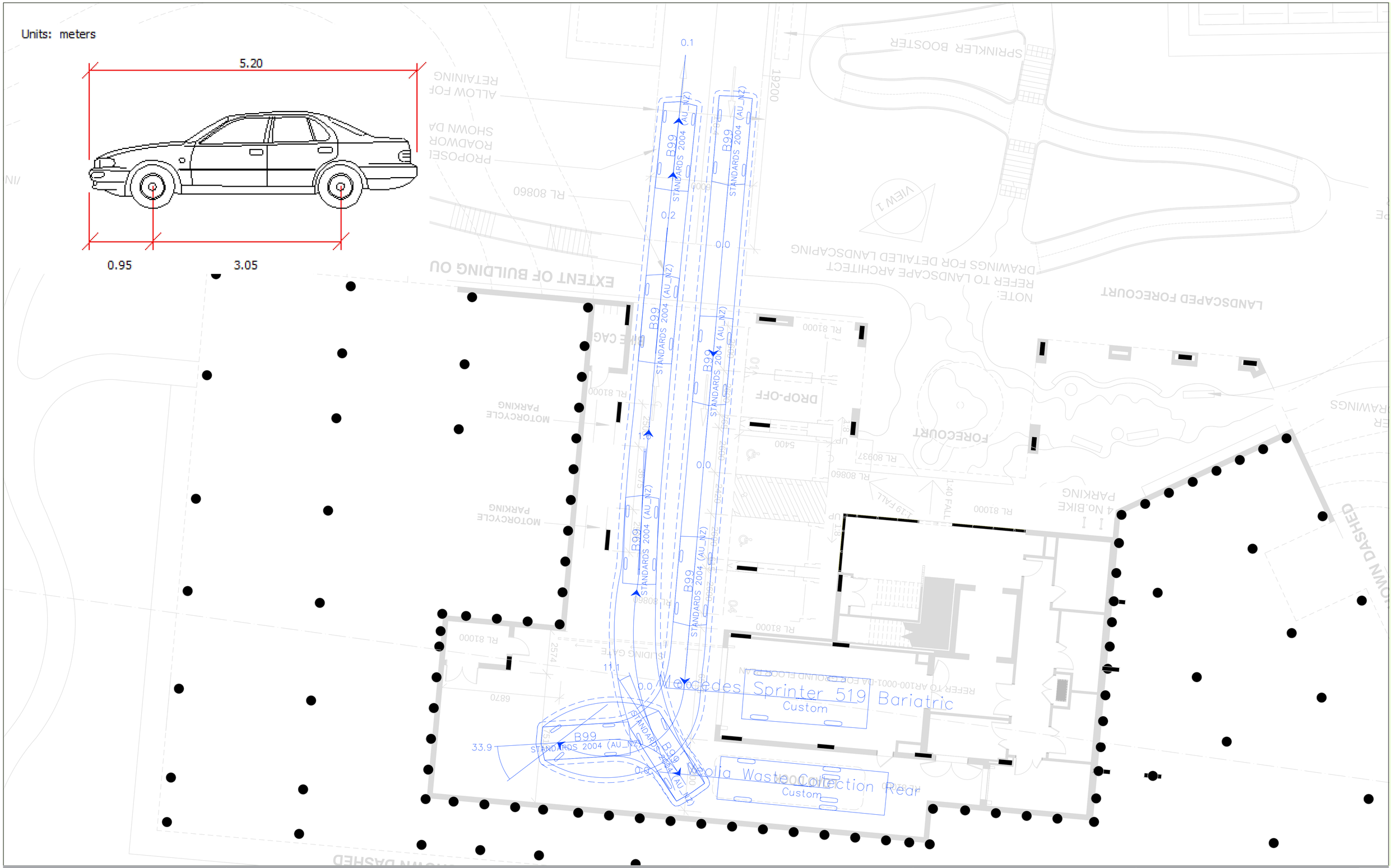
- Based on our surveys and assumptions in this report, the traffic generation of the MHP is anticipated to be in the order of 232 vehicles per day and 25 vehicles in the peak hour.
- SIDRA intersection analyses show that this traffic can be readily absorbed by the road network in the vicinity of the site. No significant detrimental impacts on the road network are expected as a result of this development.
- The MHP design has a statutory requirement to provide 31 car parking spaces, three (3) bicycle spaces and one (1) motorcycle space. These should be provided as part of the new development, based on past car parking surveys of the NWRH precinct showing significant existing demand.
- The proposed development provides 31 car parking spaces, including two (2) DDA spaces. Two (2) drop-off spaces are also provided in front of the building entry. Six (6) bicycle spaces and two (2) motorcycle spaces are also provided. This meets the parking provision requirements outlined above.
- Swept path assessments are provided in Appendix A and demonstrate that key vehicle types are capable of accessing and circulating through their relevant areas of the facility. This assumes the end bays facilitating turn-around manoeuvres are line marked as no-standing spaces.
- The car park design provided is otherwise compliant with Clause C2.6.2-A1 of the State Planning Provisions.
- Headroom clearance in the carpark and loading dock is reportedly 4m. This supports access by small rigid vehicles (SRV) and the Veolia rear loader vehicles that are expected to service this site. The clearance does not support MRV access. The Department of Health / NWRH should confirm that vehicles larger than this will not require access to the ground level car park or loading dock areas.
- Loading activities within the NWMHP should occur outside of peak operating times, to reduce vehicle-vehicle and vehicle-pedestrian conflict risks occurring within the NWRH carpark circulation aisles
- The proposed design is capable of supporting safe pedestrian connection between the nominated site carparks and the building.
- The following points should also be considered in order to support safe pedestrian connections to the broader North West Regional Hospital site:
    - ‘10 km/hr shared zone’ signage should be provided at the entry, exit, and within the new carpark area
    - ‘Pedestrian crossing’ signage should be provided at the car park entry to warn drivers of the pedestrian crossing at the top of the ramp. Site lines for drivers entering the car park may be reduced due to the ramp gradient.
    - A strategy is required to facilitate accessible pedestrian connection between the proposed MHP and the broader NWRH site. NWRH should consider the implementation of an on-demand shuttle service, until such time that a suitable design solution is identified.

Appendices

Appendix A

Swept paths

Units: meters



Rev	Description	Checked	Approved	Date
C	RESPOND TO RFI	T.M.	M.R.	15.12.2025
B	UPDATED BASE PLANS	T.M.	M.R.	19.11.2025
A	FOR CLIENT REVIEW	T.M.	M.R.	16.10.2025

Author F. KHUNG **Drafting Check** T. MAYWALD

Designer F. KHUNG **Design Check** T. MAYWALD

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Project No. 12655713

Client: Artas Pty Ltd

Project: North West Regional Hospital Mental Health

Status: PRELIMINARY

Drawing Title: North West Regional Hospital, Burnie
B99 Turnaround
Schematic Design Layout

Size: A1

Drawing No.: 12655713-XC_NWRH_SK001

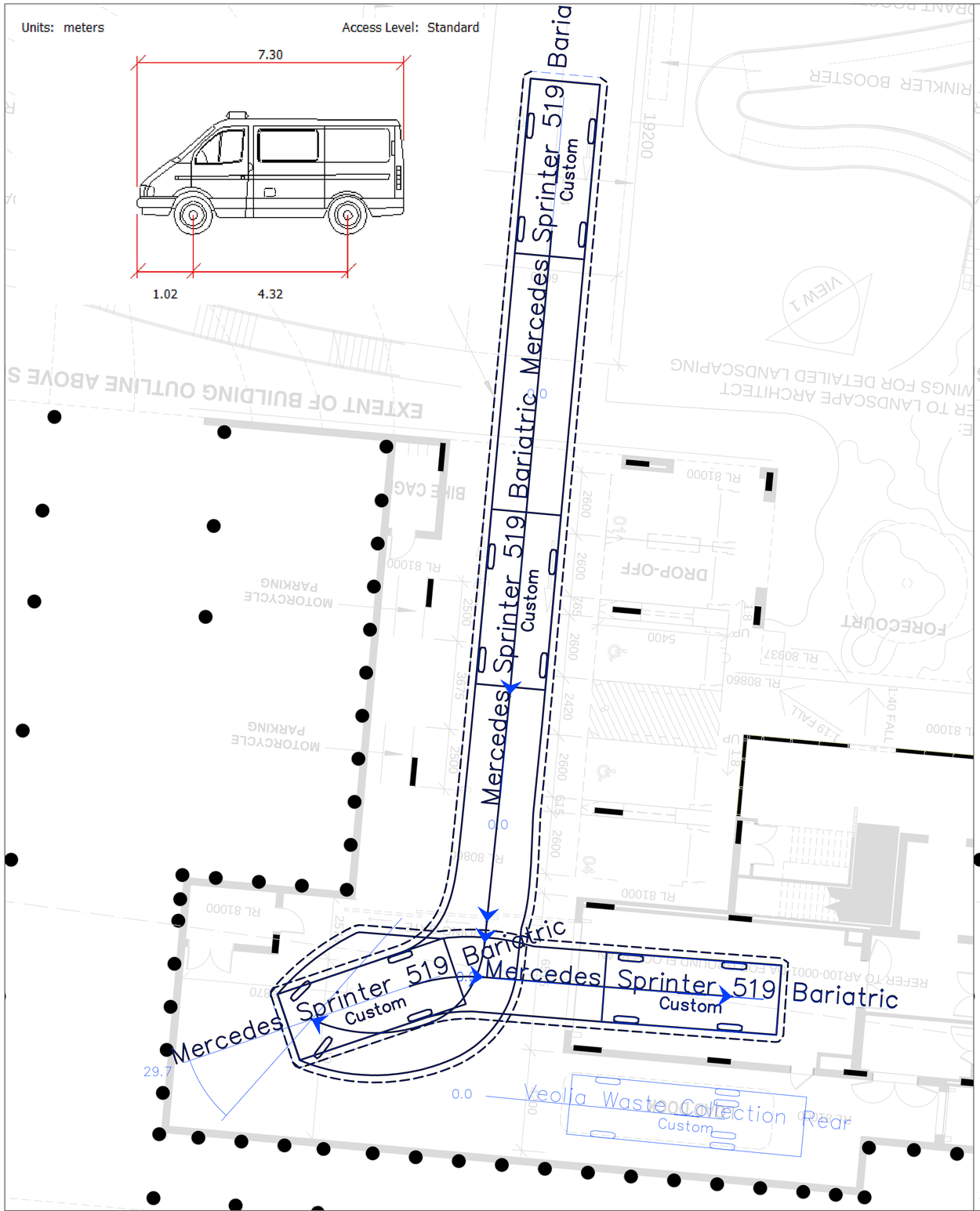
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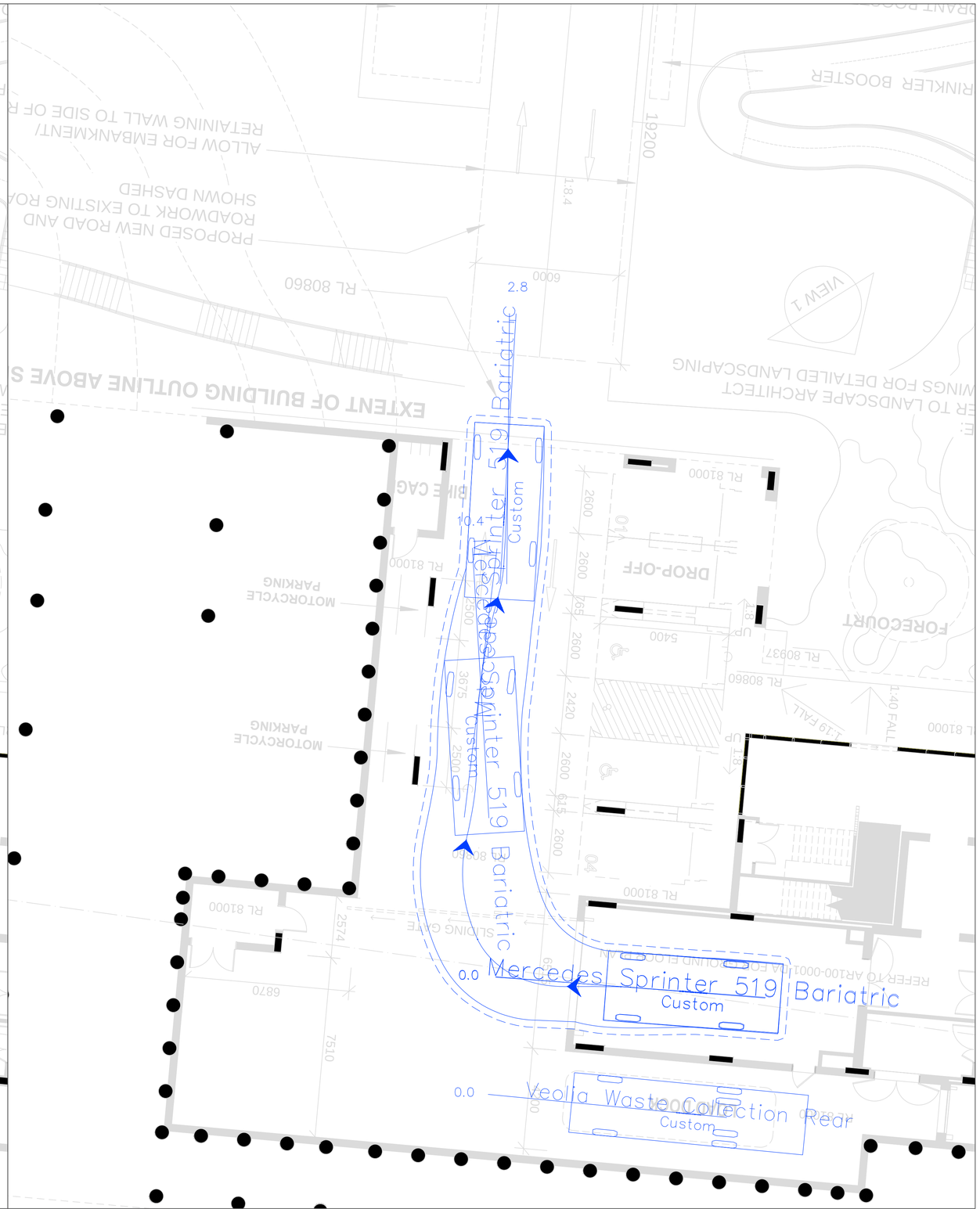
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Rev	Description	Checked	Approved	Date
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Author F. KHUNG **Drafting Check** T. MAYWALD

Designer F. KHUNG **Design Check** T. MAYWALD

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Project No. 12655713

Client: Artas Pty Ltd

Project: North West Regional Hospital Mental Health

Status: PRELIMINARY

Drawing Title: North West Regional Hospital, Burnie
7m ambulance access
Schematic Design Layout

Drawing No: 12655713-XC_NWRH_SK001

Size: A1

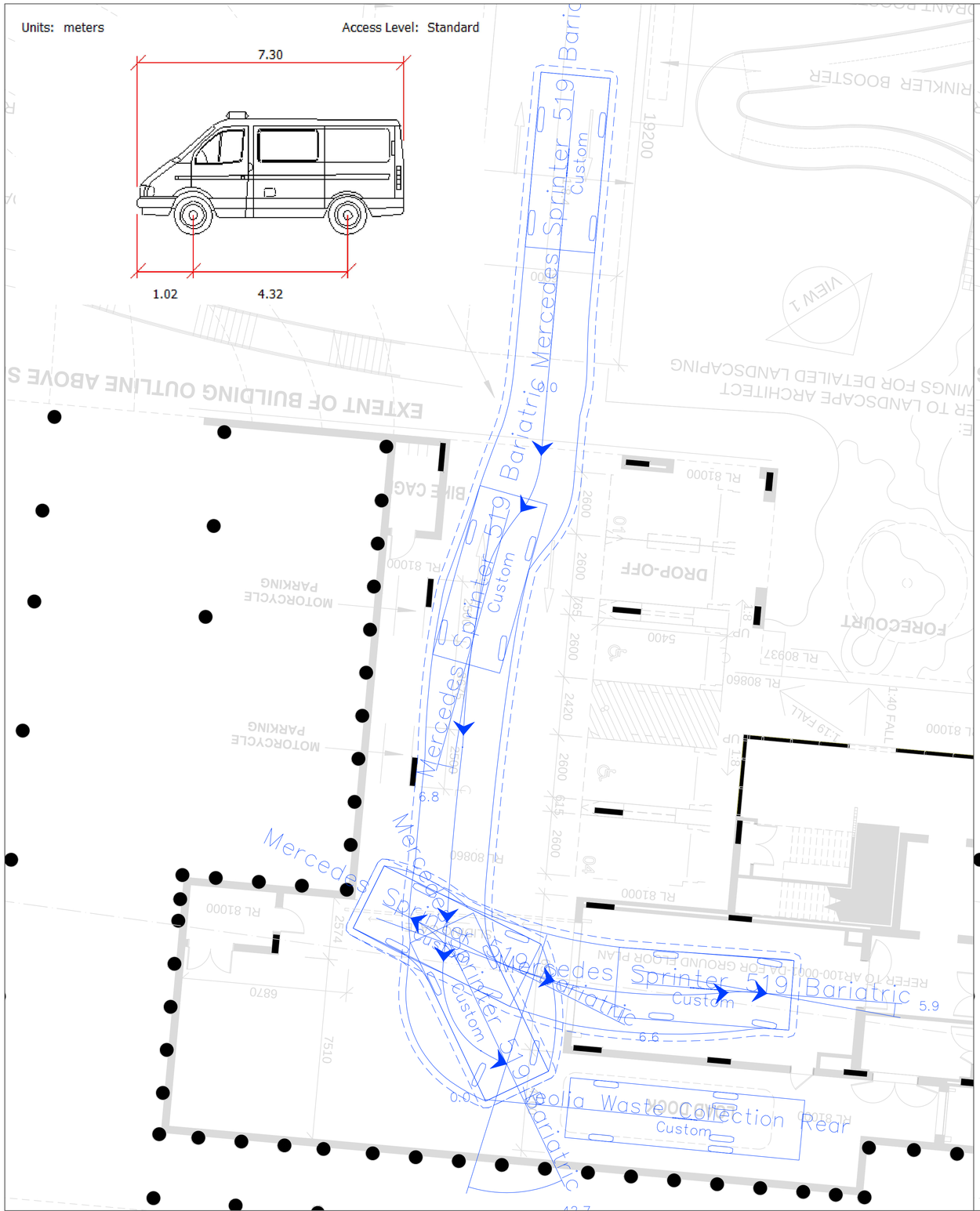
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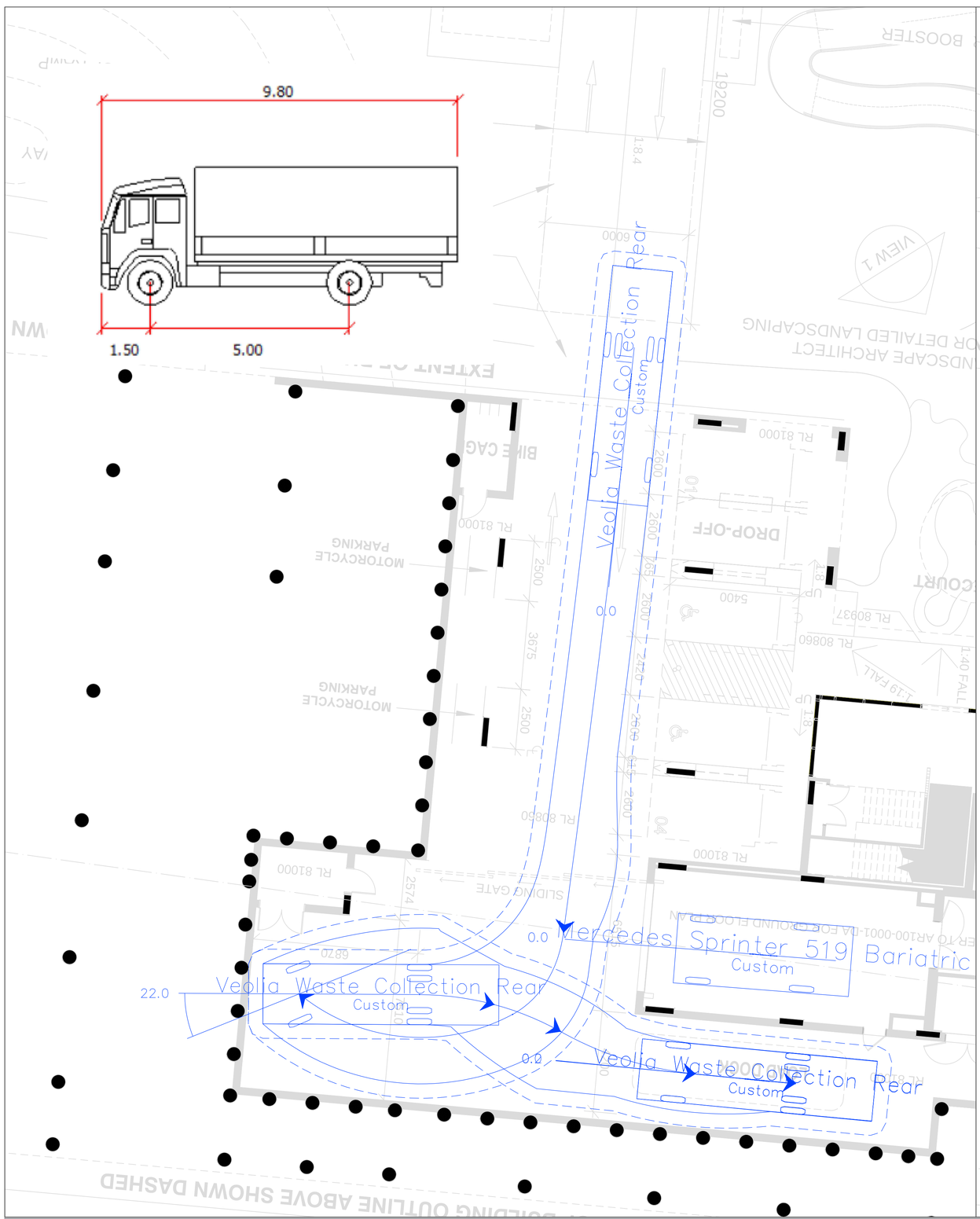
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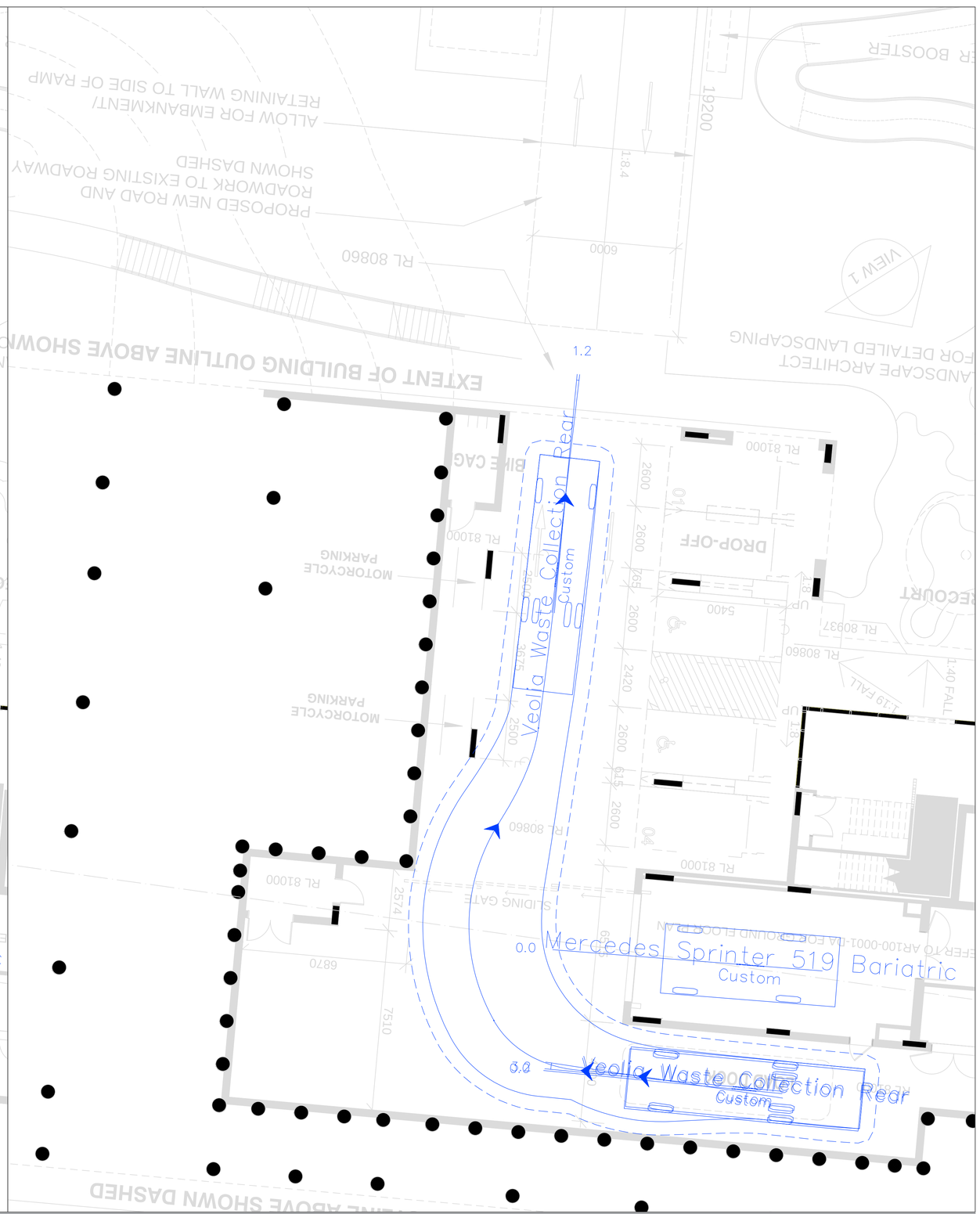
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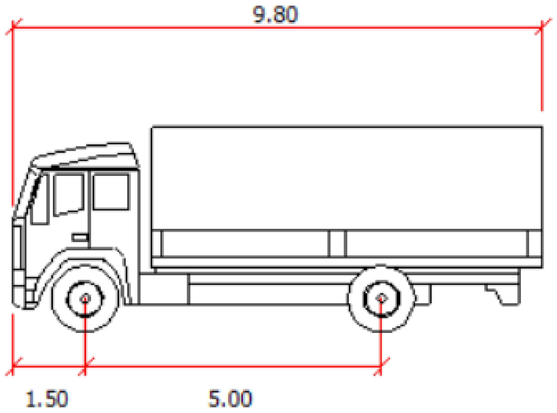
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Client: Artas Pty Ltd
Project: North West Regional Hospital Mental Health
Status: PRELIMINARY

Drawing Title: North West Regional Hospital, Burnie
Waste Access
Schematic Design Layout

Size: A1
Drawing No.: 12655713-XC_NWRH_SK001
Rev: C

Plot Date: 15 December 2025 - 12:03 PM Plotted by: Farn-Ling Khung
File Name: \\ghdnet\ghd\AU\Melbourne\Projects\31\12655713\Tech\Design\SK01 (2025.11.19) - Copy\12655713-XC_NWRH_SK001.dwg



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Rev	Description	Checked	Approved	Date
B	UPDATED BASE PLANS	T.M.	M.R.	19.11.2025
A	FOR CLIENT REVIEW	T.M.	M.R.	16.10.2025

Author F. KHUNG **Drafting Check** T. MAYWALD
Designer F. KHUNG **Design Check** T. MAYWALD

0 1 2 3 4 5m
SCALE 1:100 AT ORIGINAL SIZE

N

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Project No. 12655713

Client Artas Pty Ltd

Project North West Regional Hospital Mental Health

Status PRELIMINARY

Drawing Title North West Regional Hospital, Burnie
7m Ambulance Access
Schematic Design Layout

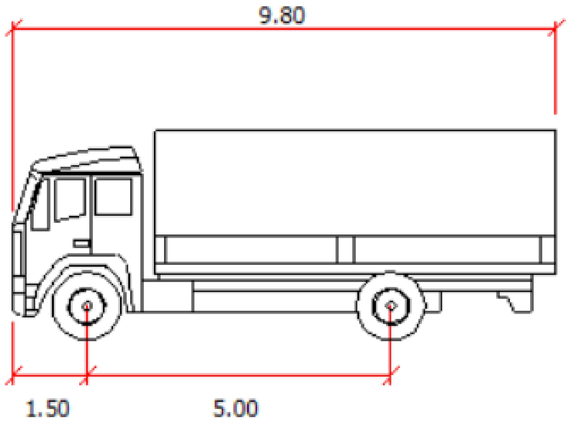
Size A1

Drawing No. 12655713-XC_NWRH_SK001

Rev B

Plot Date: 19 November 2025 - 3:30 PM Plotted by: Claire O'Brien

File Name: \\ghdnet\ghd\AU\Melbourne\Projects\31\12655713\Tech\Design\SK01 (2025.11.19)\12655713-XC_NWRH_SK001.dwg



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Rev	Description	Checked	Approved	Date
B	UPDATED BASE PLANS	T.M.	M.R.	19.11.2025
A	FOR CLIENT REVIEW	T.M.	M.R.	16.10.2025

Author F. KHUNG **Drafting Check** T. MAYWALD
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0 1 2 3 4 5m
SCALE 1:100 AT ORIGINAL SIZE

N

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Project No. 12655713

Client Artas Pty Ltd
Project North West Regional Hospital Mental Health
Status PRELIMINARY

Drawing Title North West Regional Hospital, Burnie
7m Ambulance Access
Schematic Design Layout

Size **A1**
Drawing No 12655713-XC_NWRH_SK001
Rev **B**

Plot Date: 19 November 2025 - 3:30 PM Plotted by: Claire O'Brien
File Name: \\ghdnet\ghd\AU\Melbourne\Projects\31\12655713\Tech\Design\SK01 (2025.11.19)\12655713-XC_NWRH_SK001.dwg

