Brighton Council

Planning Authority Agenda

10 August 2021

Name: .....

INDEX

Planning Authority: 10 August 2021

Brighton Council

Council Representatives: Cr Gray (Chairperson); Cr Owen (Deputy Chair); Cr Curran; Cr Garlick; Cr Geard; Cr Jeffries; Cr Murtagh and Cr Whelan.

NOTICE OF MEETING

Dear Councillor,

Notice is hereby given that the next **Planning Authority Meeting** will be held in the Council Chambers, Council Offices, Old Beach at **5.30 p.m. on Tuesday, 10 August 2021**, to discuss business as printed below.

QUALIFIED PERSON CERTIFICATION

I HEREBY CERTIFY that in accordance with Section 65 of the Local Government Act 1993, any advice, information and recommendation contained in the reports related to the Agenda have been prepared by persons who have the qualifications or experience necessary to give such advice, information and recommendations.

Dated at Old Beach this ***5th*** day of ***August 2021***.

James Dryburgh

GENERAL MANAGER

A G E N D A

Please note: It is now Council Policy to record proceedings of Ordinary Council Meetings, Special Meetings and Planning Authority meetings from July 2021. Other than official Council audio recordings, no unauthorised video or audio recording of proceedings of Council meetings shall be permitted without specific approval by resolution of Council. An audio recording of the meeting will be available via a link on the Brighton Council website within 7 business days of the meeting.

1. Acknowledgement of Country

I would like to begin by acknowledging the traditional owners of the land on which we meet today. I would like to pay my respects to Elders past and present and acknowledge the Aboriginal people present today.

2. Apologies

3. Public Question Time and Deputations

4. Declaration of Interest

In accordance with Part 5, Section 48 of the Local Government Act 1993, the Chairman of a meeting is to request Councillors to indicate whether they have, or are likely to have an interest in any item on the agenda; and

Part 2 Regulation 8 (7) of the Local Government (Meeting Procedures) Regulations 2015, the Chairman of a meeting is to request Councillors to indicate whether they have, or are likely to have, a pecuniary interest in any item on the agenda.

Accordingly, Councillors are requested to advise of any interest they may have in respect to any matter appearing on the agenda, or any supplementary item to the agenda, which the Council has resolved to deal with, in accordance with Part 2 Regulation 8 (6) of the Local Government (Meeting Procedures) Regulations 2015.

5. Council Acting as Planning Authority

In accordance with the provisions of Part 2 Regulations 25 of the Local Government (Meeting Procedures) Regulations 2015, the intention of the Council to act as planning authority pursuant to the *Land Use Planning and Approvals Act 1993* is to be noted. In accordance with Regulation 25, the Council will act as a planning authority in respect to those matters appearing under Item 5 on this agenda, inclusive of any supplementary items.

5.1 Application under the Brighton Interim Planning Scheme 2015 - DA 2021/13 – 71 Tongatabu Road, Dromedary - Outbuilding:

Type of Report:	Planning Authority – For Decision
Application No:	DA 2021/13
Address:	71 Tongatabu Road, Dromedary
Proposal:	Outbuilding
Zone:	Rural Living Zone (Area C)
Representations:	One (1)
Discretions:	1. Setback to side boundary 2. Cut/fill 3. Outbuildings 4. Stormwater management
Attachments:	A – Advertised Documents (See pages 55 - 63) B – Representation (under separate cover) C – Engineering Report
Author:	Planning Officer (Richard Cuskelly)

1. Executive Summary

1.1. Planning approval is sought for an outbuilding at 71 Tongatabu Road, Dromedary (the 'site').
1.2. This application was received prior to 11 February 2021 and therefore must be determined under the Brighton Interim Planning Scheme 2015 (the 'Interim Scheme').
1.3. The site is situated within the Rural Living Zone (Area C).
1.4. The key planning issues relate to amenity and stormwater management.
1.5. One (1) representation was received within the statutory public advertising period.
1.6. The application is recommended for approval subject to conditions.
1.7. There are issues raised in the representation that have warranted separate investigation from Council staff.
1.8. Due to the receipt of a representation during the public advertising period, the final decision is delegated to the Planning Authority or by full Council acting as a Planning Authority.

2. Legislative & Policy Content

2.1. The purpose of this report is to enable the Planning Authority to determine application DA 2021/13.
2.2. This determination must be made no later than 17 August 2021. The statutory assessment period has been extended with the consent of the applicant.
2.3. The relevant legislation is the *Land Use Planning and Approvals Act 1993* (the 'Act'). The provisions of the Act require a planning authority to take all reasonable steps to ensure compliance with the planning scheme.

2.4. This report details the reasons for the officer recommendation. The Planning Authority must consider this report but is not bound to adopt the recommendation. Broadly, the Planning Authority can either: (1) adopt the recommendation, or (2) vary the recommendation by adding, modifying or removing recommended reasons and conditions or replacing an approval with a refusal (or vice versa). Any alternative decision requires a full statement of reasons to comply with the *Judicial Review Act 2000* and the *Local Government (Meeting Procedures) Regulations 2015*.

2.5. This report has been prepared with appropriate regard to the State Policies that apply under the *State Policies and Projects Act 1993*.

2.6. This report has been prepared with appropriate regard to Council's Strategic Plan and other Council policies, and the application is not found to be inconsistent with these. Nevertheless, it must be recognised that the planning scheme is a regulatory document that provides the overriding consideration for this application. Matters of policy and strategy are primarily a matter for preparing or amending the planning scheme.

3. Risk & Implications

3.1. Approval or refusal of this application will have no direct financial implications for the Planning Authority, unless the decision is appealed.

3.2. Implications for Council include general matters related to rate income, asset maintenance and renewal and responding to future building applications.

4. Site Detail

4.1. The site is a 6689m^2 lot (not including the Tongatabu and Crown Road reserves) with existing access to Tongatabu Road (see Figure 1).

4.2. It is already developed by a dwelling and BBQ area.

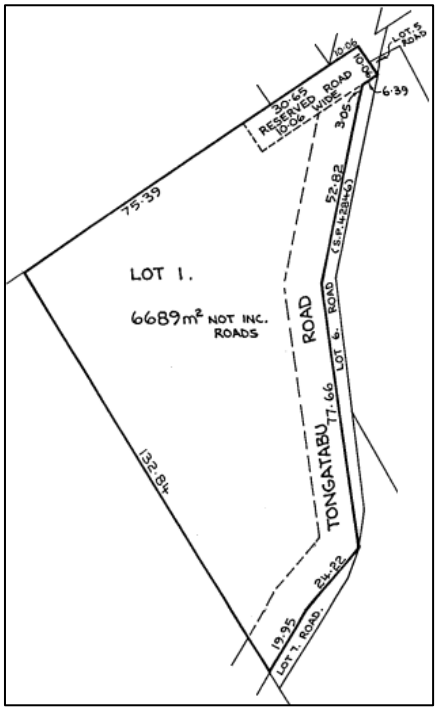


Figure 1. Folio plan

4.3. The site is within Area C of the Rural Living Zone of the Interim Scheme, while land to the north and west is zoned Environmental Living (see Figure 2).

4.4. The western portion of the site is within a mapped threatened vegetation community: (DTO) *Eucalyptus tenuiramis forest and woodland on sediments*; though the proposed outbuilding is just clear of this area.

4.5. The site drops to the west at a gradient of approximately 1 in 5 (and a low-risk Landslide Hazard Area covers much of the site).

Figure 2. Aerial photograph of the site (highlighted)

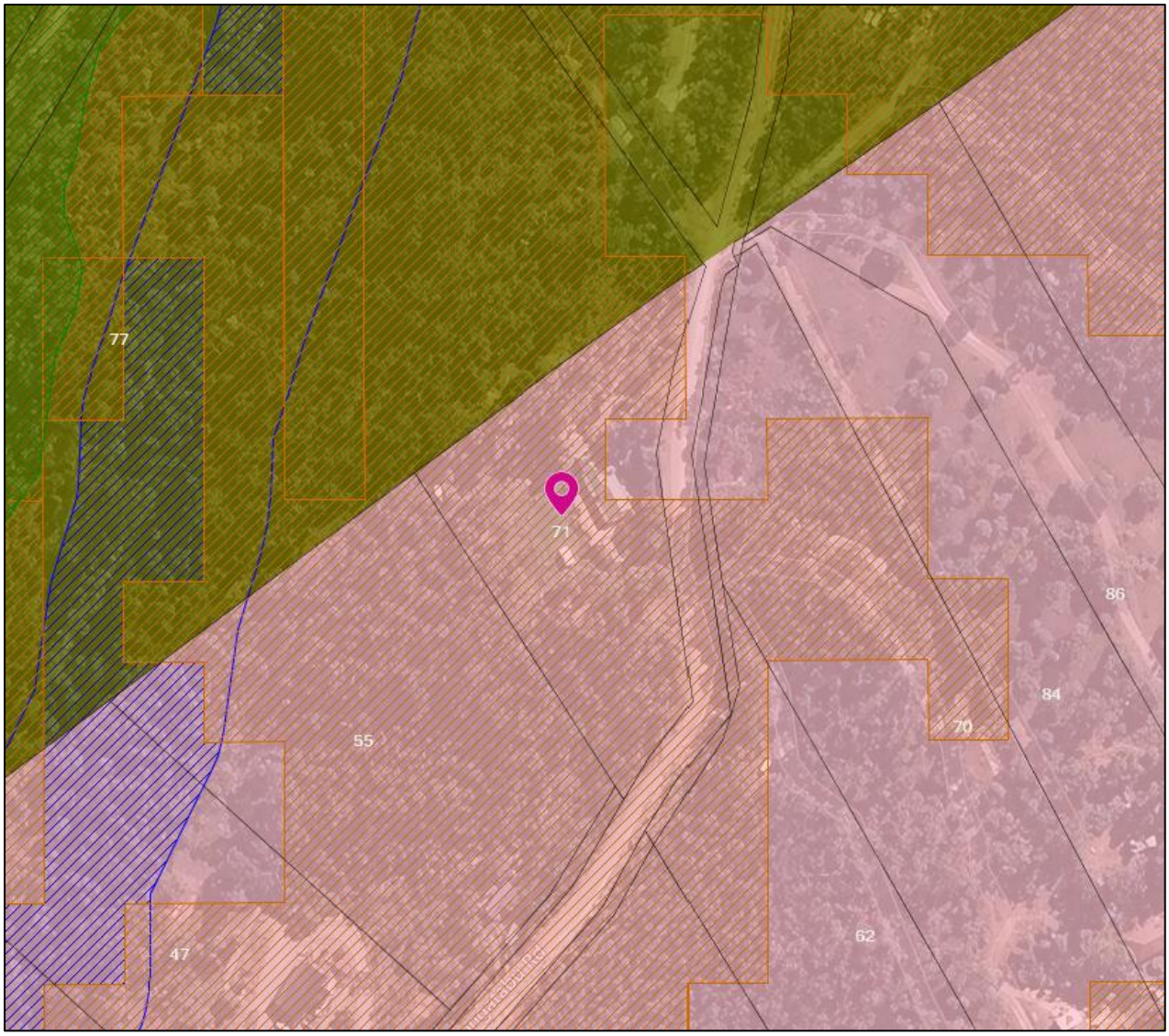


Figure 3. Planning controls affecting the site and surrounds (Pink = Rural Living Zone (C); Green = Environmental Living Zone; Orange Hatch = Landslide Hazard Area (Low Risk); Blue Hatch = Waterway Protection Area)

5. Proposal

5.1. One outbuilding is proposed for domestic purposes.

5.2. The outbuilding has a floor area of 77m^2, a maximum height above natural ground level of 4.6m and requires cut of up to 1.5m.

