Clarence... a brighter place

DEVELOPMENT APPLICATION

PDPLANPMTD-2023/041206

PROPOSAL: Two Warehouses, Signage and Change of Use to Storage

LOCATION: 14 Spark Drive, Cambridge

RELEVANT PLANNING SCHEME: Tasmanian Planning Scheme - Clarence

ADVERTISING EXPIRY DATE: 08 February 2024

The relevant plans and documents can be inspected at the Council offices, 38 Bligh Street, Rosny Park, during normal office hours until 08 February 2024. In addition to legislative requirements, plans and documents can also be viewed at www.ccc.tas.gov.au during these times.

Any person may make representations about the application to the Chief Executive Officer, by writing to PO Box 96, Rosny Park, 7018 or by electronic mail to clarence@ccc.tas.gov.au. Representations must be received by Council on or before 08 February 2024.

To enable Council to contact you if necessary, would you please also include a day time contact number in any correspondence you may forward.

Any personal information submitted is covered by Council's privacy policy, available at www.ccc.tas.gov.au or at the Council offices.

Clarence City Council

Clarence... a brighter place

APPLICATION FOR DEVELOPMENT / USE OR SUBDIVISION

*The personal information on this form is required by Council for the development of land under the Land Use Planning and Approvals Act 1993. We will only use your personal information for this and other related purposes. If this information is not provided, we may not be able to deal with this matter. You may access and/or amend your personal information at any time. How we use this information is explained in our **Privacy Policy**, which is available at www.ccc.tas.gov.au or at Council offices.*

Proposal: Warehouse Development

Location:

Address 14 Spark Drive

Suburb/Town Cambridge *Postcode* 7170

Current Owners/s:

Applicant:

Personal Information Removed

Tax Invoice for application fees to be in the name of:
(if different from applicant)

Estimated cost of development $ 2,900,500.00

Is the property on the Tasmanian Heritage Register? Yes [ ] No [X]

(if yes, we recommend you discuss your proposal with Heritage Tasmania prior to lodgement as exemptions may apply which may save you time on your proposal)

If you had pre-application discussions with a Council Officer, please give their name	
Current Use of Site:	N/A

Does the proposal involve land administered or owned by the Crown or Council?	Yes		No X

Declaration:

- *I have read the Certificate of Title and Schedule of Easements for the land and am satisfied that this application is not prevented by any restrictions, easements or covenants.*
- *I authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation. I agree to arrange for the permission of the copyright owner of any part of this application to be obtained. I have arranged permission for Council's representatives to enter the land to assess this application*
- *I declare that, in accordance with Section 52 of the Land Use Planning and Approvals Act 1993, that I have notified the owner of the intention to make this application. Where the subject property is owned or controlled by Council or the Crown, their signed consent is attached. Where the application is submitted under Section 43A, the owner's consent is attached.*
- *I declare that the information in this declaration is true and correct.*

Acknowledgement:

- *I acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process; for display purposes during public consultation; and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.*

Applicant's Signature:

Signature..... *Date* 19/12/2023

PLEASE REFER TO THE DEVELOPMENT/USE AND SUBDIVISION CHECKLIST ON THE FOLLOWING PAGES TO DETERMINE WHAT DOCUMENTATION MUST BE SUBMITTED WITH YOUR APPLICATION.

Clarence City Council

DEVELOPMENT/USE OR SUBDIVISION CHECKLIST

Clarence... a brighter place

Documentation required:

1. **MANDATORY DOCUMENTATION**

This information is required for the application to be valid. An application lodged without these items is unable to proceed.

- ❑ Details of the location of the proposed use or development.
- ❑ A copy of the current Certificate of Title, Sealed Plan, Plan or Diagram and Schedule of Easements and other restrictions for each parcel of land on which the use or development is proposed.
- ❑ Full description of the proposed use or development.
- ❑ Description of the proposed operation.
  May include where appropriate: staff/student/customer numbers; operating hours; truck movements; and loading/unloading requirements; waste generation and disposal; equipment used; pollution, including noise, fumes, smoke or vibration and mitigation/management measures.
- ❑ Declaration the owner has been notified if the applicant is not the owner.
- ❑ Crown or Council consent (if publically-owned land).
- ❑ Any reports, plans or other information required by the relevant zone or code.
- ❑ Fees prescribed by the Council.

  Application fees (please phone 03 6217 9550 to determine what fees apply). An invoice will be emailed upon lodgement.

2. **ADDITIONAL DOCUMENTATION**

In addition to the mandatory information required above, Council may, to enable it to consider an application, request further information it considers necessary to ensure that the proposed use or development will comply with any relevant standards and purpose statements in the zone, codes or specific area plan, applicable to the use or development.

- ❑ **Site analysis plan and site plan**, including where relevant:
  - *Existing and proposed use(s) on site.*
  - *Boundaries and dimensions of the site.*
  - *Topography, including contours showing AHD levels and major site features.*
  - *Natural drainage lines, watercourses and wetlands on or adjacent to the site.*
  - *Soil type.*
  - *Vegetation types and distribution, and trees and vegetation to be removed.*
  - *Location and capacity of any existing services or easements on/to the site.*
  - *Existing pedestrian and vehicle access to the site.*
  - *Location of existing and proposed buildings on the site.*
  - *Location of existing adjoining properties, adjacent buildings and their uses.*
  - *Any natural hazards that may affect use or development on the site.*
  - *Proposed roads, driveways, car parking areas and footpaths within the site.*
  - *Any proposed open space, communal space, or facilities on the site.*
  - *Main utility service connection points and easements.*
  - *Proposed subdivision lot boundaries.*

- ❑ Where it is proposed to erect buildings, **detailed plan**s with dimensions at a scale of 1:100 or 1:200 showing:
  - *Internal layout of each building on the site.*
  - *Private open space for each dwelling.*
  - *External storage spaces.*
  - *Car parking space location and layout.*
  - *Major elevations of every building to be erected.*
  - *Shadow diagrams of the proposed buildings and adjacent structures demonstrating the extent of shading of adjacent private open spaces and external windows of buildings on adjacent sites.*
  - *Relationship of the elevations to natural ground level, showing any proposed cut or fill.*
  - *Materials and colours to be used on rooves and external walls.*
- ❑ Where it is proposed to erect buildings, a plan of the proposed **landscaping** showing:
  - *Planting concepts.*
  - *Paving materials and drainage treatments and lighting for vehicle areas and footpaths.*
  - *Plantings proposed for screening from adjacent sites or public places.*
- ❑ Any additional reports, plans or other information required by the relevant zone or code.

This list is not comprehensive for all possible situations. If you require further information about what may be required as part of your application documentation, please contact Council's Planning Officers on (03) 6217 9550 who will be pleased to assist.

CERTIFICATE OF TITLE

LAND TITLES ACT 1980

TASMANIA

TORRENS TITLE

VOLUME	FOLIO
184018	29
EDITION	**DATE OF ISSUE**
3	01-Sep-2023
Page 1	of 1

I certify that the person described in Schedule 1 is the registered proprietor of an estate in fee simple (or such other estate or interest as is set forth in that Schedule) in the land within described subject to such exceptions, encumbrances, interests and entries specified in Schedule 2 and to any additional entries in the Folio of the Register.

Recorder of Titles

RECORDER OF TITLES TASMANIA

DESCRIPTION OF LAND

City of CLARENCE
Lot 29 on Sealed Plan 184018
Derivation : Part of 50 Acres Loc. to William Smith
Prior CT 182041/110

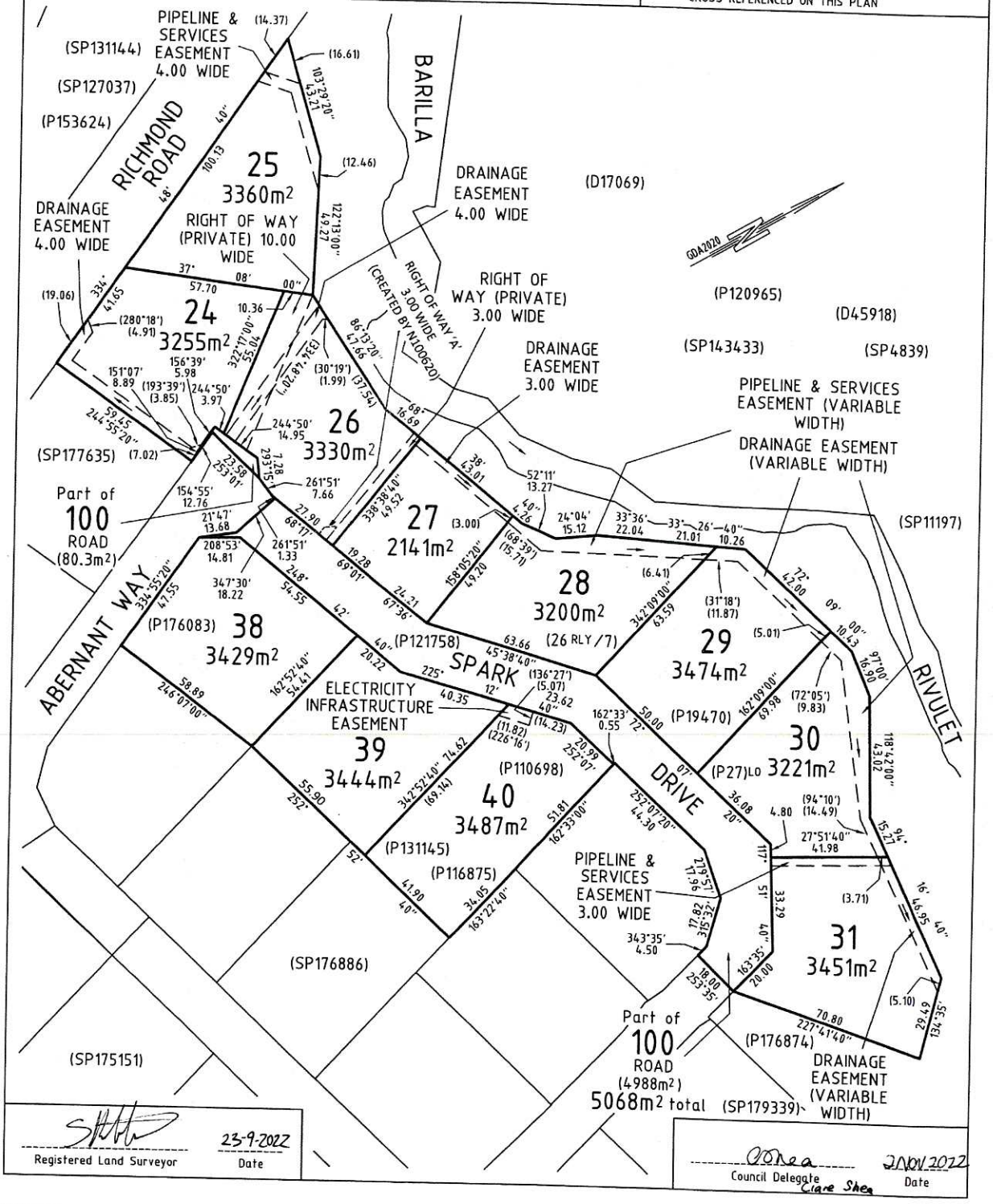
SCHEDULE 1

N143263 TRANSFER to FAIRBROTHER PTY LTD Registered 01-Sep-2023 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP184018 EASEMENTS in Schedule of Easements
SP184018 FENCING PROVISION in Schedule of Easements
SP179339 FENCING PROVISION in Schedule of Easements

OWNER Linear Capital Pty. Ltd.	**PLAN OF SURVEY**	REGISTERED NUMBER **SP184018**
FOLIO REFERENCE 182041-110	BY SURVEYOR S. Roberts of PDA SURVEYORS 127 BATHURST STREET, HOBART	
GRANTEE Part of 50 acres located to William Blay & 50 acres located to W. Smith	LOCATION City of CLARENCE	APPROVED EFFECTIVE FROM 16 NOV 2022 Recorder of Titles
	SCALE: 1:1250 / LENGTHS IN METRES / SURVEYORS REF: 48665CT-1C	
	PRIORITY FINAL PLAN	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



Registered Land Surveyor — 23-9-2022 Date

Council Delegate — 16 NOV 2022 Date

SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 184018

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.

1. Easements

1.1 **Lot 24**

Lot 24 on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT 4.00 WIDE**' shown passing through Lot 24 on the Plan.

1.2 **Lot 25**

(a) **Lot 25** on the Plan ("the Lot") is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of TasWater over the land marked **PIPELINE & SERVICES EASEMENT 4.00 WIDE** shown on the Plan ("the Easement Land")

(b) **Lot 25** on the Plan is together with a Right of Carriageway over that part of the land marked '**RIGHT OF WAY (PRIVATE) 10.00 WIDE**' shown passing through Lot 26 on the Plan.

1.3 **Lot 26**

(a) **Lot 26** on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT 4.00 WIDE**' shown passing through **Lot 26** on the Plan.

(b) **Lot 26** on the Plan is subject to a Right of Carriageway (appurtenant to Lot 25 on the Plan) over that part of the land marked '**RIGHT OF WAY (PRIVATE) 10.00 WIDE**' shown passing through **Lot 26** on the Plan.

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: Linear Capital Pty Ltd FOLIO REF: CT 182041/110 SOLICITOR & REFERENCE: C Wootton 182041/110	PLAN SEALED BY: Clarence City Council DATE: 2nd November 2022 SD-2014/41 REF NO. Stage 6 & 7 Council Delegate Clare Shea
NOTE: The Council Delegate must sign the Certificate for the purposes of identification.	

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 2 OF 6 PAGES	Registered Number SP 184018
SUBDIVIDER: Linear Capital Pty Ltd FOLIO REFERENCE: CT 182041/110	

(c) **Lot 26** on the Plan is subject to a Right of Carriageway (in gross in favour of Clarence City Council) over that part of the land marked '**RIGHT OF WAY (PRIVATE) 3.00 WIDE**' shown passing through **Lot 26** on the Plan.

1.4 **Lot 27**

Lot 27 on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT 3.00 WIDE**' shown passing through Lot 27 on the Plan.

1.5 **Lot 28**

(a) **Lot 28** on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT (VARIABLE WIDTH)**' shown passing through Lot 28 on the Plan.

(b) **Lot 28** on the Plan ("the Lot") is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of TasWater over the land marked **PIPELINE & SERVICES EASEMENT (VARIABLE WIDTH)** shown on the Plan ("the Easement Land")

1.6 **Lot 29**

(a) **Lot 29** on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT VARIABLE WIDTH**' shown passing through Lot 29 on the Plan.

(b) **Lot 29** on the Plan ("the Lot") is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of TasWater over the land marked **PIPELINE & SERVICES EASEMENT (VARIABLE WIDTH)** shown on the Plan ("the Easement Land")

1.7 **Lot 30**

(a) **Lot 30** on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT VARIABLE WIDTH**' shown passing through Lot 30 on the Plan.

(b) **Lot 30** on the Plan ("the Lot") is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of TasWater over the land marked **PIPELINE & SERVICES EASEMENT (VARIABLE WIDTH)** shown on the Plan ("the Easement Land")

Signed by **Linear Capital Pty Ltd**: _____ _____

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 3 OF 6 PAGES	Registered Number SP 184018
SUBDIVIDER: Linear Capital Pty Ltd FOLIO REFERENCE: CT 182041/110	

1.8 **Lot 31**

(a) **Lot 31** on the Plan is subject to a Right of Drainage (in gross in favour of Clarence City Council) over that part of the land marked '**DRAINAGE EASEMENT VARIABLE WIDTH'** shown passing through Lot 31 on the Plan.

(b) **Lot 31** on the Plan ("the Lot") is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of TasWater over the land marked **PIPELINE & SERVICES EASEMENT 3.00 WIDE** shown on the Plan ("the Easement Land")

1.9 **Lot 40**

Lot 40 on the Plan is subject to an Electricity Infrastructure Easement (in gross in favour of TasNetworks) over that part of Lot 40 marked '**ELECTRICITY INFRASTRUCTURE EASEMENT'** on the Plan.

2. FENCING PROVISION

In respect of each and every lot on the Plan the Vendor (**Linear Capital Pty Ltd**) shall not be required to fence.

3. INTERPRETATION

"Electricity Infrastructure Easement" means

FIRSTLY all the full and free right and liberty for Tasmanian Networks Pty Ltd and its successors and its and their servants agents and contractors (hereinafter called "TasNetworks") at all times hereafter:

(1) **TO** maintain, lay, erect and install anything used for, or in connection with the generation, transmission or distribution of electricity including powerlines (overhead or underground), substations for converting electricity, substations for transforming or controlling electricity and equipment for metering, monitoring or controlling electricity (hereinafter called "electricity infrastructure") of such materials and type as TasNetworks may determine above, on or under the land respectively marked "ELECTRICITY INFRASTRUCTURE EASEMENT" on Lot 40 on the Plan (hereinafter called the "servient land");

Signed by **Linear Capital Pty Ltd**: _____ _____

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ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 4 OF 6 PAGES	Registered Number SP 184018
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(2) **TO** enter into and upon the servient land for the purpose of examining, operating, maintaining, repairing, modifying, adding to or replacing electricity infrastructure without doing unnecessary damage to the said servient land and making good all damage occasioned thereby;

(3) **TO** erect fencing, signs, barriers or other protective structures upon the servient land if in the opinion of TasNetworks these are necessary for reasons of safety;

(4) **TO** cause or permit electrical energy to flow or be transmitted or distributed through the said electricity infrastructure;

(5) **TO** enter into and upon the servient land for all or any of the above purposes with or without all necessary plant equipment and machinery and the means of transporting the same and if necessary to cross the remainder of the said land in consultation with the registered proprietor/s for the purpose of access and regress to and from the servient land;

(6) Causing as little damage as possible and making reasonable compensation for all damage done.

NOTHING herein contained shall prevent the registered proprietor/s for themselves and their successors in title from using the servient land **PROVIDED THAT** such use does not derogate from this grant or, in the opinion of TasNetworks compromise the safe operation of TasNetworks electricity infrastructure located on, above or under the servient land.

"Pipeline and Services Easement" means:

THE FULL RIGHT AND LIBERTY for the TasWater at all times to:

(1) enter and remain upon the Easement Land with or without employees, contractors, agents and all other persons duly authorised by it and with or without machinery, vehicles, plant and equipment;

(2) investigate, take soil, rock and other samples, survey, open and break up and excavate the Easement Land for any purpose or activity that TasWater is authorised to do or undertake;

(3) install, retain, operate, modify, relocate, maintain, inspect, cleanse, repair remove and replace the Infrastructure;

(4) run and pass sewage, water and electricity through and along the Infrastructure;

Signed by **Linear Capital Pty Ltd**: _____ _____

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ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 5 OF 6 PAGES	Registered Number SP 184018
SUBDIVIDER: Linear Capital Pty Ltd FOLIO REFERENCE: CT 182041/110	

(5) do all works reasonably required in connection with such activities or as may be authorised or required by any law:

(a) without doing unnecessary damage to the Easement Land; and

(b) leaving the Easement Land in a clean and tidy condition; and

(6) if the Easement Land is not directly accessible from a highway, then for the purpose of undertaking any of the preceding activities TasWater may with or without employees, contractors, agents and all other persons authorised by it, and with or without machinery, vehicles, plant and equipment enter the Lot from the highway at any then existing vehicle entry and cross the Lot to the Easement Land; and

(7) use the Easement Land as a right of carriageway for the purpose of undertaking any of the preceding purposes on other land, TasWater reinstating any damage that it causes in doing so to any boundary fence of the Lot.