Appendix B

SIDRA results

MOVEMENT SUMMARY

Site: 101 [2023_AM_Existing_Brickport Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2023 Existing Conditions
AM Peak 8am-9am
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	248	2.1	248	2.1	0.129	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	24	17.4	24	17.4	0.019	2.2	LOS A	0.1	0.6	0.34	0.33	0.34	33.1
Approach			273	3.5	273	3.5	0.129	0.2	NA	0.1	0.6	0.03	0.03	0.03	55.9
East: Hospital Street [E]															
4	L2	All MCs	5	0.0	5	0.0	0.004	1.0	LOS A	0.0	0.1	0.30	0.18	0.30	33.7
6	R2	All MCs	38	8.3	38	8.3	0.070	6.1	LOS A	0.3	1.9	0.56	0.62	0.56	32.2
Approach			43	7.3	43	7.3	0.070	5.5	LOS A	0.3	1.9	0.53	0.57	0.53	32.4
North: Brickport Road [N]															
7	L2	All MCs	152	2.8	152	2.8	0.096	5.7	LOS A	0.4	2.9	0.09	0.52	0.09	33.7
8	T1	All MCs	231	2.3	231	2.3	0.120	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			382	2.5	382	2.5	0.120	2.3	LOS A	0.4	2.9	0.04	0.21	0.04	45.7
All Vehicles			698	3.2	698	3.2	0.129	1.7	NA	0.4	2.9	0.06	0.16	0.06	47.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2023_PM_Existing_Brickport Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2023 Existing Conditions
PM Peak 2:30-3:30pm
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	191	2.2	191	2.2	0.099	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	17	18.8	17	18.8	0.013	2.1	LOS A	0.1	0.4	0.33	0.32	0.33	33.1
Approach			207	3.6	207	3.6	0.099	0.2	NA	0.1	0.4	0.03	0.03	0.03	56.2
East: Hospital Street [E]															
4	L2	All MCs	14	0.0	14	0.0	0.010	1.0	LOS A	0.0	0.3	0.29	0.19	0.29	33.7
6	R2	All MCs	140	0.8	140	0.8	0.205	4.8	LOS A	0.8	5.8	0.54	0.60	0.54	32.7
Approach			154	0.7	154	0.7	0.205	4.5	LOS A	0.8	5.8	0.52	0.56	0.52	32.8
North: Brickport Road [N]															
7	L2	All MCs	87	1.2	87	1.2	0.055	5.7	LOS A	0.2	1.6	0.07	0.52	0.07	33.7
8	T1	All MCs	209	6.0	209	6.0	0.112	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			297	4.6	297	4.6	0.112	1.7	LOS A	0.2	1.6	0.02	0.15	0.02	48.7
All Vehicles			658	3.4	658	3.4	0.205	1.9	NA	0.8	5.8	0.14	0.21	0.14	45.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2023_AM_Existing_Uplands Place (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2023 Existing Conditions
AM Peak 6:45am-7:45am
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	132	1.6	132	1.6	0.075	4.6	LOS A	0.0	0.0	0.00	0.50	0.00	46.1
2	T1	All MCs	7	0.0	7	0.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.50	0.00	47.2
Approach			139	1.5	139	1.5	0.075	4.4	NA	0.0	0.0	0.00	0.50	0.00	46.1
North: Uplands Place [N]															
8	T1	All MCs	3	0.0	3	0.0	0.003	0.0	LOS A	0.0	0.1	0.19	0.25	0.19	48.3
9	R2	All MCs	2	0.0	2	0.0	0.003	5.3	LOS A	0.0	0.1	0.19	0.25	0.19	32.6
Approach			5	0.0	5	0.0	0.003	2.1	NA	0.0	0.1	0.19	0.25	0.19	40.5
West: Hospital Street [W]															
10	L2	All MCs	3	0.0	3	0.0	0.039	1.1	LOS A	0.1	0.9	0.12	0.29	0.12	32.1
12	R2	All MCs	43	4.9	43	4.9	0.039	1.8	LOS A	0.1	0.9	0.12	0.29	0.12	32.0
Approach			46	4.5	46	4.5	0.039	1.8	LOS A	0.1	0.9	0.12	0.29	0.12	32.0
All Vehicles			191	2.2	191	2.2	0.075	3.7	NA	0.1	0.9	0.03	0.44	0.03	41.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [2023_PM_Existing_Uplands Place (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2023 Existing Conditions
PM Peak 2:15-3:15pm
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	80	0.0	80	0.0	0.047	4.6	LOS A	0.0	0.0	0.00	0.48	0.00	46.2
2	T1	All MCs	8	0.0	8	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	47.3
Approach			88	0.0	88	0.0	0.047	4.1	NA	0.0	0.0	0.00	0.48	0.00	46.3
North: Uplands Place [N]															
8	T1	All MCs	11	0.0	11	0.0	0.007	0.0	LOS A	0.0	0.1	0.09	0.15	0.09	49.0
9	R2	All MCs	3	0.0	3	0.0	0.007	5.1	LOS A	0.0	0.1	0.09	0.15	0.09	32.9
Approach			14	0.0	14	0.0	0.007	1.2	NA	0.0	0.1	0.09	0.15	0.09	44.1
West: Hospital Street [W]															
10	L2	All MCs	11	0.0	11	0.0	0.101	1.1	LOS A	0.3	2.5	0.11	0.29	0.11	32.1
12	R2	All MCs	114	2.8	114	2.8	0.101	1.7	LOS A	0.3	2.5	0.11	0.29	0.11	32.0
Approach			124	2.5	124	2.5	0.101	1.7	LOS A	0.3	2.5	0.11	0.29	0.11	32.0
All Vehicles			226	1.4	226	1.4	0.101	2.6	NA	0.3	2.5	0.07	0.36	0.07	37.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2035_AM_Future_Brickport Road (Site Folder: Future Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2035 Future Base
AM Peak 8am-9am
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	278	2.3	278	2.3	0.145	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	27	15.4	27	15.4	0.021	2.3	LOS A	0.1	0.7	0.36	0.35	0.36	33.1
Approach			305	3.4	305	3.4	0.145	0.2	NA	0.1	0.7	0.03	0.03	0.03	55.9
East: Hospital Street [E]															
4	L2	All MCs	6	0.0	6	0.0	0.005	1.1	LOS A	0.0	0.1	0.32	0.20	0.32	33.7
6	R2	All MCs	42	7.5	42	7.5	0.086	7.0	LOS A	0.3	2.3	0.59	0.67	0.59	32.0
Approach			48	6.5	48	6.5	0.086	6.2	LOS A	0.3	2.3	0.55	0.61	0.55	32.2
North: Brickport Road [N]															
7	L2	All MCs	169	2.5	169	2.5	0.107	5.7	LOS A	0.5	3.3	0.10	0.52	0.10	33.7
8	T1	All MCs	258	2.4	258	2.4	0.134	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			427	2.5	427	2.5	0.134	2.3	LOS A	0.5	3.3	0.04	0.21	0.04	45.7
All Vehicles			781	3.1	781	3.1	0.145	1.7	NA	0.5	3.3	0.07	0.16	0.07	47.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2035_PM_Future_Brickport Road (Site Folder: Future Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2035 Future Base
PM Peak 2:30-3:30pm
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	214	2.0	214	2.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	19	16.7	19	16.7	0.015	2.2	LOS A	0.1	0.5	0.35	0.33	0.35	33.1
Approach			233	3.2	233	3.2	0.111	0.2	NA	0.1	0.5	0.03	0.03	0.03	56.2
East: Hospital Street [E]															
4	L2	All MCs	16	0.0	16	0.0	0.012	1.1	LOS A	0.0	0.3	0.31	0.20	0.31	33.7
6	R2	All MCs	157	0.7	157	0.7	0.247	5.6	LOS A	1.0	7.2	0.58	0.65	0.60	32.5
Approach			173	0.6	173	0.6	0.247	5.1	LOS A	1.0	7.2	0.56	0.61	0.57	32.6
North: Brickport Road [N]															
7	L2	All MCs	98	1.1	98	1.1	0.061	5.7	LOS A	0.3	1.8	0.08	0.52	0.08	33.7
8	T1	All MCs	235	5.8	235	5.8	0.125	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			333	4.4	333	4.4	0.125	1.7	LOS A	0.3	1.8	0.02	0.15	0.02	48.7
All Vehicles			738	3.1	738	3.1	0.247	2.0	NA	1.0	7.2	0.15	0.22	0.15	45.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [2035_AM_Future_Uplands Place (Site Folder: Future Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2035 Future Base
AM Peak 6:45am-7:45am
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	147	1.4	147	1.4	0.084	4.6	LOS A	0.0	0.0	0.00	0.50	0.00	46.1
2	T1	All MCs	8	0.0	8	0.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.50	0.00	47.2
Approach			156	1.4	156	1.4	0.084	4.3	NA	0.0	0.0	0.00	0.50	0.00	46.1
North: Uplands Place [N]															
8	T1	All MCs	3	0.0	3	0.0	0.003	0.0	LOS A	0.0	0.1	0.20	0.25	0.20	48.3
9	R2	All MCs	2	0.0	2	0.0	0.003	5.4	LOS A	0.0	0.1	0.20	0.25	0.20	32.6
Approach			5	0.0	5	0.0	0.003	2.1	NA	0.0	0.1	0.20	0.25	0.20	40.5
West: Hospital Street [W]															
10	L2	All MCs	3	0.0	3	0.0	0.043	1.1	LOS A	0.1	1.0	0.13	0.30	0.13	32.1
12	R2	All MCs	48	4.3	48	4.3	0.043	1.8	LOS A	0.1	1.0	0.13	0.30	0.13	32.0
Approach			52	4.1	52	4.1	0.043	1.8	LOS A	0.1	1.0	0.13	0.30	0.13	32.0
All Vehicles			213	2.0	213	2.0	0.084	3.7	NA	0.1	1.0	0.04	0.45	0.04	41.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [2035_PM_Future_Uplands Place (Site Folder: Future Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

2035 Future Base
PM Peak 2:15-3:15pm
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	89	0.0	89	0.0	0.053	4.6	LOS A	0.0	0.0	0.00	0.48	0.00	46.2
2	T1	All MCs	9	0.0	9	0.0	0.053	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	47.3
Approach			99	0.0	99	0.0	0.053	4.1	NA	0.0	0.0	0.00	0.48	0.00	46.3
North: Uplands Place [N]															
8	T1	All MCs	12	0.0	12	0.0	0.008	0.0	LOS A	0.0	0.1	0.09	0.14	0.09	49.1
9	R2	All MCs	3	0.0	3	0.0	0.008	5.1	LOS A	0.0	0.1	0.09	0.14	0.09	32.9
Approach			15	0.0	15	0.0	0.008	1.1	NA	0.0	0.1	0.09	0.14	0.09	44.4
West: Hospital Street [W]															
10	L2	All MCs	12	0.0	12	0.0	0.113	1.1	LOS A	0.4	2.8	0.12	0.30	0.12	32.1
12	R2	All MCs	127	2.5	127	2.5	0.113	1.8	LOS A	0.4	2.8	0.12	0.30	0.12	32.0
Approach			139	2.3	139	2.3	0.113	1.7	LOS A	0.4	2.8	0.12	0.30	0.12	32.0
All Vehicles			253	1.3	253	1.3	0.113	2.6	NA	0.4	2.8	0.07	0.36	0.07	37.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2035_AM_PD_Brickport Road (Site Folder: Post Development)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

2035 Post Development
AM Peak 8am-9am
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	278	2.3	278	2.3	0.145	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	28	14.8	28	14.8	0.022	2.3	LOS A	0.1	0.7	0.36	0.35	0.36	33.1
Approach			306	3.4	306	3.4	0.145	0.2	NA	0.1	0.7	0.03	0.03	0.03	55.7
East: Hospital Street [E]															
4	L2	All MCs	6	0.0	6	0.0	0.005	1.1	LOS A	0.0	0.1	0.32	0.20	0.32	33.7
6	R2	All MCs	45	7.0	45	7.0	0.093	7.0	LOS A	0.3	2.5	0.59	0.68	0.59	32.0
Approach			52	6.1	52	6.1	0.093	6.3	LOS A	0.3	2.5	0.56	0.62	0.56	32.2
North: Brickport Road [N]															
7	L2	All MCs	178	2.4	178	2.4	0.113	5.7	LOS A	0.5	3.5	0.10	0.52	0.10	33.7
8	T1	All MCs	258	2.4	258	2.4	0.134	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			436	2.4	436	2.4	0.134	2.4	LOS A	0.5	3.5	0.04	0.21	0.04	45.4
All Vehicles			794	3.1	794	3.1	0.145	1.8	NA	0.5	3.5	0.07	0.17	0.07	47.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2035_PM_PD_Brickport Road (Site Folder: Post Development)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

2035 Post Development
PM Peak 2:30-3:30pm
Brickport Road & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Brickport Road [S]															
2	T1	All MCs	214	2.0	214	2.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	20	15.8	20	15.8	0.015	2.2	LOS A	0.1	0.5	0.34	0.33	0.34	33.1
Approach			234	3.2	234	3.2	0.111	0.2	NA	0.1	0.5	0.03	0.03	0.03	56.1
East: Hospital Street [E]															
4	L2	All MCs	16	0.0	16	0.0	0.012	1.1	LOS A	0.0	0.3	0.31	0.20	0.31	33.7
6	R2	All MCs	165	0.6	165	0.6	0.262	5.7	LOS A	1.1	7.9	0.59	0.67	0.62	32.4
Approach			181	0.6	181	0.6	0.262	5.3	LOS A	1.1	7.9	0.56	0.63	0.59	32.5
North: Brickport Road [N]															
7	L2	All MCs	103	1.0	103	1.0	0.064	5.7	LOS A	0.3	1.9	0.08	0.52	0.08	33.7
8	T1	All MCs	235	5.8	235	5.8	0.125	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			338	4.4	338	4.4	0.125	1.8	LOS A	0.3	1.9	0.02	0.16	0.02	48.4
All Vehicles			753	3.1	753	3.1	0.262	2.1	NA	1.1	7.9	0.16	0.23	0.16	45.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [2035_AM_PD_Uplands Place (Site Folder: Post Development)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

2035 Post Development
AM Peak 6:45am-7:45am
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	156	1.4	156	1.4	0.089	4.6	LOS A	0.0	0.0	0.00	0.50	0.00	46.1
2	T1	All MCs	8	0.0	8	0.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.50	0.00	47.2
Approach			164	1.3	164	1.3	0.089	4.4	NA	0.0	0.0	0.00	0.50	0.00	46.1
North: Uplands Place [N]															
8	T1	All MCs	3	0.0	3	0.0	0.003	0.3	LOS A	0.0	0.1	0.21	0.25	0.21	48.3
9	R2	All MCs	2	0.0	2	0.0	0.003	5.0	LOS A	0.0	0.1	0.21	0.25	0.21	32.6
Approach			5	0.0	5	0.0	0.003	2.2	NA	0.0	0.1	0.21	0.25	0.21	40.5
West: Hospital Street [W]															
10	L2	All MCs	3	0.0	3	0.0	0.045	1.1	LOS A	0.1	1.1	0.13	0.30	0.13	32.1
12	R2	All MCs	51	4.2	51	4.2	0.045	1.8	LOS A	0.1	1.1	0.13	0.30	0.13	32.0
Approach			54	3.9	54	3.9	0.045	1.8	LOS A	0.1	1.1	0.13	0.30	0.13	32.0
All Vehicles			223	1.9	223	1.9	0.089	3.7	NA	0.1	1.1	0.04	0.45	0.04	41.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
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Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [2035_PM_PD_Uplands Place (Site Folder: Post Development)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

2035 Post Development
PM Peak 2:15-3:15pm
Uplands Place & Hospital Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Uplands Place [S]															
1	L2	All MCs	95	0.0	95	0.0	0.056	4.6	LOS A	0.0	0.0	0.00	0.48	0.00	46.2
2	T1	All MCs	9	0.0	9	0.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	47.3
Approach			104	0.0	104	0.0	0.056	4.2	NA	0.0	0.0	0.00	0.48	0.00	46.3
North: Uplands Place [N]															
8	T1	All MCs	12	0.0	12	0.0	0.008	0.1	LOS A	0.0	0.1	0.10	0.14	0.10	49.1
9	R2	All MCs	3	0.0	3	0.0	0.008	4.8	LOS A	0.0	0.1	0.10	0.14	0.10	32.9
Approach			15	0.0	15	0.0	0.008	1.1	NA	0.0	0.1	0.10	0.14	0.10	44.4
West: Hospital Street [W]															
10	L2	All MCs	12	0.0	12	0.0	0.120	1.1	LOS A	0.4	3.0	0.12	0.30	0.12	32.1
12	R2	All MCs	135	2.3	135	2.3	0.120	1.8	LOS A	0.4	3.0	0.12	0.30	0.12	32.0
Approach			146	2.2	146	2.2	0.120	1.7	LOS A	0.4	3.0	0.12	0.30	0.12	32.0
All Vehicles			265	1.2	265	1.2	0.120	2.7	NA	0.4	3.0	0.07	0.36	0.07	37.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
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Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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The Power of Commitment

LANDSLIDE RISK ASSESSMENT
PROPOSED MENTAL HEALTH PRECINCT
23 BRICKPORT ROAD, COOEE

Prepared for: **CES**

Date: 10 December 2025

Document Reference: TG23212/1 - 02report Rev01

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Appendix A Borehole Logs
Appendix B Landslide Risk Matrix
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Version	Date	Prepared by	Reviewed by	Distribution
Original	06 December 2023	David Gibbons	Dr Wayne Griffioen	Electronic
Rev01	10 December 2025	David Gibbons	Dr Wayne Griffioen	Electronic

1 INTRODUCTION

1.1 Practitioner details

Lead/coordinating consultant name	Wayne Griffioen
Academic Qualification/s	BE (Hons) University of Western Australia PhD Civil Engineering, University of Western Australia
Relevant Experience	
Business name and address	Tasman Geotechnics
Contact phone number	
Email address	
Signature	
Date	10 December 2025

1.2 Methodology

This report has been prepared in accordance with the **Practice Note Guidelines for Landslide Risk Management 2007** and the **Tasmanian Planning Scheme – State Planning Provisions C15.0 Landslip Hazard Code**.

Note that the terms landslip and landslide are used interchangeably in this report and are entirely equivalent.

The proposal will require the issuance of a building permit. Developments to be assessed under the *Building Act 2016* require adherence to the **Directors Determination – Landslide Hazard Areas** (rev 1.1, dated 8 April 2021). In determining an application for Certificate of Likely Compliance, the building surveyor must (inter alia) be satisfied that the proposed work can achieve and maintain a tolerable risk. A 'landslip hazard report' may be required. This report may also be used as a landslip hazard report for the purposes of the Director's Determination.

This revision (Rev01) of our original report reflects changes to the proposed site layout.

1.3 Rationale for Assessment

It is proposed that the North West Mental Health Precinct will be constructed within the grounds of the North West Regional Hospital (NWRH) at 23 Brickport Road, Cooee (title references 164516/1 and 125373/2).

A vacant location within the existing hospital grounds has been identified for the precinct, south of existing accommodation buildings. Details were shown on a series of architectural drawings prepared by ARTAS Architects (e.g. NWMHP-AR003-0001-DA, revision A, dated 13 November 2025). Compared to the earlier conceptual designs, the precinct has a somewhat different layout.

The proposed mental health precinct building will be over two levels, comprised of:

- Parking, loading/unloading, front of house and back of house on the lower level, and
- Patient and staff spaces are on the upper level.

The lower level will be cut into the existing slope, whereas the upper level is generally close to grade, requiring less excavation. Based on the supplied drawings, the maximum proposed depth of cut appears to be approximately 6.8m.

The assessment is required as parts of the site are mapped within a landslip hazard area, and the use of the site is classified as critical. Critical uses apply to hospitals and/or emergency services.

In the planning scheme, a landslip hazard area refers to land which is within one of four landslip hazard bands (low, medium, medium-active or high). The proposed precinct area does have low landslip hazard bands mapped on parts of it, although this does not include any part of the proposed building itself. Within the low landslip hazard area - to the north of the proposed building - are parking areas, pedestrian (walking) paths, an access road to the facility, firefighting infrastructure and landscaped grounds. Although these site elements are generally of low financial value, the landslip hazard area includes the site access and consideration of landslip risk is required.

Our scope of work consisted of:

- A desktop study and review of available information, and
- Performing a Landslide Risk Assessment.

Tasman Geotechnics have previously conducted geotechnical investigations for the same development proposal. The results of those investigations are presented in *TG25004/1 – 01report* dated 25 March 2025, which includes detailed information about subsurface conditions, groundwater levels and geotechnical design parameters. Aspects of the relevant findings from those investigations are summarised herein and have been used to inform this landslide risk assessment.

2 BACKGROUND INFORMATION

2.1 Planning Scheme

The Tasmanian Planning Scheme is effective in the Burnie municipality since 22 July 2020. Clause C15.6.1 of the State Planning Provisions stipulates that the objective for building and works within a landslip hazard area is:

> *"That building and works on land within a landslip hazard area can:*
>
> *(a) minimise the likelihood of triggering a landslip event; and*
>
> *(b) achieve and maintain a tolerable risk from a landslip."*

There are no acceptable solutions. There are three performance criteria (P1.1 – P1.3), which refer to a landslip hazard report (this document):

> *P1.1*
>
> *Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip, having regard to:*
>
> *(a) the type, form, scale and intended duration of the development;*

(b) whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures;

(c) any advice from a State authority, regulated entity or a council; and

(d) the advice contained in a landslip hazard report.

P1.2

A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on adjacent land or public infrastructure.

P1.3

If landslip reduction or protection measures are required beyond the boundary of the site the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the specific hazard reduction or protection measures.

In addition to these criteria, Clause 15.5 addresses Use Standards for landslip hazard areas. Performance criteria P1.1 and P1.2 of C15.5.1 apply to all uses, and additionally P2 applies to critical uses:

In addition to the requirements in clause C15.5.1 P1.1, a critical use within a landslip hazard area must achieve and maintain a tolerable risk from landslip, having regard to:

(a) the impact on the ability of the use to respond to a landslip event;

(b) the impact on ability of the use to function and maintain service during the landslip and recovery period;

(c) any interruption to the operation of the critical use in locations external to the immediate impact of the landslip event;

(d) the creation of risk to the health or safety of people from damage or disruption to:

(i) a water supply service;

(ii) an energy supply; or

(iii) the drainage and treatment of waste water;

(e) any advice contained in a landslip hazard report; and

(f) any advice from a State authority, regulated entity or a council.

A landslide risk assessment is to address risk to property and risk to life.

Tolerable levels of risk should be set by the regulator (i.e., the Burnie City Council, or the State Government). In the absence of a definition of tolerable risk from the regulator, we propose the following risk levels.

Although tolerable levels of risk for property loss are rarely quoted in literature, AGS (2007d) suggests a Moderate risk profile as a tolerable level of risk for low-rise residential buildings on existing slopes as well as existing landslides, and for Importance Level 3 structures as defined in the Building Code of Australia (Table B1.2a). The proposed Mental Health Precinct is assessed as Importance Level 3 as it has no emergency facilities, unlike the adjacent NWRH.

AGS (2007c) suggests the tolerable loss of life individual risk should be 10^{-5}/annum for new constructed slopes, new development, or existing landslide, and 10^{-4}/annum for existing slopes or existing development. For instances where they are differentiated, the tolerable loss of life is typically lower for hospitals than for residential housing.

Therefore, for the proposed works, the following tolerable levels of risk are adopted;

- Risk to property: Moderate,
- Risk to life: 10^{-6}/annum.

2.2 Regional Setting

The site is just south of the crest of a coastal escarpment which separates an undulating plateau to the south from the low-lying coastal plain to the north. Locally, the site is at about 70-80m elevation and the plateau slopes continue to rise gently to the south. The escarpment immediately north of the site is about 50m high with a maximum slope of about 35°. The coastal plain at c. 10m AHD north of the site is about 120m wide and separates the escarpment from the Bass Strait coastline. To the west, Cooee Creek dissects the plateau. Landslides (both older and occasionally recent or active) occur sporadically along the steep escarpment slopes.

2.3 Geology

The Mineral Resources Tasmania Digital Geology Series 1:25,000 Burnie sheet shows that the surface geology of the site is mapped as Cenozoic aged basalt, described as "*Predominantly deeply-weathered*".

An extract of the MRT geology map is presented in Figure 1.

The Cenozoic basalt and any soils overlie a Proterozoic-aged basement of quartzwacke turbidites and mafic igneous rocks, which are exposed at the foreshore north of the site.

2.4 Landslide Inventory Mapping

The MRT Landslide Inventory Map shows that the site (i.e., the proposed Mental Health Precinct) is not mapped on a known landslide. An extract of the Landslide Inventory Map is presented in Figure 2. There are known landslides mapped on the coastal escarpment, generally north of the proposed precinct. The nearest to the site is about 230m to the north, and is partially within the broader NWRH grounds, as is a second landslide about 280m to the north-east.

Most of the known landslides on the coastal escarpment are of 'unknown' activity state, which means they are not known to have been recently active (i.e., in the last 50 – 100 years) but can be recognised as features in the landscape. The nearest recently active landslide is ID 382, a 30m wide by 80m long zone within the larger landslide immediately north of the site, on the coastal escarpment. MRT records indicate that landslide 382 is a discrete soil slide known to have been active prior to 1998. There are no records of damage associated with the landslide. Landslide ID 382 is about 280m north of the site, and immediately north-east of the North West Private Hospital.

2.5 Past Earthworks

Immediately north of the proposed Mental Health Precinct (MHP) is a single east-west row of six buildings which we understand are used for accommodation. The ground elevation at the buildings varies from about 76m (in the west) to 79m (in the east).

South of the accommodation buildings and partially on the northern edge of the proposed precinct location is a regular batter, the base of which appears to be formed in cut. The batter runs along the northern edge of the proposed precinct and then turns south at the eastern end. The batter slope is about 18° (i.e., 1V:3H) and the slope initially rises about 4m before flattening slightly, and a cutoff drain descends across the slope in a generally westerly direction, south of the accommodation buildings. Further south of the cutoff drain, the slope continues to rise to a relatively flat area at about 87m AHD, which is where the MHP building is proposed. Where the slopes flatten, the crest shape appears sharper than is typical for a natural slope and it appears that fill may have been placed on the upper part of the site. The most likely explanation is that material excavated from the cut (for the accommodation buildings) was placed on the vacant land to the south, which is now part of the proposed MHP. However, various other earthworks have been undertaken nearby, and the fill may have been brought from elsewhere.

Examination of aerial photographs shows that the accommodation buildings were constructed between April 1995 and January 1997. In an April 1995 aerial image piles of soil can be seen 'paddock dumped' on the site, although construction of the accommodation buildings had not yet commenced. By January 1997, the development of the accommodation buildings had been completed, and the batter immediately south had been formed. We presume that this is the earliest significant earthwork on the site. Prior to the construction in the mid-1990s the land use appears to have been agricultural.

LiDAR surveys for the site dating from 2008 and February-April 2013 are available. The surveys show that fill was placed on the eastern part of the proposed MHP, and to the south of it, between the two surveys. We estimate the (additional) fill is up to about 2.5m thick on the eastern part of the site. No (new) fill appears to have been placed along the northern edge of the proposed MHP between 2008-2013.

We have no evidence of any other past earthworks at the site (e.g., between 1995 and 2008). Post early-2013 aerial images do not appear to entirely match the February-April 2013 LiDAR derived contours and hence it is apparent that at least some additional earthworks took place on the southern part of the site post early-2013.

In the absence of compaction records, any existing fill on the site is presumed to be 'uncontrolled', i.e., not compacted to engineering specifications.

2.6 Landslide Susceptibility Mapping

For the basalt soils of the North-West coast of Tasmania, MRT have identified two scales of landslides:

- Deep-seated rotational landslides, and
- Shallow slides or debris flows

Landslide susceptibility maps for both scales of landsliding have been developed by MRT, and extracts are presented in Figures 3 and 4 respectively.

Susceptibility zones for first time deep-seated failures were developed by MRT by statistical analysis of slope geometry and geological material of known landslides, and are mapped as possible source, regression and runout areas associated with potential landslide movement. For Cenozoic basalts or basaltic colluvium, threshold values of source, regression and runout areas are 14°, 20° and 16° respectively.

The Burnie Deep-seated Landslide Susceptibility Map shows that there is a small potential source area along part of the northern edge of the proposed precinct only, where the batter slope (~18°) exceeds the source area threshold (14°). The remainder of the site is mapped as non-susceptible.

For shallow slides and debris flows, the susceptibility for source area is also based on slope angle:

- High: greater than 20°
- Moderate: between 10° and 20°
- Low: between 6° and 10°
- Very Low: less than 6°

The Burnie Shallow Slide and Debris Flow Susceptibility Map shows that areas of Low to Moderate susceptibility are mapped on the batter slopes along the northern and eastern parts of the proposed precinct. The flatter upper part of the site is mapped as non-susceptible.

For both the Deep-Seated and Shallow Slide Susceptibility mapping, the areas identified as susceptible local to the proposed precinct appear to be associated with modified slopes, i.e., slopes that have been steepened from their natural condition by earthworks (cut and/or fill). The relevant landslide susceptibility maps were published in 2010 and reflect the conditions at that time (or at some date prior to the map publication). Given the conditions appear to have been modified post-2010, if (or when) the susceptibility maps are redrawn, the shape and/or extent of the susceptible zones may be somewhat different. With this in mind, we have conducted an exercise in generating equivalent hazard bands by classifying slope maps generated from digital terrain models in line with the slope thresholds used by MRT and listed above. From this exercise, we have concluded that earthworks conducted post-2010 (and prior to mid-2013) will not result in a significant change to the landslide hazard bands in the immediate vicinity of the MHP.

The susceptibility maps indicate that there are slopes at the site which are steeper than the minimum thresholds under which landsliding could conceivably occur in the natural soils of this

type. In this instance, the slope failures to be considered are deep-seated failures caused by removal of toe support (i.e., by excavation) and increased loading on the slope (construction, or placement of fill), or small to medium scale failure of the embankments.

2.7 Previous Reports

2.7.1 By MRT

A search on the MRT website for previous investigations at or near the site revealed many studies pertaining to slope stability assessments within the Burnie area. Most are not of direct relevance to the site, but several are for sites similarly located on deeply weathered Cenozoic basalt or basaltic colluvium. The published reports typically point to similar reasons for instability which is deeply weathered basalt soils - sometimes with interbedded sands - on steep slopes being subject to movement when disturbed (e.g., by excavation) or when saturated with water.

Of direct relevance to the site is an investigation undertaken for the (then proposed) North West Private Hospital (Matthews, 1987). The investigation was conducted with test pitting and seismic spreads. Six test pits were excavated to depths of 2.4 to 3.6m below ground level with a backhoe.

Matthews reported that:

The pits confirmed the considerable depth of weathering of the basalt. Pit 4, on the northern margin of the site, was the only hole that encountered fresh basalt, and this rock was quite strongly fractured.

The basalt mostly weathers to a friable clay but in lower lying areas, where water is more likely to accumulate for longer periods (such as around Pits 5 and 6), some of the near-surface clay is plastic.

Matthews provided the following conclusion:

The test pits and seismic spreads show that the site is underlain by deep soil. Excavation to level the site should be relatively easy, even if fractured basalt (as encountered in Pit 4) is struck.

As the loads are low, there should be little problem with supporting the structure even though it will be founded on dominantly clay material. The material properties suggest that expansive soils (reactive) may be a problem and foundation design should take this into account.

The proposed outlay of the building places it quite near to steep slopes, particularly on the north side, and it is recommended that the shape is altered so that the building is no closer than about 30 m from these slopes. In addition, it is a little close to shallower slopes on the south.

This could be overcome by lengthening the building along the flatter land to the north-west.

Further movements on the steep slopes surrounding the site are likely and special attention should be given to preventing this. Excavation around the slopes should be avoided, excess drainage down them should be prevented, and the establishment of further trees should be encouraged.

We note that the North West Private Hospital is about 200m closer to the escarpment crest than the proposed precinct, and it is on the steep escarpment slopes that Matthews was concerned about ‘further movements’.

2.7.2 By Others

Tasman Geotechnics and other private geotechnical consultancies (including GES and Geoton) have conducted investigations at the NWRH and we have access to some of those past reports.

Geoton (Geoton, 2010) conducted an investigation for a single storey carpark at the eastern end of the NWRH near Uplands Place. The investigation involved the drilling of 11 boreholes with a Proline auger rig to depths of between 0.8 and 3.7m below ground level. Some of the boreholes refused, with the refusal inferred to be due to the presence of weathered rock. More southerly boreholes generally penetrated further, with some not encountering rock to 3.7m below ground level. Groundwater seepage was encountered in several of the boreholes. The natural soils were

described as high plasticity Clayey SILT, Silty CLAY and Gravelly CLAY. The investigation area was about 150m east of the proposed precinct.

Geoton (Geoton, 2012) conducted an investigation for an additional single storey carpark about 130m north-west of the site, at the western end of the NWRH near Brickport Road. The investigation was conducted by excavation of four test pits to depths of 2.7m below ground level. The test pits encountered topsoils and/or fill to a maximum of about 0.4m below ground level, overlying high plasticity Stiff to Very Stiff Clayey SILT soils to termination depth. No groundwater was encountered, and no rock was encountered.

Geoton (Geoton, 2020) conducted an investigation for a proposed carpark and integrated antenatal unit about 120m north-east of the proposed precinct. Six boreholes were drilled and these mostly refused at shallow depths (less than 1m below ground level), with the refusal inferred to be due to the presence of weathered basalt rock. One borehole penetrated further, but was located over a service trench.

Tasman Geotechnics (Tasman Geotechnics, 2022) conducted an investigation for a proposed loading dock, just east of the investigation undertaken by Geoton in 2020. Two boreholes were drilled, both of which refused apparently due to weathered basalt rock. One of these refused at only 0.4m below ground level (like the nearby Geoton boreholes) but the second extended to 1.7m below ground level, indicating the soil depth is somewhat variable at that location.

Finally, (GES, 2021) undertook a site investigation for the recently constructed Burnie Ambulance Station. The ambulance station is less than 100m south-west of the proposed precinct. The investigation involved the drilled of eight boreholes with an Earthprobe 200 rig, all to 3.0m below ground level. The boreholes encountered Clayey SILT topsoils, overlying medium to high plasticity Silty CLAY typically to about 2.3m below ground level, overlying Clayey GRAVEL, described as ‘residually weathered’ basalt. No rock was encountered.

2.7.3 North West Mental Health Precinct

Tasman Geotechnics have conducted two investigations for the proposed MHP. The first was in October 2023 as part of the feasibility study for the precinct (Tasman Geotechnics, 2023).

The second investigation (Tasman Geotechnics, 2025) was conducted after design work indicated that relatively deep excavations may be required for the construction of the MHP. Two additional boreholes (BH7 and BH8) were drilled to approximately 15m below ground level using a combination of hollow-flight auger drilling and diamond coring.

Results from these investigations are discussed below.

2.8 Proposed Development

Details of the proposed development were shown on a series of architectural drawings prepared by ARTAS Architects (e.g. NWMHP-AR003-0001-DA, revision A, dated 13 November 2025). Compared to the earlier conceptual designs, the structure has a somewhat different layout.

The proposed site layout is shown on Figure 5.

The proposed MHP consists of a single large building, over two levels. The building is a tapered rectangular shape, elongate approximately east-west. A small amount of plant will be located on the roof, but this is not considered a third level for the purposes of this report. The levels are comprised of:

- Parking, loading/unloading, front of house and back of house on the lower level, with a finished floor level (FFL) of 81.0m, and
- Patient and staff spaces are on the upper level, with an FFL of about 86.0m.

Much of the lower level will be cut into the slope, whereas the upper level is generally close to grade, requiring less excavation. The upper level has a floor area of about 2,200m^2, including an internal courtyard. The lower level has a floor area of about 800m^2, including carparking areas adjacent to the forecourt. The lower level is located centrally with respect to the long axis of the upper level.

Within the footprint of the building, the ground elevation varies from 85.8m to 87.8m (AHD). The average slope within the building footprint is about 3°. Based on the maximum elevation within the building footprint and the floor level of the lower level, the typical maximum depth of cut appears to be approximately 6.8m, disregarding the thickness of the slab and any base course for the lower level, and a small area of deeper cut for a lift well. This cut will (locally) remove any fill from the upper part of the site but will predominantly be in natural soils.