5.3. Vehicle access, an unsealed driveway and informal parking area for 2+ cars are existing.

5.4. Stormwater is proposed to be retained on-site via tanks.

6. Assessment

6.1. The *Brighton Interim Planning Scheme 2015* is a performance-based planning scheme.

6.2. To meet an applicable standard, a proposal must demonstrate compliance with either an Acceptable Solution or Performance Criteria. Where a proposal complies with a standard by relying on one or more Performance Criteria, the Council may approve or refuse the proposal on that basis. The ability to refuse the proposal relates only to the Performance Criteria relied upon.

7. Assessment against planning scheme provisions

7.1. The following provisions are relevant to the assessment of the proposed use and development:

- Part D – Clause 13.0 – Rural Living Zone
- Part E – Clause 6.0 – Parking and Access Code
- Part E – Clause 7.0 – Stormwater Management Code

7.2. The proposed use is 'residential', which is a No Permit Required use in the Rural Living Zone, under Use Table 13.2.

7.3. The proposal is considered to satisfy the relevant Acceptable Solutions listed below:

13.4.1 – Building height

13.4.2 A1 – Front setback

13.4.2 A3 – Agricultural zone setback

13.4.2 A4 – Environmental management zone setback

13.4.3 A1 – Design

13.4.3 A2 – Building colour (via permit condition)

13.4.3 A3 – Gross floor area

E6.0 – Parking and Access Code (all)

7.4. The following discretions are invoked by the proposal:

13.4.2 P2 – Side setback

13.4.3 P3 – Cut/fill

13.4.4 P1 - Outbuildings

E7.7.1 A1 – Stormwater management

8. Discretion 1 – Side setback

8.1. The proposed outbuilding has a minimum setback to the north-west side boundary of approximately 19m.

8.2. Acceptable Solution 13.4.2 A2 states:

Building setback from side and rear boundaries must be no less than 20m.

8.3. Therefore, the application must be assessed against corresponding Performance Criteria 13.4.2 P2, which states:

Building setback from side and rear boundaries must maintain the desirable characteristics of the surrounding landscape and protect the amenity of adjoining lots, having regard to all of the following:

(a) the topography of the site;

(b) the size and shape of the site;

(c) the location of existing buildings on the site;

(d) the proposed colours and external materials of the building;

(e) visual impact on skylines and prominent ridgelines;

(f) impact on native vegetation;

(g) be sufficient to prevent unreasonable adverse impacts on residential amenity on adjoining lots by:

(i) overlooking and loss of privacy;

(ii) visual impact, when viewed from adjoining lots, through building bulk and massing.

8.4. The side boundary is question is shared with 77 Tongatabu Rd which is a large undeveloped lot zoned Environmental Living under the Interim Scheme. This lot is well vegetated and any future single dwelling on this lot would unlikely be within visual proximity of the proposed outbuilding.

8.5. Due to topography and vegetation, it is unlikely that the outbuilding will be visible from the adjoining lot to the south-west. To ensure there are no adverse impacts on visual amenity, a permit condition is recommended that exterior buildings are non-reflective.

8.6. No native vegetation modification is required for the proposed outbuilding.

8.7. For the reasons set out above, the proposal is considered to meet the Performance Criteria.

9. Discretion 2 – Cut/fill

9.1. Acceptable Solution 13.4.3 A4 states:

Fill and excavation must comply with all of the following:

(a) height of fill and depth of excavation is no more than 1 m from natural ground level, except where required for building foundations;

(b) extent is limited to the area required for the construction of buildings and vehicular access.

9.2. A cut has been made to the area required for the construction of buildings and vehicular access (see Photo 1).

Photo 1: Excavation for outbuilding/access

9.3. The excavation is a maximum of 1.5m into the natural ground level. Therefore, the application must be assessed against corresponding Performance Criteria 13.4.3 P4, which states:

Fill and excavation must satisfy all of the following:

(a) does not detract from the landscape character of the area;

(b) does not unreasonably impact upon the privacy for adjoining properties;

(c) does not affect land stability on the lot or adjoining land.

9.4. The cut made is not of a scale that detracts from the landscape character of the area. It is not visible from adjoining properties and will ensure the outbuilding has minimal visual impact.

9.5. The excavation is minor enough not to affect land stability and foundational requirements will be regulated under the Building Act 2016 to ensure the outbuilding is built sustainably.

9.6. For the reasons set out above, the proposal is considered to meet the Performance Criteria.

10. Discretion 3 – Outbuildings

10.1. Acceptable Solution 13.4.4 A1 states:
Outbuildings (including garages and carports not incorporated within the dwelling) must comply with all of the following:

(a) have a combined gross floor area no more than 100 m2;

(b) have a wall height no more than 6.5 m and a building height not more than 7.5 m;

(c) have setback from frontage no less than that of the existing or proposed dwelling on the site.

10.2. The proposed outbuilding has a floor area of 77m^2, a maximum height above ground level of 4.6m and is setback slightly further the frontage than the existing dwelling. However, with the existing BBQ area, there will be a combined gross floor area of the outbuildings on-site of 113m^2 which means the proposal must comply with Performance Criteria 13.4.4 P1, below:

Outbuildings (including garages and carports not incorporated within the dwelling) must be designed and located to satisfy all of the following:

(a) be less visually prominent than the existing or proposed dwelling on the site;

(b) be consistent with the scale of outbuildings on the site or in close visual proximity;

(c) be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape.

10.3. The outbuilding is located and designed to be less visually prominent than the existing dwelling, and it is consistent with the scale of the existing BBQ area on the site.

10.4. The Desired Future Character Statement for Rural Living Area C is:
Rural Living Area C will develop at a density of approximately one lot per 2 hectares providing rural living further from settlements where a high level of amenity and privacy will be enjoyed and ecological and aesthetic values will be maintained.

This can be achieved with a recommended permit condition that the outbuilding is to be used for Residential purposes only (and not for commercial, industrial or habitable purposes).

10.5. For the reasons set out above, the proposal is considered to meet the Performance Criteria.

11. Discretion 4 – Stormwater management

11.1. Acceptable Solution 13.4.4 A1 states:
Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.

11.2. There is no public stormwater infrastructure servicing this limited access rural road. Therefore, the proposal must meet Performance Criteria E7.7.1 P1 below:
Stormwater from new impervious surfaces must be managed by any of the following:

(a) disposed of on-site with soakage devices having regard to the suitability of the site, the system design and water sensitive urban design principles;

(b) collected for re-use on the site;

(c) disposed of to public stormwater infrastructure via a pump system which is designed, maintained and managed to minimise the risk of failure to the satisfaction of the Council.

11.3. Water tanks are proposed for rainwater collection and storage. Given the environment is categorised a "dry sclerophyll forest" with a neighbouring steep gully, uncaptured overflow stormwater will be directed to the present overland flow path in a much-reduced capacity. It is likely there will be a net reduction in frequency and volume from the development.

11.4. The proposal meets the above Performance Criteria.

12. Referrals

12.1. Engineering
The application was referred to Council's Development Officer, whose Engineering Report is attached.

12.2. Environmental Health
The application was referred to Council's Senior Environmental Health Officer, who has investigated complaints regarding machinery, bike and chain-saw noise, litter and burning-off under their relevant legislation.

12.3. Animal Control
The application was referred to Council's Animal Control Officer, who advised that all dog-related complaints have, and will be, investigated under the *Dog Control Act 2000*.

13. Concerns raised by the representor

13.1. The application was advertised in accordance with the statutory requirements of the Act.

13.2. One (1) representation was received during the statutory public advertising period. The concerns of the representor are summarised below:

Concern	Response
Increased risk of erosion, soil health and landslip due to landfill, excavation, grading, vegetation removal and burning off on the site.	See criteria above and attached Engineering Report. Council's Development Officer has determined that the risk of erosion or landslip from the development is minimal and reasonable. Soil health is not a consideration for Council in its assessment under the Planning Scheme.
Native vegetation has been removed from the site.	Upon visiting the site there was evidence that at least one eucalypt had been removed in the past. However, it was near the existing dwelling and there was no evidence of land clearing near a scale warranting enforcement under the Planning Scheme. A condition that no mature eucalypts are to be removed or modified from the property without the permission of Council is recommended.

Wastewater run-off more likely to other properties due to land disturbance.	Council's Development Officer has advised that there will likely be a net reduction in frequency and volume from the development.
Commercial/industrial uses are already undertaken on the site and the proposed outbuilding will likely facilitate an intensification of this use. Specifically leading to unreasonable: • Noise impacts from machinery and traffic generation (already occurs early in morning); • Noise impacts from uninsulated outbuilding.	A condition that the outbuilding is to be used for Residential purposes only (and not for commercial, industrial or habitable purposes) is recommended. Council's Senior Environmental Health Officer has also been consulted.
Dog management (noise and containment on property).	Not a Planning matter, however Council's Animal Control Officer has been consulted.
Increased rubbish and littering as a result of use of the proposed outbuilding.	Not a Planning matter, however Council's Senior Environmental Health Officer has been consulted.
The height of the proposed outbuilding could lead to overlooking of adjoining properties.	No privacy impacts are envisaged. The outbuilding has no windows and a 4.6m maximum height above natural ground level.

14. Conclusion

14.1. Proposed is an outbuilding at 71 Tongatabu Road, Dromedary. The site is situated within the Rural Living Zone of the *Brighton Interim Planning Scheme 2015*.

14.2. The key issues are dwelling separation to a side boundary, increase in vehicle movements to an existing road access and the requirement for Water Sensitive Urban Design.

14.3. The proposal is considered to satisfy the requirements of the *Brighton Interim Planning Scheme 2015*, and as such, is recommended for approval subject to conditions.

15. Recommendations

That:

A. Pursuant to the Brighton Interim Planning Scheme 2015, Council approve DA 2021/13 for an Outbuilding for Residential use at 71 Tongatabu Road, Dromedary with the following conditions:

General

(1) The use or development must be carried out substantially in accordance with the application for planning approval, the endorsed drawings and with the conditions of this permit and must not be altered or extended without the further written approval of Council.

(2) This permit shall not take effect and must not be acted on until 15 days after the date of receipt of this letter or the date of the last letter to any representor, whichever is later, in accordance with section 53 of the *Land Use Planning and Approvals Act 1993*.

Building Colour

(3) Within 28 days of the date of this permit, a list of exterior building colour(s) must be submitted to Council. Colour(s) must have a light reflectance value not greater than 40 percent or be otherwise approved by Council's Senior Planner.

(4) Once approved by Council's Senior Planner, the colour schedule will form part of this permit.

Amenity

(5) No mature eucalypts are to be removed or modified on the site without prior written approval of Council's Senior Planner.

Services

(6) The developer must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the development. Any work required is to be specified or undertaken by the authority concerned.

Parking and Access

(7) At least two (2) car parking spaces must be provided on the land at all times for the use of the development, in accordance with Standards Australia (2004) Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney.