SECONDLY, the benefit of a covenant in gross for TasWater with the registered proprietors of the Easement Land and their successors and assigns not to erect any building, or place any structures, objects, vegetation, or remove anything that supports, protects or covers any infrastructure on or in the Easement Land, without the prior written consent of TasWater to the intent that the burden of the covenant may run with and bind the servient land and every part thereof and that the benefit thereof may be annexed to the easement herein described.

Interpretation:

"**Infrastructure**" means infrastructure owned or for which TasWater is responsible and includes but is not limited to:

(a) sewer pipes and water pipes and associated valves;

(b) telemetry and monitoring devices;

(c) inspection and access pits;

(d) electricity assets and other conducting media (excluding telemetry and monitoring devices);

(e) markers or signs indicating the location of the Easement Land, the Infrastructure or any warnings or restrictions with respect to the Easement Land or any other Infrastructure;

(f) anything reasonably required to support, protect or cover any of the Infrastructure;

Signed by **Linear Capital Pty Ltd**: _____ _____

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ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 6 OF 6 PAGES	Registered Number SP 184018
SUBDIVIDER: Linear Capital Pty Ltd FOLIO REFERENCE: CT 182041/110	

(g) any other infrastructure whether of a similar nature or not to the preceding which is reasonably required for the piping of sewage or water, or the running of electricity, through the Easement Land or monitoring or managing that activity; and

(h) where the context permits, any part of the Infrastructure.

"Right of Carriageway" means a right of carriage way as set out in long form within Schedule 8 of the *Conveyancing and Law of Property Act 1884.*

"Right of Drainage" means a right of drainage as set out in long form within Schedule 8 of the *Conveyancing and Law of Property Act 1884.*

"TasWater" means Tasmanian Water and Sewerage Corporation Pty Limited (ACN 162 220 653), trading TasWater, established under the provisions of the *Water and Sewerage Corporations Act 2012* (Tas).

4. EXECUTION

Signed on behalf of **Linear Capital Pty Ltd**

(ACN 100 448 726) in accordance with section 127

of the ***Corporations Act 2001 (Cth)*** *by:*

Signature
TROY HARPER
Director

Signature
GEOFFREY A HARPER.
Director/Secretary

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

PINNACLE

Fairbrother DEVELOPMENTS

ARTISTIC IMPRESSION

14 Spark Drive, Cambridge 7170

Owner(s) or Clients	Fairbrother Pty Ltd
Building Classification	7b Building Type C
Designer	Jason Nickerson CC6073Y
Total Floor Area (Combined)	1958.32m^2
Alpine Area	N/A
Other Hazards	Safeguarding of Airports Code, Bushfire-prone Areas Code, Specific Area Plan CLA-S15.0 - Precint B

Title Reference	184018/29
Zoning	18.0 Light Industrial
Land Size	3474m^2
Design Wind Speed	TBA
Soil Classification	TBA
Climate Zone	7
Corrosion Environment	Moderate
Bushfire Attack Level (BAL)	N/A

ID	Sheet Name	Issue
A.01	Site Plan	DA - 02
A.02	Floor Plan - Lower	DA - 02
A.03	Floor Plan - Upper	DA - 02
A.04	Elevations	DA - 02
A.05	Elevations	DA - 02
A.06	Roof Plan	DA - 02
C.01	Civil Plan	DA - 02
L.01	Landscaping Plan	DA - 02

Legend

- Electrical Connection
- Electrical Turret
- Sewer Connection
- Stormwater Connection
- Telstra Connection
- Telstra Pit
- Water Meter
- Water Stop Valve
- Fire Hydrant
- Solar Bollard Light
- Spotlight with sensor

Flood-Prone Area

Waterway & Coastal Protection Area

Important Note

Any opening in the external walls such as a door or window, that are located within the following must be provided with protection to avoid the spread of fire.

- 3m of a side or rear boundary; or
- 6m of the far side of a road or the like (if not located at or near ground level); or
- 6m of another building on the same allotment;

Surface Water Drainage

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 2022 Volume I.

Surface water, resulting from a storm having an annual exceedance probability of 1%, must not enter the building.

Limitations

F1P2 does not apply to-

(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or
(b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or an open spectator stand or open-deck carpark.

Fire Safety

Where a building is more than 500m2 or if internal fire hydrants are proposed/installed, a fire hose reel system must be provided in accordance with AS2441.
Fire hose reels must be installed within 4m of an exit or otherwise provided to provide full coverage to the building.

Survey Notes from Surveyor

This plan and associated digital model is prepared for David Kearney from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.
The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.
Services shown have been located where visible by field survey. Services denoted as being "Per DBYD only" are approximate and for illustrative purposes only. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.
This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

EXISTING SEWER MANHOLE 1025Ø
R.L: 19.66
INV: 17.93

EXISTING SW MANHOLE 1025Ø
R.L: 19.79
INV: 18.30

EXISTING SEWER MANHOLE 1025Ø
R.L: 18.86
INV: 17.09

EXISTING SW MANHOLE 1025Ø
R.L: 19.07
INV: 17.52

2,290.69 m²

42.00

3,611

10.26

4,842

1,872

1,930

DRAINAGE, PIPELINE & SERVICES EASEMENT VARIABLE WIDTH

RELOCATED CONNECTIONS

REMOVE EX. STORMWATER CONNECTION BY REGISTERED PLUMBER AT DEVELOPERS COST
R.L: 19.53
INV: NOT CONFIRMED

REMOVE EX. SEWER CONNECTION BY REGISTERED PLUMBER AT DEVELOPERS COST
R.L: 19.58
INV: 17.60

250

20.0

77.38 m²

1,555

1,000

5,400

2,600

9,354

P19 P18 P17 P16 P15 P14 P13 P12 P11 P10 P09 P08 P07 P06 P05 P04 P03 P02 P01

4,300

29
3474m²
CT: 184018/29

WAREHOUSE 02 AREA
970.91 m²
FFL: 20,500

WAREHOUSE 01 AREA
987.41 m²
FFL: 20,500

PATH: 82.07 m²

7,500

LOADING BAY

5,854

3,500

63.59

69.98

WAREHOUSE 01 SHOW ROOM & TOILET AREA
108.65 m²

TOILET AREA
5.94 m²

3,265

bollard

SHARED

1,500

PATH: 18.17 m²

cut to 20.350

5,522

3,500

1250 x 12000 x 200 open drains (see report by Flussig)

12,000

1,250

1,200

50.00

1,344

5,515

1,000

5,507

3,250

5,500

TBM R/S NAIL IN DRIVEWAY
RL = 20.59

BATTER TO COMPLY WITH AS2870

EXISTING SIDE ENTRY PIT

EXISTING LIGHT POLE

CONNECT NEW FOOTPATH TO EXISTING FOOTPATH

NEW 5.5m CROSSOVER TO LGAT STANDARD DRAWINGS TSD-R09

EXISTING CROSSOVER TO BE REMOVED

DRIVEWAY AREA
(INCL. CROSSOVER)
919.43 m²

SPARK DRIVE

Building Areas	
	MEASURED AREA
WAREHOUSE 01 AREA	987.41
WAREHOUSE 02 AREA	970.91
	1,958.32 m²

Site Areas

Site Area	3474 m²
Building Footprint	1958.32 m²
Total Site Coverage	56.37%

NOT FOR CONSTRUCTION

PINNACLE

PINNACLE DRAFTING & DESIGN
7/3 Abernant Way, Cambridge 7170
03 6248 4218
admin@pinnacledrafting.com.au
www.pinnacledrafting.com.au
Licence: CC6073Y

Site Plan

Revision: DA - 02
Approved by: JRD

Scale: 1:200 @ A2
Pg. No: A.01

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

Fairbrother DEVELOPMENTS

LEGEND

- Access Panel
- Articulation Joint
- TGSI
- Exit Sign
- Fire Hose Reel
- Fire Extinguisher

Doorway identification (Clause 10.1) - AS1428.1:2021

All doorways shall have a minimum luminance contrast of 30% provided between-

(a) door leaf and door jamb; or
(b) door leaf and adjacent wall; or
(c) architrave and wall; or
(d) door leaf and architrave; or
(e) door jamb and adjacent wall

The minimum width of the area of luminance shall be 50mm.

Explanation; where it is necessary to achieve sufficient contrast between building elements, this can usually be achieved by using very dark or very light materials.

Continuous accessible paths of travel (Clause 3.1) - AS1428.1:2021

Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:

(a) Fixtures and fittings such as lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects.
(b) Essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards.
(c) Door handles less than 900 mm above the finished floor level.

Tactile Ground Surface Indicators(TGSIs)

Tactile ground surface indicators (TGSIs) to warn people of hazards shall be in accordance with AS/NZS 1428.4.1. Locations of TGSIs are indicated as per plans.
Refer to Legend.

Note: Stair Construction

Stairs must comply with-
- clause 8.1 of AS 1428.1:2021, including the notes; and
- clause 8.2 of AS 1428.1:2021

Stair Risers: Min/Max = 115mm/190mm
Public Stair Goings: Min/Max = 250mm/355mm
Quantity Calculation Required ((2xRiser) +Goings):
Min/Max = 550mm/700mm
Minimum of 2 risers and maximum of 18 in a flight;
Not permit a 125mm sphere to pass through
between treads;
Solid construction (i.e. not perforated) if more than
10m high or more than 3 storeys;
No winders (except internally of a residential
apartment);

Artificial Lighting

Artificial lighting must be provided -

(a) in required stairways, passageways, and ramps; and
(b) if natural light of a standard equivalent to that required by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in-
(iii) Class 3, 5, 6, 7, 8 and 9 buildings - to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.

The artificial lighting system must comply with AS/NZS 1680.0.

Heights of rooms & other spaces F5D2 of NCC VOL I 2022

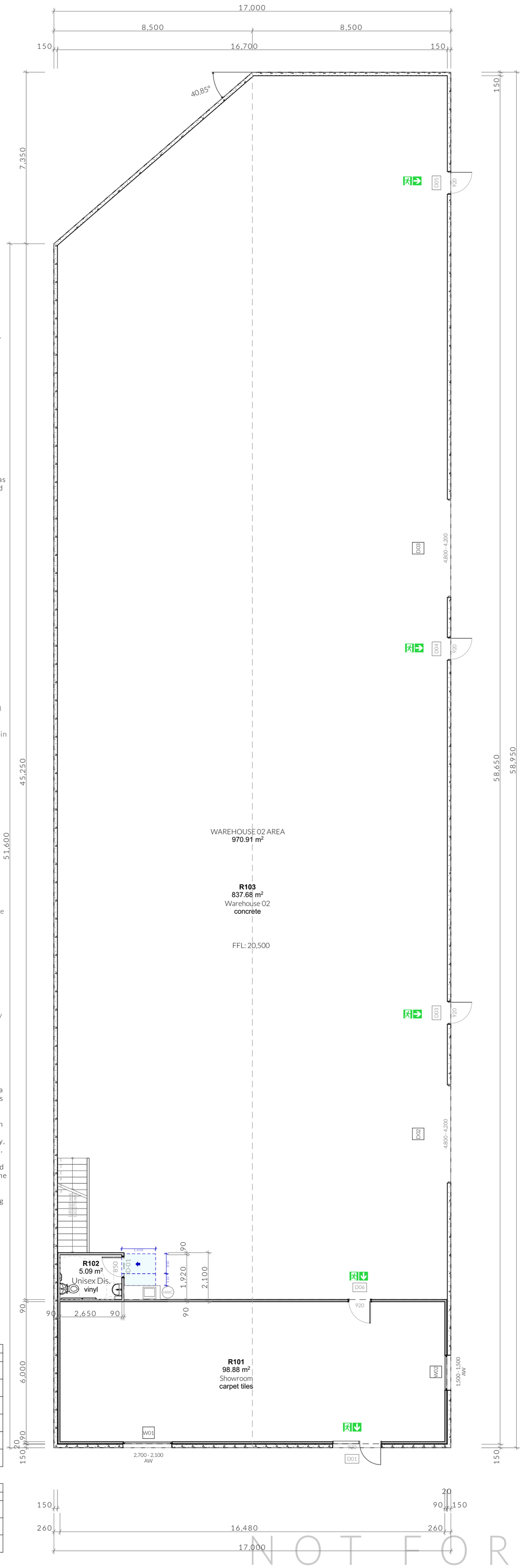
The height of rooms and other spaces in a Class 5, 6, 7 or 8 building must be not less than-

(a)for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like - 2.1 m; and
(b)for a commercial kitchen - 2.4 m; and
(c)above a stairway, ramp, landing or the like - 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; andfor a required accessible adult change facility - 2.4 m.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC 2022 Vol I. Builder to contact *Pinnacle* before undertaking works.

Floor Areas	
	MEASURED AREA
Showroom	98.88
Warehouse 02	837.68
Unisex Dis.	5.09
Warehouse 01	958.85
Open Mezzanine	109.27
Unisex Dis.	5.09

Building Areas	
	MEASURED AREA
WAREHOUSE 01 AREA	987.41
WAREHOUSE 02 AREA	970.91
	1,958.32 m²



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www.pinnacledrafting.com.au
Licence: CC6073Y

Floor Plan - Lower

Revision: DA - 02
Approved by: JRD

Scale: 1:125 @ A2
Pg. No: A.02

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

Fairbrother DEVELOPMENTS

LEGEND

- Access Panel
- Articulation Joint
- TGSI
- Exit Sign
- Fire Hose Reel
- Fire Extinguisher

Doorway identification (Clause 10.1) - AS1428.1:2021

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Building Areas	
	MEASURED AREA
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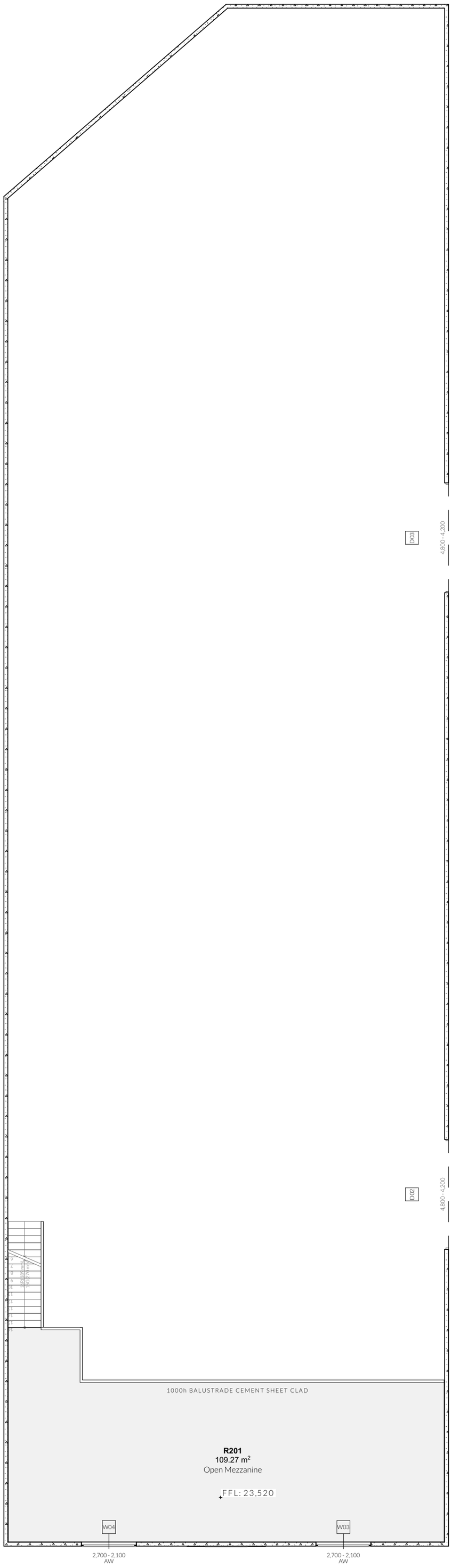
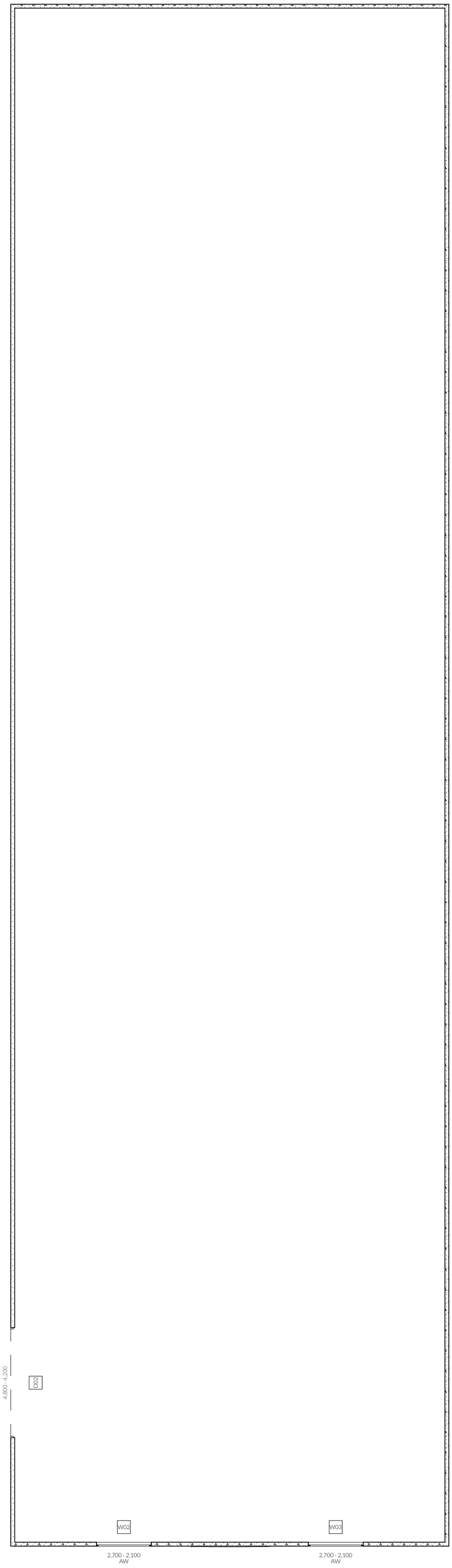
WAREHOUSE 02 AREA	970.91
	1,958.32 m²