The walls of the lower level will be designed as retaining walls.

Within the low landslip hazard area on the slopes to the immediate north of the proposed building are parking areas, pedestrian (walking) paths, an access road to the facility, firefighting/emergency infrastructure and landscaped grounds.

The drawings indicate the firefighting/emergency infrastructure (generator, hydrant booster and sprinkler booster) will be at about 78.7m elevation, which is like that of the existing hardstand south of the existing accommodation buildings. To achieve this, a cut into the slope will be required with an excavation depth of up to about 3.8m. This will need to be retained with an engineered retaining wall. Similarly, the proposed access road is designed for a grade of 1:9, which will require a cut deepening towards the south. The supplied drawings indicate allowance for retaining walls on the edges of the access ramp are required.

The remaining elements within the landslip hazard area are on grade (walking paths, landscaped grounds, extensions to parking areas), with minimal new earthworks.

Some battered slopes are indicated on the drawings where retaining walls are not proposed, such as around the perimeter of the upper level where the cut earthworks are required.

The design life of the proposed MHP is assumed to be at least 50 years.

3 FIELD INVESTIGATION

Field investigations have been carried out on two occasions.

On 3 October 2023, two Geotechnicians from Tasman Geotechnics conducted the following activities:

- Probing of six boreholes (BH1 to BH6) to the depths of between 5.1 – 6.3m below ground level, using a 4WD mounted Centurion (Geoprobe) rig,
- Installation of groundwater monitoring wells in two of the boreholes (BH1 and BH6), and
- Collecting of soil samples for laboratory testing

The second field investigation (phase 2) was carried out by a Senior Engineering Geologist from Tasman Geotechnics on 10th to 12th February 2025 and involved the following activities:

- Drilling of two boreholes (BH7 & BH8) by Tasmanian Drilling Services, using a Hanjin track-mounted drill rig:
    - BH7 was drilled using hollow-flight augers to the planned termination depth of 14.95m below ground level.
    - Due to auger refusal on boulders in the fill, BH8 was subsequently drilled using HQ triple tube (HQ3) diamond coring to the planned termination depth of 15m below ground level.
    - In-situ testing included Standard Penetration Tests (SPT) and undisturbed tube samples (U63 in BH7 and U50 in BH8) at 1m below ground level, and predominantly 1.5m intervals thereafter.
    - Disturbed (split-spoon) sampling was conducted for intervals between the in-situ testing in BH7, and HQ3 core samples were obtained between the in-situ testing in BH8.

  - The borehole locations were determined in the field with handheld GPS (+/- 3m accuracy).
- Collecting of soil samples for laboratory testing;
- Dipping of groundwater monitoring wells previously installed in boreholes BH1 and BH6 in 2023.

On both occasions, soil samples were selected for laboratory testing resulting in a total of 11 classification tests.

The engineering borehole logs from both phases of investigation are presented in Appendix A. The laboratory results are summarized in Section 4.3.

4 SITE CONDITIONS

4.1 Surface Conditions

The area identified for the proposed mental health precinct is in a vacant part of the NWRH grounds between the main hospital (to the north) and Brickport Road (to the south). The recently constructed Burnie Ambulance Station is located to the southwest of the site.

The area identified for the precinct is about 6,000m^2, and is generally vegetated with short mown grasses. The site appears to be well drained and no evidence of shallow groundwater such as seepage was observed at the time of the investigation.

The southern part of the site is relatively flat, and the northern and eastern parts fall to the north and east respectively, at slopes of up to about 18° as previously described.

4.2 Subsurface Conditions

Five of the six phase 1 boreholes at the site (BH1 and BH3 to BH6 inclusive) were drilled to the planned depth of 6.3m below ground level. BH2 was terminated earlier (at 5.1m below ground level) due to harder ground conditions. In all cases, all materials encountered were high plasticity SILT (or Silty CLAY, Unit2), usually with a trace of sand and gravel, consistent with the derivation from the deep weathering of Cenozoic basalt. No rock was encountered, although in several of the boreholes the soil exhibited textures which indicated that the soil was Extremely Weathered rock (basalt).

In BH1 and BH2 only, FILL (Unit1) was encountered overlying the natural soils to depths of 1.7m and 2.7m below ground level respectively. The FILL may have been locally derived as it was very consistent with the naturally occurring soils and contained no anthropogenic debris or other visually obvious contaminants. No buried topsoil was found, and hence we presume that the topsoil was stripped before the fill was placed. We note that BH1 and BH2 were drilled near the crest of the batter described previously.

The consistency of the soils was found to vary from Stiff to Hard, with Stiff to Very Stiff being most typical. The soil was typically dry (near surface) to moist (typically from about 1m below ground level). No groundwater inflow was observed, and no softened zones were observed.

The groundwater monitoring wells were screened from 2.7 – 3.7m below ground level in BH1, and 2.5 – 5.5m below ground level in BH6. Both wells were dry upon construction, and upon checking on Thursday 16th November 2023, and again in February 2025.

The phase 2 boreholes encountered the following subsurface conditions:

- 2.1m (BH7) and 3.5m (BH8) of FILL (Unit1), consisting of high plasticity SILT, red-brown, trace/with fine to medium grained sand and fine to coarse grained subangular to subrounded basalt and quartzite gravel, basalt cobbles/boulders present, overlying
- High plasticity SILT (Unit2), typically red-brown, orange-brown and pale-brown, trace fine to medium grained sand, no/trace fine to medium grained subrounded basalt gravel, to 14.95m (BH7) and 15m (BH8) below ground level.

Both phase 2 boreholes were terminated at the planned depth. The consistency of the fill was found to be Stiff. The natural soils were found to vary from Stiff to Very Stiff. The fill was typically below the plastic limit, whereas the natural soil was typically at or above the plastic limit.

No groundwater inflow was observed while augering BH7. Groundwater observations in BH8 were restricted by the diamond drilling process; however, the SPT and push tube samples were not wet indicating that groundwater was not encountered.

The locations of the boreholes drilled in both phases of investigation are shown in Figure 5.

4.3 Laboratory Testing

Laboratory testing was carried out by Tasman Geotechnics on a total of 11 soil samples for Atterberg Limits and particle size distribution across the two phases of investigations. The classification test results are summarised in the following table.

Table 1. Laboratory results

Sample	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	% Gravel	% Sand	% Fines
BH1, 0.7–1.0m	76	39	37	17	3	4	93
BH2, 2.8–3.1m	78	35	43	18	1	5	94
BH3, 0.8–1.1m	72	40	32	16	0	2	98
BH5, 1.9–2.3m	78	54	24	15	0	0	100
BH6, 0.8–1.2m	65	44	21	10	3	12	85
BH7, 1.7–2.0m	71	37	34	17	6	9	85
BH7, 3.7–4.0m	76	47	29	15	0	3	97
BH7, 9.7–10.0m	77	56	21	11	0	1	99
BH8, 0.5–0.8m	62	36	26	15	17	13	70
BH8, 4.7–5.0m	88	42	46	19	1	4	95
BH8, 14.5-14.8m	94	60	34	21	0	3	97

These results are all considered high, and the samples are mostly classified as high plasticity SILT, trace sand and gravel. Sample BH1 2.8 – 3.1 is considered (Silty) CLAY.

Table 2. Soil Density & Moisture Content Test Results

Sample	Unit	Dry Density (g/cm^3)	Bulk Density (g/cm^3)	Field Moisture Content (%)
BH7, 1.3 - 1.44m	1	1.31	1.82	39
BH7, 2.8 - 2.87m	2	1.35	1.86	38
BH7, 10.1 - 10.17m	2	1.01	1.61	60
BH8, 3.85 - 3.92m	2	1.23	1.76	43
BH8, 11.3 - 11.37m	2	0.97	1.64	70
BH8, 14.3 - 14.39m	2	0.94	1.67	79

These results indicate that the fill (Unit 1) tested from BH7 (1.3-1.44m) has a bulk density of 1.82g/cm^3 (about 18kN/m^3), and a field moisture content near the Plastic Limit (PL), at 39%.

The remaining samples tested were of the natural silt (Unit 2), with the bulk density ranging from 1.61 (~16kN/m^3) to 1.86g/cm^3 (~19kN/m^3). The field moisture content of the natural silt was found to be near or below the plastic limit (38-43%) in the samples tested to about 4m below ground level, and above the plastic limit (60-79%) in the samples tested from greater than 10m below ground level.

Although the installed groundwater monitoring wells were dry at the time of installation and on later observations, and no groundwater inflow was observed in the deeper boreholes, given that the soil moisture contents are notably higher from about 10m below ground level, and approaching (but remaining dry of) the liquid limit, we infer that groundwater may be present from about 10m below ground. This is still 3-4 meters deeper than the maximum proposed depth of excavation.

One undisturbed soil sample was submitted to Chadwick Geotechnics' NATA-accredited laboratory in Victoria for triaxial testing. The results are summarized in the following table.

Table 3. Triaxial Test results

Sample	Unit	Effective Cohesion, c' (kPa)	Effective Friction Angle, ϕ' (°)
BH7, 4.0-4.45m	2	15	36

Using critical state soil mechanics theory to plot the triaxial stress states in p'-q' space, we determine that the soil friction angle is 41°.

Samples were also submitted to Eurofins's NATA-accredited environmental testing laboratory for exposure classification testing. This is not relevant to the landslide risk assessment, and hence the results are not reproduced herein.

5 LANDSLIDE RISK ASSESSMENT

5.1 General

Risk assessment and management principles applied to slopes can be interpreted as answering the following questions;

- What might happen? (HAZARD IDENTIFICATION).
- How likely is it? (LIKELIHOOD).
- What damage or injury might result? (CONSEQUENCE).
- How important is it? (RISK EVALUATION).
- What can be done about it? (RISK TREATMENT).

The risk is a combination of the likelihood and the consequences for the hazard in question. Thus, both likelihood and consequences are considered when evaluating a risk and deciding whether treatment is required.

The qualitative likelihood, consequence and risk terms used in this report for risk to property are given in Appendix B and are based on the Landslide Risk Management Guidelines, published by Australian Geomechanics Society (AGS, 2007). The risk terms are defined by a matrix that brings together different combinations of likelihood and consequence. Risk matrices help to communicate the results of risk assessment, rank risks, set priorities and develop transparent approaches to decision making.

5.2 Geotechnical Model

The site is partially located on (modified) north and east facing slopes with a maximum fall of about 18°, above the threshold at which landsliding in the Cenozoic basalt soils starts to become

possible in unfavourable circumstances (such as when groundwater softens the soil). The unmodified natural slopes were probably flatter than could be reasonably expected to give rise to landsliding. Our investigation indicates that fill is confined to the relatively flat area to the south of the batter and is thickest in the southern and eastern portion of the proposed precinct. The lower part of the batter is in cut. There are no indications of distress in the existing slopes.

There is no indication of high groundwater conditions at the site, and there are no known landslides in the immediate vicinity of the site. Whilst groundwater has been encountered at relatively shallow depths in other parts of the broader NWRH site, the two monitoring wells at the site remain dry at the time of reporting and we infer that the groundwater level is ~10m below ground level.

At the proposed precinct building, the natural soils are Cenozoic aged Stiff to Very Stiff silt or clay derived from the deep weathering of Cenozoic aged basalt. No basalt rock was encountered, although it is known to occur at shallower depths in other parts of the broader NWRH site.

5.3 Potential Hazards

Based on the site observations, borehole data and available information discussed in the sections above, the following landslide hazards are identified for the site:

> **Deep-Seated Landslide**: These can occur where there is regional increase in groundwater levels or steepening of the slopes. In the absence of new large-scale unsupported excavations, the likelihood of a deep-seated landslide at the site under current climatic conditions is assessed to be Rare.
>
> **Small to Medium Scale Landslide** (up to about 3m deep): Such landslides can occur where slopes are locally steep or have been steepened by earthworks (cut or fill) and may involve up to 1,000 m^3 of soil. Small to Medium scale landslides may also occur due to localised soil erosion (e.g., from poor control of surface runoff) and locally elevated groundwater levels (e.g., seepage water collected in fill embankment).
>
> There is presently no evidence of soil erosion or high groundwater levels at the site. By using good construction practices and engineer designed retention structures to support any new earthworks, the likelihood of a Small to Medium scale landslide at the site is assessed to be Unlikely during construction, and Rare after construction.

The identification of the potential hazards considers both the site and nearby properties and is necessary to address stability issues that may negatively impact upon the site and influence the risk to property. It should be noted that of the scenarios discussed, the risks are mostly around pre-existing conditions, and the proposed development is unlikely to significantly increase these risks.

5.4 Risk to Property

The following table summarises the risk to property of the landslide events in relation to the proposed development, **assuming limitations in Section 6 are incorporated.**

Table 4. Landslide risk profiles

Scenario	Likelihood	Consequence	Risk Profile
Regional scale deep-seated landslide	Rare	Major: the building could be extensively damaged	Low
Small to medium scale landslide on the site	Unlikely during construction	Minor: would disrupt construction and require shoring	Low
	Rare after construction	Medium: would require reinstatement	Low

The assessment shows that the proposed development presents a Low level of risk.

5.5 Risk to Life

The calculation of risk to life requires a quantitative assessment. Here, we have used an event tree approach to assess the risk to life for two persons most at risk:

1. A construction worker, and
2. A patient in the facility, or a member of the facility staff

An event tree showing a possible sequence of events is presented in Appendix C for the two scenarios. The risk assessment shows that the Risk to Life is highest for the construction worker, at 3 x 10^{-7}/annum and lower for the patient or staff member, at 3 x 10^{-8}/annum.

6 CONCLUSION

6.1 Risk Evaluation

The tolerable levels of risk for the proposed development were outlined in Section 2.1. In terms of Risk to Property, this assessment shows that proposed development presents a Low level of risk and hence the risk is tolerable. In terms of Risk to Life, this assessment shows that the highest assessed Risk to Life is 3 x 10^{-7}/annum which is also tolerable.

The risk evaluation has shown that the development and subsequent use of the site can achieve and maintain a tolerable risk from landslide having regard to the type, form, scale and intended duration of the development, having regard to:

(a) the type, form, scale and intended duration of the works.

(b) whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures,

(c) any advice from a State authority, regulated entity or a council; and

(d) the advice contained in a landslip hazard report

The type, form and scale of the development have been described in this report. The construction period will be short relative to the design life of the structure but is presently unknown. We have assumed a design life of 50 years. No specific hazard reduction or protection measures are required, other than as outlined in this report (i.e., appropriately designed batter profiles and the use of engineered retaining walls). We are unaware of any advice from a State authority, regulatory entity or council. Section 7 of this report contains advice regarding the proposed work.

It is our assessment that the proposed work will not cause or contribute to landslip on the site, on adjacent land or public infrastructure (P1.2). No landslip reduction or protection works are required beyond the boundary of the site (P1.3).

6.2 Critical Use Performance Criteria

The critical use (as a component of a hospital) occurs once construction is completed, and the development is commissioned. Therefore, the landslide hazards to consider are those that exist post-construction and that could conceivably have a meaningful impact upon the critical use.

In terms of change in risk we have identified that the risk of small to medium scale landslides are similar during construction and thereafter. There is no long-term forecast of increasing risk. Increases in risk over the life of the development or use could conceivably occur due to increasing groundwater levels. If this were to occur, remedial drainage works could be undertaken.

Deep-seated landslides in the Cenozoic/Quaternary deposits have typically occurred on steeper slopes than at the present site and they are typically slow-moving features. Therefore, if a new deep-seated landslide was initiated at the site over the course of the use, we expect that it would occur slowly enough that a response (such as a management and remediation strategy) could be implemented to minimise the impact on the use. The impact will be mitigated by designing the

structure in accordance with good hillside construction practices outlined in Appendix D (Clause 15.5.1, P2a).

Provided footings for the proposed building are founded below any potential slip zones associated with landslides, there is no increase in the level of risk from a landslip requiring specific hazard reduction or protection measures arising from the proposed development other than as described in this report (Clause 15.6.1, P1.1). It is our assessment that the proposed development is not likely to cause or contribute to the occurrence of a landslip event on the site or on adjacent land, assuming the recommendations in this report are followed (Clause 15.6.1, P1.2).

The area surrounding the proposed development has similar risk profile. Therefore, there is unlikely to be interruption to the operation of the proposed development due to a landslide event on adjoining land (Clause 15.5.1, P2c).

Due to the slow-moving nature of these styles of landslides, sudden unexpected severing of water supplies, power supplies or wastewater services is considered unlikely. In addition, designing services to accommodate possible movement, such as by use of flexible joins, or by using above ground entry points for services, will ensure that services can be maintained (Clause 15.5.1, P2b). Thus, the health and safety of people is not at risk (Clause 15.5.1, P2d).

It is our assessment that no landslip reduction or protection measures will be required beyond the boundaries of the site (Clause 15.5.1, P1.2; Clause 15.6.1, P1.3).

We are unaware of any landslip management plans in place for the site or adjacent land. In terms of the specific additional performance criteria relating to the critical use, we note that no landslip management plan is required for this facility (Clause 15.5.1, P1.1).

Monitoring of cuts more than 2m high must be undertaken during construction at fortnightly intervals, to check for signs of instability.

6.3 Building Permit

For the issuance of a building permit, the Director's Determination – Landslip Hazard Areas requires conclusions regarding:

I. whether the work is likely to cause or contribute to landslip movement on the site or on adjacent land;

II. whether the work can achieve and maintain a tolerable risk for the intended life of the building having regard to various factors.

It is our conclusion that the proposed development is not likely to cause or contribute to landslip movement on the site or on adjacent land.

The following section discusses whether the development can achieve and maintain a tolerable risk for the intended life of the building in relation to the various factors.

the nature, intensity and duration of the use	The nature of the use is for health services (as a component of a hospital). We have assumed the site will be permanently occupied by both staff and patients, continuously, for the full duration of the use. The total number of people at the site is unknown, but we understand the precinct will have 22 beds. With an assumed nurse:patient ratio of 1:4 this implies about 6 nursing staff, plus supervisory staff. The total number of occupants is therefore assumed to be less than about 50 (including administration and cleaning etc.) but excluding visitors.
the type, form and duration of any development	The development is the construction of the precinct, including all landscaping works. The duration of the construction is unknown but will be 'short' relative to the design life the precinct (e.g., 18 months compared to 50 years).

the likely change in the risk across the intended life of the building	There are no reasonably predictable factors which we forecast as increasing the risk of landslide at the site across the intended life of the building.
the ability to adapt to a change in the level of risk	The only foreseeable change in the level of risk (which is not presently forecast) is for a significant increase in groundwater levels; if this were to occur then it would be possible to install additional drainage to dewater the slope.
the ability to maintain access to utilities and services	We have recommended the use of flexible joints and above-ground entry points for services to maintain access to utilities and services in the event of landslip on the site itself, although we do not expect landslip to occur. Landslip offsite which impacts on services running to the site is outside of the scope of this report and is not a likely consequence of the proposed development.
the need for specific landslip hazard reduction or protection measures on the site;	No specific landslip hazard reduction or protection measures are required on the site associated with the proposed work, although Section 7 of this report does contain recommendations regarding the proposed development.
the need for landslip hazard reduction or protection measures beyond the boundary of the site;	No specific landslip hazard reduction or protection measures are required beyond the boundary of the site associated with the proposed development.
any landslip management plan in place for the site and/or adjacent land	We are not aware of any landslip management plan in place for the site or adjacent land, nor have we identified the need for the development of such a plan.

7 LIMITATIONS

Our previous geotechnical report did not anticipate the presence of permanent battered slopes at the site. With that in mind, the following limitations should be enforced for permanent batter slopes at the site.

- For slopes where the change in elevation from the crest to toe of the batter is less than 3m vertically, the batter should be profiled at 1(V):2.5(H) or flatter. For slopes where the change in elevation is >3m, the batter should be profiled at 1(V):3(H) or flatter.
- In all cases, batters should be shaped to shed runoff and be protected from soil erosion by vegetation, matting, or mulch.

All retaining walls on the site must be designed by an appropriately qualified engineer, in accordance with our previously supplied geotechnical design parameters.

8 REFERENCES

Department of Health. (2023). *North West Hospitals Masterplan.* Hobart: Tasmanian Government.

Geoton. (2010). *Foundation Investigation ref: GL10168Ab.* Launceston: Unpublished Report for the Department of Health & Human Services.

Geoton. (2012). *Geotechnical Investigation ref: GL10168Ba.* Launceston: Unpublished Report for Hazell Bros.

Geoton. (2020). *Geotechnical Investigation GL20285Ab_Rev1.* Unpublished Report for Johnstone McGee & Gandy Pty Ltd.

GES. (2021). *Geotechnical Site Investigation - Proposed Burnie Ambulance Station.* Hobart: Unpublished Report for Morrison & Breytenbach Architects.

Matthews, W. L. (1987). *Foundation conditions at a proposed hospital site at Cooee.* Hobart: Unpublished Report for the Department of Mines UR1987/18.

Tasman Geotechnics. (2022). *Geotechnical Investigation ref: TG22082/1 - 01report.* Launceston: Unpublished Report for JMG Engineers & Planners.

Important information about your report

These notes are provided to help you understand the limitations of your report.

Project Scope

Your report has been developed on the basis of your unique project specific requirements as understood by Tasman Geotechnics at the time, and applies only to the site investigated. Tasman Geotechnics should be consulted if there are subsequent changes to the proposed project, to assess how the changes impact on the report's recommendations.

Subsurface Conditions

Subsurface conditions are created by natural processes and the activity of man.

A site assessment identifies subsurface conditions at discrete locations. Actual conditions at other locations may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time.

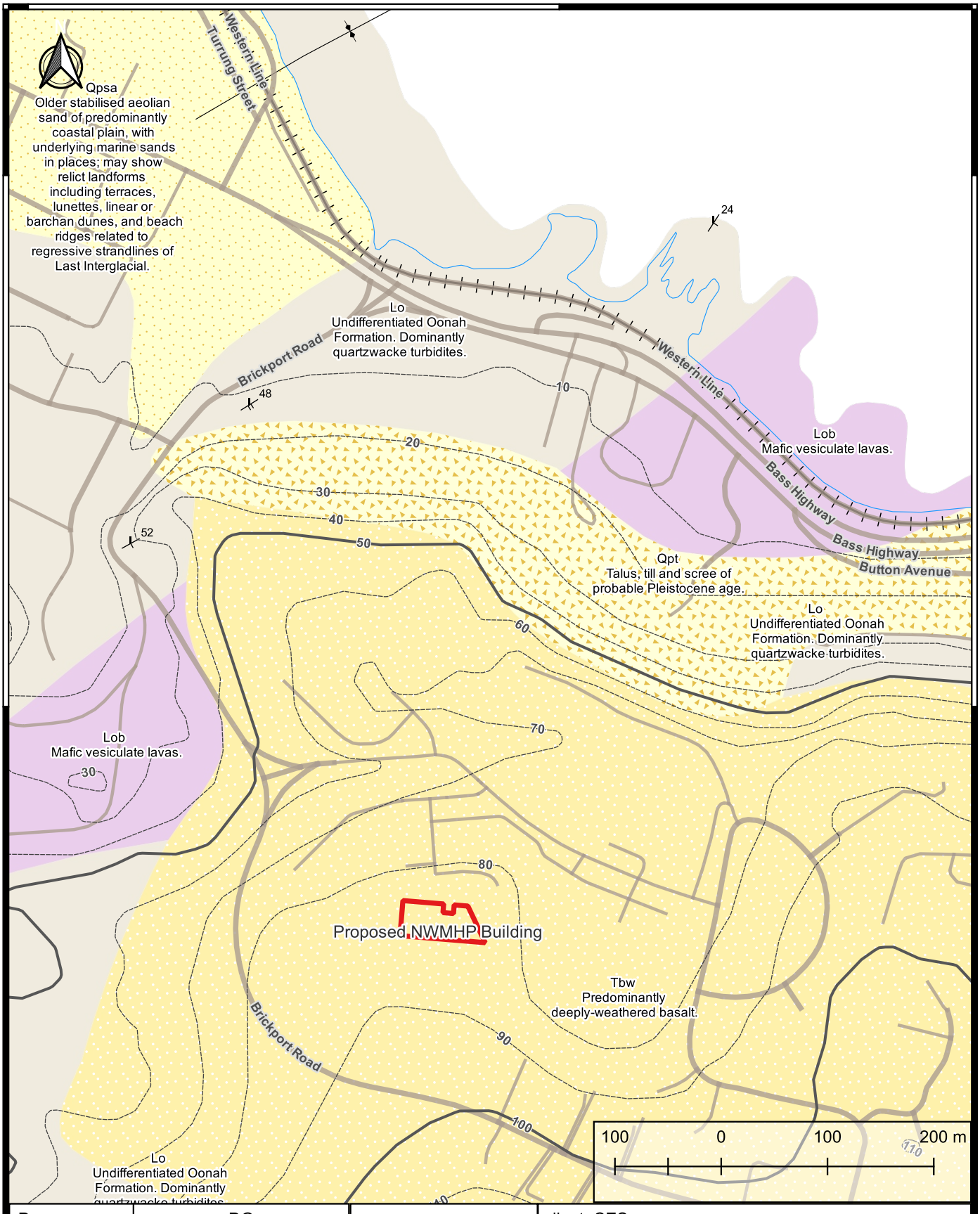
Nothing can be done to change the conditions that exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Tasman Geotechnics should be retained throughout the project, to identify variable conditions, conduct additional investigation or tests if required and recommend solutions to problems encountered on site.

Advice and Recommendations

Your report contains advice or recommendations which are based on observations, measurements, calculations and professional interpretation, all of which have a level of uncertainty attached.

The recommendations are based on the assumption that subsurface conditions encountered at the discrete locations are indicative of an area. This can not be substantiated until implementation of the project has commenced. Tasman Geotechnics is familiar with the background information and should be consulted to assess whether or not the report's recommendations are valid, or whether changes should be considered.

The report as a whole presents the findings of the site assessment, and the report should not be copied in part or altered in any way.



Drawn:	DG
Approved:	WG
Date:	09/12/2025
Scale:	1:5000
Size:	A4
Grid:	GDA94 / MGA zone 55

TASMAN geotechnics

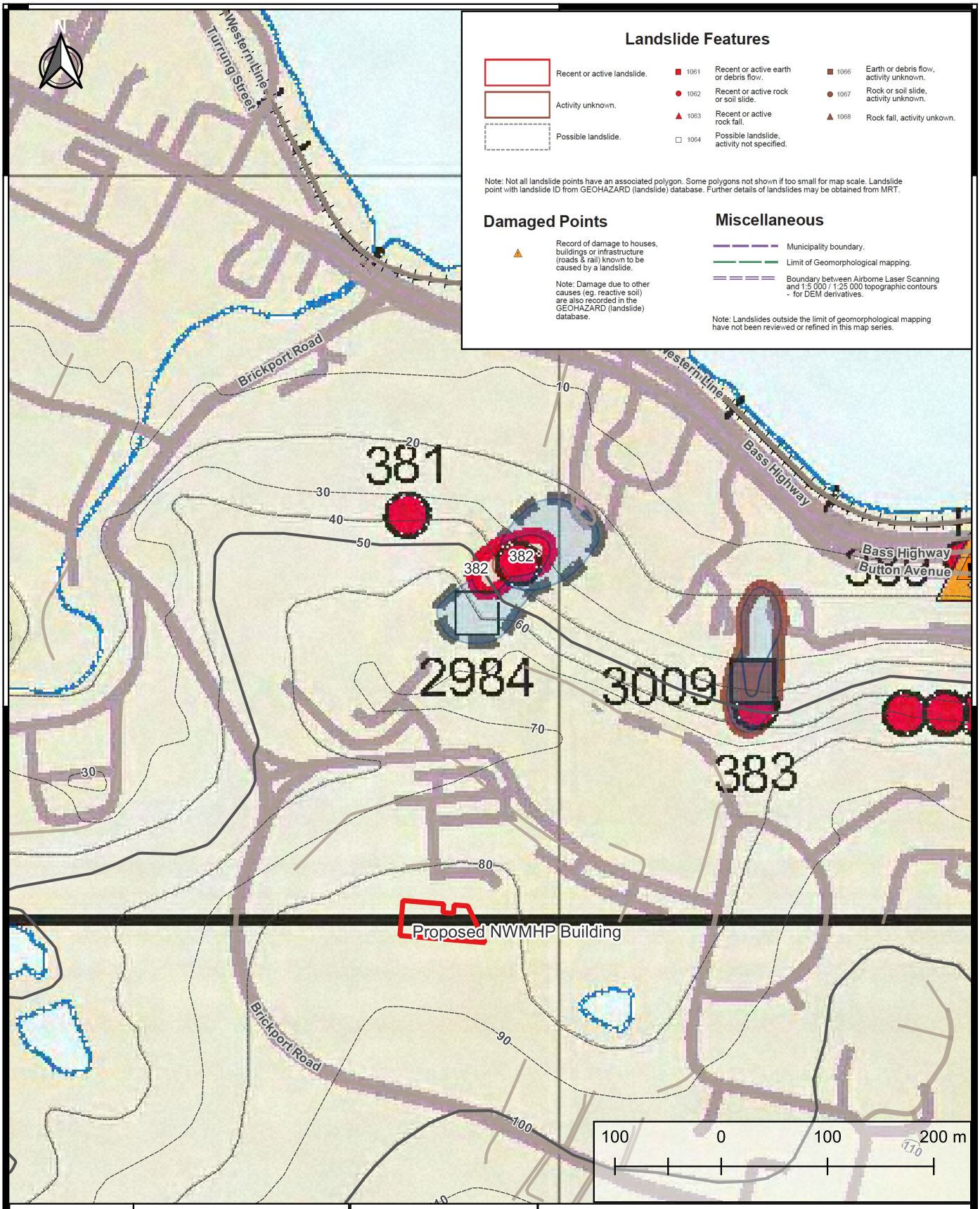
client: CES

project: Landslide Risk Assessment
Proposed North West Mental Health Precinct
23 Brickport Road, Cooee

title: Extract of MRT Geology Mapping

project no: TG23212/1 - 02report Rev01 | figure no: 1

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (http://services.thelist.tas.gov.au) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf.



Drawn:	DG
Approved:	WG
Date:	09/12/2025
Scale:	1:5000
Size:	A4
Grid:	GDA94 / MGA zone 55

TASMAN geotechnics

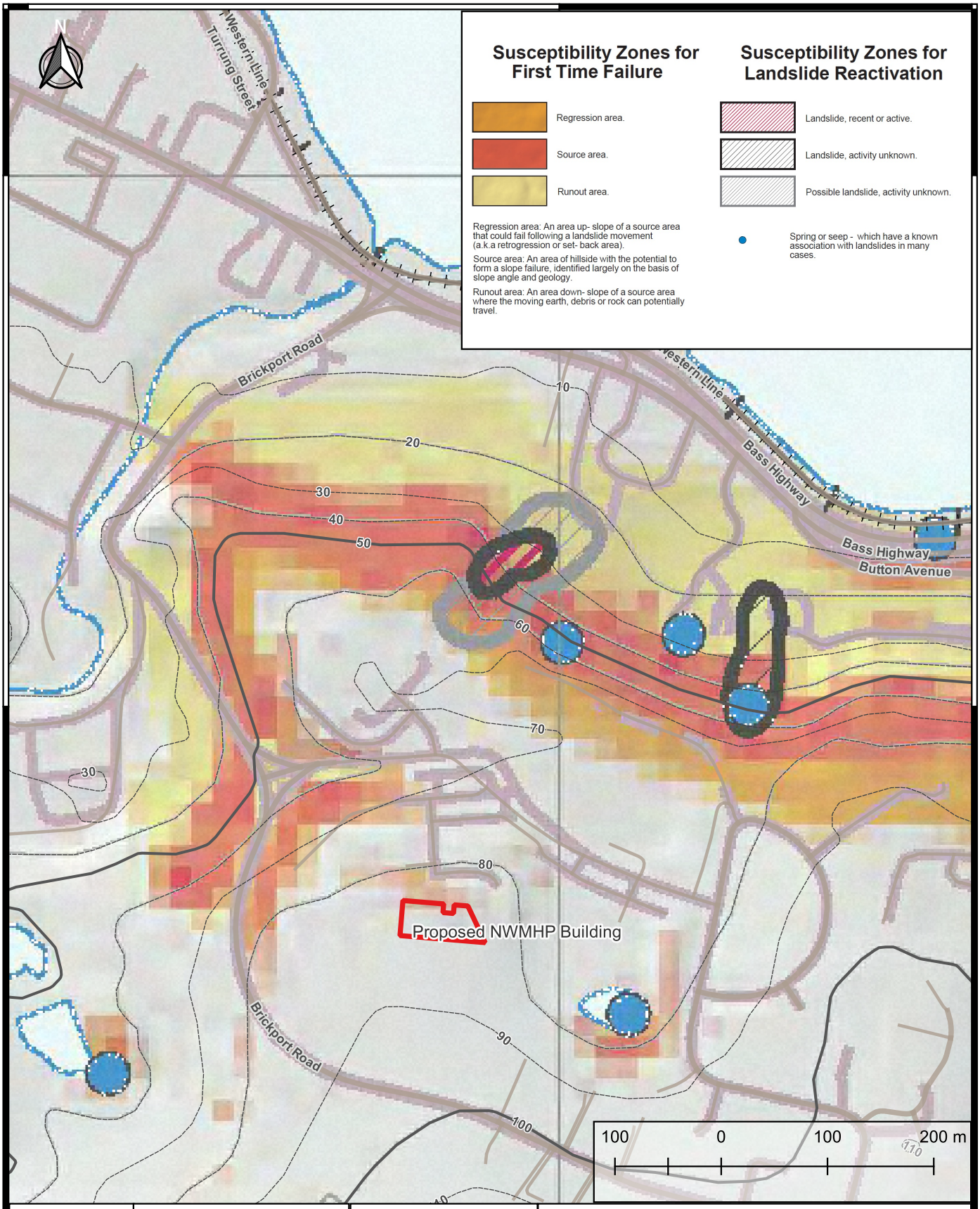
client: CES

project: Landslide Risk Assessment
Proposed North West Mental Health Precinct
23 Brickport Road, Cooee

title: Extract of MRT Landslide Inventory

project no: TG23212/1 - 02report Rev01 | figure no: 2

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (http://services.thelist.tas.gov.au) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf.