(8) The internal driveway and areas set-aside for parking and associated access and turning must be provided in accordance with Standards Australia (2004): Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney and to the satisfaction of Council's Municipal Engineer, and must include all of the following;

(a) Constructed with a durable all-weather gravel pavement,

(b) Minimum carriageway width of 4 metres, and

(c) Drained to the present overland flow path via swale drains as required located above and below batters.

(9) The internal driveway and areas set-aside for parking and associated access and turning must be designed, constructed, and maintained to avoid dust or mud generation, erosion and sediment transfer off site or de-stabilisation of the soil on site or on adjacent properties to the standard required by Council's Municipal Engineer.

Access to Road

(10) Unless approved otherwise by Council's General Manager the existing vehicular access, from the road carriageway to the property boundary, must be maintained to comply with Standard Drawings TSD-R03-v1 Rural Roads Typical Property Access, TSD-R04-v1 Rural Roads Typical Driveway Profile and TSD-RF01-v1 Guide To Intersection And Domestic Access Sight Distance and to the satisfaction of Council's General Manager.

Stormwater

(11) Stormwater from the proposed development must be retained on site and excess drained to the neighbouring gully via dispersion to the satisfaction of Council's General Manager and in accordance with a Certificate of Likely Compliance or Plumbing permit issued by the Permit Authority in accordance with the *Building Act 2016*.

Soil and Water Management

(12) Before any work commences install temporary run-off, erosion and sediment controls and maintain these at full operational capacity until the land is effectively rehabilitated and stabilised after completion of the development in accordance with the guidelines Soil and Water Management on Building and Construction Sites, by the Derwent Estuary Programme and NRM South and to the satisfaction of Council's General Manager.

Construction Amenity

(13) The development must only be carried out between the following hours unless otherwise approved by the Council's Manager Development Services:

- Monday to Friday — 7:00 a.m. to 6:00 p.m.
- Saturday — 8:00 a.m. to 6:00 p.m.
- Sunday and State-wide public holidays — 10:00 a.m. to 6:00 p.m.

(14) All works associated with the development of the land shall be carried out in such a manner so as not to unreasonably cause injury to, or prejudice or affect the amenity, function and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of:

(a) Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, ash, dust, waste water, waste products, grit or otherwise.
(b) The transportation of materials, goods and commodities to and from the land.
(c) Obstruction of any public footway or highway.
(d) Appearance of any building, works or materials.

(15) Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the site in an approved manner. No burning of such materials on site will be permitted unless approved in writing by the Council's Manager Development Services.

(16) Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the project during the construction period.

(17) The developer must make good and/or clean any footpath, road surface or other element damaged or soiled by the development to the satisfaction of the Council's Municipal Engineer.

THE FOLLOWING ADVICE APPLIES TO THIS PERMIT:

A. Before commencing any works contact your private building surveyor to ascertain what approval is required under the Building Act 2016.
B. This permit does not imply that any other approval required under any other legislation or by-law has been granted.
C. If you notify Council that you intend to commence the use or development before the date specified above, you forfeit your right of appeal in relation to this permit.
D. This planning approval shall lapse at the expiration of two (2) years from the date of the commencement of planning approval if the development for which the approval was given has not been substantially commenced. Where a planning approval for a development has lapsed, an application for renewal of a planning approval for that development shall be treated as a new application.

DECISION:

5.2 Application Under Brighton Interim Planning Scheme 2015 - SA2020/50 – Lot 1 Greenbanks Road, Bridgewater – Subdivision (30 Lots):

Type of Report:	Planning Authority – For Decision
Application No:	SA 2020/50
Address:	Lot 1 Greenbanks Road, Bridgewater (more particularly described in C/T 176402/1)
Applicant:	PDA Surveyors
Proposal:	Subdivision (30 Lots)
Zone:	General Industrial Zone
Representations:	Two (2)
Discretion:	1. Subdivision (C9.10) 2. Frontage (D25.5.1) 3. Arrangement of Roads (D25.5.1) 4. Public Open space (D25.5.1) 5. Road and Railway Assets Code (E5.0) 5. Attenuation Code (E9.0) 6. Waterway and Coastal Protection Code (E11.0) 7. Inundation Prone Areas Code (E15.0)
Attachments:	A – Plans (See pages 64 - 150) B – TasWater Submission
Author:	Senior Planner (Jo Blackwell)

1. Executive Summary

1.1. Planning approval is sought for Subdivision (30 Lots) in the General Industrial Zone at Lot 1 Greenbanks Road, Bridgewater.

1.2. The application is discretionary under Special Provision 9.10 of the Brighton Interim Planning Scheme 2015 and reliance on performance criteria in relation to subdivision standards.

1.3. Two representations were received. It is considered that the issues raised in the representations do not warrant refusal of the application.

1.4. The key planning issues relate to lot design (frontage and arrangement of roads) and stormwater.

1.5. The proposal is recommended for approval subject to various non-standard conditions relating to the above key planning issues and on servicing of the site.

1.6. The final decision must be made by the Planning Authority or by full Council acting as a planning authority due to the receipt of representations via the public exhibition period for the development application.

2. Legislative & Policy Content

2.1. The purpose of this report is to enable the Planning Authority to determine application SA 2020/50.

2.2. This determination must be made no later than 17th August 2021, which has been extended beyond the statutory timeframe with the consent of the applicant.

2.3. The relevant legislation is the *Land Use Planning and Approvals Act* 1993 (LUPAA). The provisions of LUPAA require a planning authority to take all reasonable steps to ensure compliance with the planning scheme.

2.4. This report details the reasons for the officer recommendation. The Planning Authority must consider this report but is not bound to adopt the recommendation. Broadly, the Planning Authority can either: (1) adopt the recommendation, or (2) vary the recommendation by adding, modifying or removing recommended reasons and conditions or replacing an approval with a refusal (or vice versa). Any alternative decision requires a full statement of reasons to comply with the *Judicial Review Act 2000* and the *Local Government (Meeting Procedures) Regulations 2015.*

2.5. This report has been prepared with appropriate regard to the State Policies that apply under the *State Policies and Projects Act 1993*.

2.6. This report has been prepared with appropriate regard to Council's Strategic Plan and other Council policies, and the application is not found to be inconsistent with these. Nevertheless, it must be recognised that the planning scheme is a regulatory document that provides the overriding consideration for this application. Matters of policy and strategy are primarily a matter for preparing or amending the planning scheme.

3. Risk & Implications

3.1. Implications for Council include general matters related to rate income, asset maintenance and renewal and responding to future building applications.

4. Relevant Background and Past Applications

4.1. The application was originally submitted to Council for approval in December 2020. Given the most recent amendments made to the *Land Use Planning and Approvals Act* 1993, which came into effect on 14th July 2021, the application is to be assessed against the former planning scheme, the Brighton Interim Planning Scheme, pursuant to s51(3) of the Act:

51(3) *The decision of a planning authority on an application referred to in subsection (1A) or (1B) is to be made in accordance with the provisions of the planning scheme as in effect on the day on which the application is validly made, unless another subsection of this section applies in relation to the application.*

Site Detail

4.2. The subject site is a vacant site which comprises a single title, being Certificate of Title Volume 176402 Folio 1). The land is comprehensively described in the Bushfire Hazard Management Plan prepared by Enviro-Dynamics, submitted in support of the proposal. That site assessment is reproduced here:

1.3 Site Description

The subject land is a single title occupying 22.99ha within the Brighton Industrial Estate at Greenbanks Road, Bridgewater (see location and context maps at Figures 2 & 3). It does not currently contain any built infrastructure except towers associated with high voltage electricity transmission lines that cross the land from west to east near the northern boundary.

The land is bisected from north-west to south-east by Ashburton Creek, with a large in-stream dam lying roughly in the centre of the site. To the north and east of the creek, the land has a southerly aspect, descending from a maximum height of approximately 67m above sea level asl in the north-west corner to approximately 39m asl in the south-east corner. To the south and west of the creek, the land has an easterly aspect, descending from a maximum height of approximately 62m asl in the south-west corner to approximately 39m asl in the south-east corner. Slopes across the land are generally in the range of 5-10°, with small areas of less than 5° on areas of floodplain east of the creek and in the north-east corner.

Vegetation across the site is predominantly grassland and pasture containing only scattered small trees and tall shrubs. Until recently, land west of the creek was occupied by dense regrowth scrub, but this area was cleared in October 2020 and is now mostly bare ground (compare aerial photography in figures with photos at Appendix A). Along Ashburton Creek there are areas of scrub and woodland with potential to succeed to forest over time.

Properties to the west, north and east of the subject land are also zoned General Industrial and are predominantly occupied by grassland or pasture, with small patches of scrub and woodland. To the south are Rural Living properties containing existing habitable buildings. Vegetation on these blocks is comprised of a mix of managed land, grassland/pasture and scrub or woodland with the potential to succeed to forest if left unmanaged. The broader landscape around the subject land includes large areas of contiguous woodland and forest to the west.

4.3. The site is shown in the aerial image contained in Figure 1.

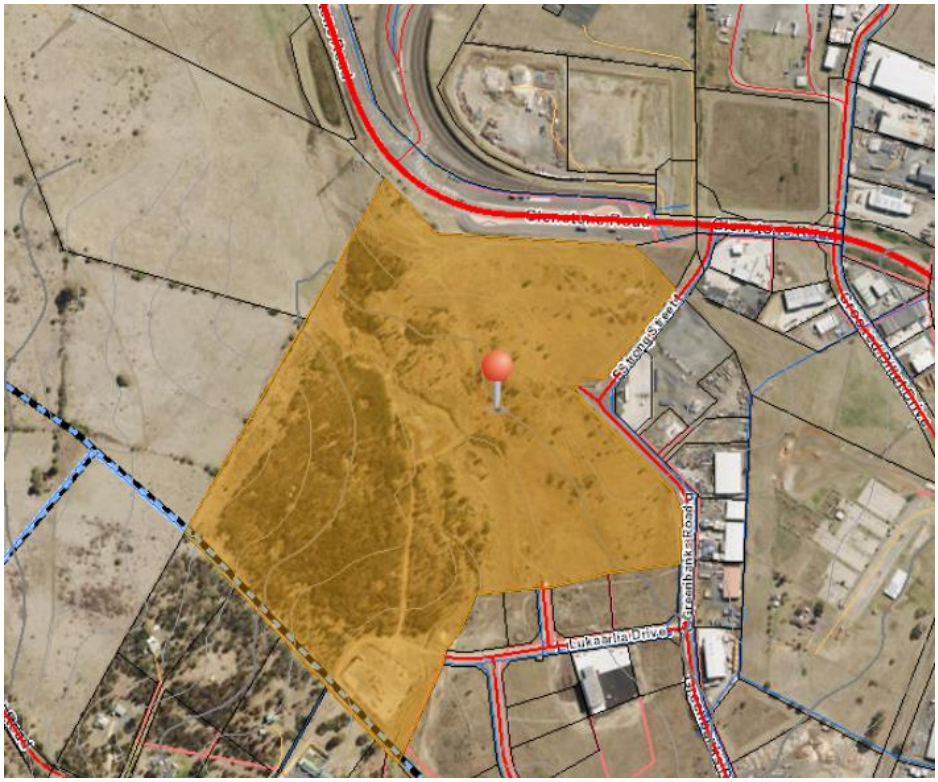


Figure 1: Aerial Site image (source: www.thelist.tas.gov.au)

4.4. As shown in figure 2, the entirety of the site is zoned General Industrial (purple). Land to the southwest is identified as Rural Living Zone (pink), and land adjoining the western corner of the site is zoned rural resource.