Warehouse 02

1:125



Warehouse 01



NOT FOR CONSTRUCTION

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Licence: CC6073Y

Floor Plan - Upper

Revision: DA - 02
Approved by: JRD

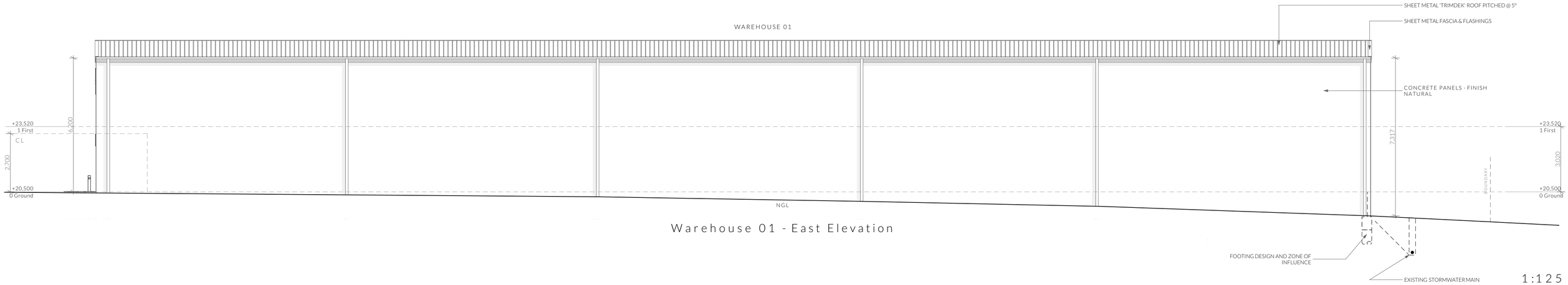
Scale: 1:125 @ A2
Pg. No: A.03

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

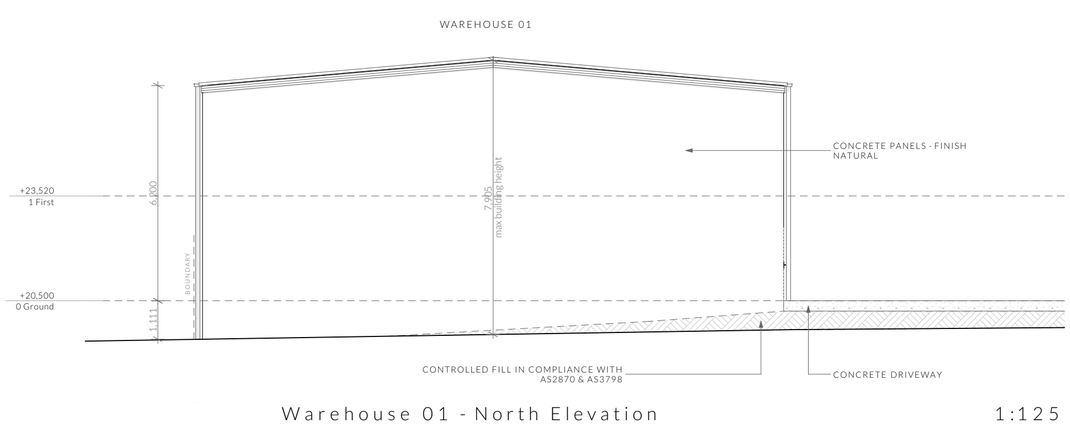
Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

Fairbrother DEVELOPMENTS



Warehouse 01 - East Elevation

1:125



Warehouse 01 - North Elevation

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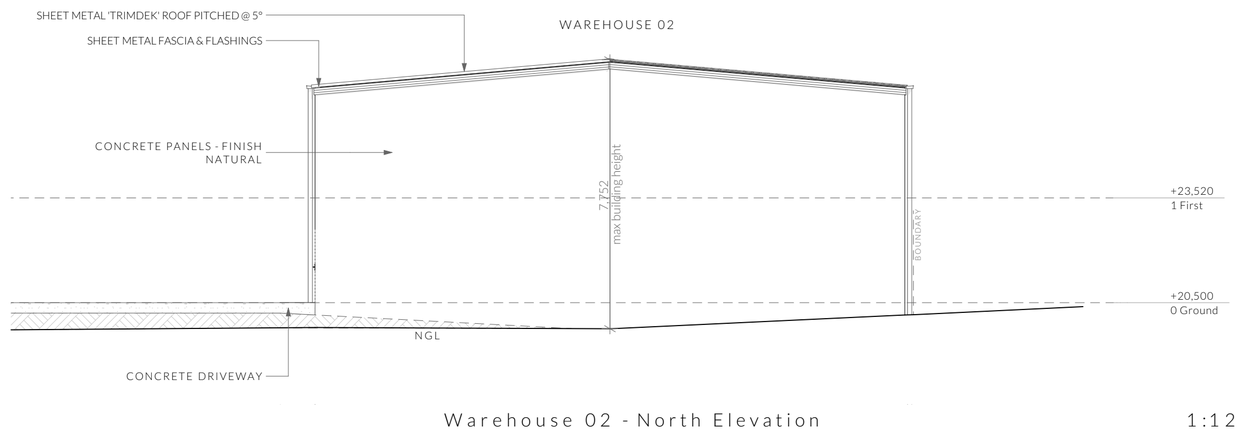
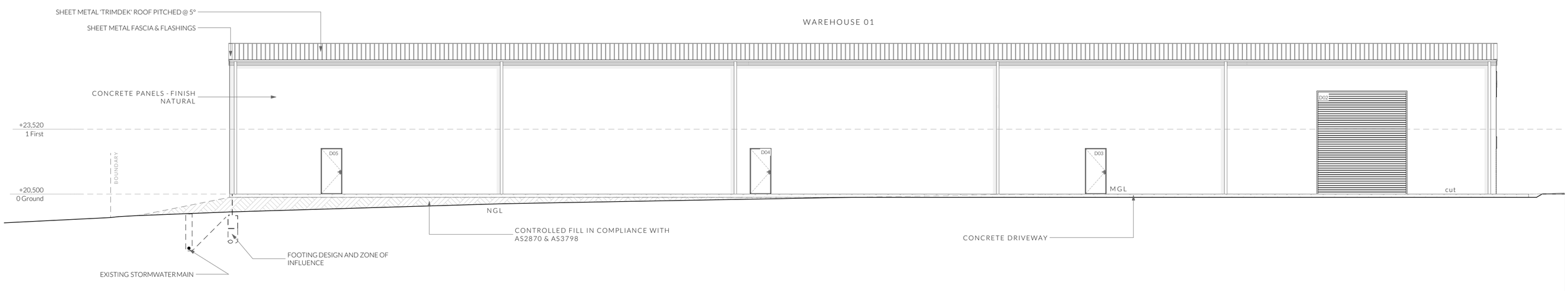


Warehouse 02 - North Elevation

1:125



Warehouse 01 - West Elevation

1:125

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Elevations

Revision: DA - 02
Approved by: JRD

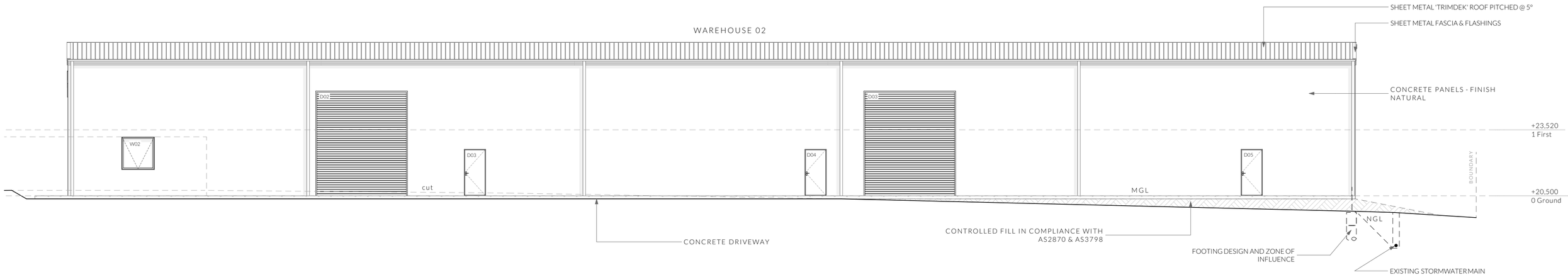
Scale: 1:125 @ A2
Pg. No: A.04

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

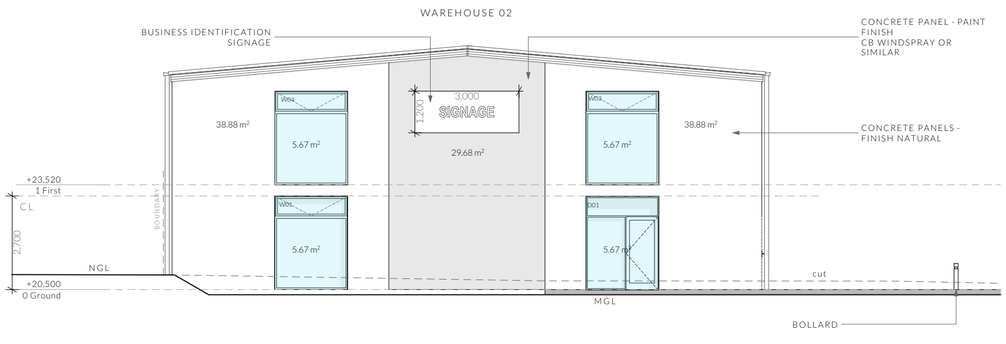
Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

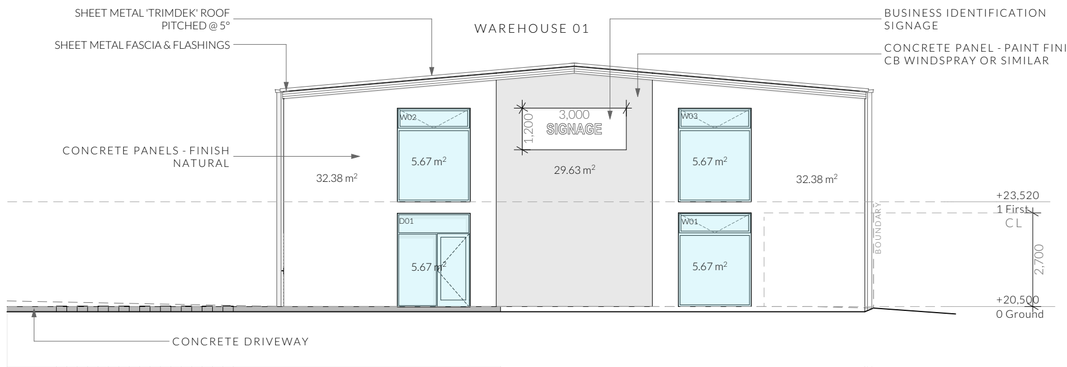
Fairbrother DEVELOPMENTS



Warehouse 02 - East Elevation 1:125



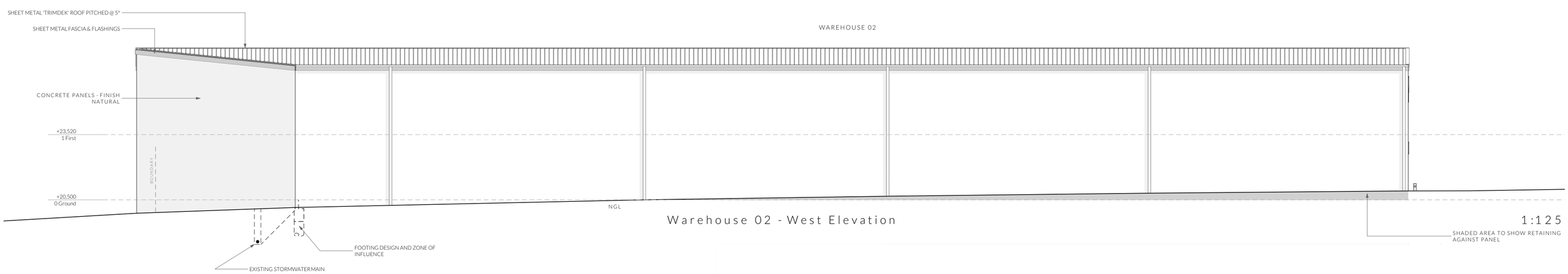
Warehouse 02 - South Elevation 1:125



Warehouse 01 - South Elevation 1:125

CLA-S15.7.2 A1 (c)

Warehouse 01	
Wall Area	50.20 m²
	10.04m² req.
provided	11.34m²
Warehouse 02	
Wall Area	45.90 m²
	9.18m² req.
provided	11.34m²



Warehouse 02 - West Elevation 1:125

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Elevations

Revision:
Approved by: JRD

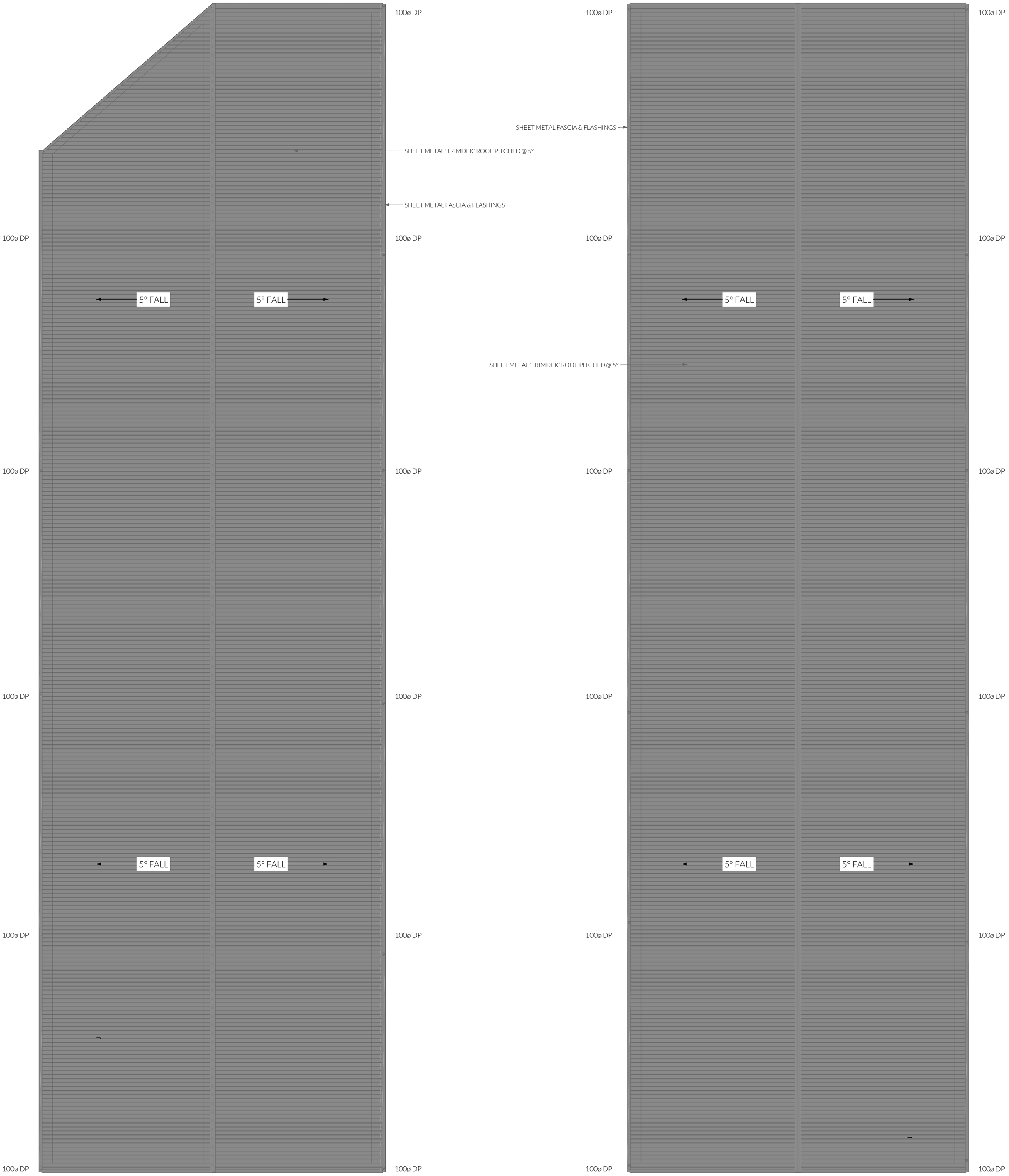
Scale: 1:125 @ A2
Pg. No: A.05

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

Fairbrother DEVELOPMENTS



N O T F O R C O N S T R U C T I O N

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Roof Plan

Revision: DA - 02
Approved by: JRD

Scale: 1:125 @ A2
Pg. No: A.06

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

Legend

- Solar Bollard Lighting
- Spotlight with Sensor
- -Seeded Lawn
- Mulched Garden Bed
- Gravel Area - Fine
- Decorative Pebble
- Water
- Paving

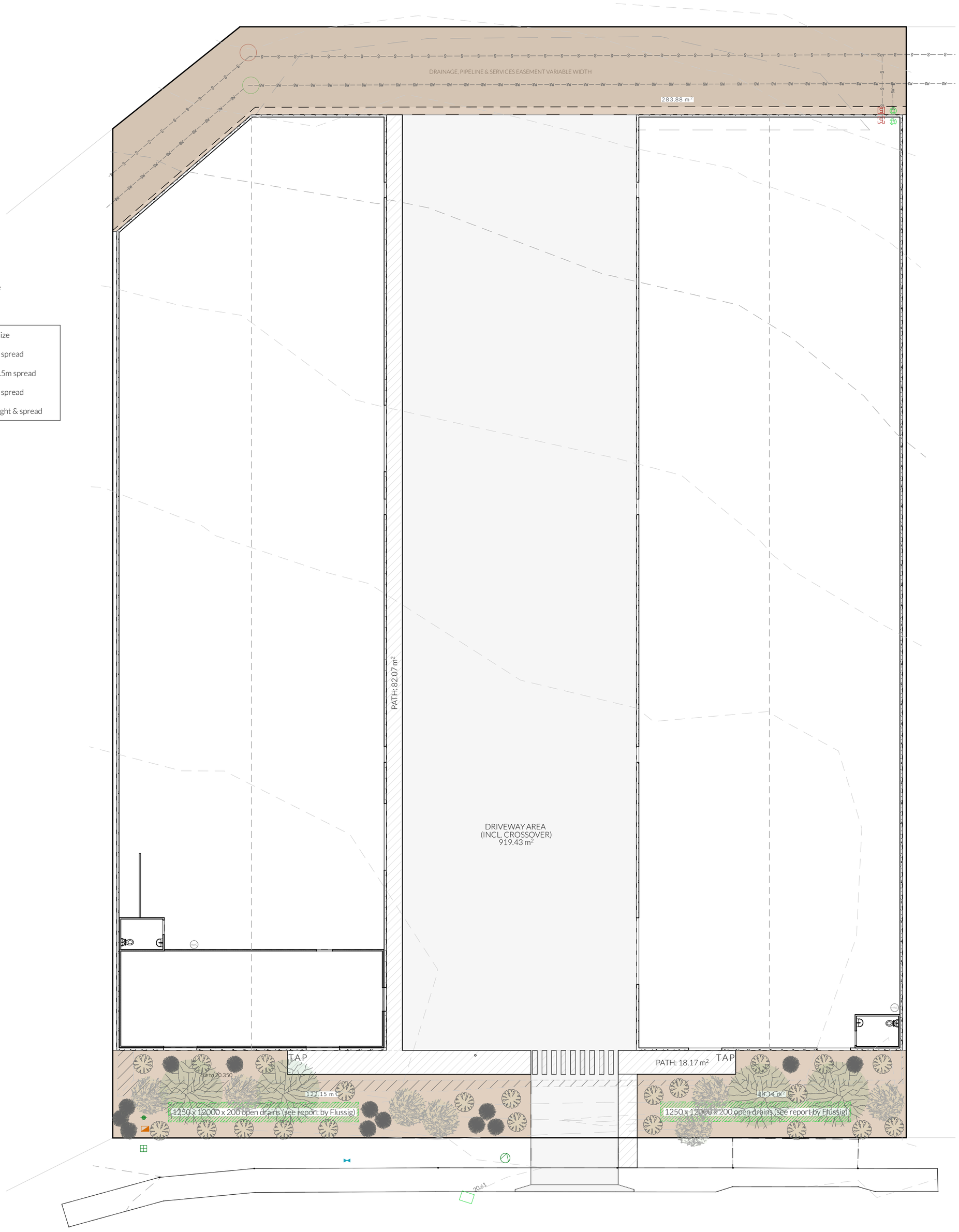
Note

Plants have been selected to be drought tolerant and low maintenance once established, It is recommended that new plants are watered with a deep soak twice a week for the first month, then once a week for the next month. As the roots develop deeply only give them a good drink in summer or in long periods without rainfall. Plant locations are indicative and may be altered where suitable growing conditions cannot be met. Garden areas to be mulched with 75mm cover of selected mulch and plants are to fertilised 6 monthly or where required until established. Garden edges are to be timber. Plantings that are unsuccessful will be replaced where required.