Drawn:	DG
Approved:	WG
Date:	09/12/2025
Scale:	1:5000
Size:	A4
Grid:	GDA94 / MGA zone 55

TASMAN geotechnics

client: CES

project: Landslide Risk Assessment
Proposed North West Mental Health Precinct
23 Brickport Road, Cooee

title: Extract of MRT Deep-Seated Landslide Susceptibility Mapping

project no: TG23212/1 - 02report Rev01 | figure no: 3

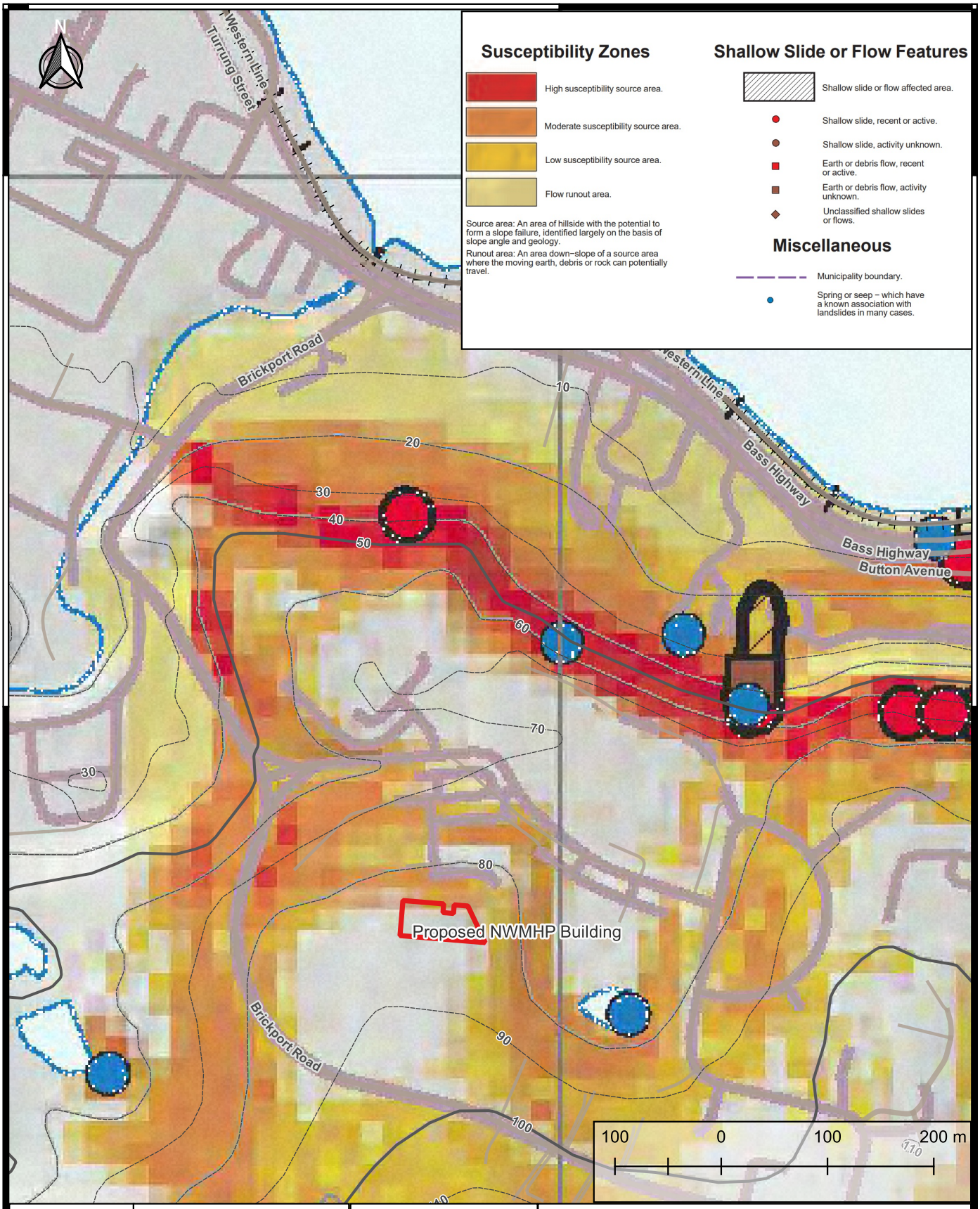
Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (http://services.thelist.tas.gov.au) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf.

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Approved:	WG
Date:	09/12/2025
Scale:	1:5000
Size:	A4
Grid:	GDA94 / MGA zone 55

TASMAN geotechnics

client: CES

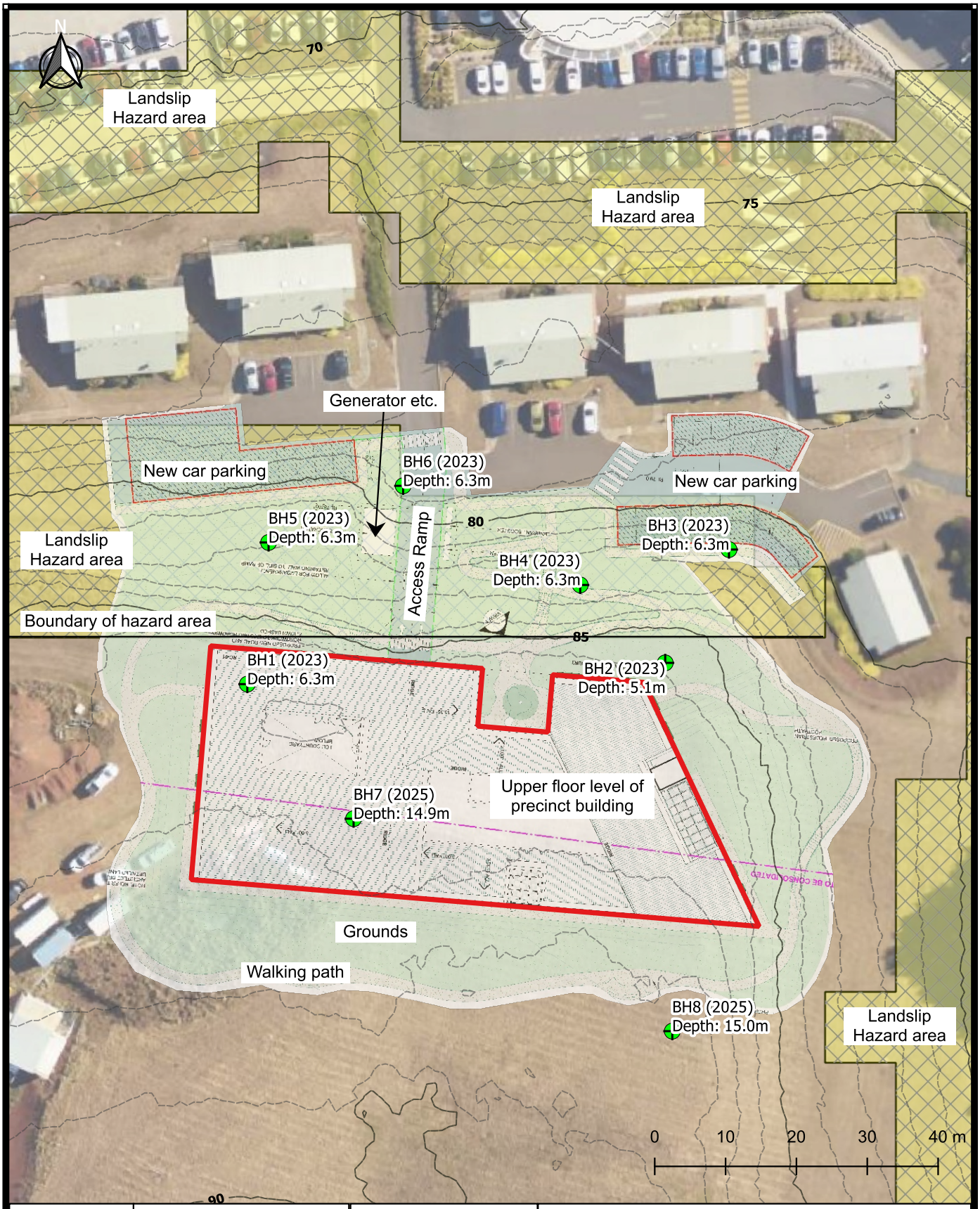
project: Landslide Risk Assessment
Proposed North West Mental Health Precinct
23 Brickport Road, Cooee

title: Extract of MRT Shallow Landslide & Debris Flow Susceptibility Mapping

project no: TG23212/1 - 02report Rev01 | figure no: 4

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (http://services.thelist.tas.gov.au) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf.

405500.0 406000.0



Drawn:	DG
Approved:	WG
Date:	09/12/2025
Scale:	1:750
Size:	A4
Grid:	GDA94 / MGA zone 55

TASMAN geotechnics

client: CES

project: Landslide Risk Assessment
Proposed North West Mental Health Precinct
23 Brickport Road, Cooee

title: Site Layout and Borehole Locations

project no: TG23212/1 - 02report Rev01 | figure no: 5

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (http://services.thelist.tas.gov.au) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf.

Appendix A

Borehole Logs

SOIL DESCRIPTION EXPLANATION SHEET

TASMAN geotechnics

Soils are described in accordance with the Unified Soil Classification System (UCS), as shown in the following table.

FIELD IDENTIFICATION

					DRY STRENGTH	DILATANCY	TOUGHNESS
COARSE GRAINED SOILS	more than 65% of material less than 63mm is larger than 0.075mm	GRAVELS	GW	Well graded gravels and gravel-sand mixtures, little or no fines			
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines			
		GRAVELLY SOILS	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines			
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines			
		SANDS	SW	Well graded sands and gravelly sands, little or no fines			
			SP	Poorly graded sands and gravelly sands, little or no fines			
		SANDY SOILS	SM	Silty sand, sand-silt mixtures, non-plastic fines			
			SC	Clayey sands, sand-clay mixtures, plastic fines			
FINE GRAINED SOILS	more than 35% of material less than 63mm is less than 0.075mm	SILT & CLAY, liquid limit less than 50%	ML	Inorganic silts, very fine sands or clayey fine sands	None to low	Quick to slow	None
			CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays and silty clays	Medium to high	None to very slow	Medium
			OL	Organic silts and organic silty clays of low plasticity	Low to medium	Slow	Low
		SILT & CLAY, liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts	Low to medium	Slow to none	Low to medium
			CH	Inorganic clays of high plasticity, fat clays	High	None	High
			OH	Organic clays of medium to high plasticity	Medium to high	None to very slow	Low to medium
PEAT			Pt	Peat muck and other highly organic soils			

Particle size descriptive terms

Name	Subdivision	Size
Boulders		>200mm
Cobbles		63mm to 200mm
Gravel	coarse	20mm to 63mm
	medium	6mm to 20mm
	fine	2.36mm to 6mm
Sand	coarse	600μm to 2.36mm
	medium	200μm to 600μm
	fine	75μm to 200μm

Minor Components

Term	Proportions	Observed properties
'Trace of'	Coarse grained: <5% Fine grained: <15%	Presence just detectable by feel or eye. Soil properties little or no different to general properties of primary component.
'With some'	Coarse grained: 5-12% Fine grained: 15-30%	Presence easily detected by feel or eye. Soil properties little different to general properties of primary component.

Density of granular soils

Term	Density index
Very loose	<15%
Loose	15 to 35%
Medium Dense	35 to 65%
Dense	65 to 85%
Very dense	>85%

Consistency of cohesive soils

Term		Undrained strength	Approximate Pocket Penetrometer Reading	Field guide
Very soft	VS	<12kPa	25kPa	A finger can be pushed well into soil with little effort
Soft	S	12 - 25kPa	25-50kPa	Easily penetrated several cm by fist
Firm	F	25 - 50kPa	50-100kPa	Soil can be indented about 5mm by thumb
Stiff	St	50-100kPa	100-200kPa	Surface can be indented but not penetrated by thumb
Very stiff	VSt	100-200kPa	200-400kPa	Surface can be marked but not indented by thumb
Hard	H	>200kPa	>400kPa	Indented with difficulty by thumb nail
Friable	Fb	-	-	Crumbles or powders when scraped by thumb nail

Moisture Condition

Dry (D)	Looks and feels dry. Cohesive soils are hard, friable or powdery. Granular soils run freely through fingers.
Moist (M)	Soil feels cool, darkened in colour. Cohesive soils are usually weakened by moisture presence, granular soils tend to cohere.
Wet (W)	As for moist soils, but free water forms on hands when sample is handled

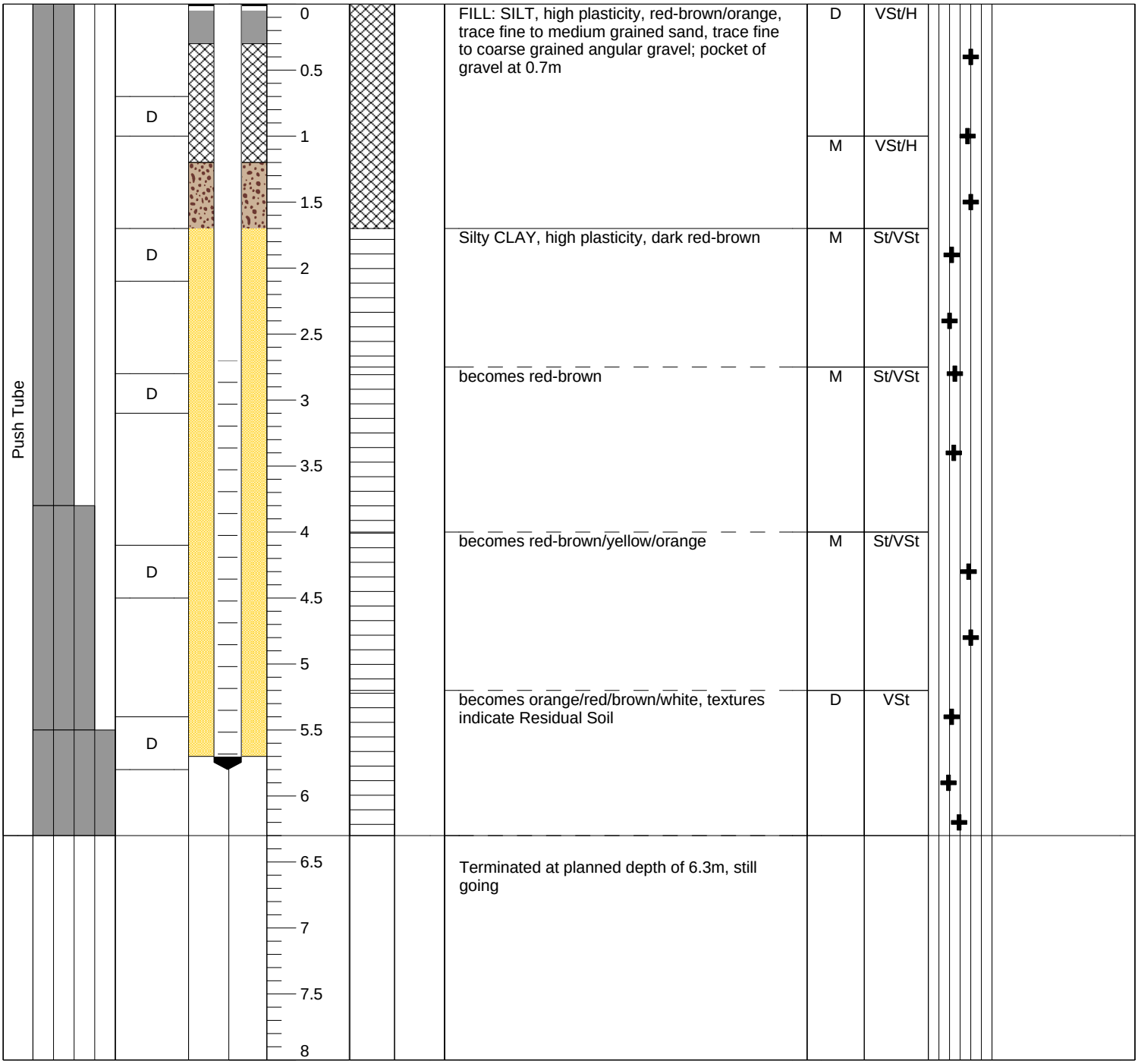
Cohesive soils can also be described relative to their plastic limit, ie: <Wp, =Wp, >Wp. The plastic limit is defined as the minimum water content at which the soil can be rolled into a thread 3mm thick.

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58/120mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH1
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405858
GDA94 Northing: 5455312
Elevation:



method

DT	Diatube
AS	Auger screwing
AD	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Piezometer Legend

- Backfill
- Bentonite
- Sand Packing
- Screen
- End Cap

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH2
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405917
GDA94 Northing: 5455315
Elevation:

Method	Penetration 1 2 3 4	Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro-meter kPa 100 200 300 400 500	Structure, additional observations
Push Tube		D		0		MH	FILL: SILT, high plasticity, red-brown/yellow, trace fine to medium grained sand, trace fine to coarse grained angular gravel	D	St		
				0.5					H		
				1			becomes red-brown; pocket of gravel at 2.0m		St/VSt		
				1.5							
				2							
				2.5			Clayey SILT, high plasticity, dark brown/red-brown	M			
				3							
				3.5			becomes red-brown				
		D		4			becomes red/orange				
				4.5			becomes red/orange/white, textures indicate Residual Soil				
				5							
				5.5			Terminated at 5.1m, still going, hard				
				6							
				6.5							
				7							
				7.5							
				8							

method

DT	Diatube
AS	Auger screwing
AH	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Notes, Samples, Tests

U50	Undisturbed sample 50mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	Vane Shear (kPa)
P	Pressure Meter
Bs	Bulk Sample
R	Refusal
E	Environmental Sample
PID	PID Measurement
WS	Water Sample

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH3
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405926
GDA94 Northing: 5455331
Elevation:

Method	Penetration 1 2 3 4	Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro-meter kPa 100 200 300 400 500	Structure, additional observations
Push Tube		D		0		MH	SILT, high plasticity, brown, trace fine to medium grained sand, trace fine to medium grained angular gravel	D	VSt		
				0.5			becomes red-brown, trace fine to medium grained sand, no gravel	D/M			
				1							
				1.5			Clayey SILT, high plasticity, red-brown, trace fine to medium grained sand	M	St/VSt		
				2			becomes red/brown/orange/yellow				
		D		2.5			textures indicate Residual Soil				
				3			becomes brown/red/yellow/white				
				3.5							
				4			becomes red/brown/grey/yellow				
				4.5							
				5							
				5.5							
				6							
				6.5			Terminated at planned depth of 6.3m, still going				
				7							
				7.5							
				8							

method

DT	Diatube
AS	Auger screwing
AH	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Notes, Samples, Tests

U50	Undisturbed sample 50mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	Vane Shear (kPa)
P	Pressure Meter
Bs	Bulk Sample
R	Refusal
E	Environmental Sample
PID	PID Measurement
WS	Water Sample

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH4
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405905
GDA94 Northing: 5455326
Elevation:

Method	Penetration 1 2 3 4	Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro-meter kPa 100 200 300 400 500	Structure, additional observations
Push Tube		D		0		MH	SILT, high plasticity, brown/red, trace fine to medium grained sand, trace fine to medium grained angular gravel	D	Fb		
				0.5				M	St		
				1							
		D		1.5			becomes brown/orange, no gravel				
				2			becomes brown/orange/grey, textures indicate Residual Soil				
		D		2.5							
				3			becomes orange/yellow/white/red/brown, trace fine to medium grained angular gravel				
				3.5							
				4			becomes brown/red/white/grey, no gravel				
		D		4.5							
				5							
				5.5							
				6							
				6.5			Terminated at planned depth of 6.3m, still going				
				7							
				7.5							
				8							

method

DT	Diatube
AS	Auger screwing
AH	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Notes, Samples, Tests

U50	Undisturbed sample 50mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	Vane Shear (kPa)
P	Pressure Meter
Bs	Bulk Sample
R	Refusal
E	Environmental Sample
PID	PID Measurement
WS	Water Sample

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH5
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405861
GDA94 Northing: 5455332
Elevation:

Method	Penetration 1 2 3 4	Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetrometer kPa 100 200 300 400 500	Structure, additional observations
Push Tube		D		0		MH	SILT, high plasticity, dark brown/brown/orange, trace fine to medium grained sand, trace fine to medium grained angular gravel	D	VSt		
				0.5				M			
				1							
				1.5			SILT, high plasticity, brown/orange, trace fine to medium grained sand				
		D		2			becomes brown/orange/red/white, no sand, no gravel				
		D		2.5							
				3			becomes orange/yellow/brown/white, textures indicate Residual Soil		St		
				3.5							
		D		4			becomes orange/white/red/brown				
				4.5							
				5							
				5.5							
				6							
				6.5			Terminated at planned depth of 6.3m, still going				
				7							
				7.5							
				8							

method

DT	Diatube
AS	Auger screwing
AH	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Notes, Samples, Tests

U50	Undisturbed sample 50mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	Vane Shear (kPa)
P	Pressure Meter
Bs	Bulk Sample
R	Refusal
E	Environmental Sample
PID	PID Measurement
WS	Water Sample

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

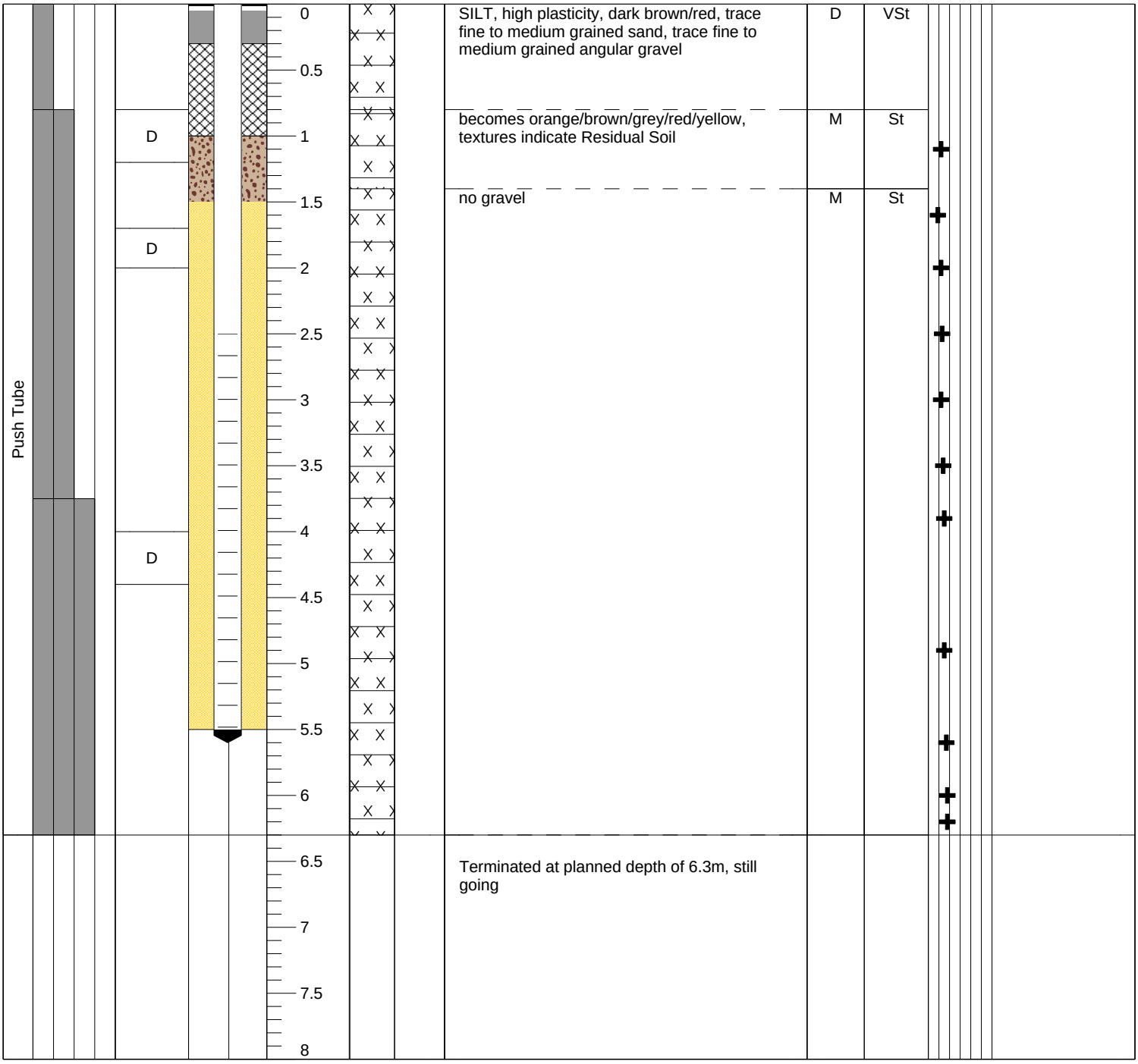
VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

ENGINEERING BOREHOLE LOG

Client: CES
Project: Geotechnical Investigation
Location: North West Regional Hospital, 23 Brickport Road, Cooee
Drill model: Centurion
Hole diameter: 58/120mm
Slope: -90 **Bearing:** 0

TASMAN geotechnics

Borehole no: BH6
Sheet no. 1 of 1
Job no. TG23212/1
Date: 3 Oct 2023
Logged By: RB
GDA94 Easting: 405880
GDA94 Northing: 5455340
Elevation:



method

DT	Diatube
AS	Auger screwing
AD	Auger drilling
RR	Roller/tricone
CB	Claw/blade bit
NMLC	NMLC core
NQ, HQ	Wireline core

water

- 17/03/18 water level on date shown
- water inflow
- partial drill fluid loss
- complete drill fluid loss

Piezometer Legend

- Backfill
- Bentonite
- Sand Packing
- Screen
- End Cap

Moisture Condition
Dry (D)
Moist (M)
Wet (W)

Cohesive soils can also be described relative to their plastic limit, ie:
<Wp
=Wp
>Wp

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard
Fb	Friable
VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

Appendix B

Landslide Risk Matrix

Terminology for use in Assessing Risk to Property

These notes are provided to help you understand concepts and terms used in Landslide Risk Assessment and are based on the "Practice Note Guidelines for Landslide Risk Management 2007" published in *Australian Geomechanics* Vol 42, No 1, 2007.

Likelihood Terms

The qualitative likelihood terms have been related to a nominal design life of 50 years. The assessment of likelihood involves judgment based on the knowledge and experience of the assessor. Different assessors may make different judgments.

Approximate Annual Probability	Implied indicative Recurrence Interval	Description	Descriptor	Level
10^{-1}	10 years	The event is expected to occur over the design life	Almost Certain	A
10^{-2}	100 years	The event will probably occur under adverse conditions over the design life	Likely	B
10^{-3}	1000 years	The event could occur under adverse conditions over the design life	Possible	C
10^{-4}	10,000 years	The event might occur under very adverse conditions over the design life	Unlikely	D
10^{-5}	100,000 years	The event is conceivable but only under exceptional circumstances over the design life	Rare	E
10^{-6}	1,000,000 years	The event is inconceivable or fanciful for the design life	Barely Credible	F

Qualitative Measures of Consequence to Property

Indicative Cost of Damage	Description	Descriptor	Level
200%	Structure(s) completely destroyed and/or large scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequential damage.	Catastrophic	1
60%	Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequential damage	Major	2
20%	Moderate damage to some of structure, and/or significant part of site requiring large stabilisation works. Could cause at least one adjacent property minor consequential damage.	Medium	3
5%	Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works	Minor	4
0.5%	Little damage.	Insignificant	5

The assessment of consequences involves judgment based on the knowledge and experience of the assessor. The relative consequence terms are value judgments related to how the potential consequences may be perceived by those affected by the risk. Explicit descriptions of potential consequences will help the stakeholders understand the consequences and arrive at their judgment.

Qualitative Risk Analysis Matrix – Risk to Property

Likelihood		Consequences to Property				
	Approximate annual probability	1: Catastrophic	2: Major	3: Medium	4: Minor	5: Insignificant
A: Almost Certain	10^{-1}	VH	VH	VH	H	L
B: Likely	10^{-2}	VH	VH	H	M	L
C: Possible	10^{-3}	VH	H	M	M	VL
D: Unlikely	10^{-4}	H	M	L	L	VL
E: Rare	10^{-5}	M	L	L	VL	VL
F: Barely credible	10^{-6}	L	VL	VL	VL	VL

NOTES:

1. The risk associated with Insignificant consequences, however likely, is defined as Low or Very Low

2. The main purpose of a risk matrix is to help rank risks and set priorities and help the decision making process.

Response to Risk

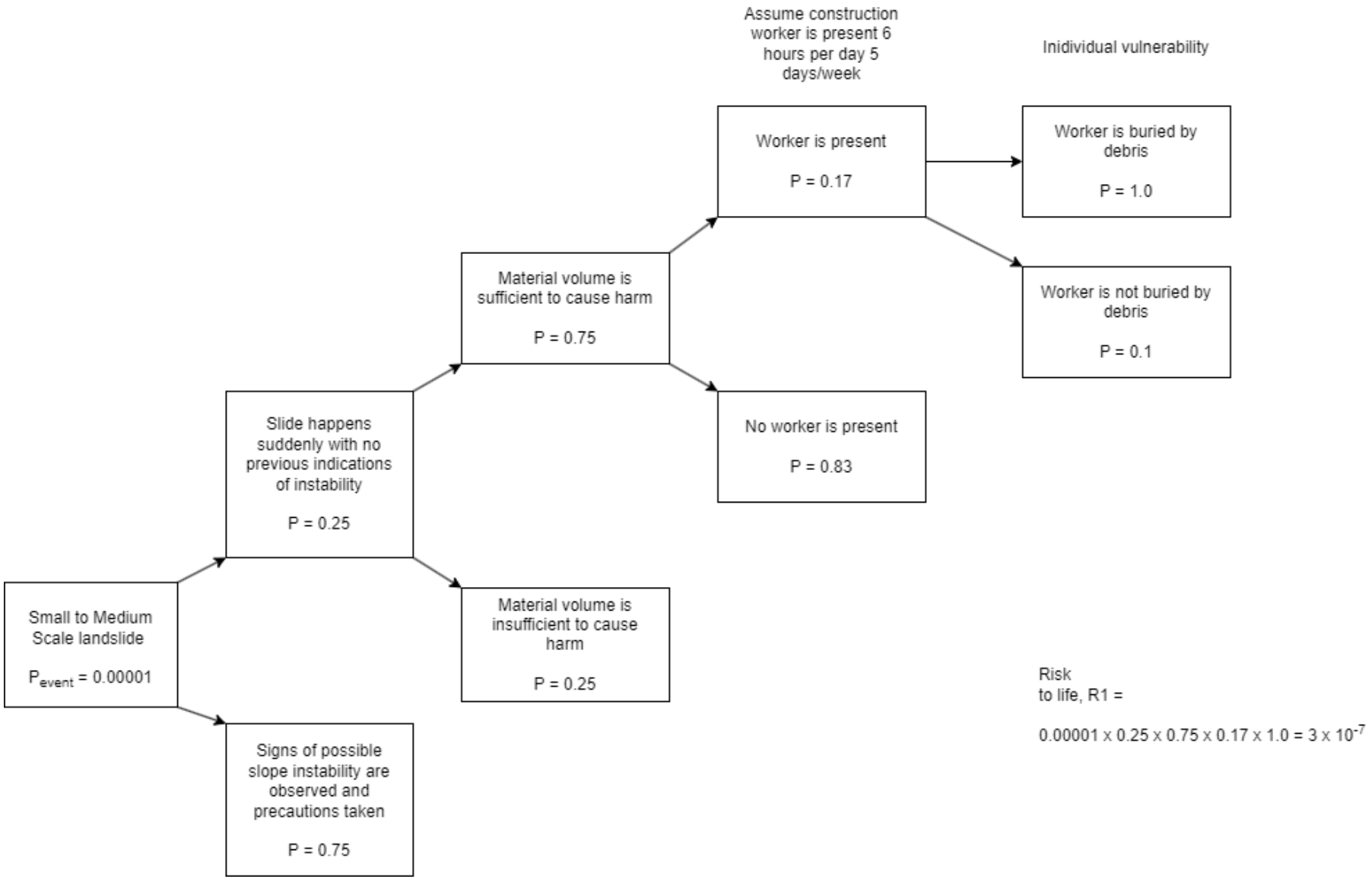
In general, it is the responsibility of the client and/or regulatory and/or others who may be affected to decide whether to accept or treat the risk. The risk assessor and/or other advisers may assist by making risk comparisons, discussing treatment options, explaining the risk management process, advising how others have reacted to risk in similar situations and making recommendations. Attitudes to risk vary widely and risk evaluation often involves considering more than just property damage (eg environmental effects, public reaction, business confidence etc).