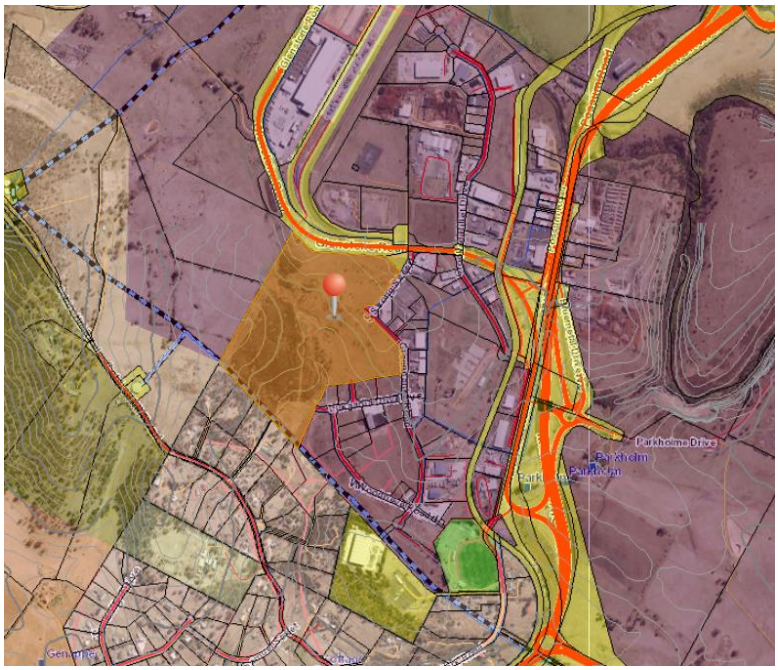


Figure 2: Zoning map (source: www.thelist.tas.gov.au)

4.5. The site is subject to a number of mapped overlays including:

- Bushfire Prone Area (entirety of site)

- Electricity Infrastructure Easement (figure 3),
- Declared pipeline corridor (figure 4).
- Waterway and Coastal Protection area for Ashburton Creek (Figure 5)
- Attenuation Area (Figure 6)

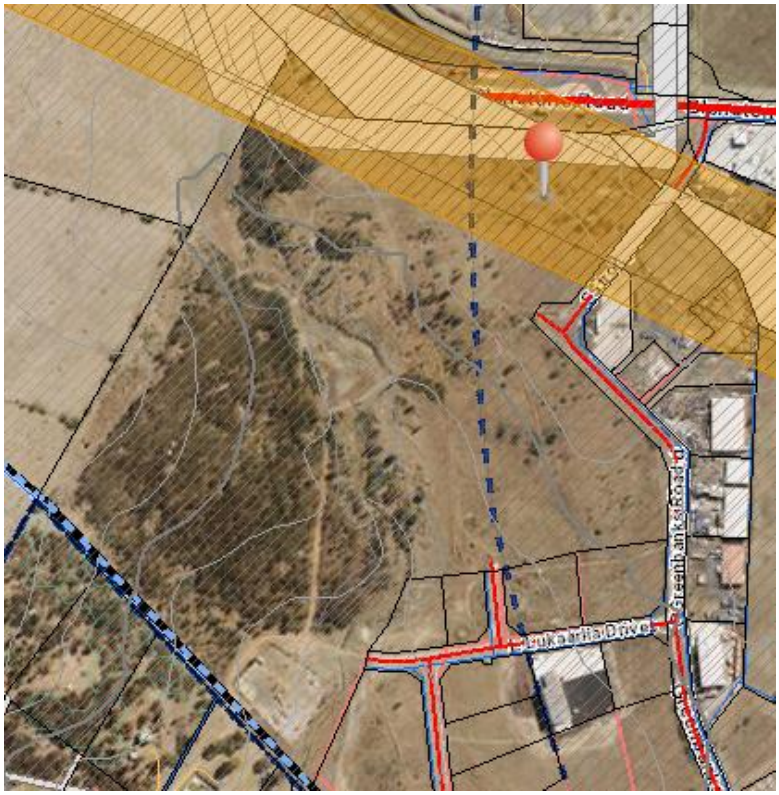


Figure 3: Mapped Electricity Transmission Infrastructure Overlay (Source: www.thelist.tas.gov.au)

Figure 4: Declared Gas Pipeline Planning Corridor (Source: www.thelist.tas.gov.au)

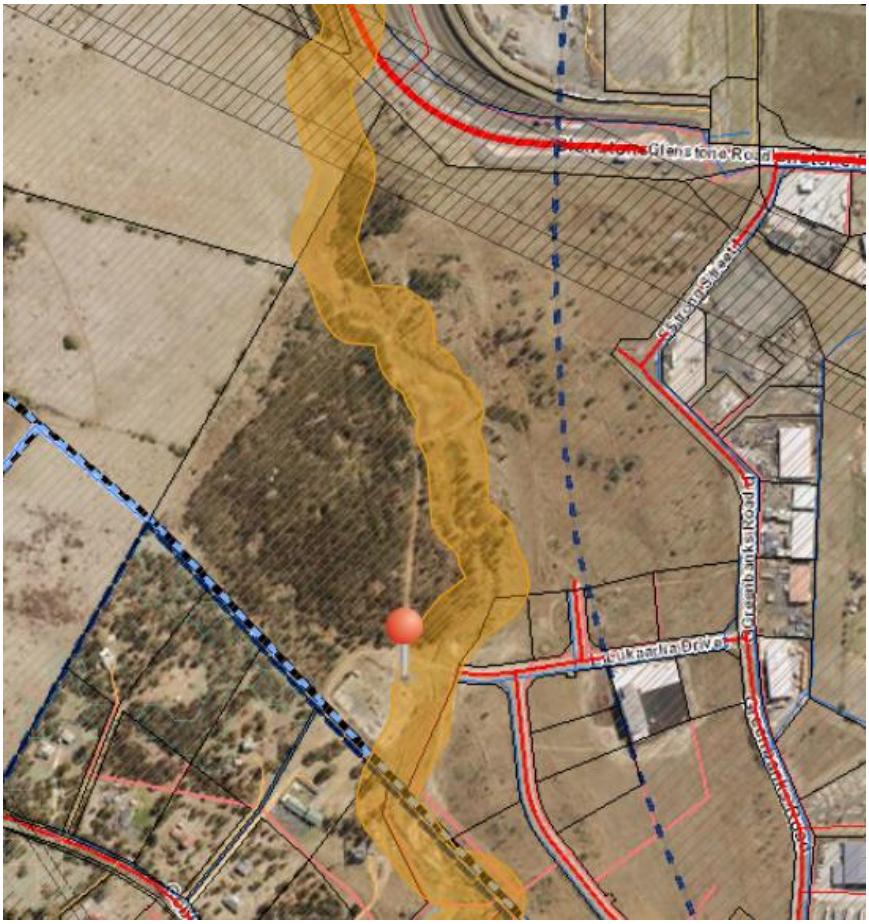


Figure 5: Waterway and Coastal Protection Overlay

Figure 6: Attenuation Overlay

4.6. The site has also been identified as possibly being the location for *Dianella amoena* (grassland flaxlily). Dianella amoena is identified by the *Environmental Protection and Biodiversity Protection Act* (Cwth) as an endangered species, whilst the *Threatened Species Protection Act* 1995 (Tas) identifies the species in Schedule 5 as rare (refer figure 7):

Figure 7: Identified threatened flora (source www.thelist.tas.gov.au)

4.7. The Biodiversity Code of the Brighton Interim Planning Scheme does not apply to this proposal (refer figure 10), given the site is not a mapped biodiversity protection area, and the removal of any potential threatened species falls under State and Federal legislation:

E10.0 Biodiversity Code

E10.1 Purpose

E10.1.1 The purpose of this provision is to:

(a) minimise loss of identified threatened native vegetation communities and threatened flora species;

(b) conserve identified threatened fauna species by minimising clearance of important habitat and managing environmental impact;

(c) minimise loss of other biodiversity values that are recognised as locally significant by the Planning Authority;

where not otherwise regulated by the State or the Commonwealth.

E10.2 Application

E10.2.1 This code applies to development involving clearance and conversion or disturbance of native vegetation within a Biodiversity Protection Area.

Figure 10: Clause 10.1 and 10.2 of the Biodiversity Code (Brighton Interim Planning Scheme 2015)

4.8. However, it is considered appropriate that advice be included in any permit approved, advising the applicant that the site is identified as having threatened species and that the provisions of the *Threatened Species Protection Act* 1995 and the *Environmental Protection and Biodiversity Conservation Act* 1999 apply.

5. Proposal

5.1. The proposal is for a 30 lot subdivision, including Lot 101 to be allocated for private open space, and associated infrastructure including roadworks and stormwater management. The lot layout is shown in figure 11 below.

5.2. The application is supported by the attached bushfire hazard management plan and servicing plans, which comprised the publicly exhibited documents.

Figure 11: Proposed Lot Layout

6. Assessment

6.1. *The Brighton Interim Planning Scheme 2015* is a performance-based planning scheme.

6.2. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to refuse the proposal relates only to the performance criteria relied upon.

7. Assessment against planning scheme provisions

7.1. The following provisions are relevant to the proposed use and development:

- Special Provisions - Subdivision C9.10
- General Industrial Zone D25.0
- E1.0 - Bushfire Prone Areas Code
- E5.0 - Road and Railway Assets Code
- E6.0 - Parking and Access Code
- E7.0 - Stormwater Management Code
- E8.0 - Electricity Transmission Infrastructure Protection Code
- E9.0 Attenuation Code
- E11.0 Waterway and Coastal Protection Code
- E15.0 Inundation Prone Areas Code

7.2. As the proposal is for subdivision only, the Use Table (25.2), Use standards (25.3) and Development standards for buildings and works (25.4) in the General Industrial Zone are not applicable.

7.3. The application satisfies the following Acceptable Solutions:

- Lot size (D25.5.1 A1)
- Lot Design (D25.5.1 A2)
- E1.0 Bushfire Prone Areas Code
- E5.0 Road and Railway Assets Code (all standards except for E5.5.1 A3)
- 6.0 Parking and Access Code
- E7.0 Stormwater Management Code
- E8.0 Electricity Infrastructure Protection Code - Entire Code
- E9.0 Attenuation Code - E9.7.1
- E11.0 Waterway and Coastal Protection Code - (E11.7.1 A2, A3; E11.7.2 A1-A3)
- E15.0 Inundation Prone Areas Code (E15.6, E15.7.1 A1, A2; E15.7.2 - E15.7.4; E15.7.6; E15.8.1; E15.8.2)

7.4 The following discretions are invoked:

- Subdivision Special Provision 9.10
- Frontage (D25.5.1 A3)
- Arrangement of Roads (no acceptable solution) (D25.5.1 A4)
- Public Open Space (no acceptable solution) (D25.5.1 A6)
- Road and Railway Assets Code E5.5.1 A3
- 9.0 Attenuation Code - 9.7.3 A1
- E11.0 Waterway and Coastal Protection Code - E11.8.1.A1 (Subdivision)

- E15.0 Inundation Prone Areas Code (E15.7.5 A1 Landfill and A2 - Mitigation measures); (E15.7.3 A1)

7.5. **Discretion 1 - Subdivision (C9.10)**

7.5.1 Section C Special Provisions of the Brighton Interim Planning Scheme 2015 (BIPS) requires that:

9.10 Subdivision

9.10.1 A permit is required for development involving a plan of subdivision.

9.10.2 A permit for development involving a plan of subdivision is discretionary unless:

(a) for adjustment of a boundary in accordance with clause 9.3.1.