Planting Schedule

Symbol	Element ID	Qty	Pot Size	Size
	Callistemon pallidus	22	tube stock	2m Height , 2m spread
	Correa alba	7	140mm	1.5m Height , 1.5m spread
	Leptosperum lanigerum	4	200mm	3m Height , 2m spread
	Lomandra longifolia	13	tube stock	1.2m - 1.5m height & spread

Landscaping Cost Estimate		Cost ($)
Cost of $5 per plant (tube stock)	Total Provided = 41	$205
Cost of $15 per plant (140mm pot)	Total Provided = 7	$105
Cost of $35 per plant (200 pot)	Total Provided = 4	$140
Cost of $70 m3 mulch	36.75m3 (489.88m^2 x 0.075)	$2571
Cost of $77 m3 decorative gravel	0m3 (165m^2 x 0.10)	$0
Timber edging $4 per l/m	108 l/m	$432
Labour	5 days @ $75	$2850
Total		$6303



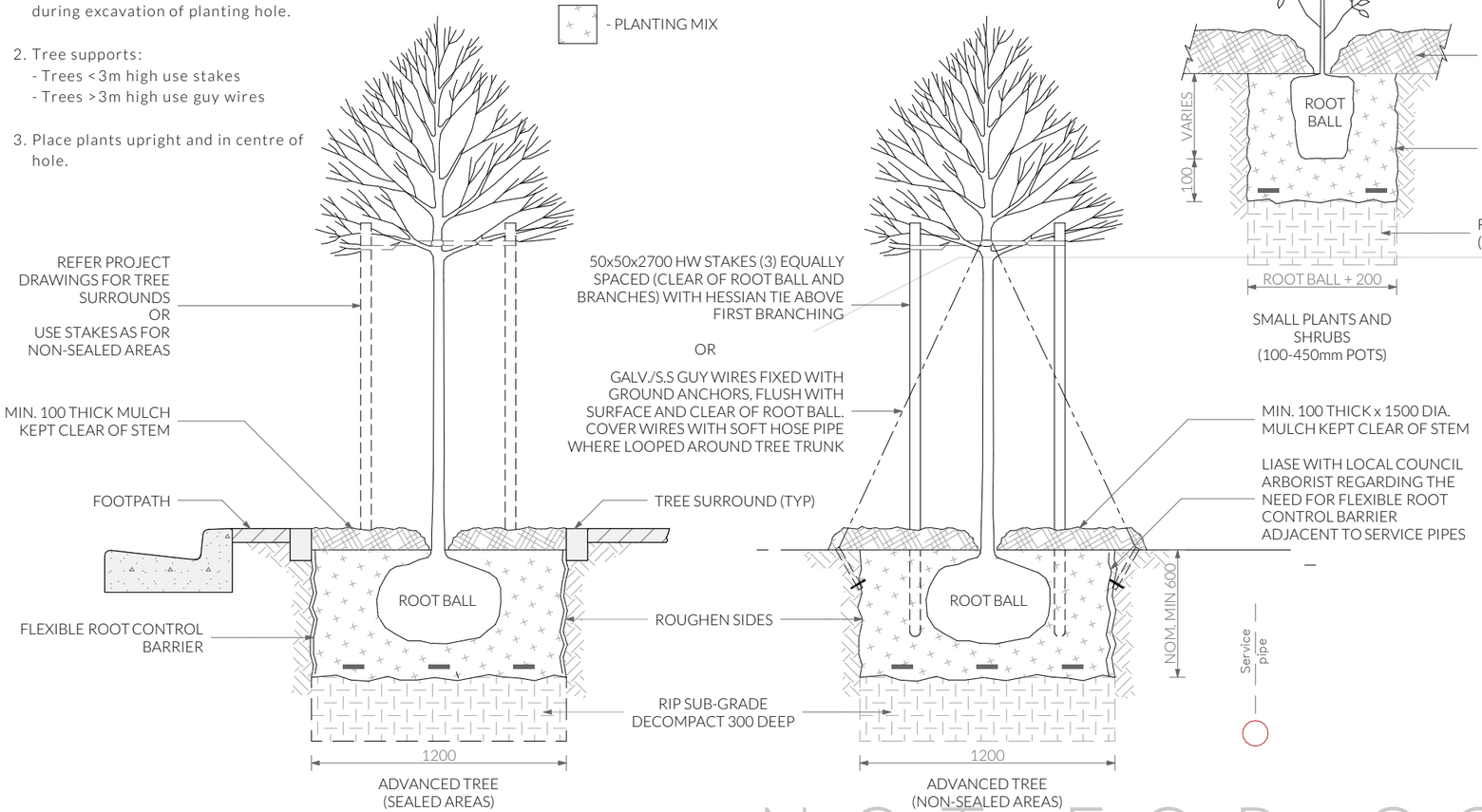
Notes

1. Liase with superintendent where clay or ground water is encountered during excavation of planting hole.
2. Tree supports:
   - Trees < 3m high use stakes
   - Trees > 3m high use guy wires
3. Place plants upright and in centre of hole.

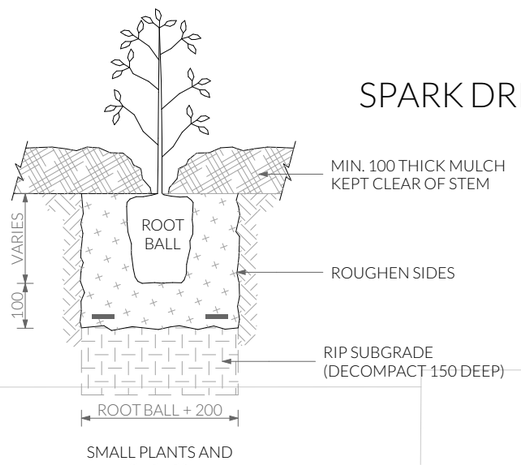
KEY

- SLOW RELEASE FERTLISER
- PLANTING MIX

Tree and Shrub Planting



SPARK DRIVE



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Landscaping Plan

Revision: DA - 02
Approved by: JRD

Scale: 1:200 @ A2
Pg. No: L.01

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Fairbrother DEVELOPMENTS

Legend

——SW—— - Stormwater Line

— —AG— — - Ag Drain

- Stormwater Connection

- **Class A** 300mm Stormwater Pit

- **Class B** 450mm Stormwater Pit

- 100mm wide trafficable grate drain

Surface Water Drainage

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 2022 3.3.3.

Surface water must be diverted away from a Class 1 building as follows:

(a) Slab-on-ground - finished ground level adjacent to a building: the external finished surface surrounding the slab must be drained to move surface water away from the building and graded to give a slope of not less than
  (i) 25mm over the first 1m from the building
    (A) in low rainfall intensity areas for surfaces that are reasonably impermeable (such as concrete or claypaving); or
    (B) for any reasonably impermeable surface that forms part of an access path or ramp provided for the purposes of Clauses 1.1 (2) or (4)(c) of the ABCB Standard for Livable Housing Design; or
  (ii) 50 mm over the first 1 m from the building in any other case.

(b) Slab-on-ground - finished slab heights: the height of the slab-on-ground above external finished surfaces mustbe not less than
  (i) 100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or
  (ii) 50 mm above impermeable (paved or concrete) areas that slope away from the building in accordance with(a); or
  (iii) 150 mm in any other case.

(c) The ground beneath suspended floors must be graded so that the area beneath the building is above the adjacent external finished ground level and surface water is prevented from ponding under the building.

Subsoil Drainage

is to comply with AS2870, AS3500 & N.C.C 2022 3.3.4.

Where a subsoil drainage system is installed to divert subsurface water away from the area beneath a building, the subsoil drain must-
  (a) be graded with a uniform fall of not less than 1:300; and
  (b) discharge into an external silt pit or sump with-
    (i) the level of discharge from the silt pit or sump into an impervious drainage line not less than 50 mm below the invert level of the inlet; and provision for cleaning and maintenance.

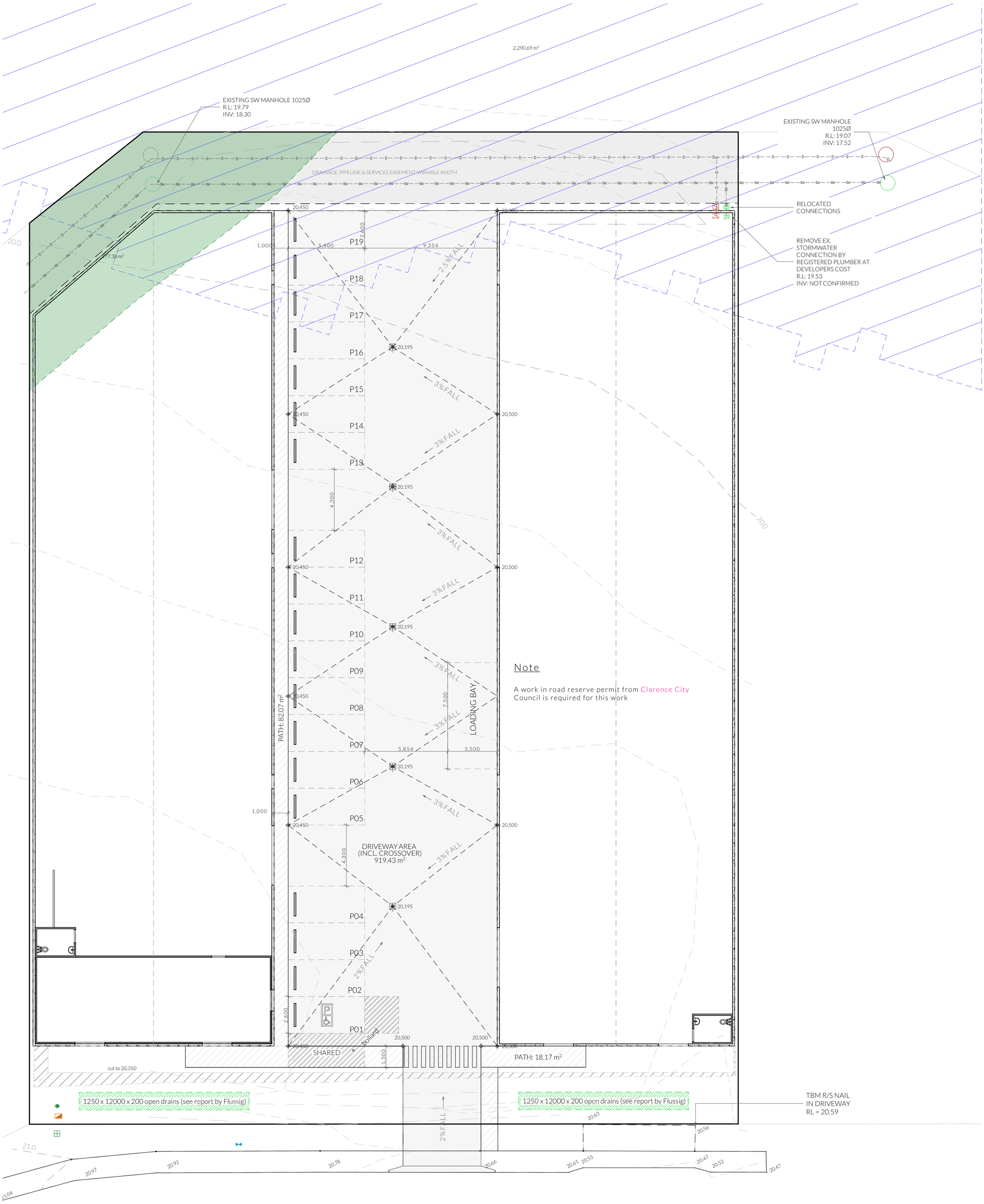
Note

All driveway pits and grate drains to be **Class B**.

Stormwater pits are indicative. Location may vary depending on site conditions.

General Notes

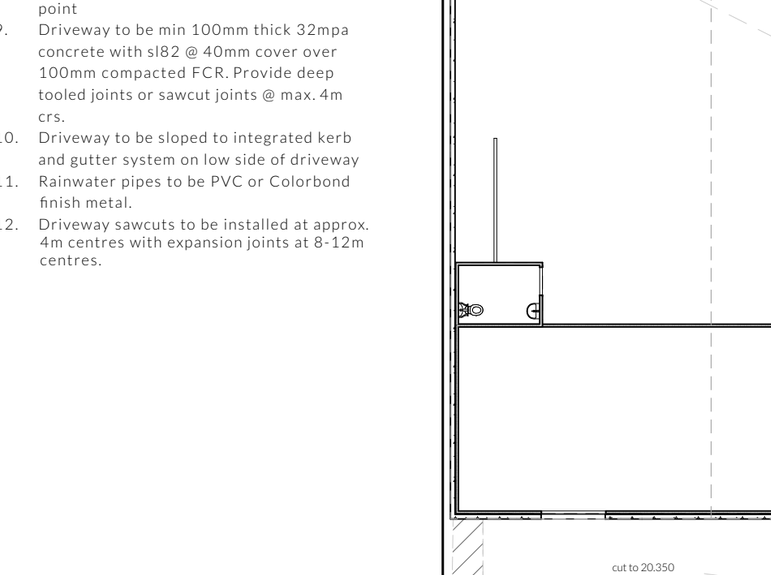
1. Remove all topsoil and organic matter from beneath concrete driveway areas and provide 100m deep compacted FCR basecourse layer.
2. Concrete strength shall be 32 mpa min.
3. Provide control joints at 6.0 m centres- refer detail.
4. Compact concrete using mechanical vibrators.
5. Cure all exposed concrete surfaces by keeping moist for 7 days. i.e cover with plastic sheets.
6. Connect new service connections into existing. Liaise with council's plumbing surveyor for location of existing connections.
7. All new and/or altered service connections shall be undertaken by council at the developer's expense.
8. Provide 100ø agricultural drains at base of cut and connect to stormwater at lowest point
9. Driveway to be min 100mm thick 32mpa concrete with sl82 @ 40mm cover over 100mm compacted FCR. Provide deep tooled joints or sawcut joints @ max. 4m crs.
10. Driveway to be sloped to integrated kerb and gutter system on low side of driveway
11. Rainwater pipes to be PVC or Colorbond finish metal.
12. Driveway sawcuts to be installed at approx. 4m centres with expansion joints at 8-12m centres.



Note

A work in road reserve permit from Clarence City Council is required for this work

TYPICAL PAVEMENT DETAIL



SPARK DRIVE

NOT FOR CONSTRUCTION

PINNACLE

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Civil Plan

Revision: DA - 02
Approved by: JRD

Scale: 1:200 @ A2
Pg. No: C.01

Proposal: New Warehouses
Client: Fairbrother Pty Ltd
Address: 14 Spark Drive, Cambridge 7170

Date: 19.12.23
Drawn by: JRN
Job No: 65-2023
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Building Surveyor: TBA

Issue	Date	Description
DA-02	21.12.23	Seperate Elevation Views
DA-02	17.01.24	Council RFI

N

Fairbrother DEVELOPMENTS

10th November 2023
FE_23080

14 Spark Drive, Cambridge
FLOOD REPORT

Prepared for: Fairbrother Pty Ltd

flussig ENGINEERS

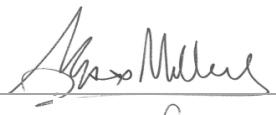
Level 4 - 116 Bathurst Street
HOBART TASMANIA 7000

ABN 16 639 276 181

Document Information

Title	Client	Document Number	Project Manager
14 Spark Drive(Lot 29), Cambridge Flood Hazard Report	**Fairbrother Pty Ltd**	FE_23080	**Max W. Möller** *BEng, FIEAust, EngExec, CPEng, NER, APEC Engineer, IntPE(Aus.)* *Managing Director / Principal Hydraulic Engineer*

Document Initial Revision

REVISION 00	Staff Name	Signature	Date
Prepared by	Max W. Moller ***Principal Hydraulic Engineer***		03/09/2023
Prepared by	Ash Perera ***Hydraulic Engineer***		01/09/2023
Prepared by	Christine Keane ***Senior Water Resources Analyst***		01/09/2023
GIS Mapping	Damon Heather ***GIS Specialist***		08/11/2023
Reviewed by	John Holmes ***Senior Engineer***		09/11/2023
Authorised by	Max W. Möller ***Principal Hydraulic Engineer***		10/11/2023

Document Revision History

Rev No.	Description	Authorised by	Date

Contents

List of Tables

List of Figures

Acronyms

AEP: Annual Exceedance Probability
ARR: Australian Rainfall and Runoff
CC: Climate Change
TPS: Tasmanian Planning Scheme
RCP: Representative Concentration Pathway
CFT: Climate Futures Tasmania

1. Introduction

Flüssig Engineers has been engaged by **Fairbrother Pty Ltd**, to undertake a site-specific flood hazard report for the proposed warehouse and office at number 14 Spark Drive, Cambridge in the Clarence City Council municipality. The purpose of this report is to determine the hydraulic characteristics on the existing and post-development scenarios and the flood hazard for the 1% AEP plus climate change (CC).

1.1 Development

The proposed development contains two new warehouses with a combined flood area of 1960 m² and approximately 960 m² concrete driveway/parking areas at 14 Spark Drive, Cambridge. The site is approximately 3,474 m². This development triggers the inundation code as the development falls within Clarence City Council, flood prone area.

1.2 Objectives and Scope

This flood analysis has been written to meet the standards of the Tasmanian Planning Scheme - Clarence (TPS) and S159 of the Tasmanian Building Act 2000, with the intent of understanding the development risk with respect to riverine flooding. The objectives of this study are:

- Provide an assessment of the site's flood characteristics under the combined 1% AEP + CC scenario.
- Provide comparison of flooding for pre- and post-development against acceptable and performance criteria.
- Provide flood mitigation recommendations for the development, where appropriate.