The following is a guide to typical responses to assessed risk.

Risk Level		Example Implications
VH	Very High	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than the value of the property.
H	High	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low. Work would cost a substantial sum in relation to the value of the property.
M	Moderate	May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.
L	Low	Usually accepted by regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.
VL	Very Low	Acceptable. Manage by normal slope maintenance procedures

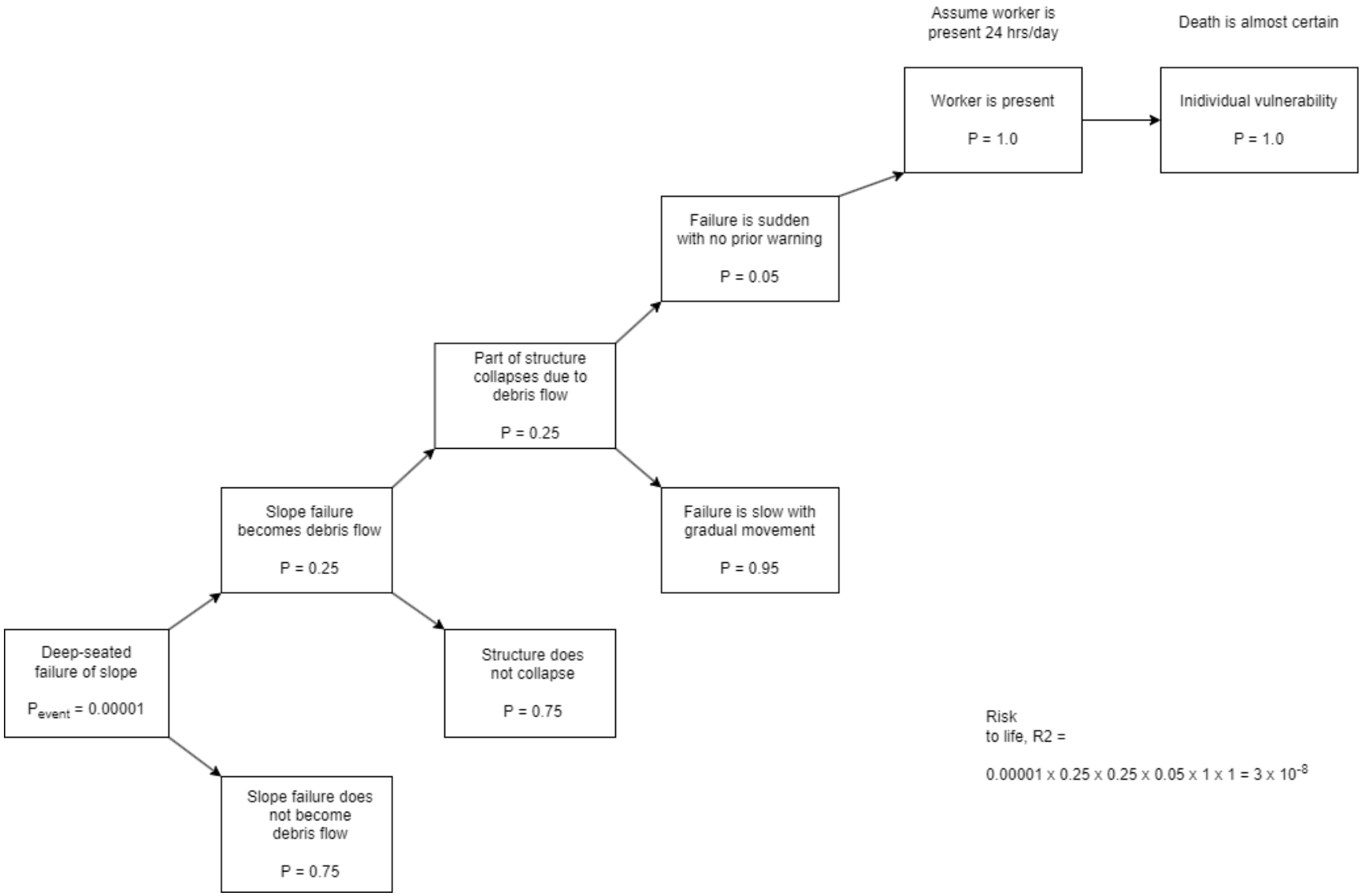
Appendix C

Risk to Life



Risk to life, R1 =

$0.00001 \times 0.25 \times 0.75 \times 0.17 \times 1.0 = 3 \times 10^{-7}$



Risk
to life, R2 =

$0.00001 \times 0.25 \times 0.25 \times 0.05 \times 1 \times 1 = 3 \times 10^{-8}$

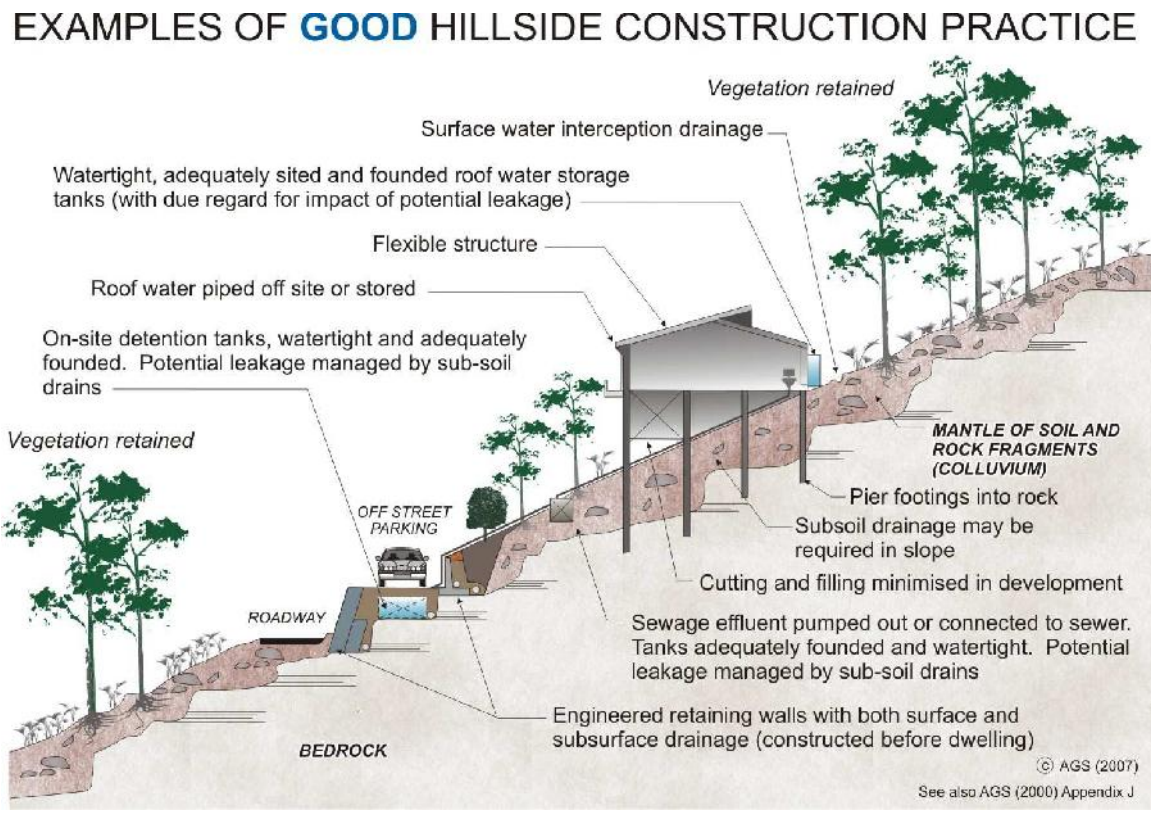
Appendix D

Guidelines to Hillside Construction

AUSTRALIAN GEOGUIDE LR8 (CONSTRUCTION PRACTICE)

HILLSIDE CONSTRUCTION PRACTICE

Sensible development practices are required when building on hillsides, particularly if the hillside has more than a low risk of instability (GeoGuide LR7). Only building techniques intended to maintain, or reduce, the overall level of landslide risk should be considered. Examples of good hillside construction practice are illustrated below.



WHY ARE THESE PRACTICES GOOD?

Roadways and parking areas - are paved and incorporate kerbs which prevent water discharging straight into the hillside (GeoGuide LR5).

Cuttings - are supported by retaining walls (GeoGuide LR6).

Retaining walls - are engineer designed to withstand the lateral earth pressures and surcharges expected, and include drains to prevent water pressures developing in the backfill. Where the ground slopes steeply down towards the high side of a retaining wall, the disturbing force (see GeoGuide LR6) can be two or more times that in level ground. Retaining walls must be designed taking these forces into account.

Sewage - whether treated or not is either taken away in pipes or contained in properly founded tanks so it cannot soak into the ground.

Surface water - from roofs and other hard surfaces is piped away to a suitable discharge point rather than being allowed to infiltrate into the ground. Preferably, the discharge point will be in a natural creek where ground water exits, rather than enters, the ground. Shallow, lined, drains on the surface can fulfil the same purpose (GeoGuide LR5).

Surface loads - are minimised. No fill embankments have been built. The house is a lightweight structure. Foundation loads have been taken down below the level at which a landslide is likely to occur and, preferably, to rock. This sort of construction is probably not applicable to soil slopes (GeoGuide LR3). If you are uncertain whether your site has rock near the surface, or is essentially a soil slope, you should engage a geotechnical practitioner to find out.

Flexible structures - have been used because they can tolerate a certain amount of movement with minimal signs of distress and maintain their functionality.

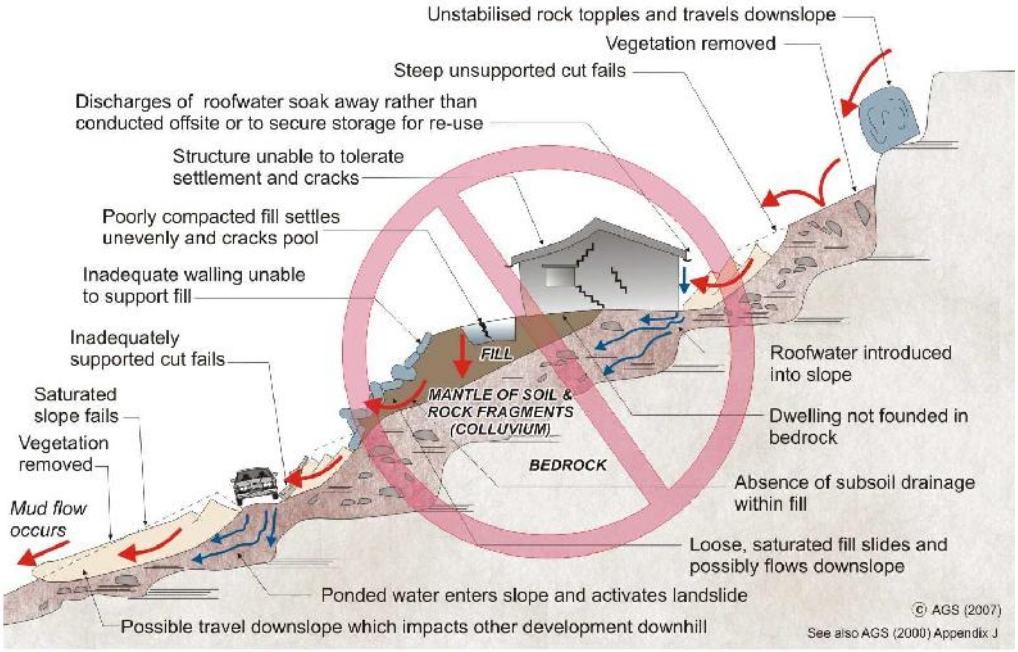
Vegetation clearance - on soil slopes has been kept to a reasonable minimum. Trees, and to a lesser extent smaller vegetation, take large quantities of water out of the ground every day. This lowers the ground water table, which in turn helps to maintain the stability of the slope. Large scale clearing can result in a rise in water table with a consequent increase in the likelihood of a landslide (GeoGuide LR5). An exception may have to be made to this rule on steep rock slopes where trees have little effect on the water table, but their roots pose a landslide hazard by dislodging boulders.

Possible effects of ignoring good construction practices are illustrated on page 2. Unfortunately, these poor construction practices are not as unusual as you might think and are often chosen because, on the face of it, they will save the developer, or owner, money. You should not lose sight of the fact that the cost and anguish associated with any one of the disasters illustrated, is likely to more than wipe out any apparent savings at the outset.

ADOPT GOOD PRACTICE ON HILLSIDE SITES

AUSTRALIAN GEOGUIDE LR8 (CONSTRUCTION PRACTICE)

EXAMPLES OF **POOR** HILLSIDE CONSTRUCTION PRACTICE



WHY ARE THESE PRACTICES POOR?

Roadways and parking areas - are unsurfaced and lack proper table drains (gutters) causing surface water to pond and soak into the ground.

Cut and fill - has been used to balance earthworks quantities and level the site leaving unstable cut faces and added large surface loads to the ground. Failure to compact the fill properly has led to settlement, which will probably continue for several years after completion. The house and pool have been built on the fill and have settled with it and cracked. Leakage from the cracked pool and the applied surface loads from the fill have combined to cause landslides.

Retaining walls - have been avoided, to minimise cost, and hand placed rock walls used instead. Without applying engineering design principles, the walls have failed to provide the required support to the ground and have failed, creating a very dangerous situation.

A heavy, rigid, house - has been built on shallow, conventional, footings. Not only has the brickwork cracked because of the resulting ground movements, but it has also become involved in a man-made landslide.

Soak-away drainage - has been used for sewage and surface water run-off from roofs and pavements. This water soaks into the ground and raises the water table (GeoGuide LR5). Subsoil drains that run along the contours should be avoided for the same reason. If felt necessary, subsoil drains should run steeply downhill in a chevron, or herring bone, pattern. This may conflict with the requirements for effluent and surface water disposal (GeoGuide LR9) and if so, you will need to seek professional advice.

Rock debris - from landslides higher up on the slope seems likely to pass through the site. Such locations are often referred to by geotechnical practitioners as "debris flow paths". Rock is normally even denser than ordinary fill, so even quite modest boulders are likely to weigh many tonnes and do a lot of damage once they start to roll. Boulders have been known to travel hundreds of metres downhill leaving behind a trail of destruction.

Vegetation - has been completely cleared, leading to a possible rise in the water table and increased landslide risk (GeoGuide LR5).

DON'T CUT CORNERS ON HILLSIDE SITES - OBTAIN ADVICE FROM A GEOTECHNICAL PRACTITIONER

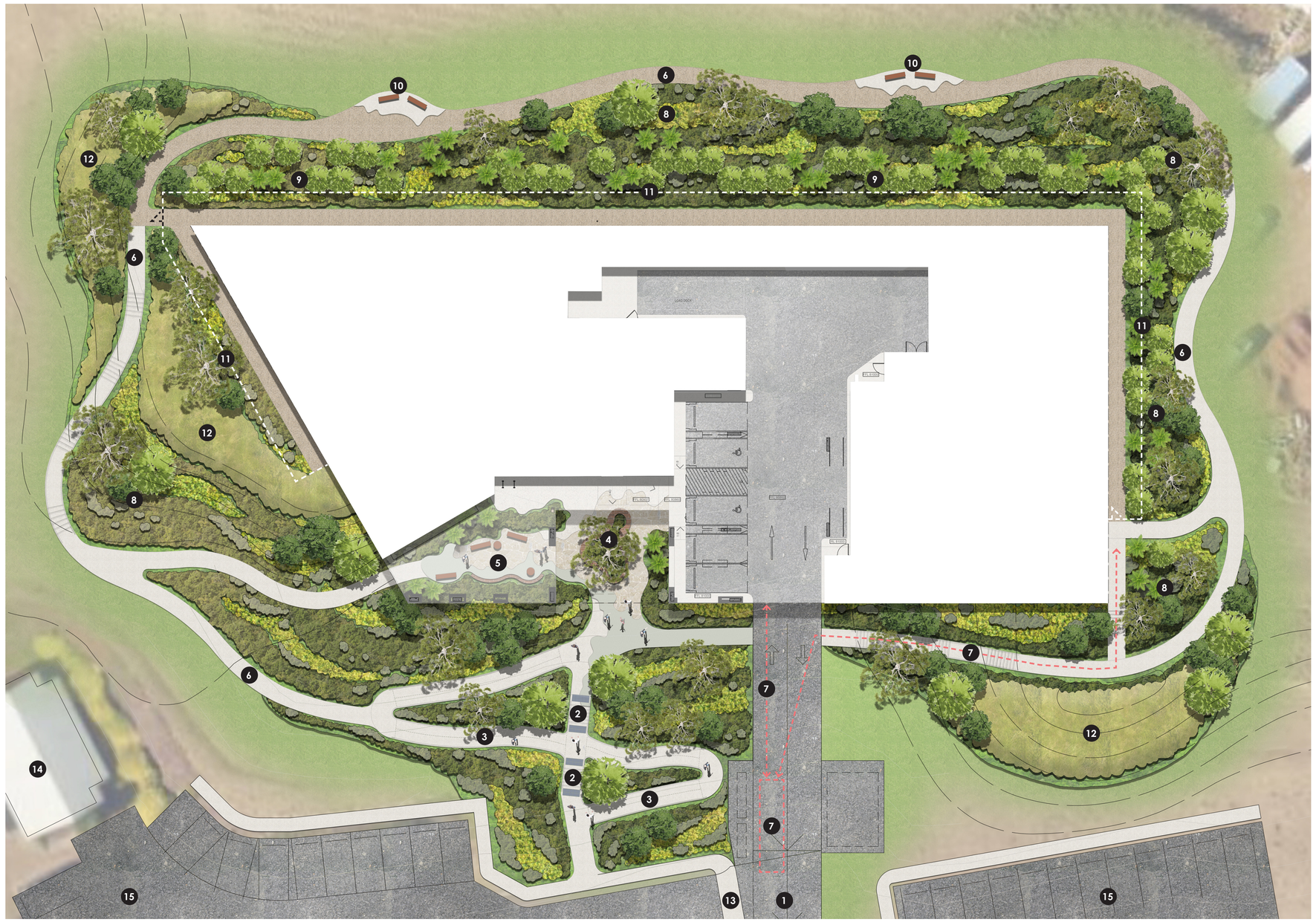
More information relevant to your particular situation may be found in other Australian GeoGuides:

- GeoGuide LR1 - Introduction
- GeoGuide LR2 - Landslides
- GeoGuide LR3 - Landslides in Soil
- GeoGuide LR4 - Landslides in Rock
- GeoGuide LR5 - Water & Drainage
- GeoGuide LR6 - Retaining Walls
- GeoGuide LR7 - Landslide Risk
- GeoGuide LR9 - Effluent & Surface Water Disposal
- GeoGuide LR10 - Coastal Landslides
- GeoGuide LR11 - Record Keeping

The Australian GeoGuides (LR series) are a set of publications intended for property owners; local councils; planning authorities; developers; insurers; lawyers and, in fact, anyone who lives with, or has an interest in, a natural or engineered slope, a cutting, or an excavation. They are intended to help you understand why slopes and retaining structures can be a hazard and what can be done with appropriate professional advice and local council approval (if required) to remove, reduce, or minimise the risk they represent. The GeoGuides have been prepared by the Australian Geomechanics Society, a specialist technical society within Engineers Australia, the national peak body for all engineering disciplines in Australia, whose members are professional geotechnical engineers and engineering geologists with a particular interest in ground engineering. The GeoGuides have been funded under the Australian governments' National Disaster Mitigation Program.

NORTH WEST REGIONAL HOSPITAL MENTAL HEALTH PRECINCT | **LANDSCAPE DEVELOPMENT APPLICATION PACKAGE**





DRAWING KEY

1. Vehicle entry / exit to hospital carpark
2. Stepped pedestrian entry through native planting
3. Ramped / accessible pedestrian entry through landscape
4. Courtyard with raised organic-shaped planters and large feature tree. Textural hardstand materials throughout
5. Undercover forecourt with seating / break out space. Textural hardstand materials throughout
6. Pedestrian pathway around building to connect external spaces
7. Fire truck and path of travel (less than 50m) to fire hydrant on north west corner of building
8. Layered vegetation within periphery planting to provide privacy to hospital courtyards while maintaining certain viewsheds out to greater landscape
9. Sheltered planting to rear of building, using columnar and cascading planting to provide privacy. Lush rainforest species in this area
10. Seating nodes nestled in various locations around path network
11. Fence within garden to stop public access to building apron. Gates with access control
12. Low mounding with coastal dune grass plantings
13. Connection to existing pedestrian path network
14. Existing building
15. Existing road infrastructure

LANDSCAPE LOOK AND FEEL PRECEDENTS







PLANTING PALETTE

TREES

Image #	1	2	3	4	5	6
Latin name	*Allocasuarina littoralis*	*Banksia integrifolia*	*Eucalyptus pauciflora 'Little Snowman'*	*Eucalyptus pulchella*	*Leptospermum lanigerum*	*Melaleuca ericafolia*
Common name	Black Sheoak	Coastal Banksia	Dwarf Snowgum	White Peppermint	Wooly Tea Tree	Swamp Paperbark
Mature size (H x W)	6 x 3	6 x 3	6 x 4	10 x 6	3 x 3	6 x 4
Notes	Australian species	Australian species	Australian cultivar	Tasmanian native	Australian species	Australian species

SHRUBS & FEATURES

Image #	7	8	9	10	11	12	13	14	15	16
Latin name	*Adenanthos sericeus*	*Banksia marginata*	*Callistemon 'Little John'*	Convolvulus cneorum	*Correa alba*	*Dicksonia antarctica*	Leucophyta brownii	*Melaleuca squarrosa*	*Polystichum proliferum*	*Westringia fruiticosa*
Common name	Wooly Bush	Silver Banksia	Dwarf Bottlebrush	Silver Bush	White Correa	Man Fern	Cushion Bush	Scented Paperbark	Mother Shield Fern	Coastal Rosemary
Mature size (H x W)	3 x 2	3 x 2	0.8 x 1	1 x 1	3 x 2	4 x 2.5	1 x 1	3 x 2	1 x 1	1.2 x 1.5
Notes	Australian species	Australian species	Australian cultivar	Exotic species	Australian species	Australian species	Australian species	Tasmanian species	Australian species	Australian species

GRASSES, CLIMBERS & GROUNDCOVERS

Image #	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Latin name	*Anigozanthos flavidus*	*Calamagrostis 'Karl Foerster'*	*Carpobrotus rossii*	*Casuarina glauca 'Cousin It'*	*Chrysocephalum apiculatum*	*Correa alba 'Silver Stars'*	*Craspedia glauca*	*Dianella tasmanica*	*Disphyma crassifolium 'White Wash'*	*Ficinia nodosa*	*Myoporum parvifolium*	*Poa poiformis*	*Scleranthus biflorus*	*Viola hederacea*
Common name	Kangaroo Paw	Feather Reed Grass	Coastal Pigface	Cousin It	Common Everlasting	Prostrate Correa	Billy Buttons	Tasmanian Flax Lily	Round Leafed Pigface	Knobby Clubrush	Creeping Boobialla	Coastal Tussock Grass	Canberra Grass	Native violet
Mature size (H x W)	0.8 x 0.8	1 x 0.6	0.1 x 0.3	0.6 x 0.8	0.6 x 0.6	0.3 x 1.2	0.5 x 0.5	0.6 x 0.6	0.3 x 1.2	0.5 x 0.5	0.3 x 1.5	0.8 x 0.8	0.2 x 1	0.3 x 1.2
Notes	Australian species	Australian cultivar	Tasmanian species	Australian cultivar	Tasmanian species	Australian cultivar	Tasmanian species	Tasmanian species	Tasmanian cultivar	Australian species	Australian species	Australian species	Australian species	Australian species





GENERAL

1. TENDERER SHALL MAKE THEMSELVES AWARE OF THE LOCAL COUNCIL AND AUSTROADS STANDARDS FOR ALL CIVIL WORKS. TENDERERS SHALL MAKE ALL NECESSARY ALLOWANCES FOR WORKS TO BE CARRIED OUT IN ACCORDANCE WITH STANDARDS WITHIN THE TENDER PRICE.

2. THE CONTRACTOR IS TO NOTIFY ALL RELEVANT STATUTORY AUTHORITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS ON SITE FOR THE POSSIBLE LOCATION OF ANY EXISTING SERVICES NOT SHOWN ON THESE PLANS. THE SUPERINTENDENT SHALL BE NOTIFIED OF ANY SERVICES THAT ARE NOT SHOWN IN THE DOCUMENTATION. ALL EXISTING SERVICES ARE TO BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO EXISTING SERVICES IS TO BE MADE GOOD AT THE CONTRACTORS EXPENSE.

3. THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED FOR COUNCIL APPROVAL AND TENDERING PURPOSES ONLY THEY ARE NOT TO BE USED FOR CONSTRUCTION. A CONSTRUCTION SET WILL BE ISSUED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

4. COMMON TRENCHING; THE FOLLOWING CLEARANCE DISTANCES (BARREL TO BARREL) MUST BE MAINTAINED FROM EXISTING OR PROPOSED SERVICES, FOR ALL COMMON TRENCHING:
HORIZONTAL:
- 300mm ALONG A LENGTH GREATER THAN 2m
- 500mm MINIMUM FROM ANY MAIN GREATER THAN Ø200mm
-150mm MINIMUM ALONG LENGTH LESS THAN 2m

VERTICALLY:
- 150mm MINIMUM
- 300mm MINIMUM FROM ANY MAIN GREATER THAN Ø200mm

ELECTRICAL CABLES SHALL BE MINIMUM DISTANCE OF 400mm OF WHICH 300mm SHOULD BE IN NATURAL AND UNDISTURBED MATERIAL.

5. LOCAL ENERGY SUPPLIER TRENCHING; THE CONTRACTOR IS TO ALLOW FOR EXCAVATION AND BACKFILLING FOR ALL INSTALLATION OF LOCAL ENERGY SUPPLIER CABLES. WHERE REQUIRED CONTRACTOR IS TO LIAISE WITH ENERGY SUPPLIER FOR THE EXTENT OF CABLE TRENCHING.

6. TELECOMMUNICATION TRENCHING; THE CONTRACTOR IS TO ALLOW FOR EXCAVATION AND BACKFILLING FOR ALL INSTALLATION OF LOCAL TELECOMMUNICATION SUPPLIER CABLES. WHERE REQUIRED CONTRACTOR IS TO LIAISE WITH LOCAL TELECOMMUNICATION SUPPLIER FOR THE EXTENT OF CABLE TRENCHING.

7. EXISTING SERVICES ARE TO BE LOCATED PRIOR TO COMMENCING DEMOLITION OR SITE WORKS. THE CONTRACTOR IS TO ARRANGE AND PAY FOR THE ON SITE MARKING AND CONFIRMATION OF DEPTH OF SERVICE AND LOCATION FOR ALL UNDERGROUND SERVICES INCLUDING LOCAL TELECOMMUNICATION, ENERGY, WATER AUTHORITY AND COUNCIL SERVICES (i.e. STORMWATER) IN THE AREA OF NEW WORKS. LOCATION TO BE CONFIRMED USING CABLE LOCATORS AND HAND DIGGING METHODS. PRIOR TO ANY WORK ON SITE, ANY CLASHES WITH DESIGNED SERVICES ON FOLLOWING DRAWINGS ARE TO BE REPORTED TO DESIGN ENGINEER FOR DIRECTION.

8. COUNCIL AND AUTHORITIES APPROVALS; ALL WORKS ARE TO BE IN ACCORDANCE WITH APPROVAL FROM WATER AUTHORITY (CERTIFICATE OF CONSENT) AND LOCAL COUNCIL (DEVELOPMENT APPLICATION).

9. THE CONTRACTOR IS TO ALLOW FOR TEMPORARY WORKS SUCH AS DIVERSION MAINS OF EQUAL CAPACITY TO EXISTING AND PUMPED SYSTEMS AS REQUIRED TO ALLOW NEW WORKS OR MODIFICATION TO EXISTING BE CARRIED OUT WITH MINIMAL INTERRUPTION TO SITE WATER RETICULATION AND DRAINAGE SERVICES.

10. WHERE EXISTING SERVICES ARE LOCATED WITHIN 600mm OF NEW BUILDING WORKS THEY SHALL BE DIVERTED AND RELAID TO ENGINEERS SITE DIRECTION.

11. DISRUPTION TO EXISTING SERVICES; THE CONTRACTOR SHALL ORGANISE SEQUENCE OF WORKS TO ENSURE MINIMUM DISRUPTION TO EXISTING ACTIVE SERVICES. ANY INTERRUPTIONS ARE TO BE APPROVED BY THE PRINCIPAL.

PAVEMENT SPECIFICATION

THE PAVEMENT WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING DEPARTMENT OF STATE GROWTH SPECIFICATIONS:
SECTION 204 - EARTHWORKS - AUG 2016
SECTION 304 - UNBOUND FLEXIBLE PAVEMENT CONSTRUCTION - AUG 2016
SECTION 304 - PREPARATION OF GRANULAR PAVEMENTS FOR BITUMINOUS SURFACING - AUG 2016
SECTION 407 - DENSE GRADED ASPHALT - FEB 2022
SECTION 408 - SPRAYED BITUMINOUS SURFACINGS - DEC 2020
ALL THE DEPARTMENT OF STATE GROWTH SPECIFICATIONS REFERENCED IN THESE SECTIONS.

CONCRETE FINISHES

CONCRETE SHALL BE FINISHED IN ACCORDANCE WITH THE FOLLOWING UNLESS OTHERWISE NOTED:
GENERAL CONCRETE
- FORMED SURFACES THAT WILL BE VISIBLE ONCE THE WORKS ARE COMPLETE - CLASS 3 TO AS3610.1-2018 TABLE 3.2.3.
- FORMED SURFACES THAT WILL BE BURIED AND WILL NOT BE VISIBLE ONCE THE WORKS ARE COMPLETE - CLASS 4 TO AS3610.1-2018 TABLE 3.2.3.
- UNFORMED SURFACES THAT WILL BE VISIBLE ONCE THE WORKS ARE COMPLETE - BURNISHED STEEL TROWEL TO NATSPEC CLASS A TOLERANCE.
- UNFORMED SURFACES THAT WILL BE BURIED AND WILL NOT VISIBLE ONCE THE WORKS ARE COMPLETE - BURNISHED STEEL TROWEL TO NATSPEC CLASS A TOLERANCE.
- UNFORMED SURFACES THAT WILL BE TRAFFICABLE AND VISIBLE ONCE THE WORKS ARE COMPLETE - BURNISHED STEEL TROWEL TO NATSPEC CLASS A TOLERANCE THEN BROOMED TO FORM A NON-SLIP FINISH.
- UNFORMED SURFACES FOR KERBS AND VEE DRAINS - STEEL TROWEL TO LGAT STANDARDS.

EARTHWORKS

1. GENERAL EARTHWORKS, MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THESE DRAWINGS AND THE CURRENT EDITION OF THE S.A.A. CODE FOR EARTHWORKS AS3798 TOGETHER WITH ANY CODES, STANDARDS OR REGULATIONS REFERRED TO THEREIN. A COPY OF AS3798 SHALL BE RETAINED ON SITE AT ALL TIMES.

2. THE CONTRACTOR IS TO ENGAGE AN APPROVED GEOTECHNICAL ENGINEER TO CARRY OUT LEVEL 3 TESTING OF ALL EARTHWORKS TO AS3798, INCLUDING:
- SUBGRADE
- FILLS
- PAVEMENTS
- BACKFILLING OF SERVICE TRENCHES

CERTIFICATION OF THESE ELEMENTS IS TO BE PROVIDED PROGRESSIVELY AND PRIOR TO PRACTICAL COMPLETION.

3. AREAS OF FILL; REMOVE TOPSOIL AND ORGANIC MATERIAL, PROOF ROLL SUBGRADE IN ACCORDANCE WITH AS1289 TO:
- 98% STANDARD DRY DENSITY UNDER BUILDING
- 100% STANDARD DRY DENSITY UNDER ROADS AND CARPARKS
- REMOVE ANY SOFT SPOTS AND AND COMPACT WITH 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE.

ROADWORKS/PAVEMENT/FOOTPATHS/TURF

1. ALL WORKS ARE TO BE CARRIED OUT TO THE LOCAL COUNCIL AND AUSTROADS STANDARDS. ANY DEPARTURES FROM THESE STANDARDS REQUIRES PRIOR APPROVAL OF SUPERINTENDENT AND THE LOCAL COUNCIL WORKS SUPERVISOR.