(b) the subdivision is prohibited in accordance with clause 8.9; or

(c) the plan of subdivision must not be approved under section 84 Local Government (Building and Miscellaneous Provisions) Act 1993.

7.5.2 The proposal does not satisfy the requirements of 9.7.2 (a), (b) and (c) and accordingly must be assessed as being discretionary.

7.6. **Discretion 2 - Frontage (D25.5.1 A3)**

7.6.1 The Acceptable Solution (AS) required by clause D25.5.1 A3 of BIPS requires that *"The frontage for each lot must be no less than: 40m".*

7.6.2 The proposal plan shows that of the 29 industrial lots proposed, Lots 1 - 6, 9-12, 21 and 23 do not satisfy the AS.

7.6.3 Accordingly, the PC must be addressed, which requires at 25.5.1P3: *"The frontage for each lot must be sufficient to accommodate development consistent with the Zone Purpose, having regard to any Local Area Objectives or Desired Future Character Statements."*

7.6.4 The Zone Purpose, contained at clause 25.1 is replicated here:

25.1.1 Zone Purpose Statements:

25.1.1.1. To provide for manufacturing, processing, repair, storage and distribution of goods and materials where there may be impacts on neighbouring uses;

25.1.1.2 To provide industrial activity with good access to strategic transport networks;

25.1.1.3 To promote efficient use of existing industrial land stock

25.1.1.4 To restrict intensification of existing non-conforming uses;

25.1.1.5 To provide industrial activity with good access to strategic transport networks.

7.6.5 There are no Local Area Objectives nor Desired Future Character Statements identified for the General Industrial Zone.

7.6.6 As shown on the proposal plan (refer Figure 11), most of the lots with subminimum frontages, for example Lots 2, 3, and 4 which are accessed from the proposed cul-de-sac, either widen from the access to the rear of the site, and are considered likely to be able to provide for on-site manoeuvring, or have frontages just below the AS of 40m, for example lots 6, 8 and 23. Accordingly, those lots are considered to satisfy the PC.

7.6.7 However, the design of Lots 11 and 12 are not considered to satisfy the Zone Purpose as currently provided for, in particularly 25.1.12/25.1.1.5, which are replicated). Both lots are narrow and are considered insufficient to provide appropriate turning and manoeuvring on site, given the industrial zoning of the site. Given the uses provided for in the use table at 25.2, and similarly in the Tasmanian Planning Scheme, the narrow lots proposed at Lots 11 and 12 are considered likely to fetter future development of the site.

7.6.8 Accordingly, it is considered reasonable that for the PC to be satisfied, a condition be included in any permit approved requiring that an amended plan of subdivision be submitted for the approval of the Manager Development Services showing the amalgamation of Lots 11 and 12.

7.7. **Discretion 3 - Arrangement of Roads (D25.5.51 P4)**

7.7.1 There is no AS relating to the arrangement of roads within a subdivision. Accordingly, the PC must be addressed, which is replicated here:

P4 The arrangement of roads within a subdivision must satisfy all of the following:

(a) will not compromise appropriate and reasonable future subdivision of the entirety of the parent lot;

(b) accords with any relevant road network plan adopted by the Planning Authority;

(c) facilitates the subdivision of neighbouring land with subdivision potential through the provision of connector roads, where appropriate, to the common boundary;

(d) provides acceptable levels of access safety, convenience and legibility through a consistent road function hierarchy.

7.7.2 The proposed plan of subdivision includes a future road which will extend north west from the intersection of Strong Street and Greenbanks Road before circling round and connecting with the western end of Lukaarlia Street.

The proposal plan also includes an area "Required for Future Road" within Lot 101 to be designated for Public Open Space.

7.7.3 The proposed area designated "Required for Future Road" is shown directly abutting Ashburton Creek, which is not considered appropriate as it is located within the Waterway and Coastal Protection overlay. Further, the road lot adjoins the dividing boundary of two neighbouring lots to the west, namely 155 and 158 Cobbs Hill Road, requiring both sites to be developed simultaneously to allow extension of the proposed road.

7.7.4 The proposal was referred to Council's Senior Technical Officer who advises that the extension of the future road into the adjacent lots is problematic without both adjacent property owners working cooperatively. It is considered a better outcome to relocate the future road between lots 13 and 15.

7.7.5 A condition is recommended that an amended plan of subdivision is submitted to the Manager Development Services showing the road lot adjacent to the southern boundary of Lot 15.

7.7.6 The proposal does not demonstrate an intention to build the connector road to the common boundary of adjoining land, as required by the performance criteria at (c). It is therefore recommended that a condition be included in the permit that the road is to be constructed prior to sealing of the Final Plan.

7.7.7. The PC can be satisfied, with conditions.

7.8. **Discretion 4 - Public Open Space (D25.5.1 A6)**

7.8.1 There is no AS in relation to public open space. The PC requires that *"Public Open Space must be provided as land or cash in lieu, in accordance with the relative Council policy"*

7.8.2 Clause 2.3 of Council's policy in relation to Public Open Space (AP13) is relevant to the assessment. That clause is replicated below:

> *"A land contribution in any Zone may be requested on a merit based assessment by the Council to obtain land for the purposes of a riparian, foreshore or littoral reserve to assist in preservation of the environmental values attributed to these areas through improved land management"*

7.8.3 The applicant proposes to transfer the land contained in Lot 101 to Council as a "land contribution" in accordance with clause 2.3 of the policy.

7.8.4 Ashburton Creek is considered a significant catchment which supports council's stormwater network, in the Bridgewater West area.

7.8.5 Provision of the Public Open Space along Ashburton Creek was discussed with council staff prior to lodgement of the application, and assessed as a suitable land contribution

7.8.6 It is recommended that a condition be included in any permit approved requiring the applicant to submit a landscaping plan for the entirety of the open space contained in Lot 101. The landscaping plan is to be prepared by a suitably qualified person and provides for the remediation and establishment of a publicly accessible riparian reserve adjacent to Ashburton Creek, to be approved by the Manager Development Services. An additional condition is recommended requiring implementation of the landscaping plan to be completed prior to sealing of any lots on the plan.

7.8.7 The PC can be satisfied, with conditions.

7.9 Discretion 5 - Road and Railway Assets Code - E5.5.1A3

7.9.1 The AS at A3 requires that the annual average daily traffic (AADT) of vehicle movements to a site, using an existing access or junction in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.

7.9.2 The proposal provides connection to the existing Strong Street / Greenbanks Road intersection and to the end of the existing section of Lukaarlia Drive. The proposal is for subdivision of a total of 29 lots for industrial use, which will exceed the AADT permitted by A3 above.

7.9.3 The PC requires:

> Any increase in vehicle traffic at an existing access or junction in an area *subject to a speed limit of 60km/h or less must be safe and not unreasonably impact the efficiency of the road, having regard to:*
>
> *(a) the increase in traffic caused by the use;*
>
> *(b) the nature of the traffic generated by the use;*
>
> *(c) the nature and efficiency of the access or the junction;*
>
> *(d) the nature and category of the road;*
>
> *(e) the speed limit and traffic flow of the road;*
>
> *(f) any alternative access to a road;*
>
> *(g) the need for the use;*

(h) any traffic impact assessment; and

(i) any written advice received from the road authority.

7.9.4 The proposal was supported by a Traffic Impact Assessment, which was referred to council's Senior Technical Officer for assessment. That officer advises that when the site is fully developed, the traffic at the existing Strong Street/Greenbanks Road intersection is likely to increase by 4500 vehicle movements per day.

7.9.5 The application was also referred to the Department of State Growth, who had no concerns.

7.9.6 It is considered that the PC can be satisfied with a condition recommended for inclusion in any permit approved, requiring the upgrade of the Strong Street/Greenbanks Rd intersection.

7.10 Discretion 6 - Attenuation Code - E9.7.2 A1

7.10.1 There Is no acceptable solution provided for E9.7.2A1. Accordingly, the PC must be addressed which requires:

Development for sensitive use, including subdivision of lots within a sensitive zone, must not result in potential to be impacted by environmental harm from use with potential to cause environmental harm, having regard to all of the following:

(a) the nature of the use with potential to cause environmental harm; including:

(i) operational characteristics;

(ii) scale and intensity;

(iii) degree of hazard or pollution that

may be emitted from the activity;

(b) the degree of encroachment by the sensitive use into the Attenuation Area or the attenuation distance;

(c) measures in the design, layout and construction of the development for the sensitive use to eliminate, mitigate or manage effects of emissions

7.10.2 The proposal is not for subdivision of lots within a sensitive zone. Further clause 9.2.3 prohibits sensitive use within the Attenuation areas shown on the planning scheme maps.

7.10.3 Future applications pursuant to the Tasmanian Planning Scheme will also be prohibited from establishing a sensitive use, pursuant to the Brighton Industrial Hub Specific Area Plan which prohibit sensitive use in clause BRI-S10.6.1.

7.11 Discretion 7 - Attenuation Code - E9.7.3 A1

7.11.1 There is no AS provided for clause E9.7.3 A1. Accordingly, the PC must be considered which is replicated below:

Development, including subdivision, must not result in potential to be impacted by quarry operations having regard to all of the following:

(a) the nature of the quarry, including:

(i) operational characteristics

(ii) scale and intensity;

(iii) degree of hazard or pollution that may be emitted from the activity;

(b) the degree of encroachment of development or use into the Bridgewater Quarry Attenuation Area;

(c) measures in the design, layout and construction of the development or use to eliminate, mitigate or manage effects of the quarry.

7.11.2 The proposal is for subdivision only, with future uses being assessed at the time of application.

7.11.3 The proposed site encroaches on the western outer edge of the mapped attenuation area for the Bridgewater Quarry (refer figure 6).

7.11.4 The proposal was referred to the Bridgewater/Boral Quarry for comment, however, a response has not been received. It is taken that the lack of response would indicate that the proposal does not raise any issues regarding the subdivision.

7.11.5 Further, any future development on the proposed lots within the overlay will be referred to the Bridgewater Quarry for comment, pursuant to the requirements of the Attenuation Code.

7.11.6 It Is considered that the are no additional measures required in relation to managing the effects of the quarry on the site.

7.11.7 The PC can be satisfied.

7.12 Discretion 8 - Waterway and Coastal Protection Code - E11.7.1 A1

7.12.1 The AS requires that "Building and Works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision under this planning scheme."

7.12.2 As the proposal includes work along Ashburton Creek, the PC will need to be addressed, which states:

> *Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:*
>
> *(a) avoid or mitigate impact on natural values;*
>
> *(b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;*
>
> *(c) avoid or mitigate impacts on riparian or littoral vegetation;*
>
> *(d) maintain natural streambank and streambed condition, (where it exists);*
>
> *(e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;*
>
> *(f) avoid significantly impeding natural flow and drainage;*
>
> *(g) maintain fish passage (where applicable);*
>
> *(h) avoid landfilling of wetlands;*
>
> *(i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.*

7.12.3 It is considered that the PC can be satisfied by requiring a condition that all works are undertaken in accordance with the 'Wetlands and Waterways Works Manual (DPIWE,2003). A further condition is recommended that a requiring a landscaping plan to be submitted prior to commencement works showing remediation and landscaping of the WCP area, taking into account the natural values of the site.