1.3 Limitations

This study is limited to the objectives of the engagement by the client, the availability and reliability of data, and including the following:

- The flood model is limited to a 1% AEP + CC worst case temporal design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All provided data by the client or government bodies for the purpose of this study is deemed fit for purpose.
- The study is to determine the effects of the new development on flooding behaviour and should not be used as a full flood study into the area without further assessment.

1.4 Relevant Planning Scheme Requirements

Table 1. TPS Planning Scheme Requirements

Planning Scheme Code	Objective	Document Reference
C12.5.1 Uses within a flood prone area	That a habitable building can achieve and maintain a tolerable risk from flood	Refer Section 4
C12.6.1 Building and works within a flood prone area	(a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and	Refer Section 5.1
	(b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.	Refer Section 3.2

Planning Scheme Code	Objective	Document Reference
C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area	That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.	Refer section 4

2. Model Build

2.1 Overview of Catchment

The contributing catchment for 14 Spark Drive is approximately 968 ha. The land use of the catchment is zoned General Industrial, Landscape Conservation and Light Industrial, with the specific site being zoned Light Industrial.

Figure 1 below outlines the approximate contributing catchment for the 14 Spark Drive, Cambridge proposed development site.

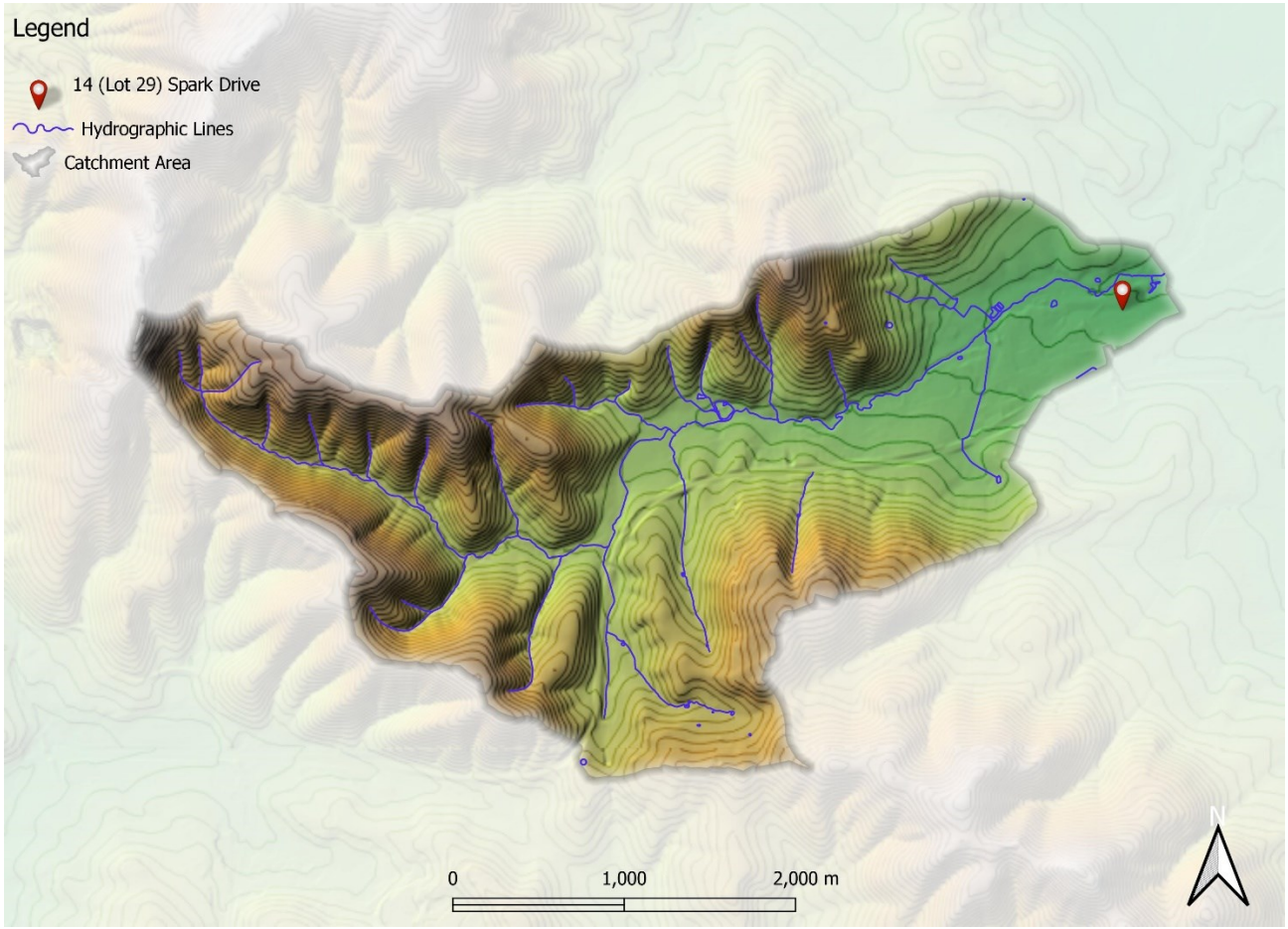


Figure 1. Contributing Catchment, 14 Spark Drive, Cambridge

2.2 Hydrology

The following Table 2 states the adopted hydrological parameters for the RAFTS catchment, derived from best practice documents.

Table 2. Parameters for RAFTS catchment

Catchment Area (ha)	Initial Loss Perv/imp (mm)	Continuing Loss Perv/imp (mm/hr)	Manning's N pervious	Manning's N impervious	Non-linearity factor
968	27/1	4.0/0.0	0.045	0.02	-0.285

2.2.1 Design Rainfall Events

TPS 2021 requires modelling of flood events of 1% AEP (100yr ARI) for the life of the development. Therefore, the design events assessed in this analysis are limited to the 1% AEP + CC design events. Due to the size and grade of the catchment the peak rainfall time was restricted to between 10min – 24 hrs.

Figure 2 shows the box and whisker output for the 1% AEP model run. The model shows that the 1% AEP 4.5-hour storm temporal pattern 5 was the worst-case median storm. Therefore, this storm event was used within the hydraulic model.

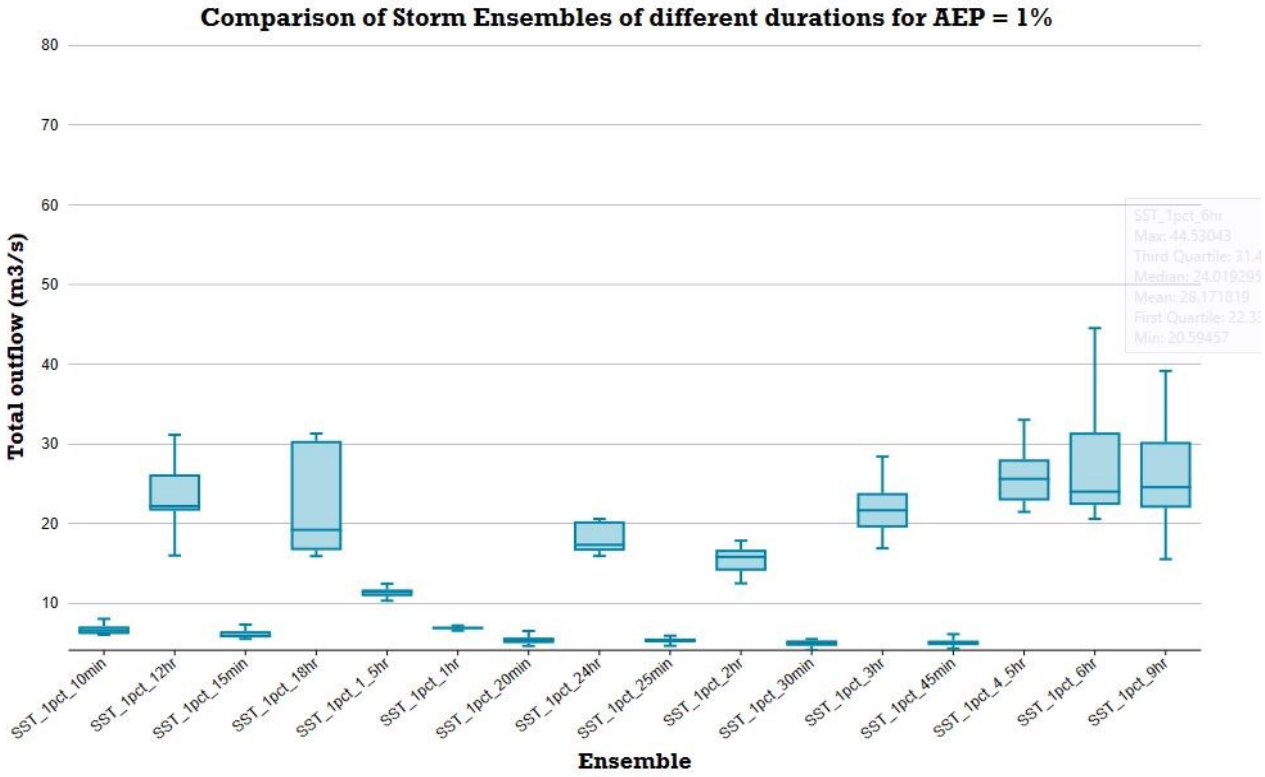


Figure 2. AEP 1% Box and Whisker

2.2.2 Climate Change

As per ARR 2019 Guidelines, for an increase in rainfall due to climate change at 2100, it is recommended the use of RCP 8.5. Table 3 shows the RCP 8.5 increase compared to the revised increase of 14.6% as suggested by Climate Futures Tasmania. Therefore, the RCP 8.5 increase of 16.3% was adopted in the model as a more conservative estimate.

Table 3. Climate Change Increases

Climate Zone	CFT increase @ 2100	RCP 8.5 increase @ 2100
South-East Tasmania	14.6 %	16.3 %

2.3 Hydraulics

A 1D-2D hydraulic model was created to determine the flood level through the target area.

2.3.1 Extents and topography

The area of concern is situated in the north-east of the catchment. The catchment originates from the end of Alliance Drive to the south, approximately 350 mAHD higher than the site location and the mainstream with an average gradient of approximately 8-10%.

2.3.2 Calibration/Validation

This catchment has no stream gauge to calibrate the model against a real-world storm event. Similarly, there is little historical information available, and no past flood analysis undertaken to validate against the flows obtained in the model.

2.3.3 Survey

The 2D surface model was taken from a combination of LiDAR 2019 to create a 1m and cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below.

Figure 3. 1m DEM (Hill shade) of Lot Area, 14 Spark Drive

2.3.4 Roughness (Manning's n)

Table 4 shows Manning's values used in the model. Values for this layer were derived from the ARR 2019 Guidelines.

Table 4. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

2.3.5 Walls

All significant fences and retaining structures were included as 2D linear wall structures within the 2D model. Fences were modelled 300 mm above the ground level.

2.3.6 Buildings and roads

Buildings were represented as mesh polygons with a high Manning's n value within the model. Buildings with unknown floor levels were set with a minimum 300 mm above ground. This method allows for flow through the building if the flood levels/pressure become great enough. The aim is to mimic flow through passageways such as doors, windows, hallways etc.

2.4 Development Runoff

Stormwater runoff from the development site has been assessed under pre- and post-development models to determine the potential impact the development at 14 Spark Drive has on the immediate local flows. As per planning guidelines it is a requirement that this does not have a negative impact from pre to post development.

Site Characteristics for the pre- and post-development model are summarised in Table 5.

Table 5. Site Characteristics

	Pre-Development		Post-Development	
Land Use	**Area (m²)**	**% Total land**	**Area (m²)**	**% Total land**
Pervious	3,474	100	554	16
Impervious	0	0	2,920	84

3. Model Results

The result of 1% AEP + CC were run through the pre-development and post-development model scenarios to compare the changes to flooding onsite and to surrounding properties.

3.1 Flood depth and extent

It can be seen from the pre-development model runs (Figure 4), that there is a relatively shallow, slow moving overland flood path that flows from the south via Spark Drive and into the development lot area. There is a major flow path north of the lot boundary through Barilla Rivulet. However, this catchment does not affect the lot as the site has already been filled to a higher level.

Figure 5 shows the effect the development has on the overland flow path. 2 x 1250 mm wide, 200 mm open drains on the southern lot boundary are recommended to minimise the impacts of the development on flood behaviour on the proposed warehouses. As seen in Figure 5, the flood depths will be restricted within the recommended open drains and will eventually be directed out via the internal stormwater drainage system towards the northern lot boundary. Figure

The concrete area in between the warehouses must be sloped at a minimum 1% falling towards the centre and into the internal stormwater drainage system. The depths within the concrete area are minor ranging between 20-40 mm.

The pre-development flood depth at the marked cross-sectional line is 0.05 m, which shows no notable increase in the post-development scenario (Figure 5). The flood depths within the open drain range between 140-180 mm but are contained within the open drains.

The proposed warehouses are not inundated in the post development scenario due to the recommended open drains which diverts the flow away from the warehouses.

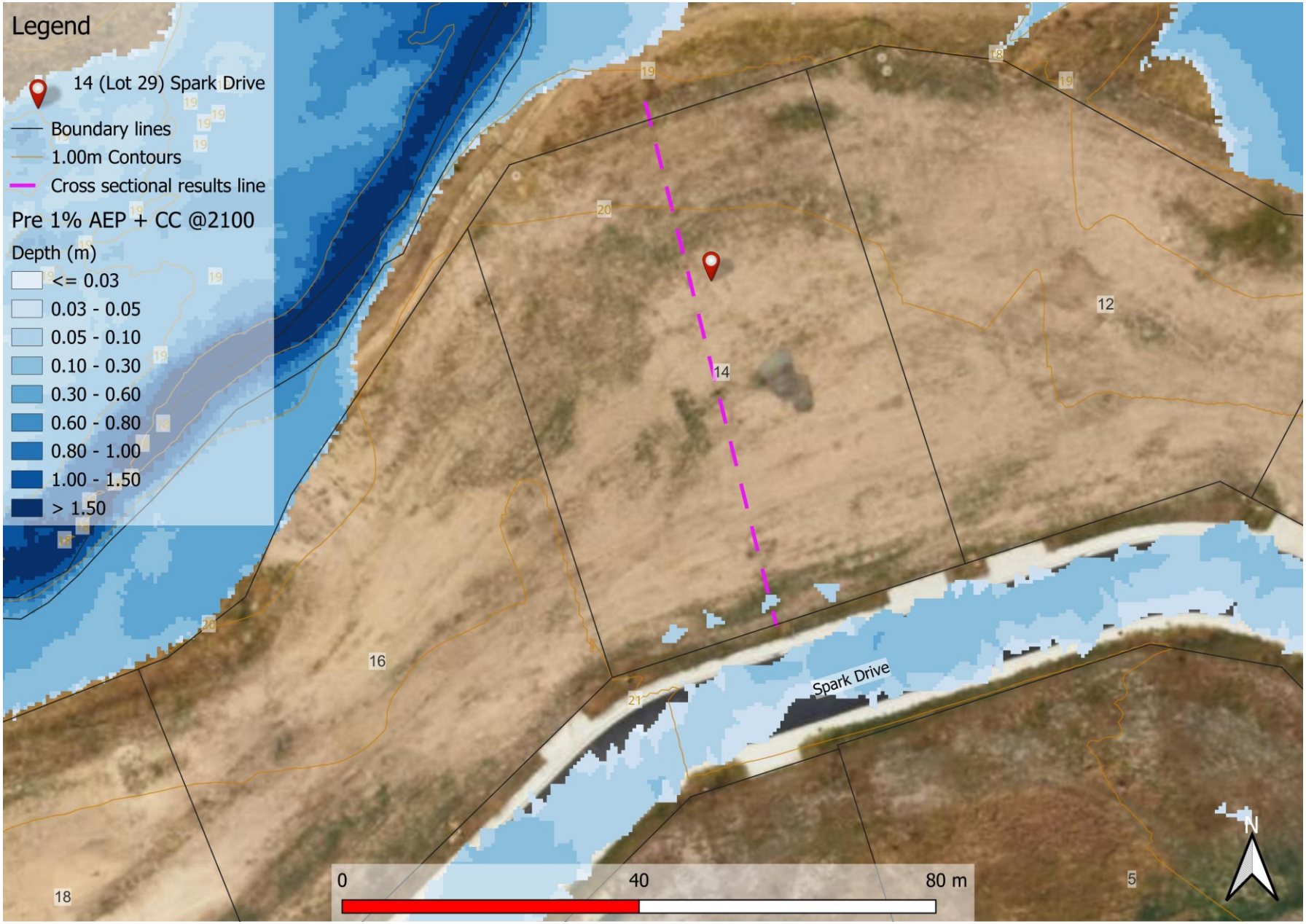


Figure 4. Pre-Development 1%+CC Flood Depths and extents

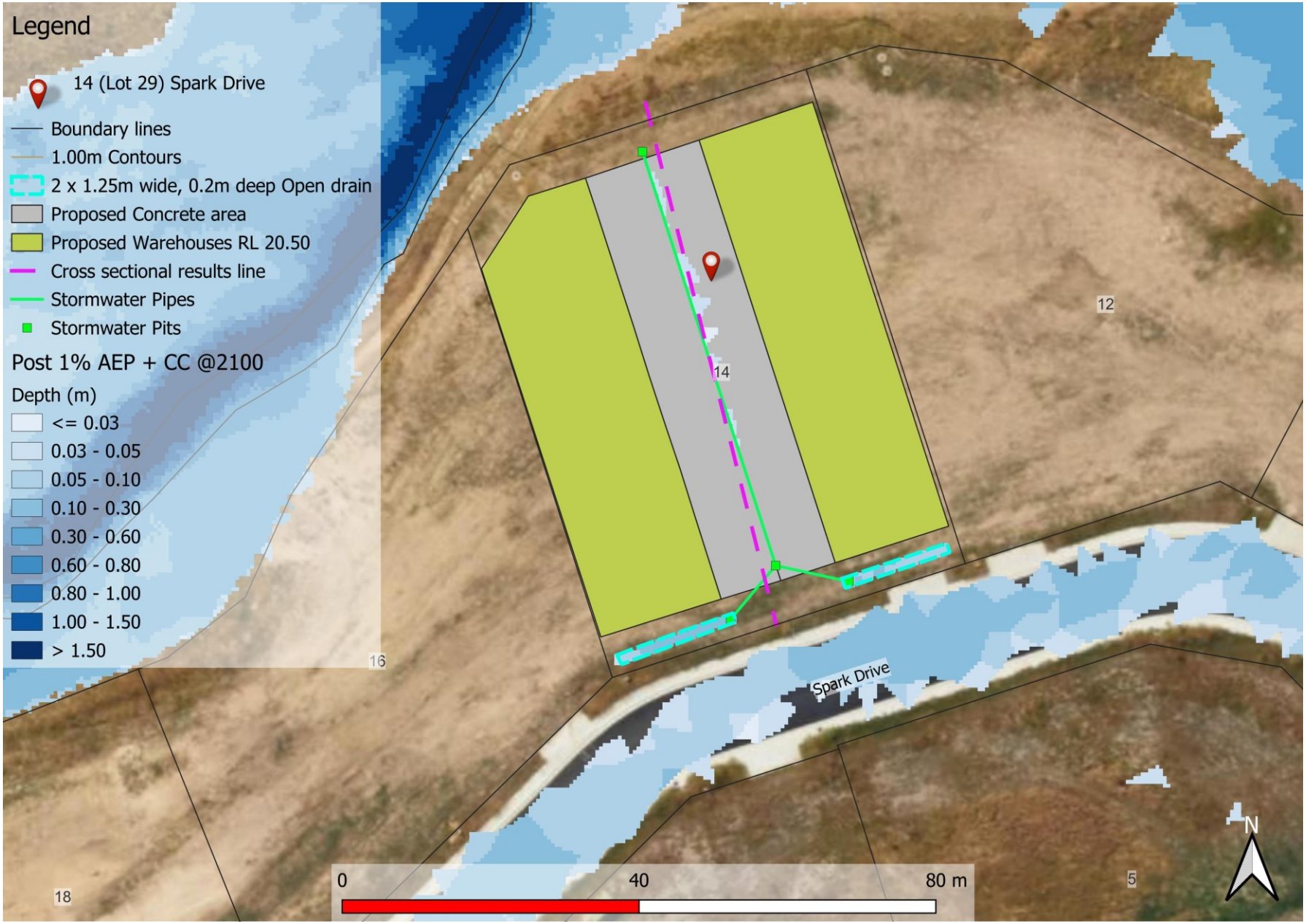


Figure 5. Post Development 1%+CC Flood Depth and extents

3.2 Displacement of Overland Flow on Third Party Property

Figure 5 shows the post-development flows that, when compared against pre-development, there appears to be no increase in flood depths on surrounding adjacent properties. The post-development hazard rating on the neighbouring properties and surrounding infrastructure remains at the same rating seen in the pre-development scenario.