2. INSPECTIONS; THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING THE FOLLOWING INSPECTIONS WITH SUPERINTENDENT. MINIMUM 48 HOURS NOTICE IS REQUIRED TO BE GIVEN TO THE SUPERINTENDENT PRIOR TO INSPECTION.
- SUBGRADE PREPARATION.
- SUB-BASE FOR ROADS, CARPARKS AND KERBS.
- BASE COURSE.
- FINAL TRIM PRIOR TO PLACING KERBS.
- FINAL TRIM PRIOR TO SEALING.

3. TESTING; THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING AND PAYING ALL COSTS ASSOCIATED WITH TESTING IN ACCORDANCE WITH D.I.E.R. SPEC G4 COMPACTION ASSESSMENT.

4. HOTMIX; ALL HOTMIX IS TO BE BLACK IN COLOUR AND IS TO MEET AND BE PLACED IN ACCORDANCE WITH D.I.E.R. RSS-DENSE GRADED ASPHALT.

5. KERBS; ALL KERBS ARE TO BE AS SHOWN ON DRAWINGS AND BE IN ACCORDANCE WITH LGAT STANDARDS.

6. ROAD RESERVE WORKS; ALL WORKS IN (OR REQUIRING OCCUPATION) IN THE ROAD RESERVE MUST BE UNDERTAKEN BY CONTRACTORS REGISTERED WITH THE LOCAL COUNCIL (REGISTERED CONTRACTOR)

STORMWATER

1. ALL WORKS ARE TO BE CARRIED OUT TO THE LOCAL COUNCIL AND D.I.E.R. STANDARDS. ANY DEPARTURES FROM THESE STANDARDS REQUIRES PRIOR APPROVAL OF SUPERINTENDENT AND THE LOCAL COUNCIL WORKS SUPERVISOR. ALL STORMWATER PLUMBING AND DRAINAGE IS TO COMPLY WITH AS3500.3-2003.

2. TESTING; ALL DRAINAGE WORKS SHALL BE SUBJECTED TO TESTS PRESCRIBED BY THE AUTHORITIES HAVING JURISDICTION OVER VARIOUS SERVICES. ANY SECTION FAILING SUCH TESTS SHALL BE REMOVED AND PROPERLY INSTALLED AT THE CONTRACTORS EXPENSE.

3. MANHOLES ARE TO BE 1050 I.D. PRECAST CONCRETE INSTALLED TO LOCAL COUNCIL STANDARDS. ALL MANHOLES IN TRAFFICKED AREAS ARE TO BE FITTED WITH HEAVY DUTY GATIC COVERS AND SURROUNDS.

4. SIDE ENTRY PITS;
- PIT INVERT DEPTHS VARY, REFER SITE PLAN.
- BENCH OUT IN A NEAT AND TIDY MANNER TO ENGINEERS APPROVAL.
- GRATED PIT - GULLY HINGED OR OTHER TYPE APPROVED.
- CONCRETE KERB LINTEL - STEEL KERB LINTEL AND 1200 LONG GALV. BAR
- INSTALL STEP IRING IF REQUIRED BY DEPTH.

5. AS INSTALLED DRAWINGS; THE CONTRACTOR IS RESPONSIBLE FOR PRODUCING "AS INSTALLED" DRAWINGS TO THE STANDARD REQUIRED BY THE LOCAL COUNCIL. THE DRAWINGS SHALL BE CERTIFIED AS BEING CORRECT BY EITHER A CHARTERED CIVIL ENGINEER OR A REGISTERED SURVEYOR. THIS SERVICE CAN BE PROVIDED BY CES, HOWEVER THE CONTRACTOR WILL BE CHARGED FOR THIS SERVICE, CONTRACTORS SHALL ALLOW FOR THIS WHEN PRICING.

6. INSPECTIONS; THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING THE FOLLOWING INSPECTIONS WITH THE SUPERINTENDENT. MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO BE GIVEN TO THE SUPERINTENDENT PRIOR TO THE INSPECTION.
- PIPEWORK BEDDING.
- INSTALLED PIPE PRIOR TO BACKFILLING.
- BACKFILLING.

WATER RETICULATION

1. ALL WATER RETICULATION WORKS TO COMPLY WITH WSA 02-2011-3.1 MRWA EDITION VERSION 2 AND WATER SERVICES ASSOCIATION OF AUSTRALIA STANDARDS. ANY DEPARTURES FROM THESE STANDARDS REQUIRES THE PRIOR (NRM) APPROVAL OF THE SUPERINTENDENT AND LOCAL WATER AUTHORITY WORKS SUPERVISOR.

2. TESTING; ALL WATER RETICULATION WORKS SHALL BE SUBJECTED TO TESTS PRESCRIBED BY THE AUTHORITIES HAVING JURISDICTION OVER VARIOUS SERVICES. ANY SECTION FAILING SUCH TESTS SHALL BE REMOVED AND PROPERLY INSTALLED AT THE CONTRACTORS EXPENSE.

3. FIRE HYDRANTS ARE TO BE AS SHOWN ON DRAWINGS. THE CONTRACTOR IS TO ALLOW TO PLACE STANDARD MARKERS AS REQUIRED BY THE LOCAL AUTHORITY.

4. TRENCHES AND BACKFILLING; ALL TRENCHES ARE TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH DRAWINGS AND LOCAL WATER AUTHORITY STANDARDS.

5. THRUST AND ANCHOR BLOCKS ARE TO BE PROVIDED AT BENDS, VALVES, HYDRANTS AND LINE ENDS IN ACCORDANCE WIT THE LOCAL WATER AUTHORITY STANDARDS.

6. INSPECTIONS; THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING THE FOLLOWING INSPECTIONS WITH THE SUPERINTENDENT. MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO BE GIVEN TO THE SUPERINTENDENT PRIOR TO THE INSPECTION.
- PIPEWORK BEDDING.
- INSTALLED PIPE PRIOR TO BACKFILLING.
- BACKFILLING.

7. PIPE CLEANING; THE CONTRACTOR IS TO ALLOW TO CLEANSE WATER MAINS BY FLUSHING WITH SODIUM HYPOCHLORIDE AS DIRECTED BY LOCAL AUTHORITY.

8. AS INSTALLED DRAWINGS; THE CONTRACTOR IS RESPONSIBLE FOR PRODUCING "AS INSTALLED" DRAWINGS TO THE STANDARD REQUIRED BY THE LOCAL WATER AUTHORITY. THE DRAWINGS SHALL BE CERTIFIED AS BEING CORRECT BY EITHER A CHARTERED CIVIL ENGINEER OR A REGISTERED SURVEYOR. THIS SERVICE CAN BE PROVIDED BY CES, HOWEVER THE CONTRACTOR WILL BE CHARGED FOR THIS SERVICE, CONTRACTORS SHALL ALLOW FOR THIS IN THEIR PRICING.

9. WATER CONNECTIONS; UNLESS OTHERWISE STATED WATER CONNECTIONS ARE TO BE 20mm AND INSTALLED AS PER THE LOCAL WATER AUTHORITY REQUIREMENTS AND AS3500.1-2003 STANDARDS.

SOIL AND WATER MANAGEMENT

1. ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH 'SOIL & WATER MANAGEMENT ON BUILDING & CONSTRUCTION SITES' GUIDELINES AVAILABLE FROM NORTHERN RESOURCE MANAGEMENT (NRM).

2. SOIL EROSION CONTROL IN ACCORDANCE WITH NRM GUIDELINES, CONTRACTORS TO ALLOW TO:-
-LIMIT DISTURBANCE WHEN EXCAVATING BY PRESERVING VEGETATION WHEREVER POSSIBLE.
-DIVERT UPSLOPE WATER WHERE PRACTICAL.
-INSTALL SEDIMENT FENCES DOWN SLOPE OF ALL DISTURBED LANDS TO FILTER LARGE PARTICLES PRIOR TO STORMWATER SYSTEM.
-WASH EQUIPMENT IN DESIGNATED AREA THAT DOES NOT DRAIN INTO STORM WATER SYSTEM.
-PLACE ON-SITE STOCK PILES AWAY FROM ON-SITE DRAINAGE AND UP SLOPE FROM SEDIMENT FENCES.
-LEAVE & MAINTAIN VEGETATED FOOT PATH.
-STORE ALL HARD WASTE & LITTER IN A DESIGNATED AREA THAT WILL PREVENT IT FROM BEING BLOWN AWAY AND WASHED INTO STORMWATER SYSTEM.
-RESTRICT VEHICLE MOVEMENT TO STABALISED ACCESS.

3.CONTRACTORS ARE TO COMPLETE ALL WORK IS IN ACCORDANCE WITH NRM SOIL AND WATER MANAGEMENT ON BUILDING AND CONSTRUCTION SITE USING THE FOLLOWING FACT SHEETS:
-FACT SHEET 1: SOIL & WATER MANAGEMENT ON LARGE BUILDING & CONSTRUCTION SITES.
-FACT SHEET 2: SOIL & WATER MANAGEMENT ON STANDARD BUILDING & CONSTRUCTION SITES.
-FACT SHEET 3: SOIL & WATER MANAGEMENT PLANS.
-FACT SHEET 4: DISPERSIVE SOILS - HIGH RISK OF TUNNEL EROSION.
-FACT SHEET 5: MINIMISE SOIL DISTURBANCE.
-FACT SHEET 6: PRESERVE VEGETATION.
-FACT SHEET 7: DIVERT UP-SLOPE WATER.
-FACT SHEET 8: EROSION CONTROL MATS & BLANKETS.
-FACT SHEET 9: PROTECT SERVICE TRENCHES & STOCK PILES.
-FACT SHEET 10: EARLY ROOF DRAINAGE CONNECTION.
-FACT SHEET 11: SCOUR PROTECTION - STORM WATER PIPE OUTFALLS & CHECK DAMS.
-FACT SHEET 12: STABILISED SITE ACCESS.
-FACT SHEET 13: WHEEL WASH.
-FACT SHEET 14: SEDIMENT FENCES AND FIBRE ROLLS.
-FACT SHEET 15: PROTECTION OF STORM WATER PITS.
-FACT SHEET 16: MANAGE CONCRETE BRICK & TILE CUTTING.
-FACT SHEET 17: SEDIMENT BASINS
-FACT SHEET 18: DUST CONTROL.
-FACT SHEET 19: SITE RE-VEGETATION.

CONSTRUCTION SPECIFIC WORKS - PLUMBING

1. DUE TO THE AGE REQUIREMENTS OF BUILDING AND REQUIREMENTS OF NEW BUILDING WORKS TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS, BUILDING CODES OF AUSTRALIA, LOCAL AUTHORITY (COUNCIL AND WATER / SEWER) AND STATE FIRE SERVICE REQUIREMENTS. CONTRACTORS TO COMPLETE ALL NECESSARY CHECKS AND ASSESSMENTS LISTED BELOW TO ENSURE THE BUILDING WORKS ARE READY FOR CERTIFICATE OF OCCUPANCY AND CERTIFICATE OF COMPLETION.

2. ON SITE TESTING IS TO BE CARRIED OUT DURING ESTABLISHMENT AND PRIOR TO COMMENCEMENT OF NEW WORKS. PROVIDE LATENT CONDITIONS REPORT TO ENGINEER FOR PRICING. THIS REPORT IS TO IDENTIFY INFRASTRUCTURE UPGRADED WORKS AT FRONT END OF THE PROJECT.

3. NO VARIATION WILL BE PAID FOR LATENT PLUMBING CONDITIONS THAT HAVE NOT BEEN IDENTIFIED DURING ON SITE TESTING AND LATENT CONDITIONS REPORT.

4. THESE WORKS ARE TO BE INCLUDED IN CONTRACTORS TENDER AS AGREED WITH SUPERINTENDENT.

5. LOCATE EXISTING SERVICES WITH CABLE LOCATORS, POT HOLING, SUCTION TRUCK, DIGGING AND UNDERGROUND CCTV CAMERA INSPECTION.

6. COMPLIANCE WORKS; CONTRACTORS ARE TO COMPLETE THE FOLLOWING WORKS:
- FLOW TEST ALL INTERNAL AND EXTERNAL FIRE HYDRANTS FOR COMPLIANCE WITH AS2419.1-2005. NOTIFY RESULTS TO ENGINEER FOR APPROVAL.
- FLOW TEST ALL FIRE HOSE REEL FOR COMPLIANCE WITH AS1851.9-2005. NOTIFY RESULTS TO ENGINEER FOR APPROVAL.
- UPGRADE FIRE HOSE REEL AND HYDRANTS TO ACHIEVE COMPLIANCE WITH THESE DRAWINGS, OCCUPANCY AND COMPLETION.
- PRESSURE TEST AND DIE TEST EXISTING SEWER SYSTEM PRIOR TO COMMENCING WORKS AND CHECK FOR LEAKS OR DEFECTS. MAKE GOOD DEFECTIVE AREAS AND PROVIDE CERTIFIED RESULTS TO ENGINEER FOR APPROVAL AS PART OF LATENT CONDITIONS REPORT PREPARED AT FRONT END OF PROJECT. RE-TEST AFTER COMPLETION OF WORKS AND PROVIDE RESULTS PRIOR TO HAND OVER.

LINE TYPE LEGEND

eSW	EXISTING STORMWATER LINE
eS	EXISTING SEWER LINE
eW	EXISTING WATER LINE
FH	EXISTING FIRE HYDRANT LINE
eE	EXISTING ELECTRICITY LINE
eTEL	EXISTING TELECOMMUNICATION LINE
S	PROPOSED SEWER LINE
W	PROPOSED WATER LINE
FH	PROPOSED FIRE HYDRANT LINE
SW	PROPOSED STORMWATER LINE
	PROPOSED AG DRAIN

LEGEND

eSW-GP	EXISTING STORMWATER GRATED PIT
eSW-MH	EXISTING STORMWATER MANHOLE
eS-MH	EXISTING SEWER MANHOLE
eTP	EXISTING TELSTRA PIT
eET	EXISTING ELECTRICITY TURRET
eLP	EXISTING LIGHT POLE
SW-GP	PROPOSED STORMWATER GRATED PIT
SW-MH	PROPOSED STORMWATER MANHOLE
S-MH	PROPOSED SEWER MANHOLE
FH	PROPOSED FIRE HYDRANT
DP	PROPOSED DOWNPIPE

CIVIL DRAWINGS

DRAWING NUMBER	DRAWING NAME
NWHHP-CV-1A-01	CIVIL NOTES
NWHHP-CV-2LP-01	LOCALITY PLAN
NWHHP-CV-2E-01	OVERALL EXISTING SITE SURVEY PLAN
NWHHP-CV-2E-02	EXISTING SURVEY PLAN
NWHHP-CV-2EB-01	BULK EARTHWORKS PLAN
NWHHP-CV-2CP-01	CUT/FILL ANALYSIS PLAN
NWHHP-CV-2CP-01	CIVIL PAVEMENT PLAN
NWHHP-CV-2CW-01	CIVIL WORKS PLAN
NWHHP-CV-2LC-01	LONG AND CROSS SECTION KEY PLAN
NWHHP-CV-3LC-01	LONG SECTIONS-SHEET 1
NWHHP-CV-3LC-02	LONG SECTIONS-SHEET 2
NWHHP-CV-3LC-03	CROSS SECTIONS
NWHHP-CV-2HS-01	HYDRAULIC SERVICES PLAN
NWHHP-CV-3LH-01	EXISTING SEWER MAIN LONG SECTION
NWHHP-CV-3LH-02	STORMWATER LONG SECTION SHEET 1
NWHHP-CV-3LH-03	STORMWATER LONG SECTION SHEET 2

HATCH LEGEND

EXISTING ASPHALT PAVEMENT
EXISTING BUILDING
EXISTING CONCRETE FOOTPATH
PROPOSED ASPHALT PAVEMENT
PROPOSED GROUND FLOOR
PROPOSED LEVEL 1
PROPOSED CONCRETE FOOTPATH
PROPOSED HARD STAND CONCRETE PAVEMENT
PROPOSED RETAINING WALL
PROPOSED LANDSCAPING
PROPOSED LANDSCAPED AREA SURFACE GRADING

Rev	Description	Rev Date	By
P10	60% DETAILED DESIGN ISSUE	03/02/2026	AK
P9	ISSUED FOR INFORMATION	27/01/2026	AK
P8	ISSUED FOR INFORMATION	22/01/2026	AK

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TAS-NORTHWEST MENTAL HEALTH PRECINCT-BURNIE
CONTRACT NO. IS-698
Project address: 23 BRICKPORT ROAD, COOEE, TAS 7320
for: DEPARTMENT OF HEALTH

Billard Leece Partnership ARTAS ARCHITECTS

CIVIL SERVICES
CIVIL NOTES

Drawn:	AK	Project N°: 246237	B1 / Rev:
Authorised:	WC	Project ID - Sheet: NWHHP-CV-1A-01	P10
Current Rev Date:	06/02/2026		
Scale/Size:	As indicated @B1		

300 mm
200 mm
100 mm
50 mm
10 mm
0

Original Sheet Size B1 (1000x707)

06/02/2026

NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.

LINE TYPE LEGEND

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eS	EXISTING SEWER LINE
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eTEL	EXISTING TELECOMMUNICATION LINE



N

LOCALITY PLAN
SCALE 1:1000

Rev	Description	Rev Date	By
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ARTAS ARCHITECTS

CIVIL SERVICES
LOCALITY PLAN

Drawn:	AK	Project N°: 246237	B1
Authorised:	WC	Project ID - Sheet: NWHMP-CV-2LP-01	P10
Current Rev Date:	06/02/2026		
Scale/Size:	As indicated @B1		

Rev:

Original Sheet Size B1 (1000x707)

06/02/2026

NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.
2. 2. TASWATER SERVICES WITHIN THE ARE OF WORKS LOCATED BY UNDERGROUND ASSET LOCATOR AND REGISTERED LAND SURVEYOR.

LINE TYPE LEGEND

- eSW — EXISTING STORMWATER LINE
- eS — EXISTING SEWER LINE
- eW — EXISTING WATER LINE
- FH — EXISTING FIRE HYDRANT LINE
- eE — EXISTING ELECTRICITY LINE
- eTEL — EXISTING TELECOMMUNICATION LINE

125 BASS HIGHWAY
COOEE TAS 7320
PID: 3233600
CT: 165264/3

121A BASS HIGHWAY
COOEE TAS 7320
PID: 7673769
CT: 18098/1

113-115 BASS HIGHWAY
COOEE TAS 7320
PID: 6111887
CT: 126502/1

18 TOORAK COURT
PARKLANDS TAS 7320
PID: 6126114
CT: 6560/9

17 TOORAK COURT
PARKLANDS TAS 7320
PID: 6126122
CT: 164725/1

13-15 TOORAK COURT
PARKLANDS TAS 7320
PID: 2655959
CT: 141947/1

20 BAY STREET
PARKLANDS TAS 7320
PID: 7163398
CT: 197993/1

21 BRICKPORT ROAD
COOEE TAS 7320
PID: 2716416
CT: 147700/2

21 BRICKPORT ROAD
COOEE TAS 7320
PID: 2716408
CT: 147700/1

EXISTING DN150 CONNECTION TO TASWATER MAIN WITH DN150 LOW HAZARD FIRE SERVICE INCLUDING LOW HAZARD DN25 LOW FLOW BYPASS AND DN65 HIGH HAZARD DOMESTIC SUPPLY.

EXISTING TASWATER SEWER MAIN.

EXISTING TASWATER SEWER MAIN.

EXISTING TASWATER SEWER MAIN.

EXISTING DN150 CONNECTION TO TASWATER MAIN WITH DN150 LOW HAZARD FIRE SERVICE INCLUDING LOW HAZARD DN25 LOW FLOW BYPASS AND DN65 HIGH HAZARD DOMESTIC SUPPLY.

EXISTING TASWATER SEWER MAIN.

EXISTING TASWATER SEWER MAIN. LOCATED BY LAND SURVEYOR.

EXISTING ROCK WALL

EXISTING TREES

EXISTING LAKE

23 BRICKPORT ROAD
COOEE TAS 7320
PID: 7842622
CT: 164516/1

23 BRICKPORT ROAD
COOEE TAS 7320
PID: 7842622
CT: 125373/2

28 UPLANDS PLACE
PARK GROVE TAS 7320
PID: 7609441
CT: 7755/39

5A ALKIRA COURT
PARK GROVE TAS 7320
PID: 9059341
CT: 176618/1

5B ALKIRA COURT
PARK GROVE TAS 7320
PID: 9059342
CT: 176618/2

29 BRICKPORT ROAD COOEE TAS 7320 PID: 1709970 CT: 121561/3

31 BRICKPORT ROAD COOEE TAS 7320 PID: 1709959 PID: 1709959 CT: 121561/4

33 BRICKPORT ROAD COOEE TAS 7320 PID: 1709960 CT: 121561/5

35 BRICKPORT ROAD COOEE TAS 7320 PID: 1709961 CT: 121561/6

37 BRICKPORT ROAD COOEE TAS 7320 PID: 1709962 CT: 121561/7

39 BRICKPORT ROAD COOEE TAS 7320 PID: 1709963 CT: 121561/8

41 BRICKPORT ROAD COOEE TAS 7320 PID: 1709964 CT: 121561/9

43 BRICKPORT ROAD COOEE TAS 7320 PID: 1709965 CT: 121561/10

45 BRICKPORT ROAD COOEE TAS 7320 PID: 1709966 CT: 121561/11

47 BRICKPORT ROAD COOEE TAS 7320 PID: 1709967 CT: 121561/12

49 BRICKPORT ROAD COOEE TAS 7320 PID: 1709968 CT: 121561/13

55 BRICKPORT ROAD COOEE TAS 7320 PID: 1709969 CT: 121561/14

57 BRICKPORT ROAD COOEE TAS 7320 PID: 1709970 CT: 121561/15

63 BRICKPORT ROAD COOEE TAS 7320 PID: 1709971 CT: 121561/16

3/21 PLANDS NO. 7320 PID: 6850618 CT: 140136/3

HOSPITAL STREET

BRICKPORT RD

UPLANDS PLACE

TITLE BOUNDARY

eS-MH1

eS-MH2

N

OVERALL EXISTING SITE SURVEY PLAN
SCALE 1:1000

Original Sheet Size B1 (1000x707)

Rev	Description	Rev Date	By
P10	60% DETAILED DESIGN ISSUE	03/02/2026	AK
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TAS-NORTHWEST MENTAL HEALTH PRECINCT-BURNIE
CONTRACT NO. IS-698

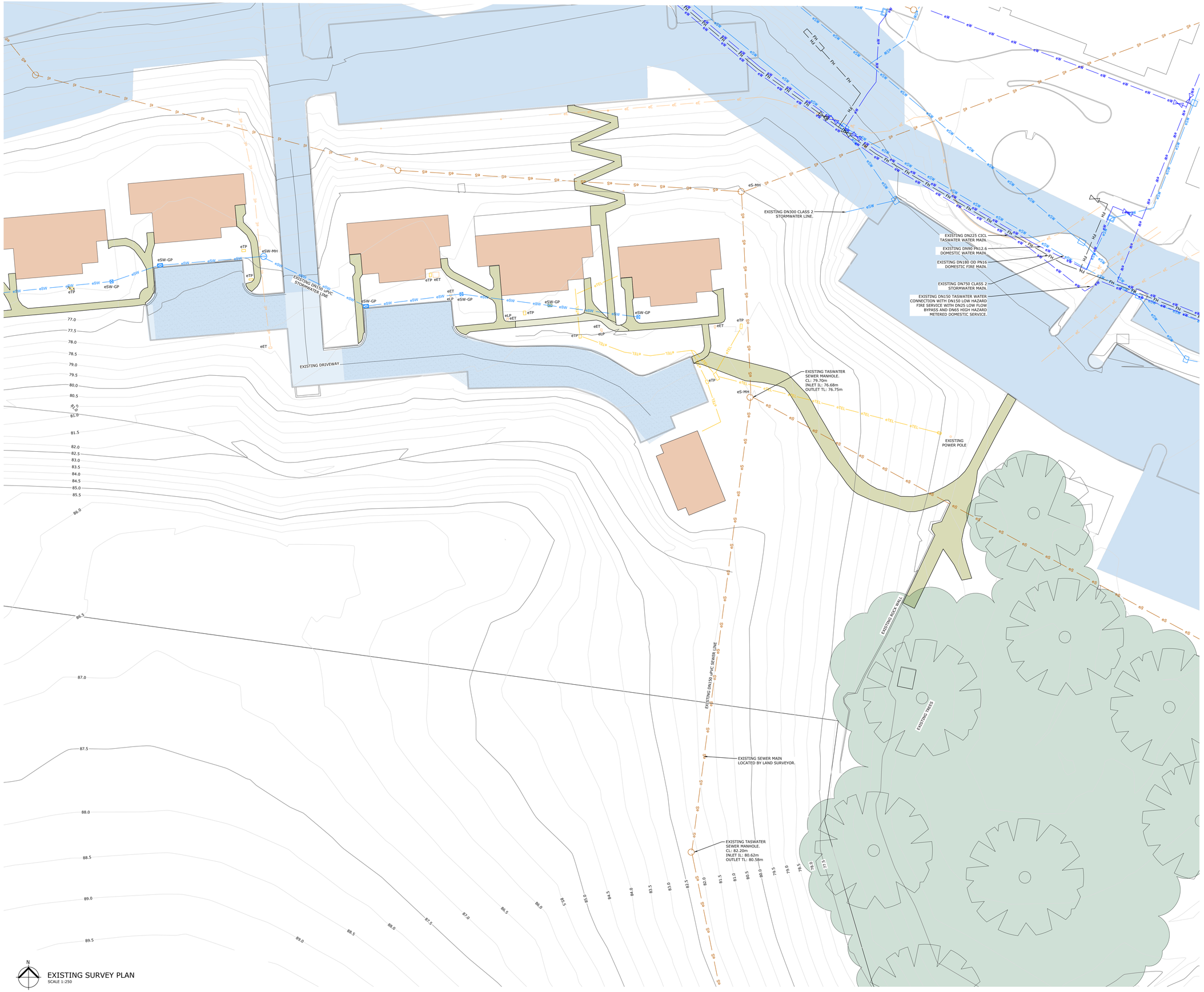
Project address: 23 BRICKPORT ROAD, COOEE, TAS 7320
for: DEPARTMENT OF HEALTH

Billard Leece Partnership
ARTAS ARCHITECTS

CIVIL SERVICES
OVERALL EXISTING SITE SURVEY PLAN

Drawn:	AK	Project N°: 246237	B1
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Scale/Size:	As indicated @B1		

06/02/2026



EXISTING SURVEY PLAN
SCALE 1:250

NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.

LINE TYPE LEGEND

eSW	EXISTING STORMWATER LINE
eS	EXISTING SEWER LINE
eW	EXISTING WATER LINE
FH	EXISTING FIRE HYDRANT LINE
eE	EXISTING ELECTRICITY LINE
eTEL	EXISTING TELECOMMUNICATION LINE

LEGEND

eSW-GP	EXISTING STORMWATER GRATED PIT
eSW-MH	EXISTING STORMWATER MANHOLE
eS-MH	EXISTING SEWER MANHOLE
eTP	EXISTING TELSTRA PIT
eET	EXISTING ELECTRICITY TURRET
eLP	EXISTING LIGHT POLE

HATCH LEGEND

	EXISTING ASPHALT PAVEMENT
	EXISTING BUILDING
	EXISTING CONCRETE FOOTPATH

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TAS-NORTHWEST MENTAL HEALTH PRECINCT-BURNIE
CONTRACT NO. IS-698

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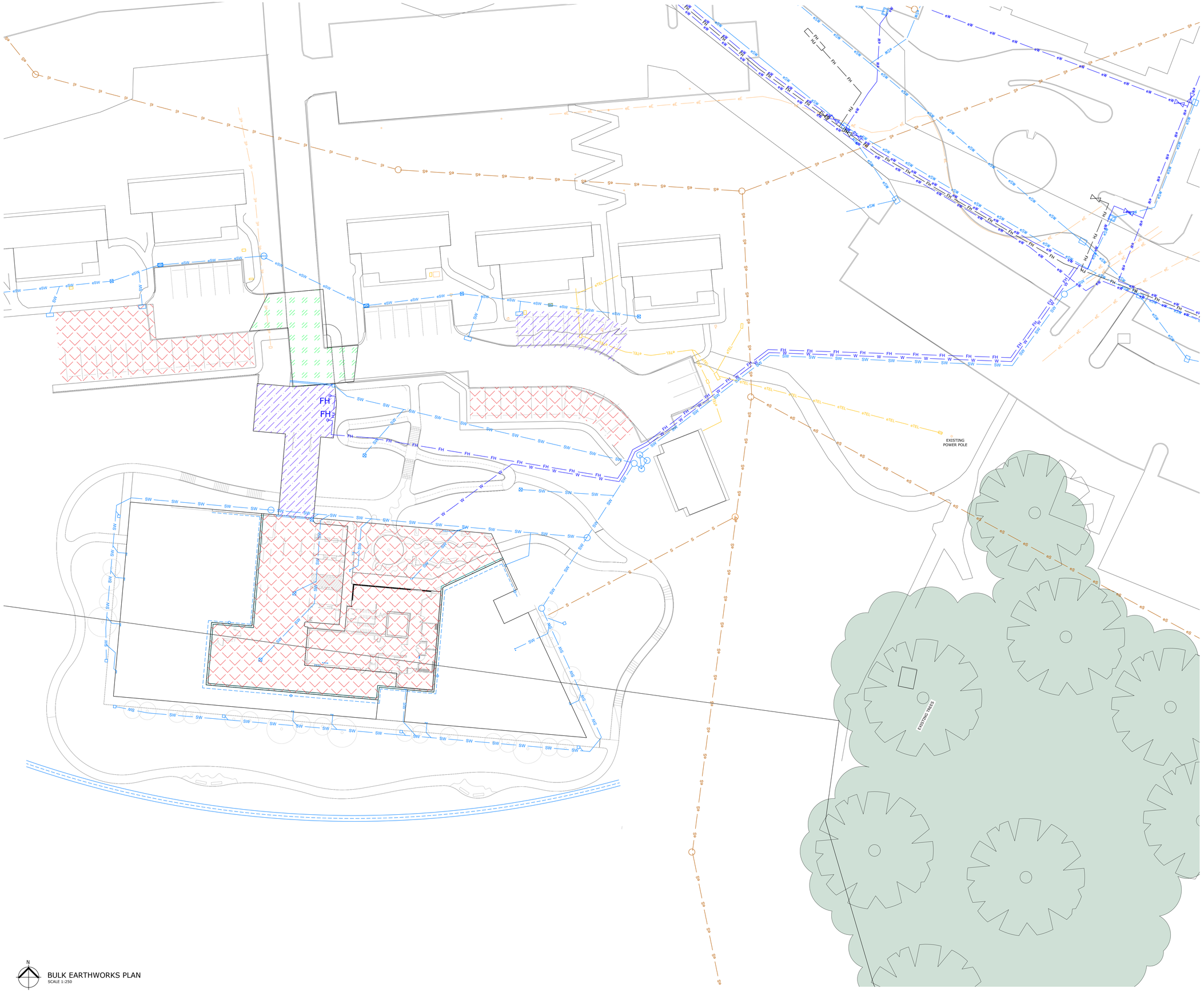
Billard Leece Partnership
ARTAS ARCHITECTS

CIVIL SERVICES
EXISTING SURVEY PLAN

Drawn:	AK	Project N°: 246237	B1
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- eS — EXISTING SEWER LINE
- eW — EXISTING WATER LINE
- FH — EXISTING FIRE HYDRANT LINE
- eE — EXISTING ELECTRICITY LINE
- eTEL — EXISTING TELECOMMUNICATION LINE

HATCH LEGEND

- CUT SURFACE TO xxx mm BELOW FSL. (PROOF ROLL SUBGRADE) OR (REFER XXX DETAIL FOR SUBGRADE PREPARATION FOR BUILDING)
- STRIP MIN 200 TOP SOIL AND PLACE FILL UP TO XXXmm BELOW FSL. REFER DETAIL XX FOR PROCEDURE
- STRIP KERB & HOTMIX AND PLACE FILL UP TO XXXmm BELOW FSL. REFER DETAIL XX FOR PROCEDURE

N

BULK EARTHWORKS PLAN
SCALE 1:250

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for: DEPARTMENT OF HEALTH

Billard Leece Partnership
ARTAS ARCHITECTS

CIVIL SERVICES
BULK EARTHWORKS PLAN

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NOTES:
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Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1		-6.142	-4.600
2		-4.600	-1.400
3		-1.400	-0.800
4		-0.800	0.000
5		0.000	0.100
6		0.100	0.300
7		0.300	2.300

CUT/FILL ANALYSIS
CUT: 12881.371 m³
FILL: 2170.063 m³

EXISTING POWER POLE

EXISTING ROCK WALL

EXISTING TREES

CUT/FILL ANALYSIS PLAN
SCALE 1:250

Rev	Description	Rev Date	By
P10	60% DETAILED DESIGN ISSUE	03/02/2026	AK
P9	ISSUED FOR INFORMATION	27/01/2026	AK
P8	ISSUED FOR INFORMATION	22/01/2026	AK

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CONTRACT NO. IS-698
Project address: 23 BRICKPORT ROAD, COOEE, TAS 7320
for: DEPARTMENT OF HEALTH

Billard Leece Partnership
ARTAS ARCHITECTS

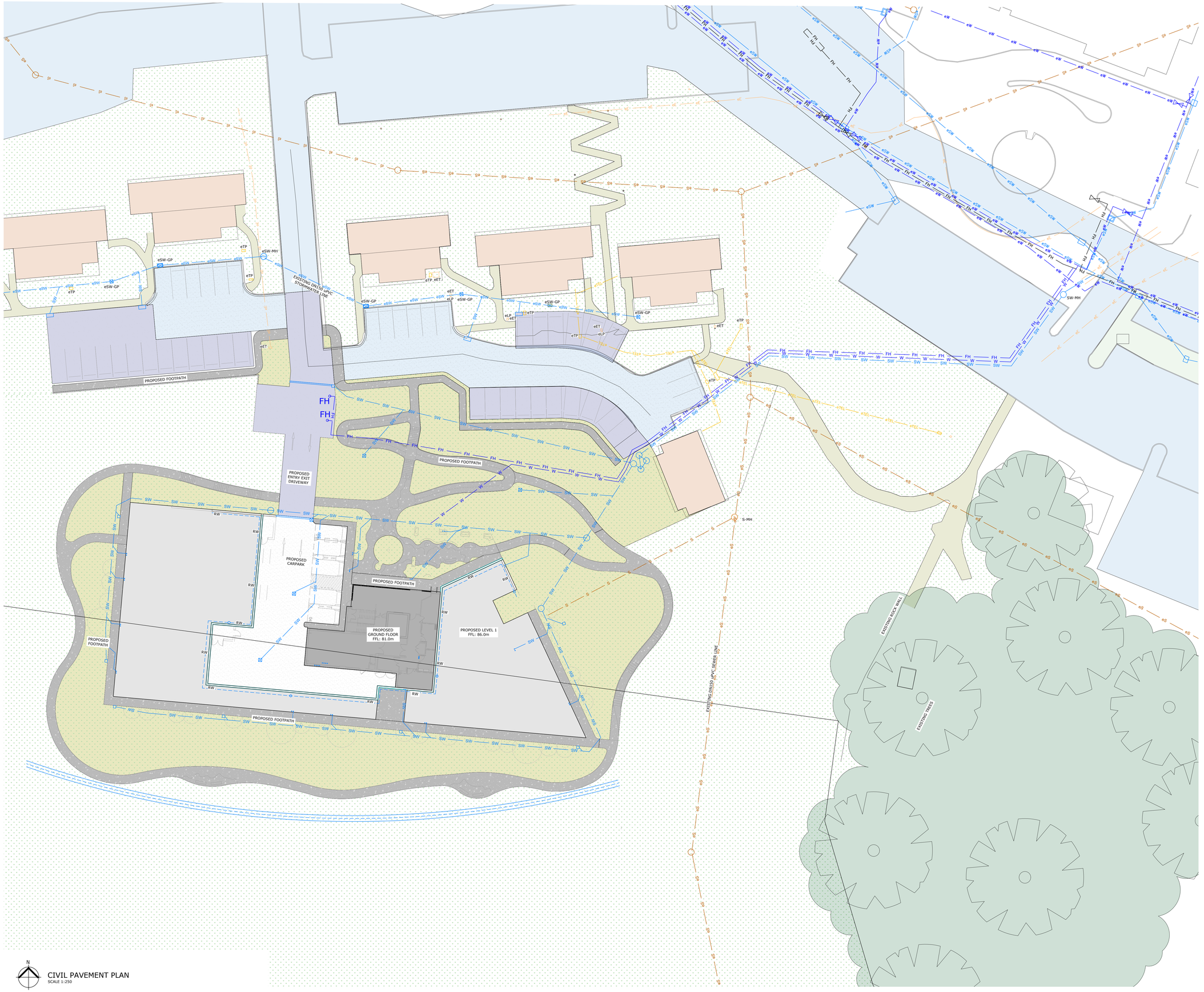
CIVIL SERVICES
CUT/FILL ANALYSIS PLAN

Drawn:	AK	Project N°: 246237	B1 Rev:
Authorised:	WC	Project ID - Sheet: NWHMP-CV-2CF-01	P10
Current Rev Date:	06/02/2026		
Scale/Size:	As indicated @B1		

300 mm
200 mm
100 mm
50 mm
10 mm
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Original Sheet Size B1 (1000x707)

06/02/2026



N

CIVIL PAVEMENT PLAN
SCALE 1:250

NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.