7.13 Discretion 9 - Waterway and Coastal Protection Code - E11.7.1 A4

7.13.1 The AS requires that "Development must involve no new stormwater point discharge into a watercourse, wetland or lake".

7.13.2 The proposal includes a number of point discharges to the watercourse. Accordingly the AS cannot be satisfied

7.13.3 The PC requires:

Development involving a new stormwater point discharge into a watercourse, wetland or lake must satisfy all of the following:

(a) risk of erosion and sedimentation is minimised;

(b) any impacts on natural values likely to arise from erosion, sedimentation and runoff are mitigated and managed;

(c) potential for significant adverse impact on natural values is avoided.

7.13.4 The proposal shows that each outfall with be provided with a Gross Pollutant Trap and will discharge to detention basins prior to discharging to the watercourse.

7.13.5 Council's Senior Technical Officer has advised that on this basis the PC can be satisfied.

7.14 Discretion 10 - Waterway and Coastal Protection Code - E11.8.1.A1

7.14.1 The AS for subdivision in the Waterway and Coastal Protection (WCP) Code requires that:

Subdivision of a lot, all or part of which is within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area must comply with one or more of the following:

(a) be for the purpose of separation of existing dwellings;

(b) be for the creation of a lot for public open space, public reserve or utility;

(c) no works other than boundary fencing works, are within a waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area;

(d) the building area, bushfire hazard management area, services and vehicular access driveway are outside the Waterway and Coastal Protection area, Future Coastal Refugia Area or Potable Water Supply Area

7.14.2 The WCP overlay encroaches onto Lots 1, 6, 16 and 20. Therefore the AS cannot be satisfied.

7.14.3 The PC requires:

Subdivision of a lot, all or part of which is within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply

Area, must satisfy all of the following:

(a) Minimise impact on natural values;

(b) provide for any building area and any associated bushfire hazard management area to be either:

(i) outside the Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area; or

(ii) able to accommodate development capable of satisfying this code;

(c) if within a Potable Water Supply Area, be in accordance with the requirements of the water and sewer authority.

7.14.4 A reserve/public open space area has been provided along Ashburton Creek, which ensures the identified Lots are clear of the watercourse itself.

7.14.5 The proposed road extension will dissect Ashburton Creek at both the northern and southern ends of the site. Civil drawings demonstrate that the Creek is to be piped under the road to the dam, to be addressed satisfactorily at detailed design stage, as shown on the concept stormwater plans prepared by PDA surveyors.

7.14.6 Building areas and bushfire hazard management areas are provided for outside of the WCP area.

7.14.7 The area is not a "potable water supply area".

7.14.8 It is considered that the PC can be satisfied. However, it is also recommended that a Soil and Water Management Plan be submitted for the approval of the Manager Development Services, and to form part of any approved permit, once approved to ensure that site works do not impact the WCP area.

7.15 Discretion 11 - Inundation Prone Areas Code E15.7.5 A1

7.15.1 The AS requires that "For Landfill, or solid walls greater than 5m in length and 0.5m in height, there is no acceptable solution".

7.15.2 It is considered likely that fill will be required at the road crossings of the watercourse and boundaries of some lots, greater than 0,.5m in height.

7.15.3 The PC requires:

Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:

(a) no adverse affect on flood flow over other property through displacement of overland flows;

(b) the rate of stormwater discharge from the property must not increase;

(c) stormwater quality must not be reduced from pre-development levels.

7.15.4 The proposal was referred to Council's Senior Technical Officer, who has advised that the concept stormwater design should result in better management of inundation. To inform the future stormwater design, it is recommended that a condition requiring a Flood Hazard Report be undertaken and any specific hazard reduction or protection measures recommended in the report to be implemented.

7.16 Discretion 12 - Inundation Prone Areas Code E15.7.5 A2

7.16.1 There is no AS applicable to E15.7.5 A2. Accordingly, the PC must be addressed, which states:

Mitigation measures, if required, must satisfy all of the following:

(a) be sufficient to ensure habitable rooms will be protected from flooding and will be able to adapt as sea levels rise;

(b) not have a significant effect on flood flow.

7.16.2 The proposal was referred to Council's Senior Technical Officer. That officer's response outlined in clause 8.14.4 is applicable to this criterion.

7.16.3 It is considered that the PC can be satisfied with the provision of a Flood Hazard Report identified in clause 8.14.4.

7.17 Discretion 13 - Subdivision within a Riverine Inundation Hazard Area - 15.8.3 A1

17.7.1 The AS requires:

Each lot, or a lot proposed in a plan of subdivision, within a Riverine Inundation Hazard Area must:

(a) be able to contain a building area, vehicular access and services, that are wholly located outside a Riverine Inundation Hazard Area;

(b) be for the creation of separate lots for existing buildings;

(c) be required for public use by the Crown, a council or a relevant agency; or

(d) be required for the provision of Utilities

17.7.2 Internal stormwater/catchment modelling identifies that the site is subject to inundation. Figure 12 and 13 shows Council's Catchment Management Plan for the Industrial Area which highlights the periphery flow paths around Ashburton Creek that are likely to run through future lots to ensure they are considered in the development of this area.

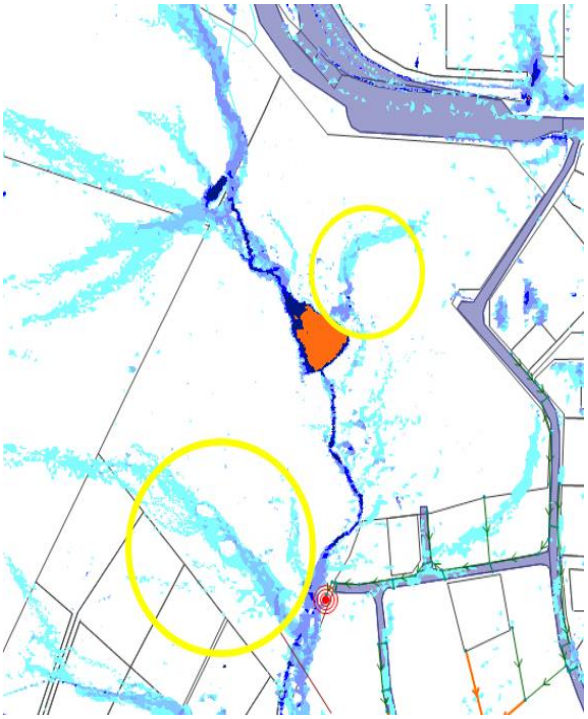


Figure 12: Overland Flow Paths

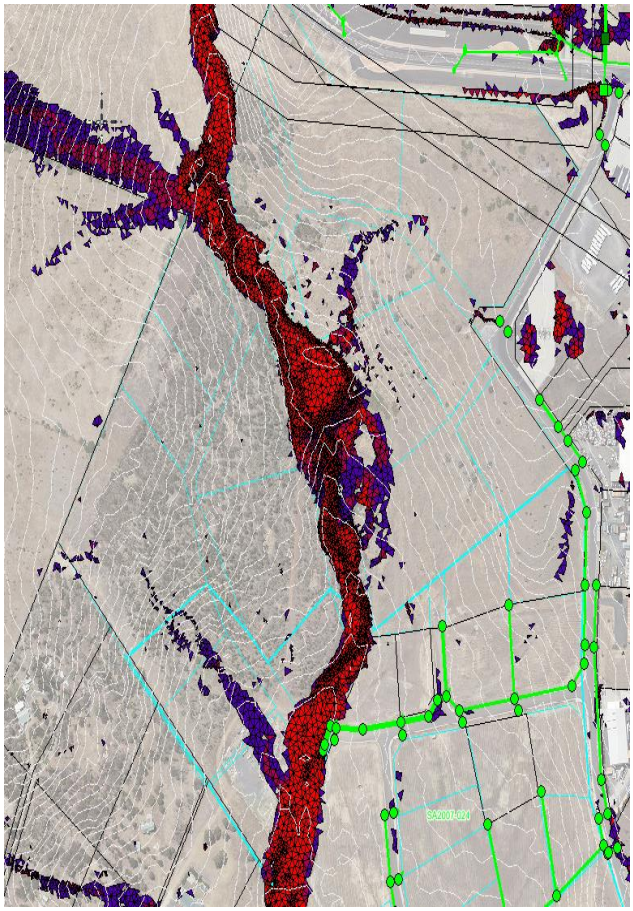


Figure 13: Flood map – 1% AEP with full development and climate change

7.17.3 The development of the Public Open Space area will include works on land that is subject to riverine inundation around Ashburton Creek. Accordingly, the AS is not able to be satisfied, and the PC must be addressed, which states:

> *Each lot, or a lot proposed in a plan of subdivision, within a riverine inundation hazard area, must not create an opportunity for use or development that cannot achieve a tolerable risk from flood, having regard to:*
>
> *(a) any increase in risk from flood for adjacent land;*
>
> *(b) the level of risk to use or development arising from an increased reliance on public infrastructure;*
>
> *(c) the need to minimise future remediation works;*
>
> *(d) any loss or substantial compromise by flood of access to the lot, on or off site;*

(e) the need to locate building areas outside the riverine inundation hazard area;

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

(g) the advice contained in a flood hazard report

7.17.4 The proposal was referred to Council's Senior Technical Officer, who has advised that the proposal will require the modification of the open space area for stormwater management (including detention) and passive recreation. The design will directly impact on the extent of any inundation.

7.17.5 Accordingly, it is recommended that a condition requiring a flood hazard report, prepared by a suitably qualified person, be submitted for approval prior to commencement of works. The report should demonstrate that works:

(a) do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and

(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.

The condition should also require that any specific hazard reduction or protection measures recommended in the report are to be incorporated in the engineering design drawings and implemented prior to the sealing of the Plan of Survey for the subdivision.

8. Discussion

8.1 External Referrals

8.1.1 TasWater

8.1.1.1 TasWater have imposed the attached conditions in their Submission to Planning Authority Notice reference TWDA 2021-0008-BTN dated 15th January 2021 that must be included in any permit granted.

8.1.2 TasNetworks

8.1.2.1 TasNetworks have provided advice that there are no concerns regarding the proposed subdivision, however, "the minor encroachment of the building envelope within Lot 24 into the Inner Protection Area (IPA) is not to be taken as support by TasNetworks for any future building encroachment into the IPA (and therefore into our existing wayleave easement.) "

8.1.2.2 TasNetworks have therefore recommended that a Wayleave Easement be registered against the title in a form provided by them. A condition to this effect is recommended for inclusion in any permit approved.

8.1.3 Department of State Growth

8.1.3.1 The Department of State Growth advised that it had no comment to make, given there is no new access to Glenstone Road proposed and is not deemed to adversely affect the safety or efficiency of the state road.

8.1.4 Boral/Bridgewater Quarry

8.1.4.1 No response was received.

8.1.5 Tasmanian Gas Pipeline

8.1.5.1. Tasmania Gas Pipeline have advised that it have no objection to the proposed application.

8.1.6 TasRail

8.1.6.1 TasRail have advised that it has no objection to the proposal.

8.1.7 Other - Bushfire Assessment

8.1.7.1 Subsequent to the conclusion of the public exhibition period, an officer of the Tasmanian Fire Service contacted the bushfire assessor directly, requesting some minor changes to the way the proposed Bushfire Hazard Report has been written.