It is therefore deemed that the post development model does not have an adverse effect on surrounding properties.

3.3 Development Effects on Stormwater Discharge

Figure 6 below shows the discharge hydrograph at the cross-sectional results line for 14 Spark Drive area only. The graph was captured in the model for both pre- and post-development runs and combined in a graph to demonstrate the change in net-discharge.

It demonstrates that there is an no notable change in discharge between the pre-and post-development discharge. There is some increase in velocity of 0.03 m/s is observed in the post-development model from a relatively slow moving 0.05 m/s in the predevelopment. These increases can be explained by recommended open drains which channel the flow of water and outfall from a narrower, singular point.

As seen from these results, the impact on stormwater discharge from the proposed development is minor and would not have a detrimental effect on receiving infrastructure.

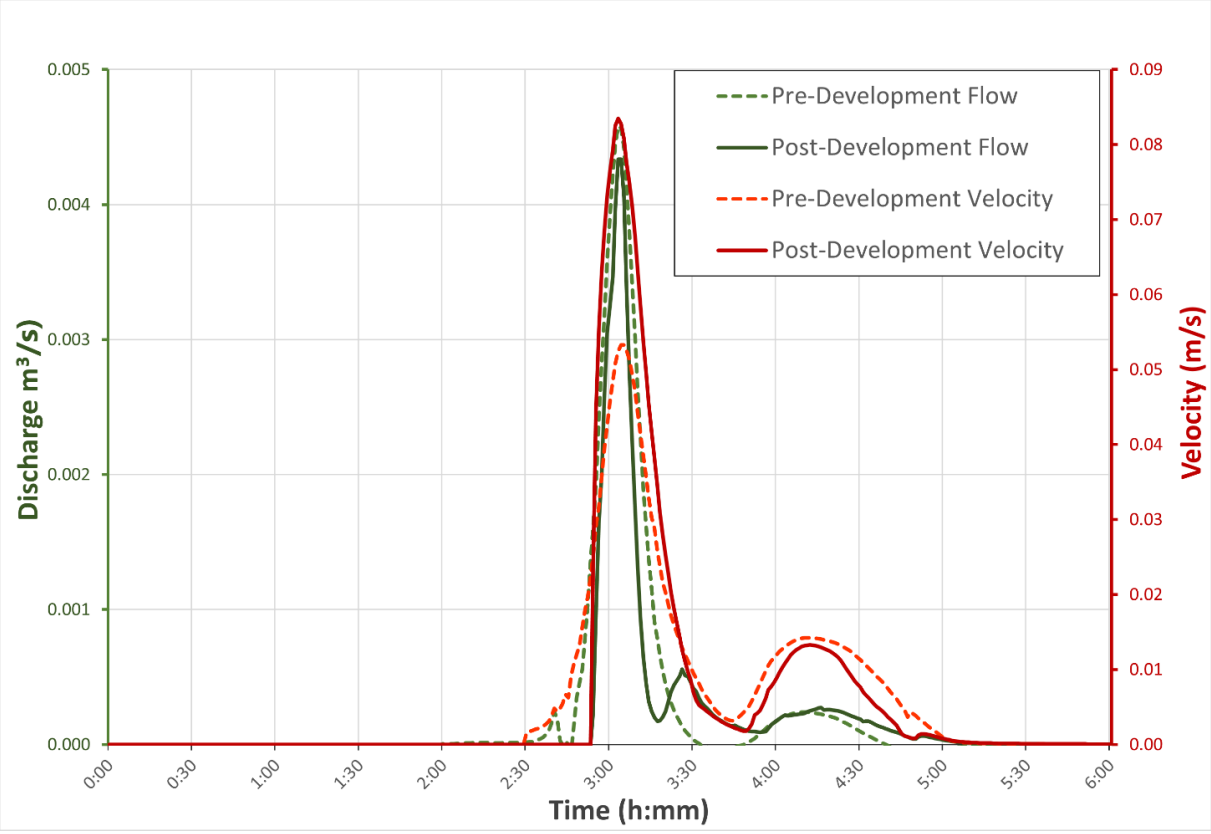


Figure 6. Pre and Post Development Net Discharge 1% AEP +CC, 14 Spark Drive.

3.4 New Habitable Building

To meet the performance criteria of Regulation 54 of the Building Regulations 2016, the construction of a new habitable building is required to have a habitable floor level > 300 mm above the 1% AEP + CC flood level. (The floor level 1% AEP + CC flood level + 300mm does not apply for non-habitable areas).

However, the proposed warehouses are not inundated in the post-development scenario with the inclusion of the recommended open drains which diverts the flow away from the habitable buildings. Therefore, the proposed development satisfies these criteria if the recommendations within this report are complied with.

3.5 Model Summary

Table 6. Pre- and post-development results at the cross-sectional line within the lot

	Pre-development	Post-development	Net Change
Depth (m)	0.05	0.05	-
Velocity (m/s)	0.05	0.08	0.03
Discharge (m^3/s)	0.005	0.005	-

4. Waterway and Coastal Protection

The existing conditions for the current waterway protection area corridor as shown in Figure 7 clearly shows no indication of flora or fauna values which would be attributed to a normal condition permanent flow waterway system. Furthermore, it's a very small fraction of the lot that includes the overlay, and the proposed warehouses and concreted area are set back from the northern property boundary and only negligibly impede on this zoned area.

Also, clearly shown in Figure 8 , there are no signs of riparian vegetation around the proposed development envelope that would be clear evidence of healthy waterway life.

Figure 7. Map showing satellite view waterway protection area inside 14 Spark Drive

Figure 8. Image showing the area inside 14 Spark Drive

As seen in Figure 8, the area of the lot under the Natural Assets Code 7.0 has been filled as part of the full industrial development. The watercourse reflected in the waterway and coastal band in the Tasmanian Planning Scheme shown in Figure 7 has been diverted via a cut-off drain towards the Barilla Rivulet without evidence that it currently flows through the development site.

5. Flood Hazard

Appendix A shows the pre and post development depth, velocity and hazard maps for the development lot and surrounding areas. In the pre-development scenario, the maximum velocity and depth at the cross-sectional line are 0.05 m/s and 0.05 m respectively. This places the hazard rating at **H1 – *Generally safe for people, vehicles and buildings*** as adopted by Australian Flood Resilience and Design Handbook as shown in Figure 9.

Following the construction of the proposed warehouse and the office, the maximum velocity shows an increase of 0.03 m/s while depth shows no change at the cross-sectional line. This has a minimal effect on the hazard rating both within the lot and on surrounding properties, **remaining at H1.**

The pre and post hazard maps are shown in the Appendix A.

As this study does not extend to the public access roads we cannot comment on the accessibility to the site, only within the site. Therefore, this report would advise that residents and visitors remain inside in the event of a flood unless instructed by emergency services.

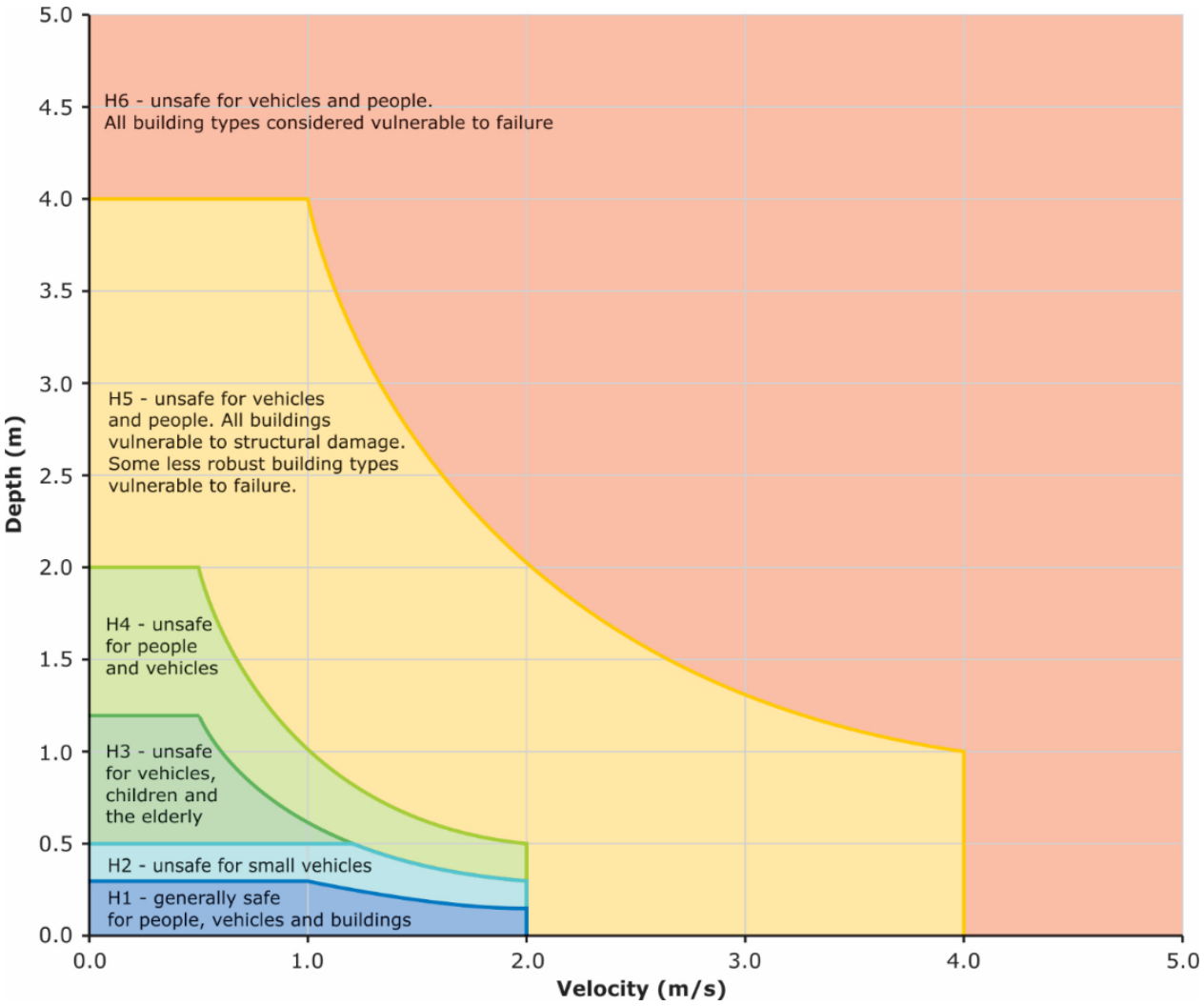


Figure 9. Hazard Categories Australian Disaster and Resilience Handbook

5.1 Tolerable Risk

Flood analysis into the lot at 14 Spark Drive, Cambridge shows the proposed warehouse and office is located within a shallow overland flow path with majority of the surrounding area rated low (H1) hazard rating in the 1% AEP plus climate change event. This means the site is considered generally safe for all ages, and structures.

Velocities and depths, although relatively small, still present some risks from erosion and debris movement. It is recommended that all structures undertake a hydrostatic/hydrodynamic analysis to ensure suitability. Assuming appropriate structural considerations are applied, it is deemed that the structures proposed, intended to be a habitable class 5 office building and a habitable class 8 warehouse building, can achieve a tolerable risk to flooding over its asset life, assuming the recommendations of this report are adhered to.

6. Report summary against TPS-Clarence

Table 7. TPS C12.5.1 Uses within a flood prone area.

C12.5.1 Uses within a flood prone hazard area			
Objectives: That a habitable building can achieve and maintain a tolerable risk from flood			
Performance Criteria			
P1.1		**P1.1**	
A change of use that, converts a non-habitable building to a habitable building, or a use involving a new habitable room within an existing building, within a flood-prone hazard area must have a tolerable risk, having regard to:		Response from flood report	
(a)	the location of the building;	(a)	Proposed new warehouses and concrete driveway/parking area in a low hazard flood prone area.
(b)	the advice in a flood hazard report;	(b)	Assuming recommendations of this report are implemented, no additional flood protection measures required for the life expectancy of a habitable building.
(c)	any advice from a state authority, regulated entity or a council;	(c)	N/A
P1.2		**P1.2**	
A flood hazard report also demonstrates that:		Response from flood report	
(a)	any increase in the level of risk from flood does not require any specific hazard reduction or protection measures;	(a)	No increase in level of risk from pre-development scenario.
(b)	the use can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures	(b)	Maximum hazard rating at the proposed development is at H1. Hazard rating does not increase in the post-development scenario.

Table 8. TPS C12.6.1 Building and works within a flood prone area.

C12.6.1 Building and works within a flood prone hazard area			
Objective: (a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and (b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.			
Performance Criteria			
P1.1		**P1.1**	
Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to:		Response from flood report	
(a)	the type, form, scale and intended duration of the development;	(a)	Proposed new warehouses and concrete driveway/parking area.
(b)	whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures;	(b)	No increase in the level of risk following the proposed development.
(c)	any advice from a state authority, regulated entity or a council; and	(c)	N/A
(d)	the advice contained in a flood hazard report.	(d)	Flood report and recommendations provided within.
Performance Criteria			
P1.2		**P1.2**	
A flood hazard report also demonstrates that the building and works:		Response from Flood Report	
(a)	do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and	(a)	There is no increase in the level of risk within the lot, adjacent land and to surrounding infrastructure.
(b)	can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.	(b)	Can achieve tolerable risk without flood protection measures provided the recommendations are followed.

Table 9. TPS C7.6.1 (P1) Buildings and works within a waterway and coastal protection area

C7.6.1 Buildings and works within a waterway and coastal protection area			
Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact			
Performance Criteria			
P1.1		**P1.1**	
Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:		Response from flood report	
(a)	impacts caused by erosion, siltation, sedimentation and runoff;	(a)	No impact
(b)	impacts on riparian or littoral vegetation;	(b)	No impact
(c)	maintaining natural streambank and streambed condition, where it exists;	(c)	Site has already been filled and existing watercourse has been diverted.
(d)	impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;	(d)	No in-stream natural habitat within development site
(e)	the need to avoid significantly impeding natural flow and drainage;	(e)	N/A
(f)	the need to maintain fish passage, where known to exist;	(f)	N/A
(g)	the need to avoid land filling of wetlands;	(g)	No wetlands observed.
(h)	the need to group new facilities with existing facilities, where reasonably practical;	(h)	Not necessary
(i)	minimising cut and fill;	(i)	Site already filled as part of site works.
(j)	building design that responds to the particular size, shape, contours or slope of the land;	(j)	N/A
(k)	minimising impacts on coastal processes, including sand movement and wave action;	(k)	N/A
(l)	minimising the need for future works for the protection of natural assets, infrastructure and property;	(l)	Not necessary
(m)	the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and	(m)	Previous watercourse diverted away from development site as per section 4.
(n)	the guidelines in the Tasmanian Coastal Works Manual.	(n)	Previous watercourse diverted away from development site as per section 4.

Table 10. TPS C7.6.1 (P3) Buildings and works within a waterway and coastal protection area

C7.6.1 Buildings and works within a waterway and coastal protection area			
Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact			
Performance Criteria			
P3		**P3**	
Development within a waterway and coastal protection area or a future coastal refugia area involving a new stormwater point discharge into a watercourse, wetland or lake must avoid or minimise adverse impacts on natural assets, having regard to:		Response from flood report	
(a)	the need to minimise impacts on water quality; and	(a)	No stormwater discharge point constructed into a watercourse, wetland or lake.
(b)	the need to mitigate and manage any impacts likely to arise from erosion, sedimentation or runoff.	(b)	N/A

7. Conclusion

The Flood Hazard Report for 14 Spark Drive, Cambridge has reviewed the potential pre- vs post-development flood scenarios.

The following conclusions were derived in this report:

1. A comparison of the post-development peak flows for the 1% AEP at 2100 were undertaken against the Tasmanian Planning Scheme – Clarence, C7.6.1, C12.5.1 & C12.6.1.
2. No increase in peak flood depths for the 1% AEP +CC at the cross-sectional line in the post-development model compared to the pre-development model.
3. Peak discharge sees no change from pre- to post-development, riverine flood scenarios.
4. There is an increase of 0.03 m/s in velocity between pre-development and post-development scenarios.
5. The pre-development model shows the hazard from flooding in the area is H1 remains unchanged in the post-development scenario.

8. Recommendations

Flussig Engineers therefore recommend the following engineering design be adopted for proposed warehouse and office to ensure the works meets the Inundation Code and the Building Regulations:

1. 2 x 1250 mm wide by 200 mm deep open drains to be constructed adjacent to the southern lot boundary as shown in Figure 5.
2. As the proposed warehouses are free from inundation, the proposed FFL of 20.500 mAHD is acceptable.
3. Concrete area to be sloped minimum 1% falling to the centre of the lot and into the internal drainage system within the driveway.
4. No additional solid structures be constructed around the property without further flood assessment.
5. Future use of lot areas to be limited to areas deemed safe under the ARR Disaster manual categories.
6. Any change of use of the facility in the future to be classed as habitable must comply with Building Regulations S.54.
7. All future proposed structures within the flood extent not shown within this report will require a separate report addressing their impacts.

Under the requirements of Flood Hazard Report, the proposed office and warehouse will meet current acceptable solutions and performance criteria under the Tasmanian Planning Scheme 2021.

9. Limitations

Flüssig Engineers were engaged by **Fairbrother Pty Ltd**, for the purpose of a site-specific Flood Hazard Report for 14 Spark Drive, Cambridge as per C7.6.1, C12.5.1 and C12.6.1 of the Tasmanian Planning Scheme - Clarence 2021. This study is deemed suitable for purpose at the time of undertaking the study. If the conditions of the development should change, the plan will need to be reviewed against all changes.