LINE TYPE LEGEND

eSW	EXISTING STORMWATER LINE
eS	EXISTING SEWER LINE
eW	EXISTING WATER LINE
FH	EXISTING FIRE HYDRANT LINE
eE	EXISTING ELECTRICITY LINE
eTEL	EXISTING TELECOMMUNICATION LINE
S	PROPOSED SEWER LINE
W	PROPOSED WATER LINE
FH	PROPOSED FIRE HYDRANT LINE
SW	PROPOSED STORMWATER LINE
	PROPOSED AG DRAIN

LEGEND

eSW-GP	EXISTING STORMWATER GRATED PIT
eSW-MH	EXISTING STORMWATER MANHOLE
eS-MH	EXISTING SEWER MANHOLE
eTP	EXISTING TELSTRA PIT
eET	EXISTING ELECTRICITY TURRET
eLP	EXISTING LIGHT POLE
SW-GP	PROPOSED STORMWATER GRATED PIT
SW-MH	PROPOSED STORMWATER MANHOLE
S-MH	PROPOSED SEWER MANHOLE
FH	PROPOSED FIRE HYDRANT

HATCH LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING BUILDING
- EXISTING CONCRETE FOOTPATH
- PROPOSED ASPHALT PAVEMENT
- PROPOSED GROUND FLOOR
- PROPOSED LEVEL 1
- PROPOSED CONCRETE FOOTPATH
- PROPOSED HARD STAND CONCRETE PAVEMENT
- PROPOSED RETAINING WALL
- PROPOSED LANDSCAPING
- PROPOSED LANDSCAPED AREA SURFACE GRADING

Rev	Description	Rev Date	By
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CONTRACT NO. IS-698

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for: DEPARTMENT OF HEALTH

Billard Leece Partnership
ARTAS ARCHITECTS

CIVIL SERVICES
CIVIL PAVEMENT PLAN

Drawn:	AK	Project N°: 246237	B1 Rev: P10
Authorised:	WC	Project ID - Sheet: NWHMP-CV-2CP-01	
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HATCH LEGEND

	EXISTING ASPHALT PAVEMENT
	EXISTING BUILDING
	EXISTING CONCRETE FOOTPATH
	PROPOSED ASPHALT PAVEMENT
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	PROPOSED LANDSCAPED AREA SURFACE GRADING

GRADE LEGEND
-3.3% NEGATIVE SLOPE DENOTES FALL.
3.4% POSITIVE SLOPE DENOTES RISE.

SPOT LEVEL KEY
38.961m Δ0.117m — PROPOSED FINISHED SURFACE LEVEL; CHANGE IN LEVEL FROM EXISTING TO PROPOSED (+VE DENOTES FILL, -VE DENOTES CUT); POINT OF INTEREST

EXISTING TREES

N

CIVIL WORKS PLAN
SCALE 1:250

Rev	Description	Rev Date	By
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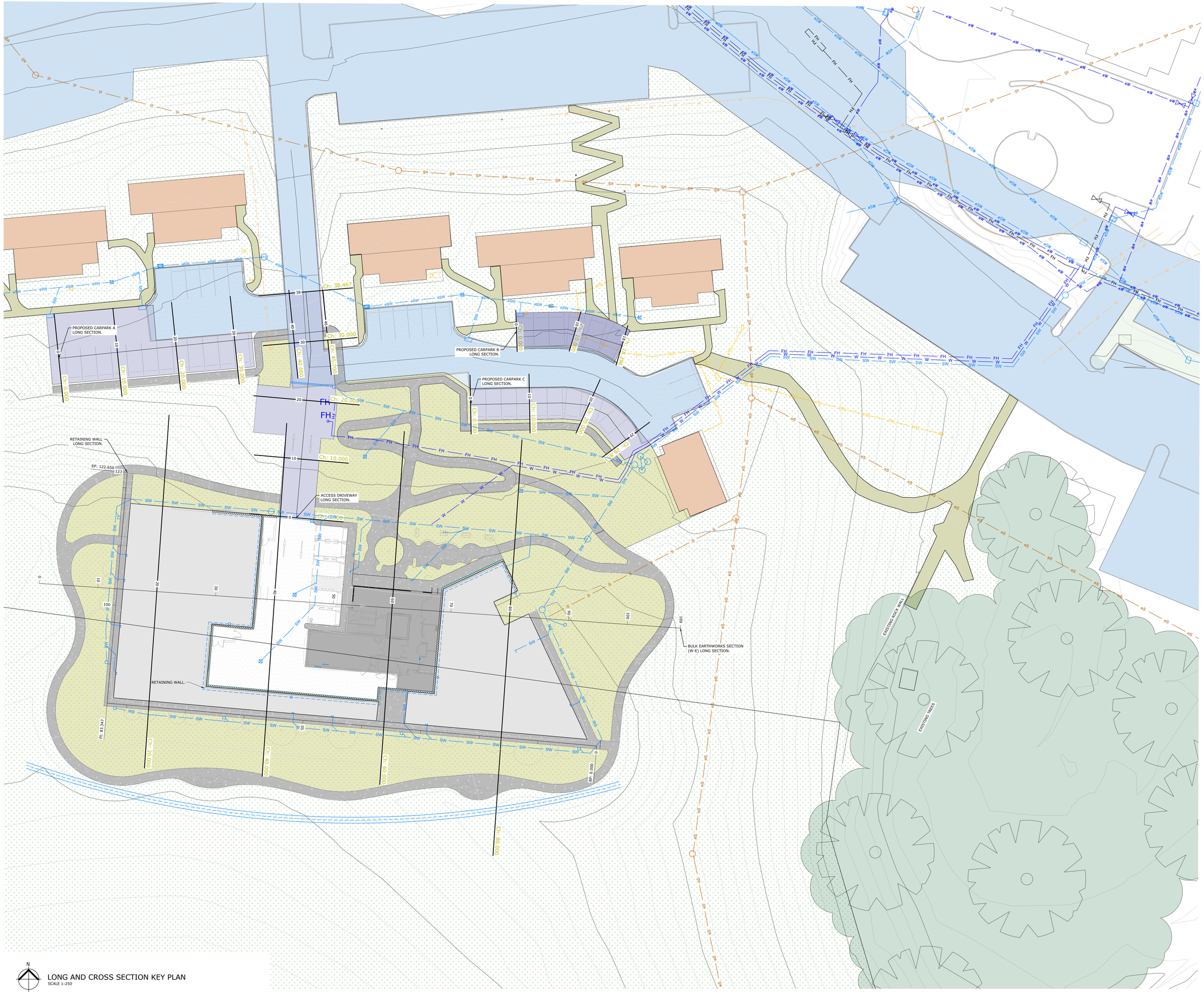
Billard Leece Partnership ARTAS ARCHITECTS

CIVIL SERVICES
CIVIL WORKS PLAN

Drawn:	AK	Project N°: 246237	B1 Rev:
Authorised:	WC	Project ID - Sheet: NWHMP-CV-2CW-01	P10
Current Rev Date:	06/02/2026		
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LONG AND CROSS SECTION KEY PLAN
SCALE 1:250

NOTES:
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LINE TYPE LEGEND

eSW	EXISTING STORMWATER LINE
eS	EXISTING SEWER LINE
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S	PROPOSED SEWER LINE
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SW	PROPOSED STORMWATER LINE
	PROPOSED AG DRAIN

LEGEND

eSW-GP	EXISTING STORMWATER GRATED PIT
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HATCH LEGEND

	EXISTING ASPHALT PAVEMENT
	EXISTING BUILDING
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	PROPOSED ASPHALT PAVEMENT
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	PROPOSED LEVEL 1
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	PROPOSED LANDSCAPING
	PROPOSED LANDSCAPED AREA SURFACE GRADING

Rev	Description	Rev Date	By
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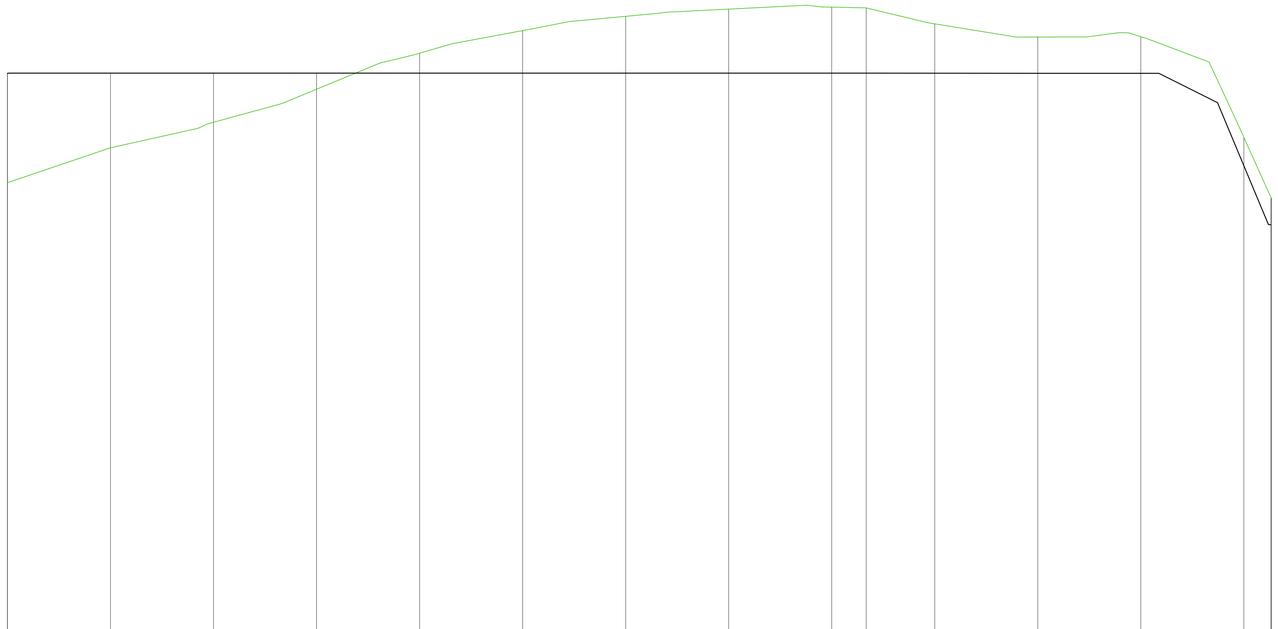
Billard Leece Partnership ARTAS ARCHITECTS

CIVIL SERVICES
LONG AND CROSS SECTION KEY PLAN

Drawn:	AK	Project N°: 246237	B1 Rev:
Authorised:	WC	Project ID - Sheet: NWHMP-CV-2LC-01	P10
Current Rev Date:	06/02/2026		
Scale/Size:	As indicated @B1		

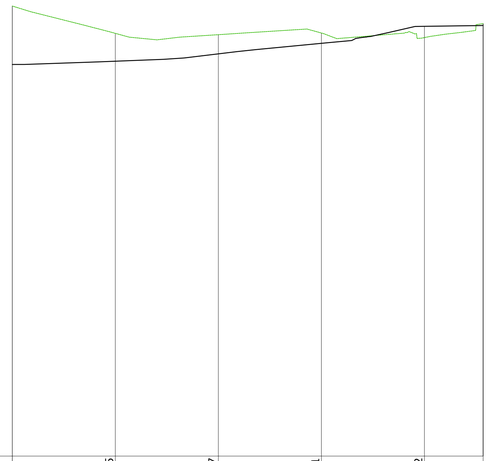
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VERT EXAG 1:5
Datum 75.000

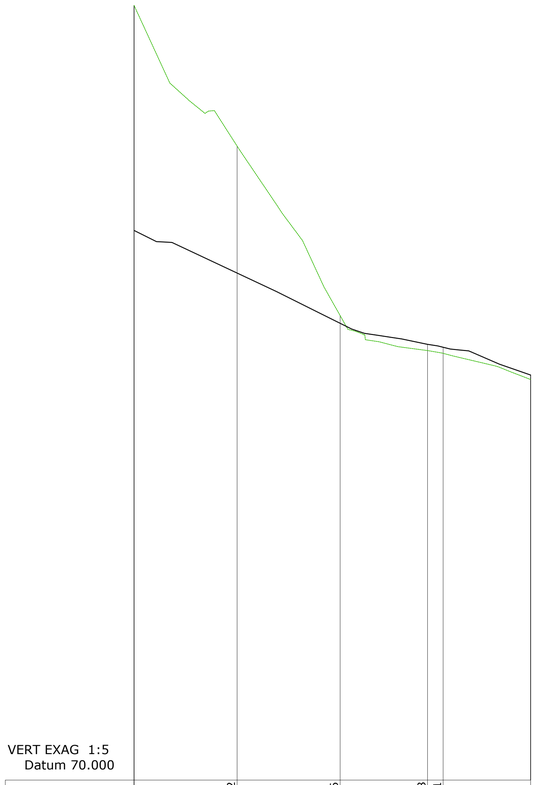
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VERT EXAG 1:5 Datum 70.000					
DESIGN LEVELS	78.665	78.807	78.011	78.342	
EXISTING LEVELS	78.206	78.180	78.212	78.123	
DEPTH	-0.541	-0.372	-0.201	0.219	
CHAINAGE	10.000	20.000	30.000	40.000	

PROPOSED CARPARK A LONG SECTION

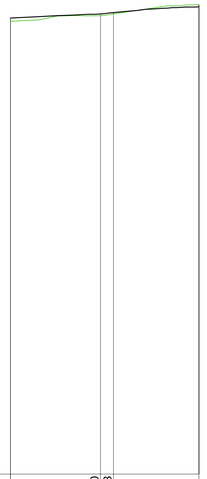
SCALE 1:250



VERT EXAG 1:5 Datum 70.000					
DESIGN LEVELS	79.842	79.866	78.458	78.401	
EXISTING LEVELS	82.306	79.017	78.337	78.283	
DEPTH	-2.464	-0.150	0.121	0.118	
CHAINAGE	10.000	20.000	28.484	30.000	

ACCESS DRIVEWAY LONG SECTION

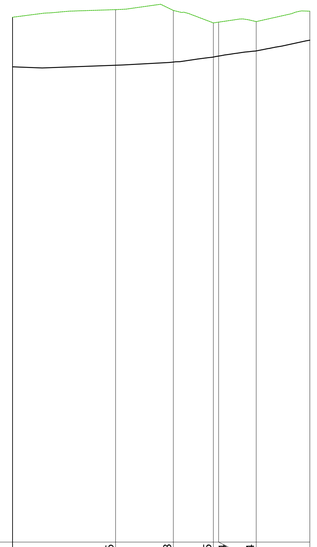
SCALE 1:250



VERT EXAG 1:5 Datum 70.000			
DESIGN LEVELS	78.896	78.930	
EXISTING LEVELS	78.932	78.958	
DEPTH	0.035	0.027	
CHAINAGE	8.741	10.000	

PROPOSED CARPARK B LONG SECTION

SCALE 1:250



VERT EXAG 1:5 Datum 70.000						
DESIGN LEVELS	79.256	79.318	80.078	79.415	80.093	79.434	80.102	79.534
EXISTING LEVELS	80.335	80.320	80.078	80.663	80.093	79.434	80.102	79.534
DEPTH	-1.079	-1.002	0.000	-0.659	0.000	0.000	0.000	0.000
CHAINAGE	10.000	15.600	19.486	20.000	20.000	23.644	23.644	30.000

PROPOSED CARPARK C LONG SECTION

SCALE 1:250

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P10	60% DETAILED DESIGN ISSUE	03/02/2026	AK
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ARTAS ARCHITECTS

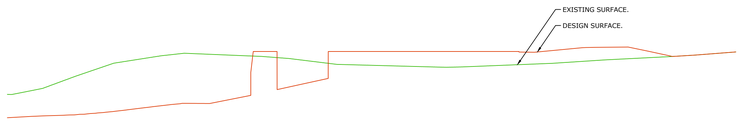
CIVIL SERVICES
LONG SECTIONS

Drawn:	AK	Project N°: 246237	B1 Rev:
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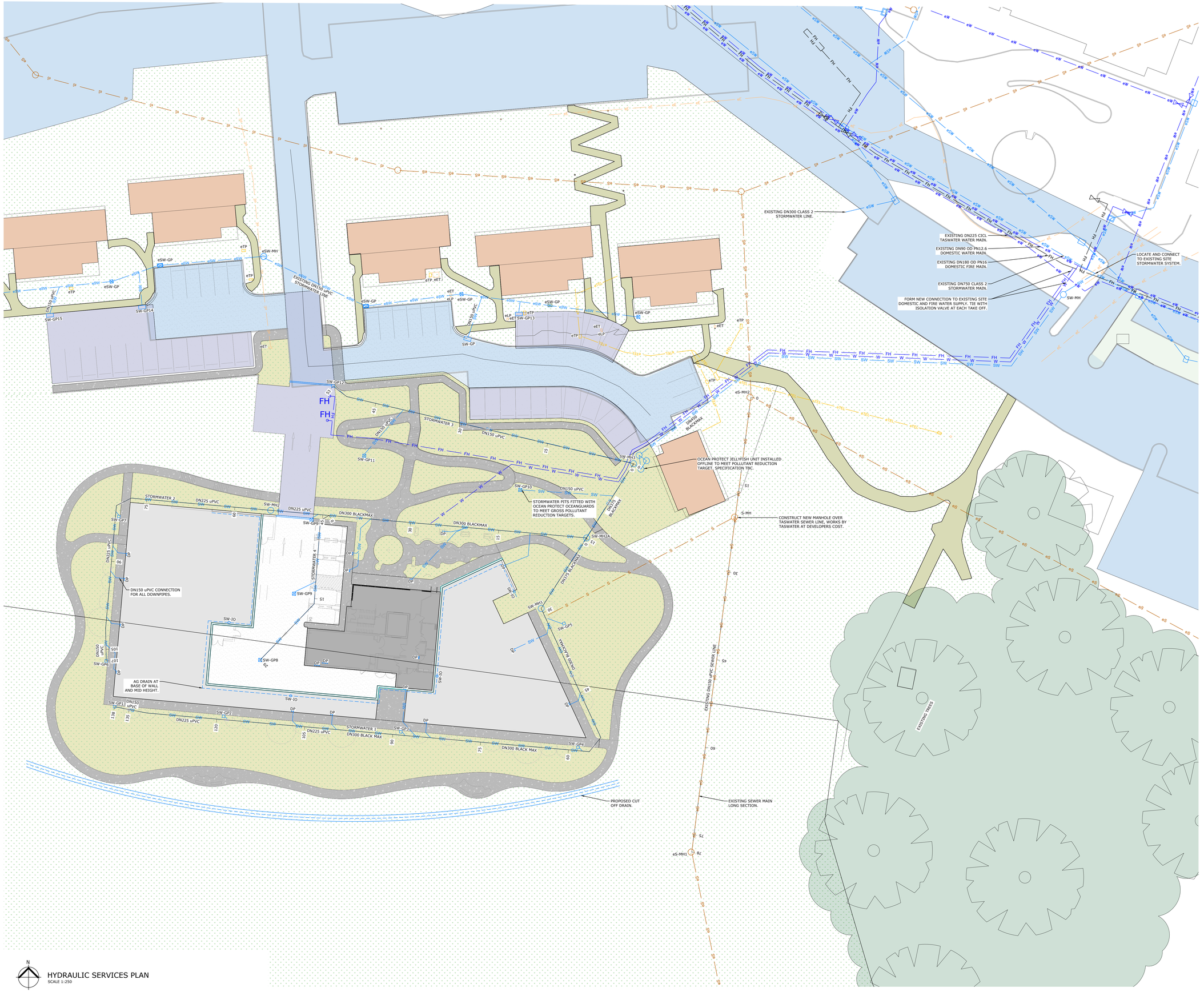
Original Sheet Size B1 (1000x707)

06/02/2026



Datum: 75.000

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NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.

LINE TYPE LEGEND

eSW	EXISTING STORMWATER LINE
eS	EXISTING SEWER LINE
eW	EXISTING WATER LINE
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LEGEND

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SW-MH	PROPOSED STORMWATER MANHOLE
S-MH	PROPOSED SEWER MANHOLE
FH	PROPOSED FIRE HYDRANT
DP	PROPOSED DOWNPIPE

HATCH LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING BUILDING
- EXISTING CONCRETE FOOTPATH
- PROPOSED ASPHALT PAVEMENT
- PROPOSED GROUND FLOOR
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N

HYDRAULIC SERVICES PLAN
SCALE 1:250

Rev	Description	Rev Date	By
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Billard Leece Partnership ARTAS ARCHITECTS

CIVIL SERVICES
HYDRAULIC SERVICES PLAN

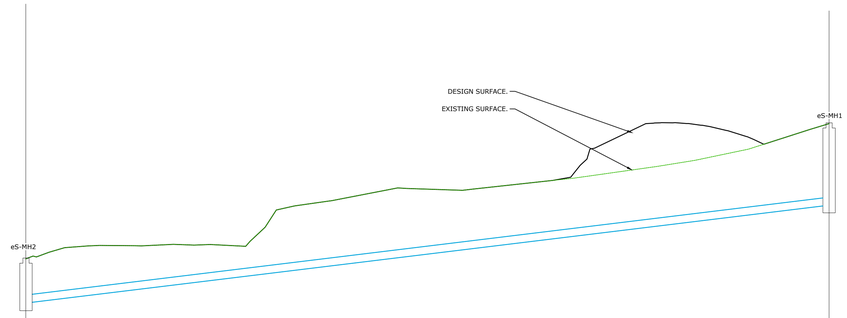
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Authorised:	WC	Project ID - Sheet:	P10
Current Rev Date:	06/02/2026	NWHMP-CV-2HS-01	
Scale/Size:	As indicated @B1		

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Original Sheet Size B1 (1000x707)

06/02/2026

NOTES:
1. REFER TO DRAWINGS C00 FOR GENERAL NOTES AND LEGEND OF SYMBOLS.



VERT EXAG 1:5
Datum 75.000

HGL & FLOW RATE			
GRADE %		2.44%	
PIPE DETAILS (CL to CL LENGTHS)		EXISTING DN150 uPVC SEWER MAIN	
KNOWN CAPACITY	0.000		0.000
DESIGN LEVEL AT MH CL	79.554		82.179
INVERT LEVEL	78.683		80.582
COVER	0.716		1.442
CHAINAGE	0.000		77.966

EXISTING SEWER MAIN LONG SECTION

SCALE 1:250

P10	60% DETAILED DESIGN ISSUE	03/02/2026	AK
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CIVIL SERVICES
EXISTING SEWER MAIN
LONG SECTION

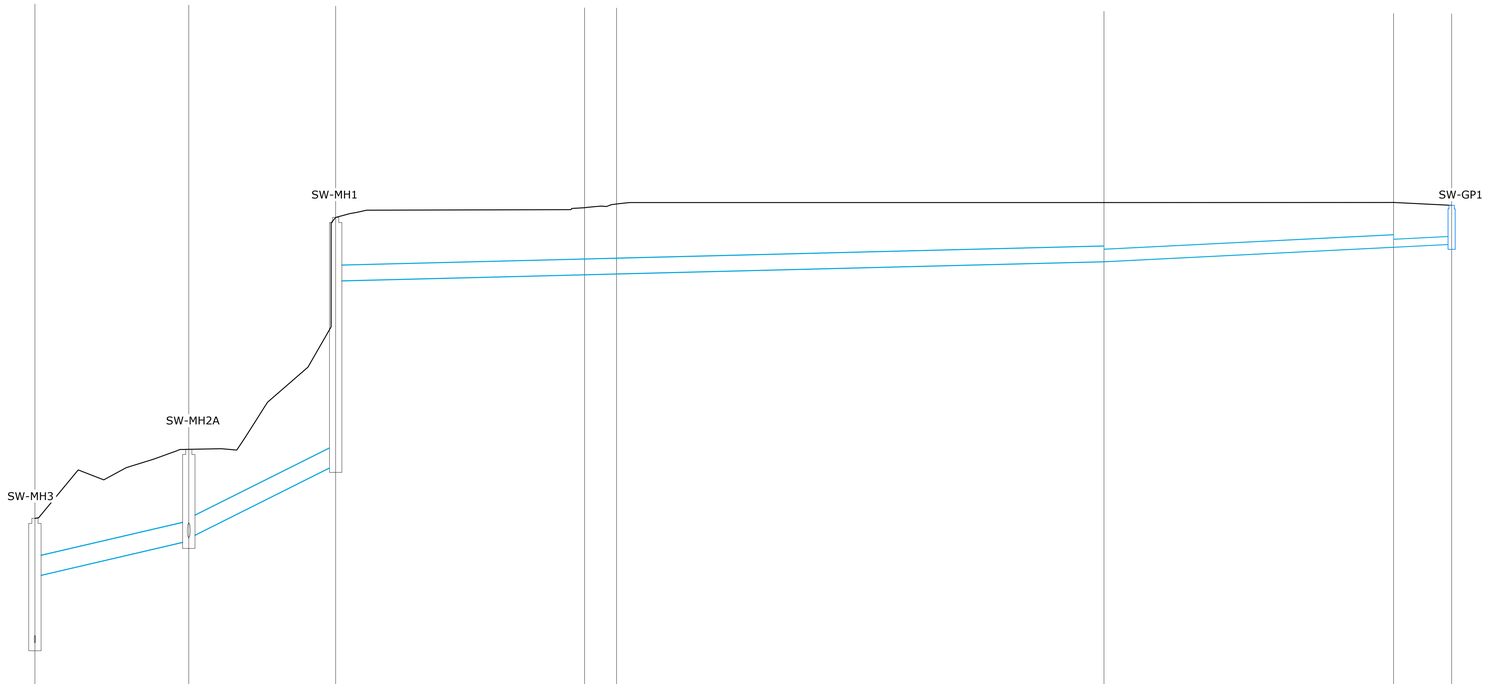
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Authorised:	WC	Project ID - Sheet: NWHMP-CV-3LH-01		P10
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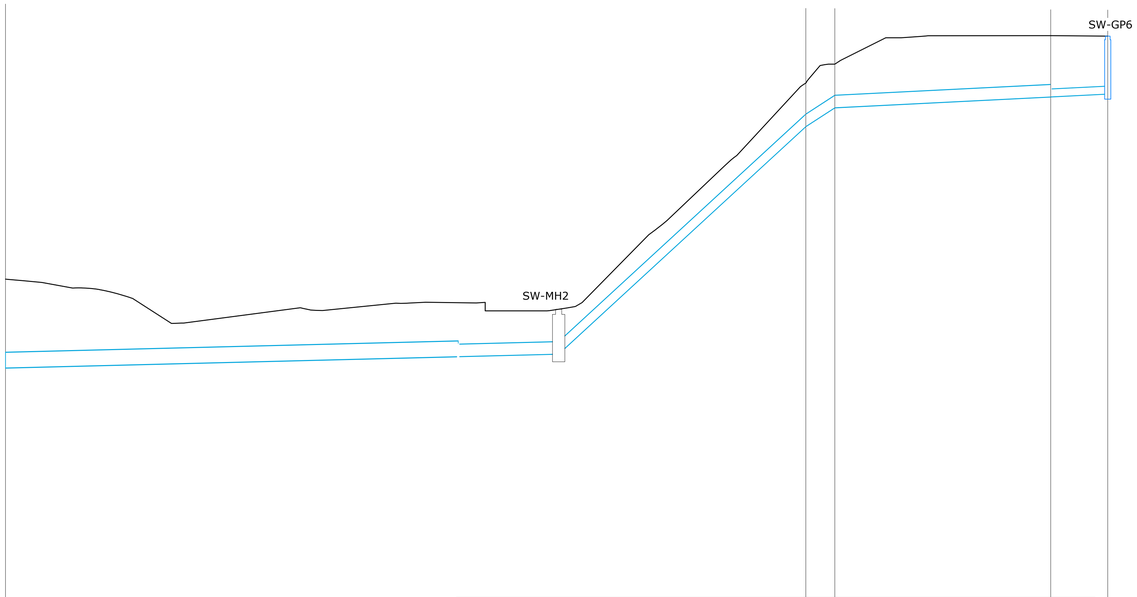
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VERT EXAG 1:5
Datum 75.000

| | | |

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VERT EXAG 1:5
Datum 75.000

| | | |

ARTAS x BLP Architects

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www.blp.com.au

Job No: 241047 Date: 04/02/2026
Drawing No: NWMHP-A000-0001-DA [C]

PROJECT NAME:

TAS - Northwest Mental Health Precinct - Burnie(V2)

PROJECT ADDRESS:

21 BRICKPORT ROAD, BURNIE, TAS 7320

Client
Tasmanian Government - Department of Health
Tasmanian Government | Department of **Health**