8.1.7.2 The bushfire assessor has contacted the assessing officer to discuss the proposed changes. The proposed changes do not affect any neighbouring landowners and recommends a restrictive instrument (either Part 5 agreement or a restrictive covenant) to ensure that the site is kept in a low-fuel state.

8.1.7.3 It was determined that a further period of public exhibition was not required, given there was no impact arising outside the site boundaries. Further, it is considered appropriate that a condition requiring the submission of an amended Bushfire Hazard Management Plan to accord with TFS requirements, be included in any permit approved, with the amended Bushfire Hazard Management to form part of the approved documents, once received and approved by Council's Manager Development Services.

8.2 Internal Referrals

8.2.1 Council's Technical Officer

8.2.1.1 The application was referred to council's Senior Technical Officer. That officer's comments have been incorporated into the assessment where required.

9. Concerns raised by representors

9.1 Two representations were received to the applicant. One representor sought to provide a supplementary representation, given the need to assess the application under the Brighton Interim Planning Scheme 2015, rather than the Tasmanian Planning Scheme - Brighton, which was approved.

9.2 The following table outlines the issues raised by representors.

	Representor 1	**Response**
1.	Need for buffer between the planned industrial subdivision and adjoining rural living zone	There is a 13m wide buffer created by two pipeline easements 3m and 10m wide respectively at the rear of the lots 6-10 adjacent to the nearby Rural Living Zone. Strategy 29 of the Brighton Structure Plan 2018 addresses buffer management between different land uses, and makes recommendations for potential interface treatments for industrial uses backing onto residential uses including: *- Requiring buildings to be built close to the rear boundary in a continuous form to provide an acoustic barrier;* *- Requiring landscaping to be planted along the rear boundary;* *- Using acoustic fencing;* *-Including at-source treatments (eg acoustic treatments).* Option 2 (Landscaping) is difficult to provide given the existence of TasWater Bulk Transfer Main and Reticulation Main in the existing easements and potential impacts from the vegetation on the existing pipelines. There is however, nothing preventing adjoining landowners from planting vegetative screening along the rear boundary of their own properties.

		More appropriate, however, would be a condition requiring the construction of acoustic fencing along the south western boundary adjoining Lots 6-10 as shown in the proposed plan of subdivision. If this condition was to be included in any permit approved, it should also be accompanied by a condition requiring the provision of an acoustic report, demonstrating the most appropriate form of acoustic fencing, taking into account the industrial zoning of the site, and adjoining residential uses.
2.	Excess noise and dust during construction.	Standard construction conditions requiring compliance with the *Environmental Management and Pollution Control Act 1993* are included in the proposed permit conditions.
3.	Loss of privacy due to loss of tranquillity of rural living area	Site inspection and satellite imagery shows that many of the residential sites have created vegetative screening barriers to the industrial. It is respectfully submitted, given that the site has been zoned and identified for industrial use since at least the 1977 planning scheme, that the property owners should have been aware that this development of the site was likely to occur at some stage.
4.	Clearing of the land and the effect on wildlife in the area. Did the land have an environment assessment before it was cleared?	The area cleared was in readiness for subdivision. Public records (Listmap) do not indicate any threatened species identified in the area where the vegetation was removed. Further the Biodiversity Code in the Brighton Interim Planning Scheme does not apply to the site, and the General Industrial Zone does not contain standards relating to vegetation clearance.
5.	Not happy with planned building envelopes on the blocks adjoining my back boundary being more towards the rear, and being closer to the rural residential boundaries.	The building envelopes are placed on the proposed plan to demonstrate that a specified area can be accommodated on site for development and satisfy bushfire hazard management. Whilst having building envelopes at the rear of the site is recommended for noise attenuation (see the first response above), it is not proposed to require a condition of the permit to register the building envelopes on the final plan.
6.	Concern about any street lighting and how this will affect my property at night.	The proposal is for an industrial subdivision that includes pedestrian footpaths. Street lighting in accordance with the relevant Australian Standards is to be provided for pedestrian and traffic safety. It is standard practice for street lighting design to be undertaken in conjunction with the electrical reticulation design. This design will require approval by Council. Standard LED light heads will be used throughout the road network.

7.	The amount of fill and debris being dumped on the site is an eyesore	This is a separate matter to the current application for assessment.
8.	The disturbance and noise from trucks dumping fill are sometimes arising before 6am	This is a separate matter to the current application for assessment. A condition setting out permitted hours for construction pursuant to the Environmental Management and Pollution Control (Noise) Regulations is recommended for inclusion in any permit approved.
9.	Real estate agents have advised that the construction of the subdivision will dramatically devalue my property	This is not a planning consideration.
10.	Request for Council to consider the term of rural living as this is our home and built to enjoy privacy and quiet, not to look at roads and concrete every time we go into our back yard.	Due to their large lot sizes, Rural Living Zones are often used as a buffer zone between Industrial or Agriculture zones and conventional residential zones. The larger lot sizes allow dwellings to be well setback and provide vegetation screening on their lots which is generally the case in this area. The land has also been zoned Industrial for over 20 years.
	Representor 2 - Initial Representation	Response
11.	No buffer zones between differing uses	Refer to point 1 above.
12.	Building areas shown located towards rear of lots closer to residential buildings	Refer to point 5 above.
13.	Brighton Structure Plan 2018 refers to buffer management	Refer to point 1 above
14.	Local objectives outcomes at clause 3.04(a) of the scheme require outcomes to be achieved by 'ensuring surrounding land use and zonings are appropriate (including the use of buffer areas to protect the industrial	Section 3 of the BIPS outlines the regional objectives under the planning scheme, which are more particularly addressed in the Southern Tasmanian Regional Land Use strategy. The STRLUS guides land use across southern Tasmania and is used to determine appropriate zoning for sites at a strategic level. However, this application is for statutory assessment, and council has no ability to alter the zoning of the site under this assessment.

	area from conflict with other uses)"	
15.	Attenuation code has a minimum attenuation distance of 100 that applies from the boundary of the site on which the activity is located for relevant listed activities. … A greater distance to be determined by council is required in line with its stated intentions in the various strategic plans	The Attenuation Code is considered at clause 8.10 and 8.11 of this report. Attenuation distances will be determined for specific, individual uses, as they are applied for in future development applications
16.	The Code applies to certain activities, sensitive uses and also to a subdivision if it creates a lot where a sensitive use could be established.	Refer to paragraphs 8.10 and 8.11 of this report.
17.	Interface of buffer zone treatments could include reducing the lot sizes to create an appropriate buffer zone between the two conflicting uses and amending the location on the proposed lots of the building area, removing lots 7-10 and creating further open space, and reinstating a natural division to fit with surrounding existing properties eg the re-introduction of mature trees	Council is required to assess the application that has been submitted against the use and development standards provided by BIPS; more particularly the General Industrial zone standards and applicable codes.
18.	General nuisance such as noise of construction, truck movements, artificial light pollution, smoke dust, weed dispersal and loss of privacy will cause a loss of amenity.	Construction activities such as noise, dust, etc are regulated by the Environmental Management and Pollution Control Act. Refer to point 6 re: street lighting A condition relating to weed management is recommended for inclusion in any permit approved. Loss of privacy - refer to point 10 above.
19.	Removal of vegetation	Refer to point 4 above.
20.	Lack of information about street lighting.	Refer to Point 6 above.

21.	Amount of fill placed on the development site suggests the topography will change	The dumping of fill is not related to the current application. However, it may be that the fill will be used in the construction of the subdivision.
22.	The DA does not accurately reflect the proposed topography of the land once the fill is in its final place.	The assessing officer has been advised recently that the placement of fill has not been undertaken by the land owner. Accordingly, the issue is one of compliance, and hence does not form part of the application for assessment.
23.	Will any water run-off at the rear of the proposed lots flow onto residential properties once the topography is changed, is the drainage system proposed adequate to prevent this	The applicant has proposed a stormwater design, which will be refined during the engineering assessment process. However, the stormwater design has been reviewed by Council's technical officer, and is considered adequate and suitable to contain stormwater on the site, with conditions as outlined below. As can be seen from Figures 12 and 13 above, existing overland flows run typically North-South across the site.
24.	Will any future potential buildings as allowed under the proposed building areas block access to sunshine on adjacent residential properties if the contours of the land change?	The application is for subdivision only.
25.	Proposed alteration to standard construction times.	Construction hours are regulated by the Environmental Management and Pollution Control Act 1993.
26.	Request for council to be mindful of the Rural Residential Zone and the amenity and privacy.	Refer to Point 10 above.
	Additional issues raised in Supplementary Representation	
27.	There are no local area objectives (LOA) or desired future character statements (DFCS) in relation to the subdivision standards for the General Industrial Zone. It is submitted that the LAO and and DFCS for the Rural Living Zone are relevant when considering the proposed subdivision.	The proposal must be assessed against the development standards of the General Industrial Zone. However in considering strategy 29 of the Brighton Structure Plan, and by the recommendation of a condition for an acoustic fence, it is submitted that the amenity of the Rural Living Zone has been considered, within the functions available for statutory assessment.

28.	Application requirements for assessment of an application for use or development under BIPS requires a full description of the proposed use and development.	Clause 8.1.2 sets out the application requirements. It is considered that the proposal can satisfy the requirements of the planning scheme, based on the information provided.

10. Conclusion

10.1 The proposed use and development of **Subdivision (30 Lots)** in General Industrial Zone at Lot 1 Greenbanks Road, Bridgewater (C/T 176402/1] satisfies the relevant provisions of the *Brighton Interim Planning Scheme 2015* and as such is recommended for approval.

11. Recommendations

That: A. Pursuant to the *Brighton Interim Planning Scheme 2015*, Council approves application SA 2020/50 for use and development of **Subdivision (30 Lots) in** General Industrial Zone at Lot 1 Greenbanks Road, Bridgewater (C/T 176402/1)**,** for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

General

1. The subdivision layout or development must be carried out substantially in accordance with the application for planning approval, the endorsed drawings and with the conditions of this permit and must not be altered or extended without the further written approval of Council.

2. Prior to the subdivision commencing the developer must submit an amended proposal plan including:

   a. A road with a minimum 20 metre reservation width provided between lots 13 and 15;

   b. Amalgamate Lots 11 and 12;

   Once accepted by the General Manager, the amended plan will form part of the endorsed documents.

3. Prior to Council sealing the final plan of survey for any stage the developer must provide certification from a suitably qualified person that all requirements of the approved Bushfire Hazard Management Plan has been complied with.

4. This permit shall not take effect and must not be acted on until 15 days after the date of receipt of this permit unless, as the applicant and the only person with a right of appeal, you notify Council in writing that you propose to commence the use or development before this date, in accordance with Section 53 of the Land Use Planning and Approvals Act 1993.

Bushfire Hazard Management Plan

5. Prior to commencement of works, an amended Bushfire Hazard Management Plan must be submitted to, and approved by, Council's Manager Development Services, incorporating amendments required by the Tasmanian Fire Service relating to hazard management areas, and more particularly comprised in Bushfire Hazard Report (Version 3) prepared by Enviro-Dynamics dated July 2021.