This report is to be used in full and may not be used in part to support any other objective other than what has been outlined within, unless specific written approval to do otherwise is granted by Flüssig Engineers.

Flüssig Engineers accepts no responsibility for the accuracy of third-party documents supplied for the purpose of this flood report.

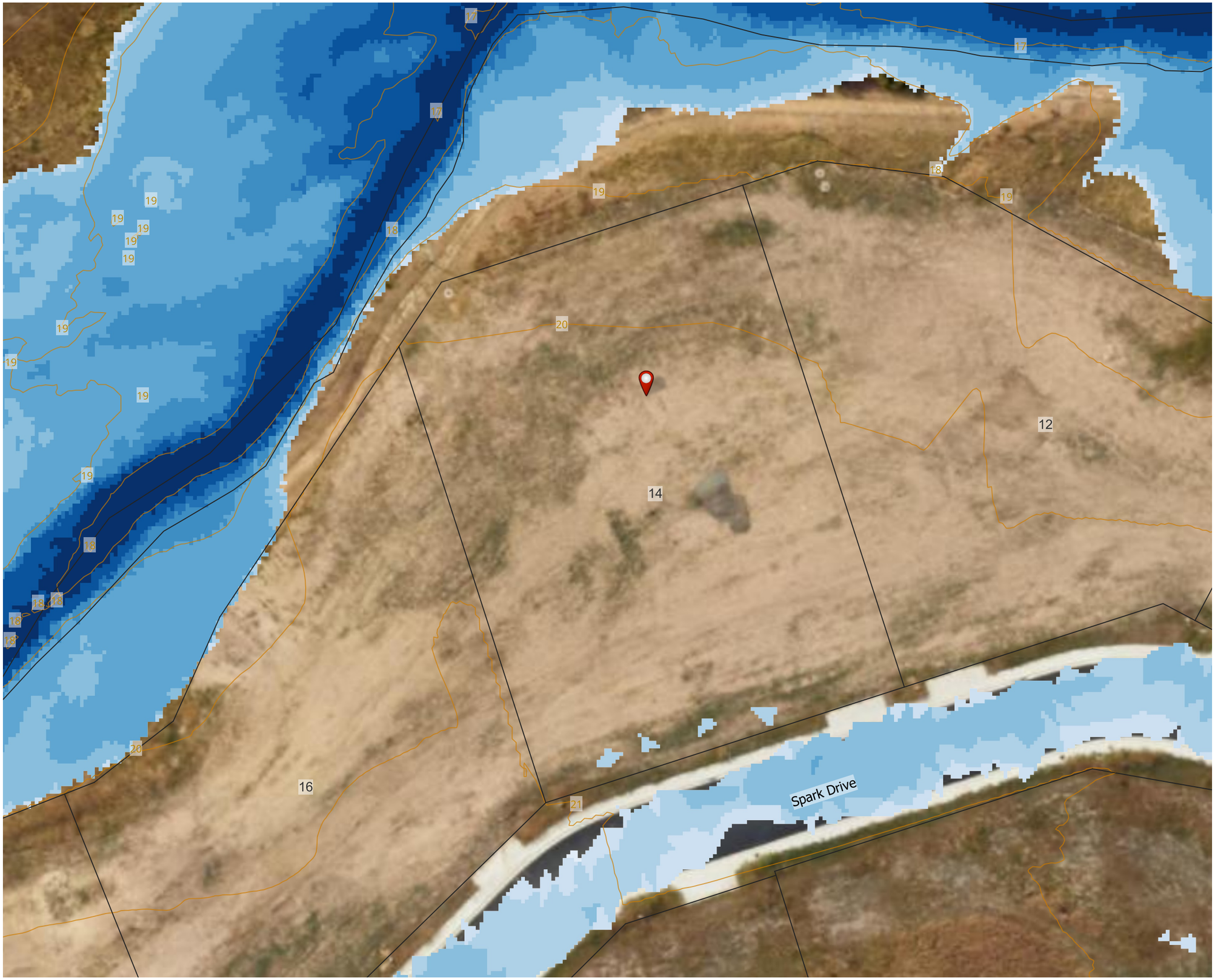
10. References

- Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC
- Austroads 2013, Guide to Road Design Part 5: Drainage-General and Hydrology Considerations
- Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2019, Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia
- Grose, M. R., Barnes-Keoghan, I., Corney, S. P., White, C. J., Holz, G. K., Bennett, J., & Bindoff, N. L. (2010). Climate Futures for Tasmania: General Climate Impacts Technical Report.
- T.A. Remenyi, N. Earl, P.T. Love, D.A. Rollins, R.M.B. Harris, 2020, Climate Change Information for Decision Making –Climate Futures Programme, Discipline of Geography & Spatial Sciences, University of Tasmani

11. Appendices

Appendix A Flood Maps

PRE 1% AEP + CC @2100



Legend

14 (Lot 29) Spark Drive

Boundary lines

1.00m Contours

Pre 1% AEP + CC @2100

Depth (m)

- <= 0.03
- 0.03 - 0.05
- 0.05 - 0.10
- 0.10 - 0.30
- 0.30 - 0.60
- 0.60 - 0.80
- 0.80 - 1.00
- 1.00 - 1.50
- > 1.50

0 10 20 m

meters

N

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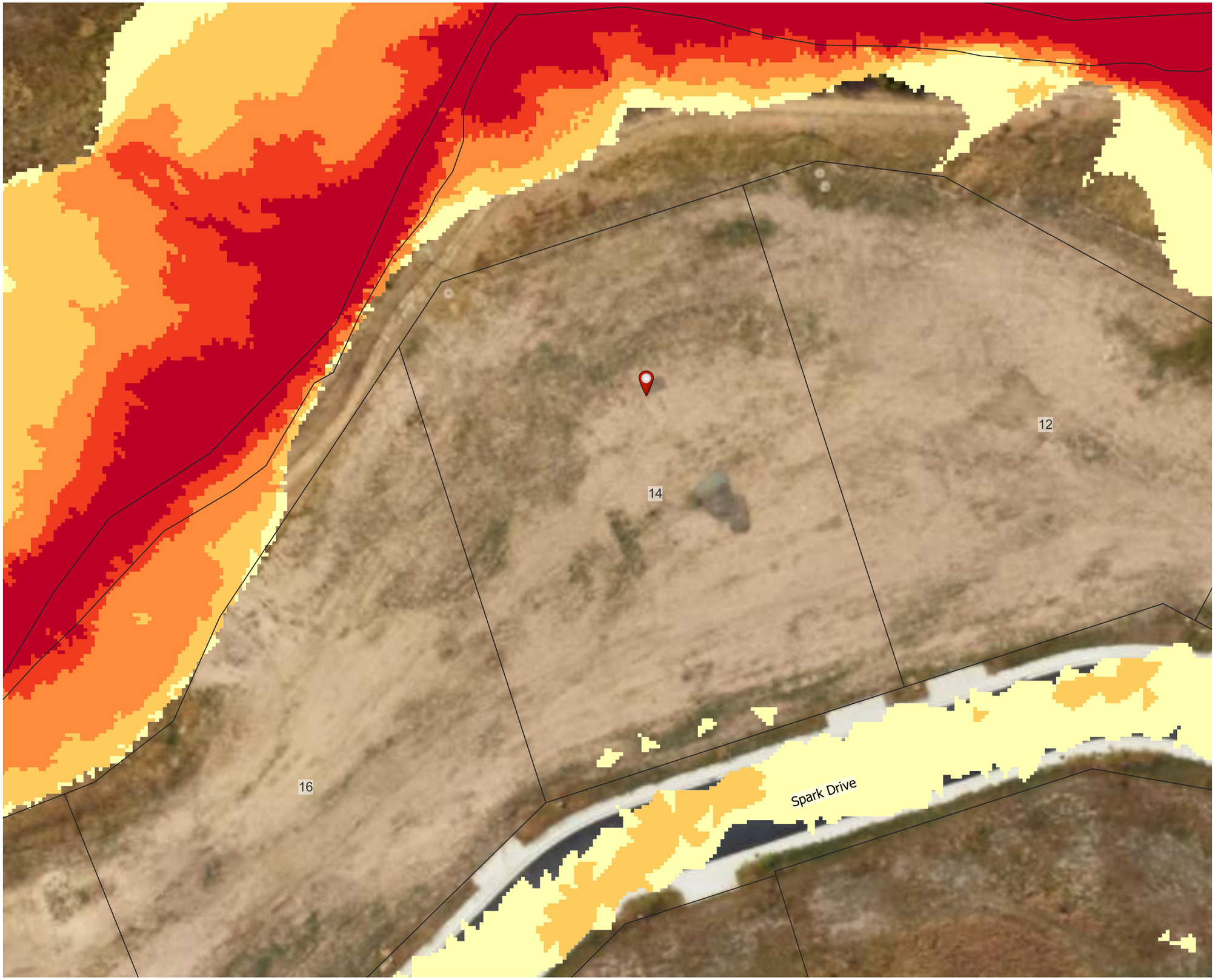
20-10-2023 Flussig Engineers Map CRS: GDA94 / MGA zone 55 EPSG:28355

PRE 1% AEP + CC @2100



Legend

14 (Lot 29) Spark Drive

Boundary lines

Pre 1% AEP + CC @2100

Velocity (m/s)

- <= 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

0 10 20 m

meters

N

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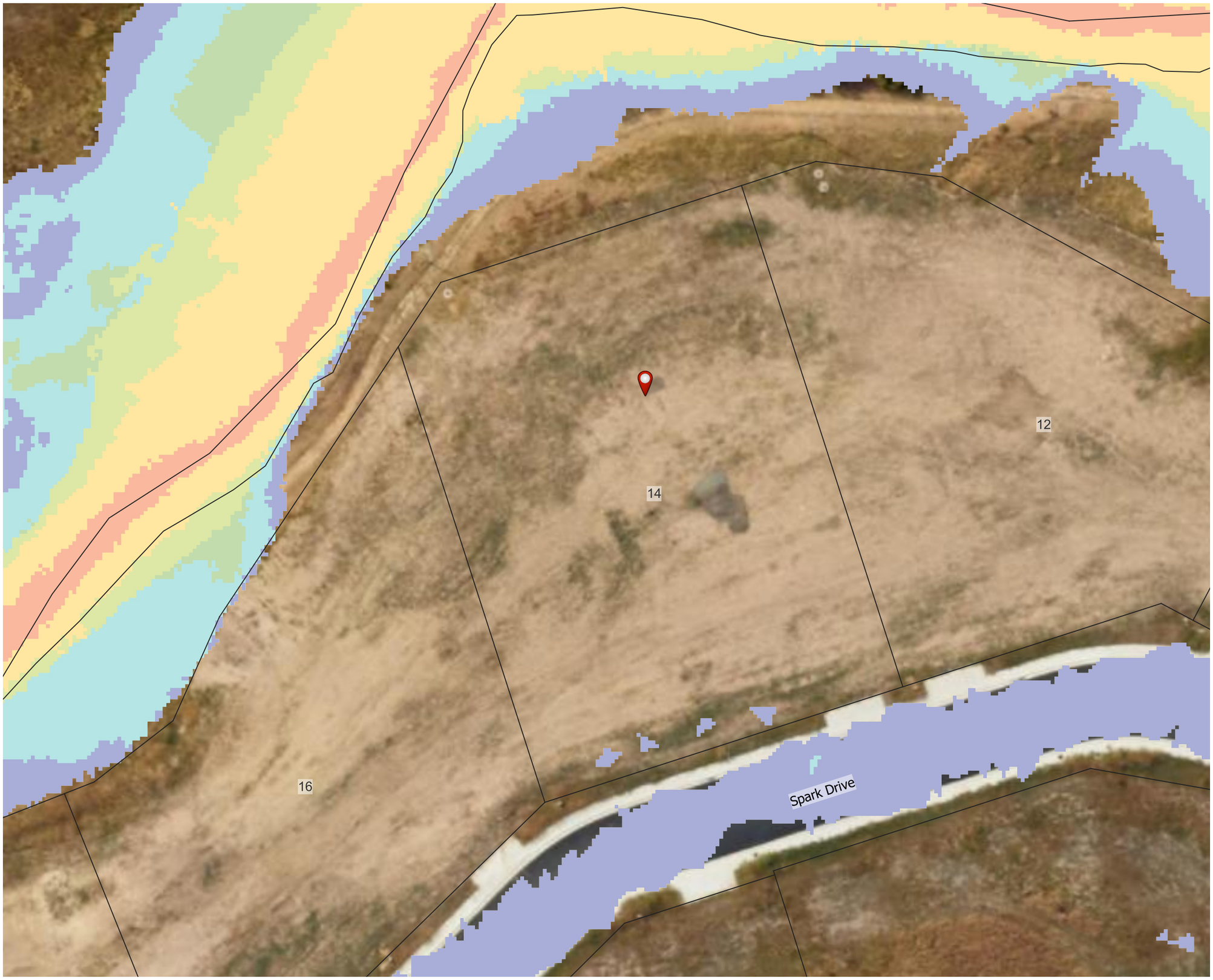

Legend

14 (Lot 29) Spark Drive

Boundary lines

Pre 1% AEP + CC @2100

Hazard

H1
H2
H3
H4
H5
H6

0 10 20 m

meters

N

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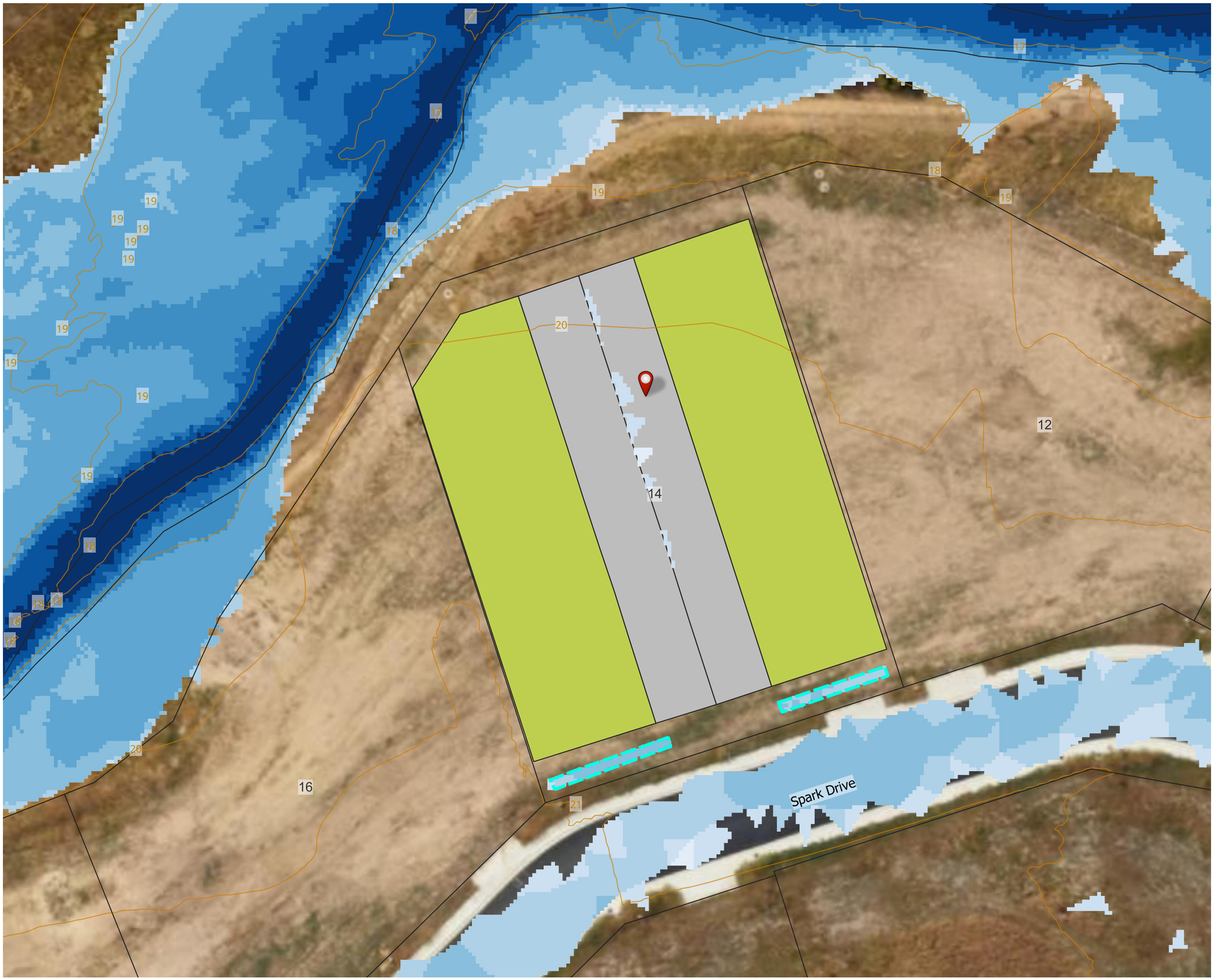
POST 1% AEP + CC @2100



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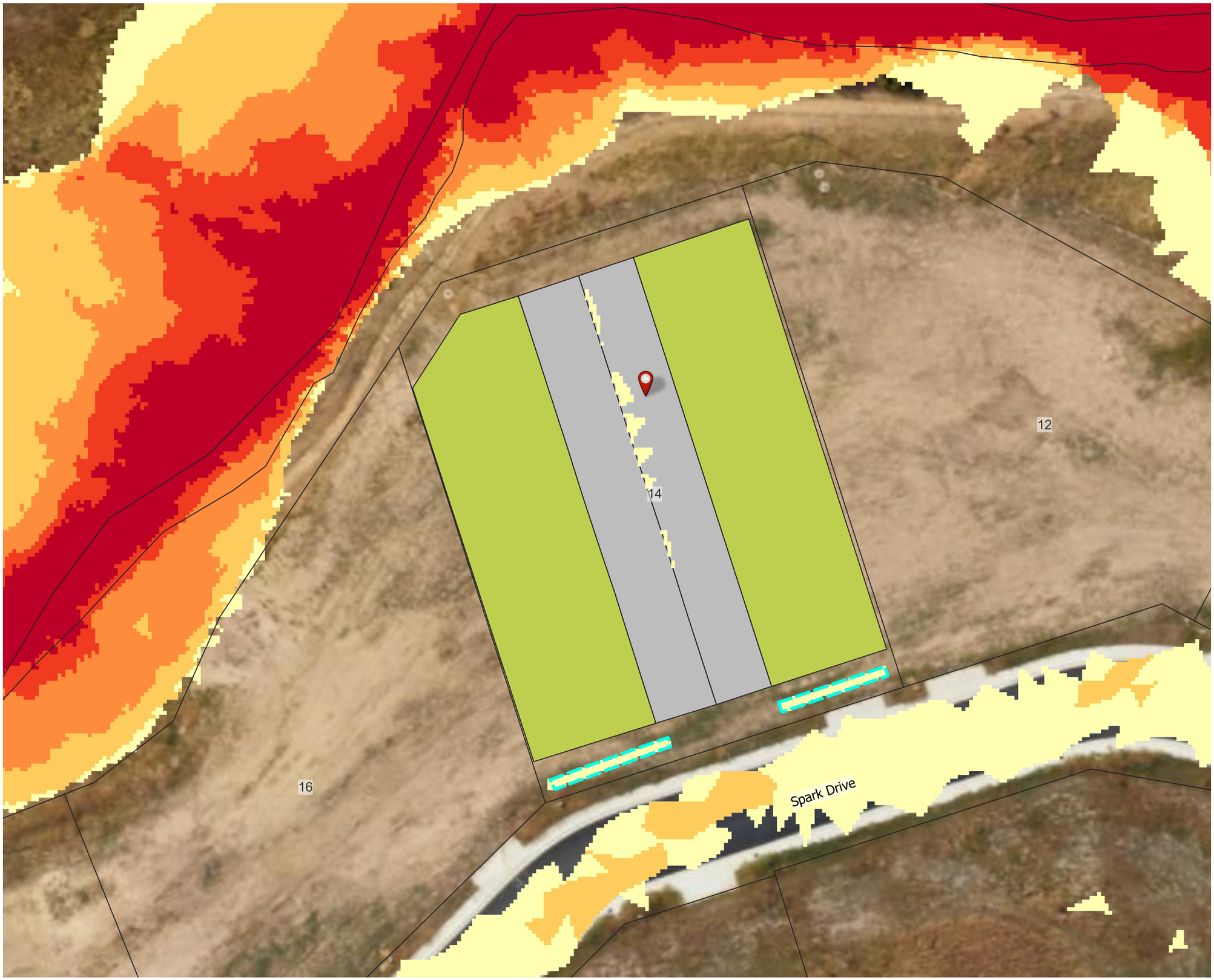