DRAWING LIST - DA

Sheet No.	Sheet Name	Revision	Date
A000-0001-DA	COVER SHEET	C	04/02/2026
AR002-0002-DA	SITE CONTEXT PLAN	D	04/02/2026
AR003-0001-DA	PROPOSED SITE PLAN - ROOF	E	04/02/2026
AR003-0002-DA	PROPOSED SITE PLAN - GROUND	E	04/02/2026
AR100-0001-DA	PLAN - GENERAL ARRANGEMENT - GROUND	D	04/02/2026
AR100-0101-DA	PLAN - GENERAL ARRANGEMENT - LEVEL 1	D	04/02/2026
AR100-0201-DA	PLAN - GENERAL ARRANGEMENT - LEVEL 2 (PLANT)	D	04/02/2026
AR200-0001-DA	ELEVATIONS - GENERAL ARRANGEMENT	C	04/02/2026
AR210-0001-DA	SECTIONS - GENERAL ARRANGEMENT	C	04/02/2026
AR450-0001-DA	3D VISUALISATION	C	04/02/2026

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Rev	Date	Revision	By	Chk.
A	13/11/2025	FOR APPROVAL		
B	19/11/2025	ISSUE FOR APPROVAL		
C	12/12/2025	FOR APPROVAL		
D	04/02/2026	FOR APPROVAL		

SITE PLAN - NOTE

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SITE PLAN - LEGEND

- EXISTING BUILDING
- EXISTING BUILDING
- EXISTING ROAD
- EXISTING FOOTPATH
- PROPOSED LANDSCAPING (REFER TO LANDSCAPE ARCHITECT FOR DETAIL)
- PROPOSED PEDESTRIAN FOOTPATH
- PROPOSED ROAD
- PROPOSED ON-GRADE CAR PARKING EXPANSION
- RC-01 *ALUMINIUM PROFILED ROOFING SUITED FOR MARINE ENVIRONMENT (PERCIPERE) COLOUR 06*
- GROUND CUT
- PROPOSED PEDESTRIAN CROSSING
- TITLE BOUNDARY
- TITLE BOUNDARY TO BE CONSOLIDATED
- FLIGHT PATH AIRPORT OBSTACLE LIMITATION AREA
- CONTOURS (REFER TO CIVIL ENG DWG FOR DETAIL)

1 PLAN - PROPOSED SITE CONTEXT
SCALE 1 : 1000

Client
Tasmanian Government - Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
SITE CONTEXT PLAN

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
Page Size	**Drawn by**	**Checked by**
B1 (1000x707mm)	TW	CB

FOR APPROVAL

Drawing No.	Rev.
NWMHP-AR002-0002-DA	[D]

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A	13/11/2025	FOR APPROVAL		
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C	02/12/2025	ISSUE FOR INFORMATION		
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E	04/02/2026	FOR APPROVAL		

AR450-0001
VIEW 3

PROPOSED PEDESTRIAN FOOTPATH

NOTE: REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

TITLE BOUNDARY TO BE CONSOLIDATED, NOT PART OF THIS APPLICATION

NOTE: REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

ZONE FOR SOLAR PANELS EXACT SIZE AND LOCATION TBC

232 sqm

3.00° FALL

RIDGE

10.00° FALL

23.00° FALL

15.00° FALL

LCU COURTYARD BELOW

RC-01

LANDSCAPED FORECOURT

PROPOSED PEDESTRIAN FOOTPATH

NOTE: REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

RL 80860

PROPOSED NEW ROAD AND ROADWORK TO EXISTING ROADWAY SHOWN DASHED

ALLOW FOR EMBANKMENT/ RETAINING WALL TO SIDE OF RAMP

RETAINING WALL

GENERATOR

LOW HEIGHT RETAINING WALL

SPRINKLER BOOSTER

HYDRANT BOOSTER

RL 78600

EXISTING ACCOMMODATION BUILDING

PROPOSED EXPANSION OF ON-GRADE CAR PARKING SHOWN HATCHED

EXISTING CARPARKING

RL 79.0

EXISTING FOOTPATH

PROPOSED FOOTPATH

NEW SECTION OF PATH TO CONNECT TO EXISTING

EXISTING CARPARKING

EXISTING ACCOMMODATION BUILDINGS

EXISTING CARPARK

SITE PLAN - NOTE

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Client
Tasmanian Government - Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
PROPOSED SITE PLAN - ROOF

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
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Drawing No. NWMHP-AR003-0001-DA Rev. [E]

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1 - PROPOSED SITE PLAN - ROOF
SCALE 1 : 250

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SITE PLAN - NOTE

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SITE PLAN - LEGEND

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- EXISTING ROAD
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- CONTOURS (REFER TO CIVIL ENG DWG FOR DETAIL)

Client
Tasmanian Government - Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
PROPOSED SITE PLAN - GROUND

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
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1 - PROPOSED SITE PLAN - GROUND
SCALE 1 : 250

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EXTENT OF BUILDING OUTLINE ABOVE SHOWN DASHED

EXTENT OF BUILDING OUTLINE ABOVE SHOWN DASHED

9609

28736

LOADING/ UNLOADING

LOAD DOCK

15790

2150

4625

2475

WASTE COMPOUND

LOAD DOCK DTY

LOAD DOCK CLN

AMBULANCE

POLICE/ AMBUL. BAY

12230

5940

6515

7510

10564

ST-BULK

B-LAW

CIRC

ENTRY-SECURE

BOH

ICT/ COMMS RM

GUN SAFE

SLIDING GATE

6870

3374

FFL 81000

MAIN SWITCH RM

LIFT 01

STAIR 01

BVENDING

6130

2600

615

2600

2000

CLRM-EQ STORE

CIRC

UP

FOH

FFL 81000

1:8

UP

2000

2420

2500

MOTORCYCLES PARKING

1200

3675

2500

16837

1:61

2400

FFL 80850

FORECOURT

NOTE:
REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

UP

1:8

DROP-OFF

5965

RL 81000

4 No. BIKE PARKING

16355

BIKE CAGE (3 no.)

BIKE CAGE

PAVING TYPE AND FINISH PER LANDSCAPE ARCHITECT'S DRAWINGS

FFL 81000

EXTENT OF BUILDING OUTLINE ABOVE SHOWN DASHED

EXTENT OF BUILDING OUTLINE ABOVE SHOWN DASHED

12967

9943

7396

1
AR200-0001

NOTE:
REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

NOTE:
REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR DETAILED LANDSCAPING

1: 8.4 RAMP DOWN

SPRINKLER BOOSTER

GENERATOR

PAVING TYPE AND FINISH PER LANDSCAPE ARCHITECT'S DRAWINGS

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FLOOR PLAN - LEGEND

- INTERNAL AREAS
- TRAVEL
- COURTYARD - LANDSCAPING - REFER TO LANDSCAPE ARCHITECT DWG FOR DETAIL
- LANDSCAPING - REFER TO LANDSCAPE ARCHITECT DWG FOR DETAIL
- ROAD ASPHALT FINISH
- PAVEMENT
- PROPOSED COLUMNS - REFER TO STRUCT ENG. DWG FOR DETAIL
- PROPOSED WALLS
- GROUND CUT
- PROPOSED PEDESTRIAN CROSSING

1 - PLAN - GROUND FLOOR PLAN
SCALE 1 : 100

Client
Tasmanian Government - Department of Health

Tasmanian Government | Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
PLAN - GENERAL ARRANGEMENT - GROUND

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
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PAVING TYPE AND FINISH PER LANDSCAPE ARCHITECT'S DRAWINGS

AR200-0001 2

NOTE:
REFER TO LANDSCAPE ARCHITECT
DRAWINGS FOR DETAILED LANDSCAPING

4810

44667

NOTE:
REFER TO LANDSCAPE ARCHITECT
DRAWINGS FOR DETAILED LANDSCAPING

FFL 85900

FFL 86000

HIGH CARE UNIT (4 BEDS)

1 BED POD

1 BED (SWING BED)

6 BEDS

4 BEDS POD (POD A)

LOW CARE UNIT (18 BEDS)

4 BEDS

4 BEDS POD (POD B)

FOH

STAFF AREAS

COURTYARD

COURTYARD-DE-ESC MH

COURTYARD-ACUTE-MH

LINE OF ROOF OVER SHOWN DASHED

ENS-MH-SP
1BED-MH-SP
1BED-MH
ENS-MH
SEN MOD RM
CIRC
SECL RM
ENS-MH-SECL
DE-ESC
SECL ANTE
B-HWS B
ENS-MH-ACC
1BED-MH-ACC
LNG/DINE/ACT-MH
LNG-GEN-MH
STF/CONS INTERFACE
OFF-CLIN WRK
ST-GEN
CLRM
WC-STF
B-LIN
EDB
MECH
DTUR-DISP
ST-EQ
CLN ST
MED RM
ST-PAT PROP
B-DRT-LIN
ACT/THERAPY-MH
GROUP RM-MH
INDR EXERCS-MH
INTERVIEW-MH
AIRL- SECURE
LAUNDRY-MH
PROJECT PARKING
B-MEAL TRO
B-BEV
MEETING RM
LIFT 01
STAIR 01
TRIBUNAL RM
OFF-CLIN WRK
B-PROP-VIS
WC/SHR-ACC-STF
SECURITY RM
RECEPTION
FOYER/ WAIT
FAM RM
WC-ACC
CONS RM
LAUNDRY-MH
B-PROP-STF
ST-PHOTOCPY
OFF-1P-9
STF RM
OFF-WS X 5
OFF-WS X 6
OFF-2P-12
BREAKOUT
WC-PAT
SEN MOD RM
DINE/BEV-MH
KITCHEN-MH

2303
2300
2200
1813
4348
9945
38522
33013

NOTE:
REFER TO LANDSCAPE ARCHITECT
DRAWINGS FOR DETAILED LANDSCAPING

AR200-0001 3

AR200-0001 4

RL 85.8

NOTE:
REFER TO LANDSCAPE ARCHITECT
DRAWINGS FOR DETAILED LANDSCAPING

AR200-0001 1

NOTE:
REFER TO LANDSCAPE ARCHITECT
DRAWINGS FOR DETAILED LANDSCAPING

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Client
Tasmanian Government - Department of Health
Tasmanian Government | Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

N

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
PLAN - GENERAL ARRANGEMENT - LEVEL 1

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241047	IS-698	04/02/2026
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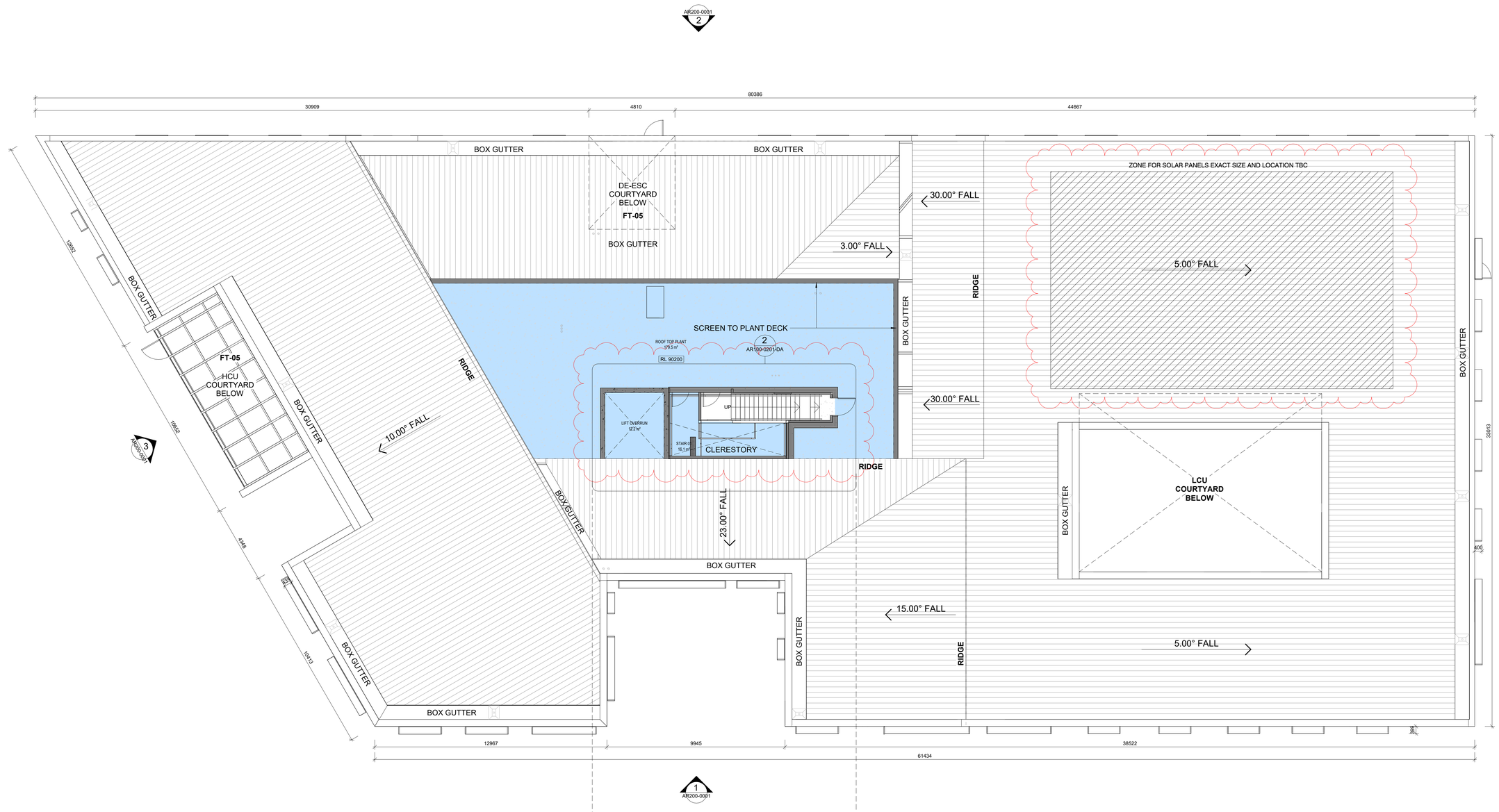
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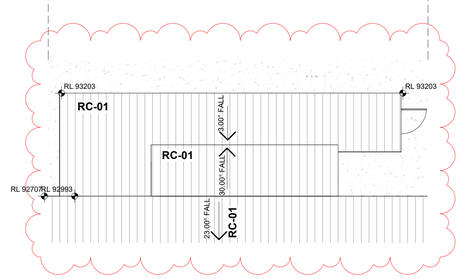
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1 / - PLAN - LEVEL 01
SCALE 1 : 100

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A	13/11/2025	FOR APPROVAL		
B	19/11/2025	ISSUE FOR APPROVAL		
C	02/12/2025	ISSUE FOR INFORMATION		
D	04/02/2026	FOR APPROVAL		





2 - PLAN - LEVEL 02 (TOP OF ROOF)
SCALE 1 : 100

1 - PLAN - LEVEL 02 (ROOF PLAN)
SCALE 1 : 100

GENERAL ARRANGEMENT - NOTE

DRAWINGS ARE FOR INTENT PURPOSES ONLY

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION DOCUMENTS, AND ALL OTHER CONSULTANT DOCUMENTATION.
2. ALL WORKS ARE TO COMPLY WITH A.S. BUILDING STANDARDS - RELEVANT STANDARDS NOTED IN RELEVANT DRAWING SETS.
3. ANY DISCREPANCIES BETWEEN THE INFORMATION ARCHITECTURAL DRAWINGS AND THE INFORMATION PROVIDED IN SCHEDULES AND DOCUMENTATION ISSUED BY OTHER CONSULTANTS TO BE REFERRED TO THE ARCHITECT PRIOR TO ANY CONSTRUCTION COMMENCING.
4. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO WORKS COMMENCING. DO NOT SCALE MEASUREMENTS FROM THIS DRAWING.
5. WORK SITE TO BE CLEARED OF ALL RUBBISH, PACKAGING, MATERIALS, AND BUILDERS EQUIPMENT PRIOR TO HANDOVER.
6. DETAIL CLEAN OF BUILDING TO BE CONDUCTED PRIOR TO HANDOVER.
7. ALL DEFECTS IDENTIFIED ARE TO BE RECTIFIED BY THE RELEVANT CONTRACTOR.

FLOOR PLAN - LEGEND

RC-01 — *ALUMINIUM PROFILED ROOFING SUITED FOR MARINE ENVIRONMENT (PERCIPERE) COLOUR 06*

DP. — DOWNPIPE RAINWATER SUMP (REFER TO HYDRAULICS ENG DWG FOR DETAIL)

PLANT AREA

CONTOURS (REFER TO CIVIL ENG DWG FOR DETAIL)

FT-05 — ENCLOSED COURTYARDS, GLAZING AND SAFETY MESH, EXACT CONFIGURATION TBC

RC-01 — *ALUMINIUM PROFILED ROOFING SUITED FOR MARINE ENVIRONMENT (PERCIPERE) COLOUR 06*

4 AR200-0001

Client
Tasmanian Government - Department of Health
Tasmanian Government | Department of Health

0 10 20 30 50mm
N
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
PLAN - GENERAL ARRANGEMENT - LEVEL 2 (PLANT)

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026

Page Size	Drawn by	Checked by
B1 (1000x707mm)	TW	CB

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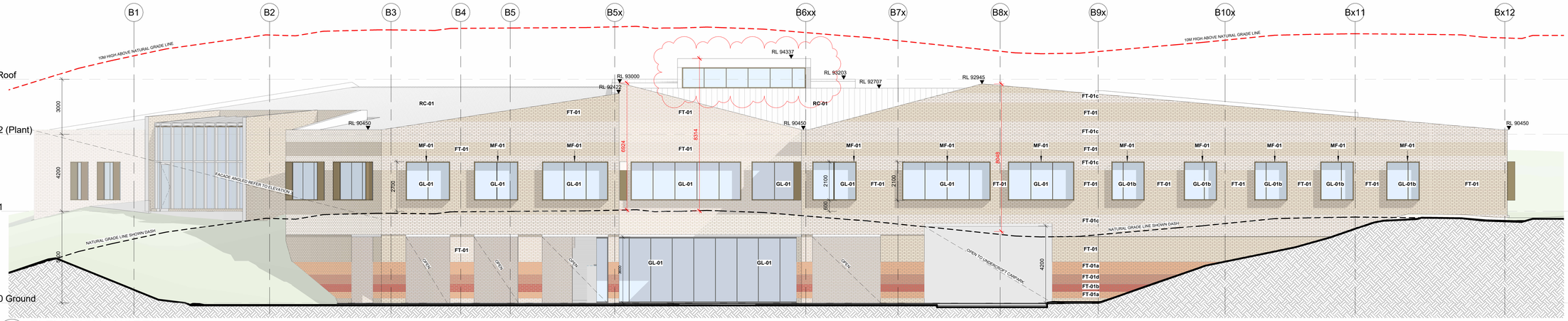
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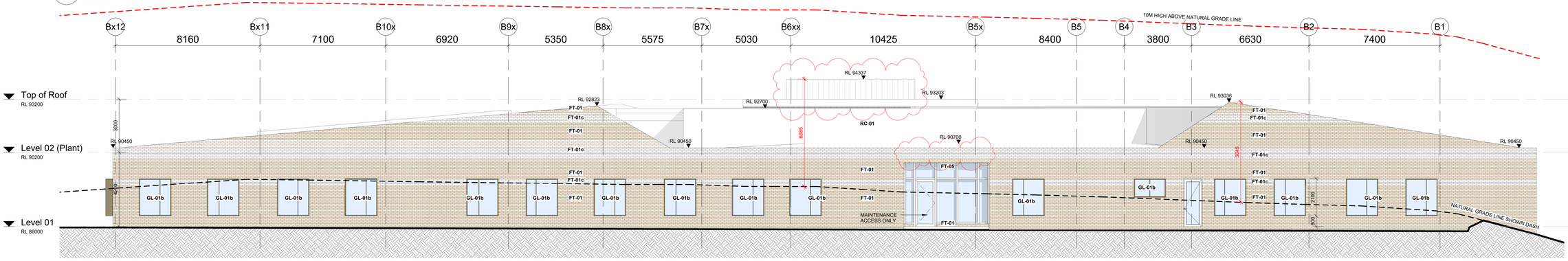
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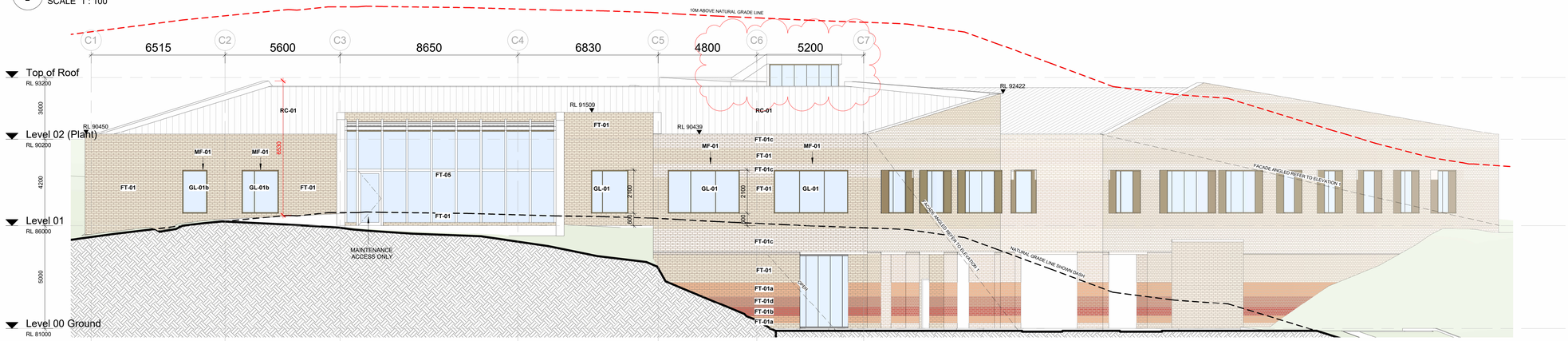
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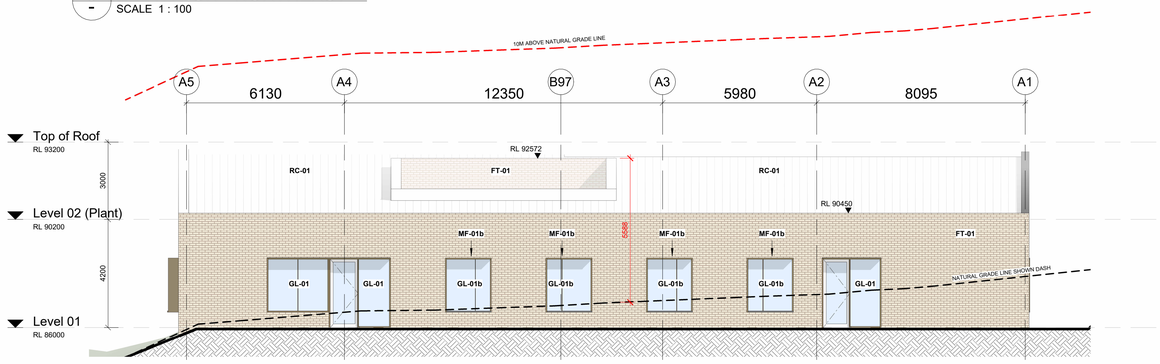
1 - ELEVATION - NORTH
SCALE 1 : 100



2 - ELEVATION - SOUTH
SCALE 1 : 100



3 - ELEVATION - NORTHEAST
SCALE 1 : 100



4 - ELEVATION - WEST
SCALE 1 : 100

ELEVATION & SECTION LEGEND

NOTE ALL MATERIALS, COLOURS AND PROFILES TO BE FURTHER RESOLVED.

GL-01		*SECTION J - GLAZING CLEAR*
GL-01b		*SECTION J - GLAZING WITH INTERNAL JOCKEY SASH - CLEAR*
GL-01c		*SECTION J - SPANDREL PANEL CHARCOAL COLOUR*
MF-01		*SOLID ALUMINIUM SUNSHADES - FULL REVEAL GENERAL GLAZING FRAMES - BRONZE COLOUR 01*
MF-01b		*SOLID ALUMINIUM SUNSHADES - L-SHAPED - BRONZE COLOUR 01*
FT-01		*PATTERNED BRICK FACADE COLOUR 01*
FT-01a		*PATTERNED BRICK FACADE COLOUR 02*
FT-01b		*PATTERNED BRICK FACADE COLOUR 03*
FT-01c		*PATTERNED BRICK FACADE COLOUR 04*
FT-01d		*PATTERNED BRICK FACADE COLOUR 05*
FT-04		BLOCKWORK
FT-05		ENCLOSED COURTYARDS, GLAZING AND/OR SAFETY MESH, EXACT CONFIGURATION TBC
RC-01		*ALUMINIUM PROFILED ROOFING SUITED FOR MARINE ENVIRONMENT (PERCIPERE) COLOUR 06*
RC-02		*ALUMINIUM PERFORATED SOFFIT MATCHES COLOUR 06*
		10M HIGH ABOVE NATURAL GRADE LINE
		NATURAL GRADE LINE

Client
Tasmanian Government - Department of Health
Tasmanian Government | Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
ELEVATIONS - GENERAL ARRANGEMENT

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
Page Size	**Drawn by**	**Checked by**
B1 (1000x707mm)	TW	CB

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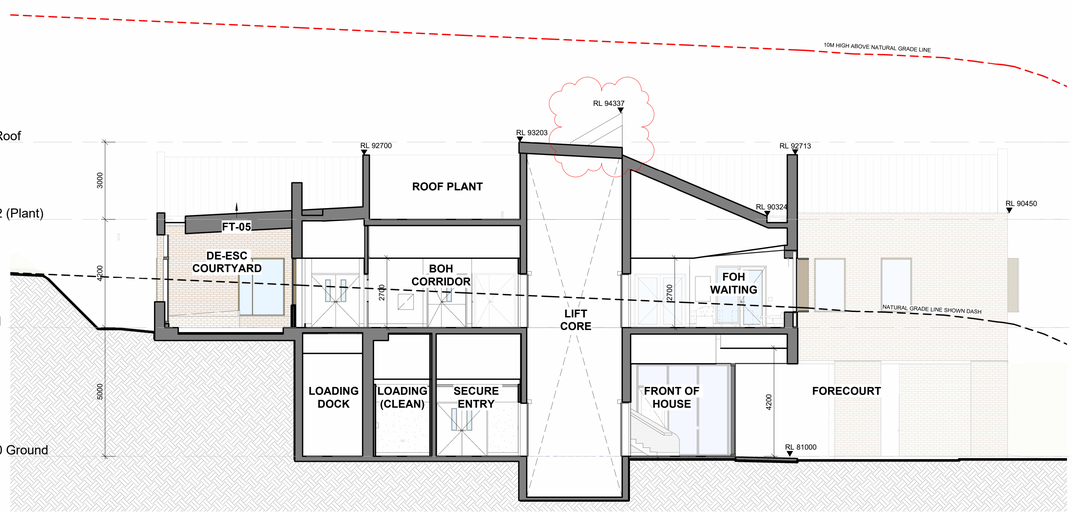
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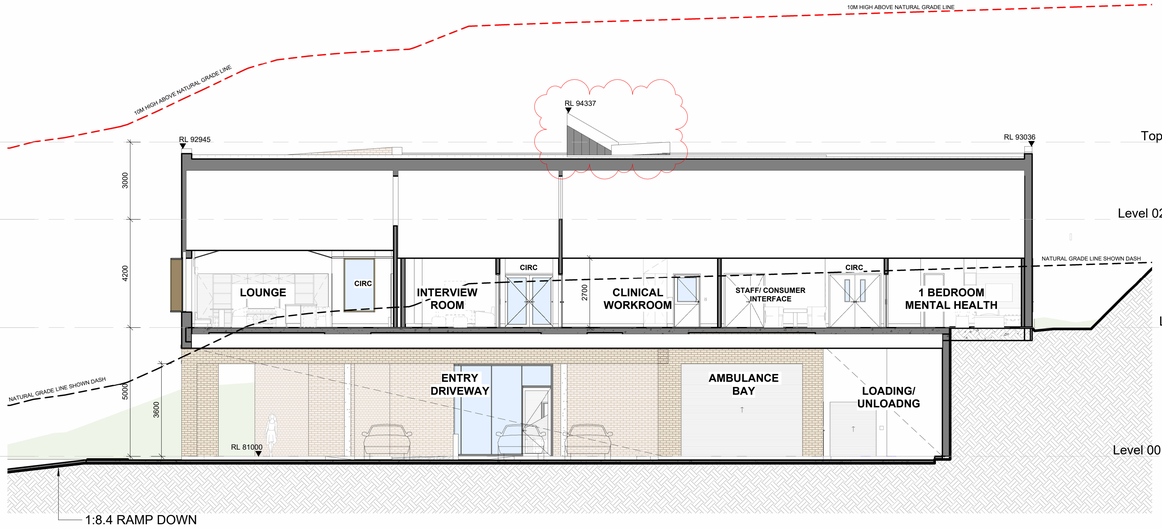
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C	04/02/2026	FOR APPROVAL		



A SECTION AA
SCALE 1 : 100

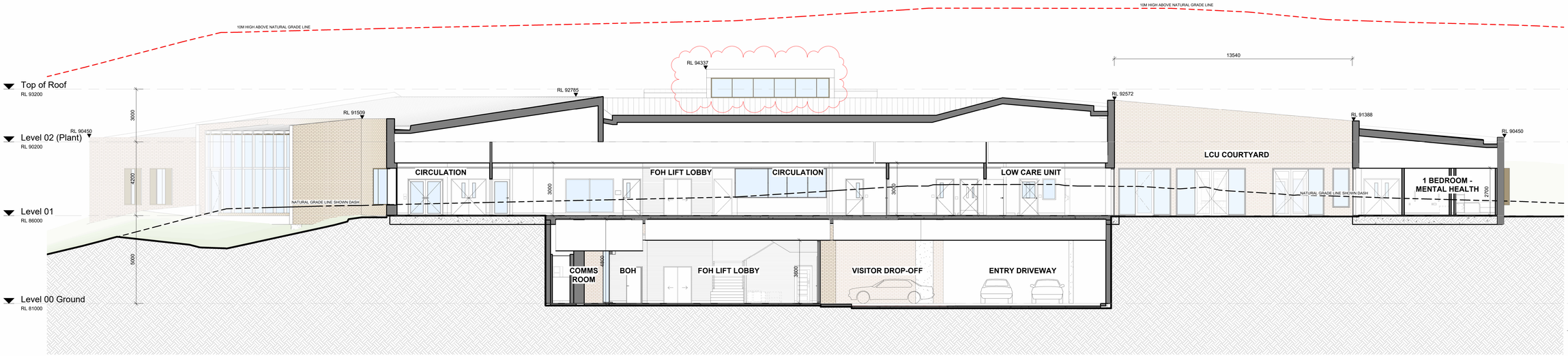


B SECTION BB
SCALE 1 : 100

ELEVATION & SECTION LEGEND

NOTE ALL MATERIALS, COLOURS AND PROFILES TO BE FURTHER RESOLVED.

- GL-01 — *SECTION J - GLAZING CLEAR*
- GL-01b — *SECTION J - GLAZING WITH INTERNAL JOCKEY SASH - CLEAR*
- GL-01c — *SECTION J - SPANDREL PANEL CHARCOAL COLOUR*
- MF-01 — *SOLID ALUMINIUM SUNSHADES - FULL REVEAL GENERAL GLAZING FRAMES - BRONZE COLOUR 01*
- MF-01b — *SOLID ALUMINIUM SUNSHADES - L-SHAPED - BRONZE COLOUR 01*
- FT-01 — *PATTERNED BRICK FACADE COLOUR 01*
- FT-01a — *PATTERNED BRICK FACADE COLOUR 02*
- FT-01b — *PATTERNED BRICK FACADE COLOUR 03*
- FT-01c — *PATTERNED BRICK FACADE COLOUR 04*
- FT-01d — *PATTERNED BRICK FACADE COLOUR 05*
- FT-04 — BLOCKWORK
- FT-05 — ENCLOSED COURTYARDS, GLAZING AND/OR SAFETY MESH, EXACT CONFIGURATION TBC
- RC-01 — *ALUMINIUM PROFILED ROOFING SUITED FOR MARINE ENVIRONMENT (PERCIPERE) COLOUR 06*
- RC-02 — *ALUMINIUM PERFORATED SOFFIT MATCHES COLOUR 06*
- 10M HIGH ABOVE NATURAL GRADE LINE
- NATURAL GRADE LINE



C SECTION CC
SCALE 1 : 100

Client
Tasmanian Government - Department of Health

Tasmanian Government | Department of Health

0 10 20 30 50mm
ScaCHECK@ B1

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
SECTIONS - GENERAL ARRANGEMENT

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
Page Size	**Drawn by**	**Checked by**
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VIEW 1 - PEDESTRIAN MAIN ENTRY VIEW



VIEW 2 - MAIN FACADE VIEW - NORTH EAST ORIENTATION



VIEW 3 - BACK VIEW - SOUTH ORIENTATION

KEY PLAN 1:500

Rev	Date	Revision	By	Chk.
A	13/11/2025	FOR APPROVAL		
B	19/11/2025	ISSUE FOR APPROVAL		
C	04/02/2026	FOR APPROVAL		

Client
Tasmanian Government - Department of Health

N

Project Name
TAS - Northwest Mental Health Precinct - Burnie(V2)

Drawing Name
3D VISUALISATION

Project No	Contract No	Revision Date
241047	IS-698	04/02/2026
Page Size	**Drawn by**	**Checked by**
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