Legend

- 14 (Lot 29) Spark Drive
- Boundary lines
- 2 x 1.25m wide, 0.2m deep Open drain
- Proposed Warehouses RL 20.50
- Proposed Concrete area

Post 1% AEP + CC @2100

Velocity (m/s)

- <= 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

0 10 20 m

meters

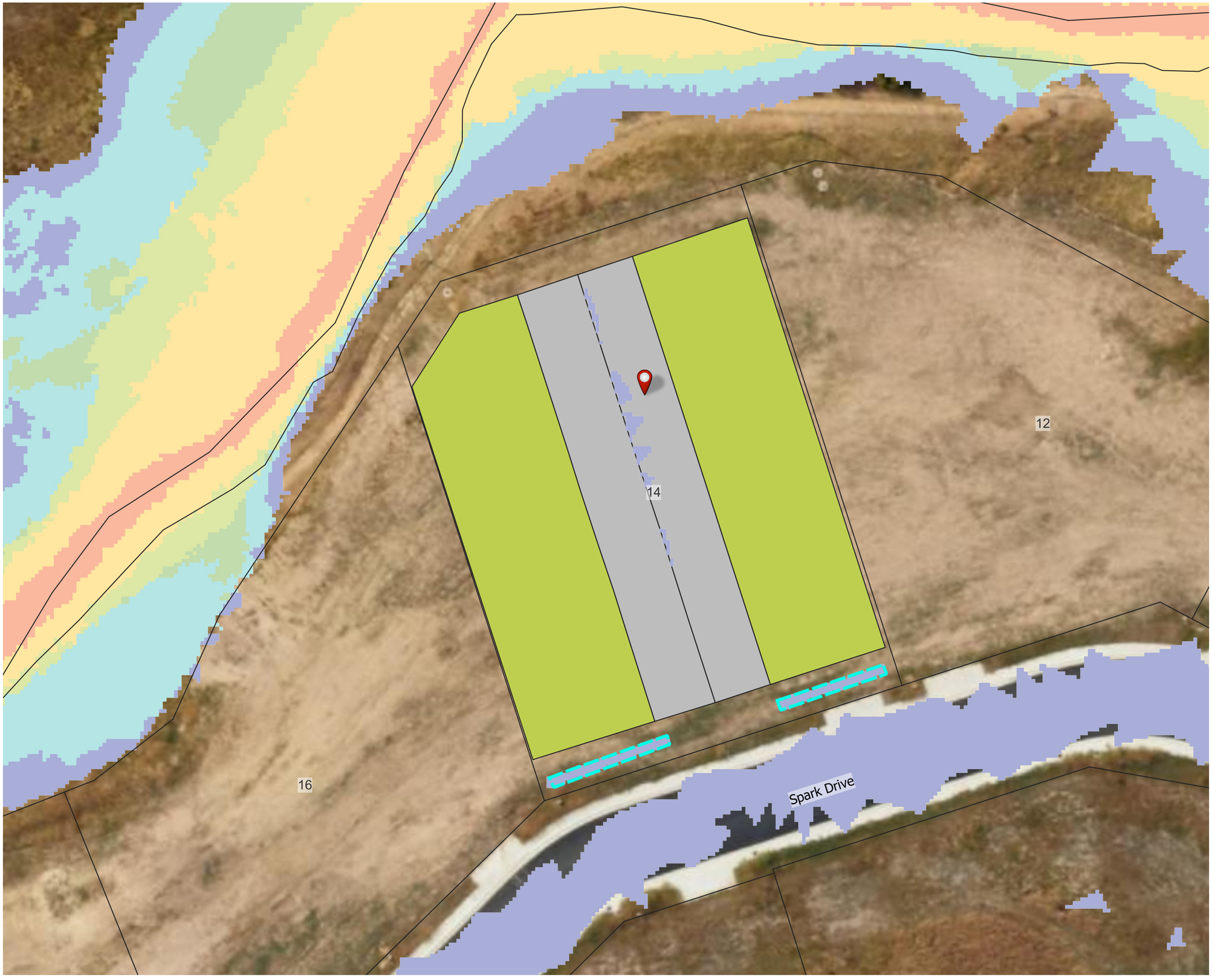
N

flüssig ENGINEERS
admin@flussig.com.au
(03) 6288 7704
www.flussig.com.au
116 Bathurst St, Level 4
Hobart, 7000, TASMANIA

07-11-2023 Flussig Engineers

Map CRS: GDA94 / MGA zone 55 EPSG:28355

POST 1% AEP + CC @2100



Legend

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Post 1% AEP + CC @2100

Hazard

- H1
- H2
- H3
- H4
- H5
- H6

0 10 20 m

meters

N

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07-11-2023 Flussig Engineers Map CRS: GDA94 / MGA zone 55 EPSG:28355

Contact Project Manager: **Max Möller**

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Hobart TAS 7000

Planning Submission

Warehouse Development

14 Spark Drive, Cambridge

Prepared For:
Clarence City Council

Issue	01
Date	19 December 2023
Project Name	Spark Drive Warehouse Development
Project Number	249001
Author	Sam Lambert
Document	Planning Submission

Contents

1. Introduction

Planning approval is sought for the development proposing the construction of 2 warehouses on a vacant parcel of newly created land identified as 14 Spark Drive, Cambridge (see Figure 1).

Figure 1 – Location of Subject Site

1.1 Planning Overview

Location	14 Spark Drive, Cambridge
Title Information	Certificate of Title Volume 184018 Folio 29
Land Area	3474m^2
Proposed Use Class	Storage
Proposed Development	Construction of a Warehouse Facility involving the provision of vehicular access and parking
Applicable Zone	18.0 Light Industrial
Overlays	Airport Obstacle limitation area; Cambridge Industrial Estate Specific Area Plan; Flood Prone Hazard Area Code; Bushfire Prone Areas Code; Natural Assets Code
Status of Application	Permitted

1.2 Proposed Use and Development

The proposal is to establish a warehouse facility on the lot located at 14 Spark Drive, Cambridge. The facility to be constructed comprises of 1 x 987m^2 and 1 x 971m^2 warehouses contained within the 3474m^2 lot. The warehouses consist of 2 separate building footprints within the site. The project proposes the construction of the warehouses, carparking, hardstand and landscaping.

1.2.1 Construction of the Warehouse Development

The building is proposed to be constructed comprising of a concrete slab on ground, precast concrete panels for external wall and bounding wall construction and steel roof frame structure. The roof cladding will consist of colorbond cladding and matching colorbond gutters, and flashings. Down pipes will be painted PVC.

The external finishes of the building will be in keeping with the requirements of the Local Planning Scheme with a desired outcome of natural concrete panels. Typically finishes are natural pre-cast concrete panels.

2.0 Location

2.1 Subject Site

The Site at 14 Spark Drive, Cambridge comprises a single lot and is legally defined in Certificate of Title Volume 184018 Folio 29. The site has an area of 3474m^2. The Northern boundary is 42.00m in length adjoining an undeveloped public walkway and rivulet area. The Eastern boundary is 69.98m in length and adjoins a vacant lot. The Southern boundary is 50.00m in length adjoining the developed Council Verge and Roadway. The Western boundary is 63.59m in length adjoining an undeveloped site.

2.2 Existing Land Use

The site is currently vacant.

2.3 Topography

The site includes a natural gradient from the South-West to North-East of the site of approximately 1.4m in total.

2.4 Site Access

The site is currently serviced with one (1) compliant crossover located to the Eastern side of the Southern boundary. A new central driveway cross over is proposed for the project. The central crossover provides for practical access and egress within the property boundary as indicated by the design documentation supplied. The existing crossovers shall be removed.

The parking area will be provided as reinforced concrete area to allow for car parking and turning for service vehicles.

2.5 Site Servicing

The site is currently vacant; therefore, the following services and connections points are identified on the Contour and Detail survey with service connection applications to be progressed as part of the Building approval process.

Potable Water Service - The water supply to the site is provided running parallel and adjacent to the Southern/Front Boundary. Records indicate the existing service consists of a 150mm diameter PVC-U reticulation main. A new connection application is to be progressed through Taswater.

Sewer Service - The site is serviced by existing authority sewer infrastructure provided running parallel and adjacent to the North /Rear Boundary. Records indicate the existing service consists of 300mm diameter of PVC-U material. The sewer connection is in close proximity to the North and East Boundary Junction.

Stormwater Service - The existing buildings will be serviced with stormwater infrastructure located within the services easement to the rear of the lot. The connection is available at the North and East Boundary junctions.

Electrical Service - The site is serviced with an Electrical Connection Cabinet located in the South-Western corner of the lot.

3.0 Proposed Operation

3.1 Staff Numbers

Unit 1 – The warehouse proposed consists of 987m^2 of floor area. The use of the warehouse is predominantly for long term storage, where the access to and within the building may be a maximum of one (1) time per week however more likely one (1) time per fortnight or less. Therefore, staff numbers are considered to be one (1) or less.

Unit 2– The warehouses proposed consist of 971m^2 of floor area. This warehouse is intended for light industrial operations and therefore the number of staff is predicted to be up to 10 at any one time.

3.2 Operating hours

In line with Clause 18.3.1 Use Standards, the hours of operation will consist of 7:00am to 9:00pm (Monday to Saturday) and 8:00am to 9:00pm (Sunday and Public Holidays). The site is not located within 50m of a General Residential Zone, Inner Residential Zone, Low Density Residential Zone and Rural Living Zone, therefore, based on proximity, this is not applicable.

3.3 Vehicle Movements and Loading and Un-Loading Requirements

The vehicle movements will be consistent with staff numbers included in Part 3.1 above.

Unit 1 –The use of the warehouse is predominantly for long term storage where the access to and within the building may be a maximum of one (1) time per week however more likely one (1) time per fortnight or less.

Unit 2 –This warehouse is targeted for light industrial operations and therefore the number of vehicle movements are anticipated as normal to support a development of this size. The carpark and hardstand area has allowed for adequate circulation space to suit service vehicles.

3.4 Waste Generation and Disposal

Unit 1 - The waste generated is predicted to be minimal, however, it is proposed to be contained within each warehouse, therefore not visible from any road or public space.

Unit 2– The waste generated is predicted to be minimal, however, it is proposed to be contained within each warehouse, therefore not visible from any road or public space.

4.0 Conclusion

This proposal seeks approval to develop the site with the construction of 2 warehouses and undertake associated works involving hardstand, carparking and landscaping areas.

The proposal has been designed to be generally in accordance with the applicable Scheme standards for the Light Industrial Use, therefore is considered Permitted Development in accordance with the Land Use Planning and Approvals Act 1993.

PINNACLE

17/01/2024
Att: Planning
Clarence City Council

Dear Sir/Madam,

PDPLANPMTD-2023/041206 - 14 Spark Drive, Cambridge

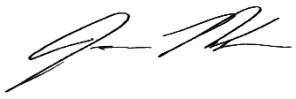
In response to your correspondence dated 03.01.24
I have addressed your requests as follows:

ITEM	COUNCIL REQUEST	DEVELOPMENT RESPONSE
1	*CLA-S15.6.1 Amenity* *• In relation to clause CLA-S15.6.1 A6 of the Scheme, please clarify if the use of the site, particularly unit 2, in that the use must not emit dust or other particulates, smells or fumes beyond the boundaries of the site.*	Both buildings have are proposed for the Warehouse Use. Warheouse 2 does not have a tenant yet however any changes to the proposed will require a new DA. It is anticipated that a warehouse will be utilized mainly for storage and the use would not emit any particles, dust or smells. If a use is proposed that would trigger a discretion under this Clause an application would be submitted.
2	*18.4.6 Landscaping* *• Please provide amended plans demonstrating that clause 18.4.6 A1 is met, in that landscaping must be provided along the frontage of the site to a depth not less than 5.5m. It appears that a portion of the landscaping has a depth less than 5.5m.*	Landscaping has been provided to a depth of 5.5m from the frontage less access strips to the site and buildings. Reduced buffers have been approved within the Cambridge Industrial Estate on multiple sites including 3-5 Abernant Way, 2 Railway Court. The access to the building in safe and efficient manner is a requirement under the Parking & Access Code hence the requirements for the pathways to be located at the fronts of the building. The Landscaping Plan shows a mixture of low vegetation and larger trees to provide variety.
3	*Parking and Sustainable Transport Code C2.5.4 Loading Bays* *• In relation to clause C2.5.4 A1 of the Scheme, a loading bay must be provided for uses with a floor area of more than 1000m2 in a single occupancy. Please provided amended*	A loading bay has been proposed adjacent to Warehouse 1 which allows sufficient manoeuvring and aisle widths for the car parking area.

	plans to show a loading bay for unit 2, to demonstrate compliance with the above clause.	
4	*C2.6.2 Design and Layout of Parking Areas* *• Please provide amended plans to show the driveway and parking space gradients comply with clause C2.6.2A1.1 (a)(i) of the Scheme.*	A Civil Plan has been provided to show gradients
5	*Natural Assets Code* *C7.6.1 Buildings and works within a waterway and coastal protection area or future coastal refugia area* *• A waterway protection area is present at the rear of the site, please show the location of the waterway protection area on the site plan. In addition, if any building works are located within the overlay, please demonstrate compliance with the relevant performance criteria of clause C7.6.1 P1.1 of the Scheme.*	Mapping as been show on the Site Plan. A report has been commissioned to address Clause C7.6.1 P1.1
6	*Flood-prone Hazard Code* *C12.6 Development Standards for Buildings and Works* *• As the Flood Report recommends open drainage along the southern boundary, please amend the Site Plan and Landscape Plan to show that it is consistent with the recommendations of the Flood Report.*	Site & Landscaping Plans have been amended to include this.

I trust the provided information addresses the matters identified in the further information request and ask that the council now accept the submitted documentation as a valid application under LUPA.

Kind Regards,



Jason Nickerson

Director

From: "Sam Lambert" <slambert@fairbrother.com.au>
Sent: Wed, 17 Jan 2024 15:35:11 +1100
To: "City Planning" <cityplanning@ccc.tas.gov.au>
Subject: RE: Request for further information - 14 Spark Drive Cambridge
Categories: Brandon

Hi Holly,

As per our discussion, please find the below development response sufficient to satisfy Item 4 of the RFI

The location of the overlay has been indicated in the amended plans lodged with you earlier today. (17/01/23). The Site Plan indicates that Warehouse 2 is partly located within the Code Overlay, therefore I have justified the minimal impact the development will have on the existing overlay and satisfying the performance criteria contained within Clause C7.6.1 P1.1 of the scheme as per your request.

Performance Criteria

P1.1
Buildings and works within a waterway and coastal protection area must avoid or minimize adverse impacts on natural assets having regard to:

a. **Impacts caused by erosion, sitation, sedimentation and runoff:**

Development Response:

The buildings and works are designed by qualified engineering consultants to ensure erosion, sitation, sedimentation and runoff is minimized and captured adequately and in accordance with engineering design principles and council engineering guidelines.

b. **Impacts on Riparian or Littoral Vegetation;**

Development Response:

The site is freshly subdivided and developed land, this item is Not Applicable.

c. **Maintaining a natural streambank and streambed condition, where it exists;**

Development Response:

A report dealing with the Flood-Prone aspect of the development has been commissioned and provided for any flood waters, impacts on the natural stream bank and stream bed are non-existent.

d. **Impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;**

Development Response:

The site is freshly subdivided and developed land and the building is proposed with a horizontal distance setback of 20.2 metres therefore this item is Not Applicable.

e. **The need to avoid significantly impeding natural flow and drainage;**

Development Response:

The site is freshly subdivided and developed land and the building is proposed with a horizontal distance setback of 20.2 metres from the rivulet therefore this item is Not Applicable.

f. **The need to maintain fish passage, where known to exist;**

Development Response:

The site is freshly subdivided and developed land and the building is proposed with a horizontal distance setback of 20.2 metres from the rivulet therefore this item is Not Applicable.

g. **The need to avoid land filling of wetlands;**

Development Response:

The site is freshly subdivided and developed land and the building is proposed with a horizontal distance setback of 20.2 metres from the rivulet therefore this item is Not Applicable.

h. **The need to group new facilities with existing facilities, where reasonably practical;**

Development Response:

Not Applicable.

i. **Minimizing cut and fill;**

Development Response:

The buildings and works are designed by qualified engineering consultants to balance out the cutting and filling of the site, the ground levels located in the rear easement portion of the site is to remain unchanged to minimize the impact.

j. **Building design that responds to the particular size, shape, contours or slope of the land;**

Development Response:

The buildings and works are designed by qualified engineering consultants to balance out the cutting and filling of the site, the ground levels located in the rear easement portion of the site is to remain unchanged to minimize the impact.

k. **Minimizing impacts on coastal processes, including sand movement and wave action;**

Development Response:

Not Applicable.

l. **Minimizing the need for future works for the protection of natural assets, infrastructure and property:**

Development Response:

The development site contains a 6.5m wide easement to the rear, therefore the impact on the overlay area is minimal and any protection works are not applicable.

m. **The environmental best practice guidelines in the Wetlands and Waterways works manual;**

Development Response:

The site is freshly subdivided and developed land and the building is proposed with a horizontal distance setback of 20.2 metres from the rivulet therefore this item is Not Applicable.

n. **The guidelines in the Tasmanian Coastal Works Manual;**

Development Response:

Not Applicable.

Please let me know if you have any further queries,

Thanks

Sam Lambert
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Email: slambert@fairbrother.com.au | Web: http://www.fairbrother.com.au