Acoustic Fencing

6. Prior to commencement of works, a report prepared by a suitably qualified person must be submitted to, and approved by Council's Manager Development Services. The report must assess potential industrial use and design an appropriate acoustic fence to be constructed on the south western boundary adjacent to Lots 6 - 10 inclusive.

7. The acoustic fence required by condition 4 above must be constructed prior to sealing of the Final Plan of Subdivision, or If a staged development plan is approved, prior to the sealing of the first plan relating to lots 6-10 inclusive.

8. The cost of the acoustic fence is to be borne solely by the developer.

TasWater

9. The use and/or development must comply with the requirements of TasWater, as detailed in the form Submission to Planning Authority Notice, Reference No TWDA 2021/0008-BTN dated 15th January 2021, as attached to this permit.

Agreements

10. Prior to the sealing of the Final Plan of Survey an agreement pursuant to Part 5 of the Land Use Planning and Approvals Act 1993 must be entered into for the proposed lot, to the effect that the owner covenants and agrees with the Brighton Council that –

    a) Prior to connecting to the public stormwater system each lot must provide for the treatment of stormwater to achieve the quality targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 of the Brighton Interim Planning Scheme 2015, and to the satisfaction of the Council's General Manager.

    b) The owners of lot 1 through 30 agree to manage the entirety of their lots in perpetuity as 'low threat vegetation' and /or non-vegetated land as defined by clause 2.2.3.2 of AS 3959-2009 Construction of Buildings in Bushfire Prone areas".

11. Agreements made pursuant to Part 5 of the Land Use Planning and Approvals Act 1993 must be prepared by the applicant on a blank instrument form to the satisfaction of the Council and registered with the Recorder of Titles. The subdivider must meet all costs associated with the preparation and registration of the Part 5 Agreement.

Staged development

12. The subdivision development must not be carried out in stages except in accordance with a staged development plan submitted to and approved by Council's Senior Planner.

Transfer of reserves

13. All roads or footways must be shown as "Road" or "Footway" on the final plan of survey and transferred to the Brighton Council by Memorandum of Transfer submitted with the final plan.

Public open space

14. At the time of sealing of the Final Plan, the public open space contained in Lot 101 as indicated on the endorsed plan must be transferred to the Brighton Council.

Easements

15. Easements must be created over all drains, pipelines, wayleaves, and services in accordance with the requirements of the Council's Municipal Engineer. The cost of locating and creating the easements shall be at the subdivider's full cost.
16. Easements must be created over all electricity infrastructure in accordance with the requirement of Tasmanian Networks Pty Ltd, in the form attached to this permit.
17. The cost of locating and creating the easements shall be at the subdivider's full cost.

Covenants

18. Covenants or other similar restrictive controls that conflict with any provisions or seek to prohibit any use provided within the planning scheme must not be included or otherwise imposed on the titles to the lots created by this permit, either by transfer, inclusion of such covenants in a Schedule of Easements or registration of any instrument creating such covenants with the Recorder of Titles, unless such covenants or controls are expressly authorised by the terms of this permit or the consent in writing of the Council's Senior Planner.

Final plan

19. A final approved plan of survey and schedule of easements as necessary, together with two (2) copies, must be submitted to Council for sealing for each stage. The final approved plan of survey must be substantially th6e same as the endorsed plan of subdivision and must be prepared in accordance with the requirements of the Recorder of Titles.

20. Prior to Council sealing the final plan of survey for each stage, security for an amount clearly in excess of the value of all outstanding works and maintenance required by this permit must be lodged with the Brighton Council. The security must be in accordance with section 86(3) of the Local Government (Building & Miscellaneous Provisions) Council 1993. The amount of the security shall be determined by the Council's Municipal Engineer in accordance with Council Policy 6.3 following approval of any engineering design drawings and shall not to be less than $5,000.

21. All conditions of this permit, including either the completion of all works and maintenance or payment of security in accordance with this permit, must be satisfied before the Council seals the final plan of survey for each stage. It is the subdivider's responsibility to notify Council in writing that the conditions of the permit have been satisfied.

22. The subdivider must pay any Titles Office lodgement fees direct to the Recorder of Titles.

Landscaping

23. The landscape reserve and road reserves must be landscaped by trees or plants in accordance with a landscape plan prepared by a suitably qualified landscape architect or other person approved by Council and submitted to Council for endorsement with the engineering drawings. The landscape plan must show the areas to be landscaped, the form of landscaping, and the species of plants and estimates of the cost of the works.

24. Planting shall be equivalent to a minimum of 1 tree per 20 metres frontage, whichever is greater, using advanced plants that suit the character of the locality. No plants listed as noxious weeds within Tasmania or displaying invasive characteristics shall be used in the landscaping of the road.

25. The landscaping plan must be designed in accordance with Council Policy No AP03 Trees on Council Land and:

    a. Show:

        i. remediation of the entirety of the land contained in Lot 101

        ii. Appropriate revegetation of Ashburton Creek and the riparian areas adjacent to Ashburton Creek. All plantings must be native to the area.

    c. Provide public access to Lot 101, including a gravel walking track, a minimum of 1.5m wide adjacent to Ashburton Creek.

    d. Provide a minimum of one (1) street tree every 20m. Each mature tree must be a minimum 2.0m high at the time of planting.

    e. Street trees must be located after considering all services under and above ground, and traffic safety Refer to the IPWEA standard drawing TSD-RF01-v1 SIGHT DISTANCES, or any subsequent version for details.

    f. the Landscaping in the road reserve, located such that it does not affect the operation of proposed infrastructure.

Weed management

26. Prior to the carrying out of any works approved or required by this approval, the subdivider must provide a weed management plan detailing measures to be adopted to limit the spread of weeds listed in the Weed Management Act 1999 through imported soil or land disturbance by appropriate water management and machinery and vehicular hygiene to the satisfaction of Council's Municipal Engineer and of the Regional Weed Management Officer, Department of Primary Industries Water and Environment.

Engineering

27. The subdivision must be carried out in accordance with the Tasmanian Subdivision Guidelines October 2013 (attached).

28. Engineering design drawings, to the satisfaction of the Council's Municipal Engineer, must be submitted to and approved by Council before any works associated with development of the land commence.

29. Engineering design drawings are to be prepared by a qualified and experienced civil engineer, or other person approved by Council's Municipal Engineer, in accordance with the Tasmanian Subdivision Guidelines October 2013, and must show –

    a) all existing and proposed services required by this permit;

    b) all existing and proposed roadwork required by this permit;

    c) measures to be taken to provide sight distance in accordance with the relevant standards of the planning scheme;

    d) measures to be taken to limit or control erosion and sedimentation;

    e) any other work required by this permit.

30. Approved engineering design drawings will remain valid for a period of 2 years from the date of approval of the engineering drawings.

31. The developer shall appoint a qualified and experienced Supervising Engineer (or company registered to provide civil engineering consultancy services) who will be required to certify completion of subdivision construction works. The appointed Supervising Engineer shall be the primary contact person on matters concerning the subdivision.

Services

32. The Subdivider must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the proposed subdivision works. Any work required is to be specified or undertaken by the authority concerned.

33. Any existing services shared between lots are to be separated to the satisfaction of Councils Municipal Engineer.

34. Property services must be contained wholly within each lots served or an easement to the satisfaction of the Council's Municipal Engineer or responsible authority.

35. Property services for internal lots must be extended the full length of the access strip to the lot proper or conduits for future services provided to the satisfaction of Council Municipal Engineer.

Roadworks

36. Roadworks and drainage must be constructed in accordance with the standard drawings and specifications prepared by the IPWE Aust. (Tasmania Division) and to the requirements of Council's Municipal Engineer or as otherwise required by this permit.

37. Roadworks must, unless approved otherwise by Council's Municipal Engineer, include: -

    a. New Roads

        i. 20m min. reservation width;

        ii. 11.0m min. carriageway width;

        iii. 25.0m min dia (carriageway) cul de sac

iv. Kerb and channel;

v. 1.5m min. width concrete footpath both sides; and

vi. Underground stormwater drainage.

38. The developer must upgrade the Strong Street/Greenbanks Road intersection to a minimum T-junction with a channelised right turn lane on the eastern approach of Greenbanks Road.

39. A 1.5m minimum width reinforced concrete footpath must be provided across the frontage of the proposed lots on the existing sections of Strong Street and Greenbanks Road, including lots 24, 27, 28, 29 and 30.

40. All carriageway surface courses must be constructed with a hot mix asphalt with a minimum compacted depth of 40mm, in accordance with standard drawings and specifications prepared by the IPWE Aust. (Tasmania Division) and the requirements of Council's General Manager.

41. An industrial standard reinforced concrete vehicle access must be provided from the road carriageway to each Lot.

42. Vehicle accesses must be in accordance with Council's standard drawings, Australian Standard AS 2890.2, Parking facilities - Part 2: Off-Street, commercial vehicle facilities, and to the satisfaction of Council's Municipal Engineer.

43. Kerb ramps must be provided to accommodate the needs of people with disabilities in accordance with standard drawings prepared by the IPWE Aust. (Tasmania Division) and to the requirements of Council's Municipal Engineer.

44. Unless approved otherwise by Council's Municipal Engineer the developer must provide a minimum 1.5m wide gravel footpath in the walkway between Lots 6 and 7.

45. A minimum 1.5m wide concrete footpath is to be provided in the central open space land (Part of Lot 101) to provide a pedestrian linkage along Ashburton Creek, or as recommended by the Flood Study required pursuant to condition 50 of this permit and to the satisfaction of council's Municipal Engineer.

46. The road required between Lots 13 and 15 must be constructed prior to sealing of the Final Plan, or if a staged development scheme is approved by Council's Manager Development Services, prior to the sealing of the Final Plans for Lots 11 to 15 inclusive.

Stormwater

47. The developer is to provide a minor stormwater drainage system designed to be able to accommodate a storm with an ARI of 50 years when the land serviced by the system is fully developed.

48. The developer is to provide a major stormwater drainage system, including culverts under the proposed road, designed to accommodate a storm with an ARI of 100 years.

49. Advice: Overland flow paths to accommodate a storm with an ARI of 100 years are to be contained wherever possible to roads or reserves. Where overland flow paths run through lots, easements are to be provided.

50. The developer is to provide a piped stormwater property connection to each lot capable of servicing the entirety of each lot by gravity in accordance with Council standards and to the satisfaction of Council's Municipal Engineer.

51. The stormwater system is to be designed such that there is no increase in pre-development flows in the Ashburton Creek where it leaves the subject property.

52. The Developer is to incorporate Water Sensitive Urban Design Principles into the development for the treatment and disposal of stormwater. The stormwater treatment system is to achieve the quality targets in the State Stormwater Strategy 2010 and be in accordance with:

    a. the Water Sensitive Urban Design Procedures for Stormwater Management in Southern Tasmania, and

    b. to the satisfaction of the Council's Municipal Engineer.

53. Gross pollutant traps are to be provided on the outfalls of all piped stormwater networks prior to discharging to any basins or watercourses.

54. Prior to the approval of Engineering Design Drawings the developer must submit a Flood Hazard Report, prepared in accordance with section E15.0 Inundation Prone Areas Code of the Brighton Interim Planning Scheme 2015 for approval by Councils Municipal Engineer. Once approved the Report will form part of the endorsed documents.

    The Report is to demonstrate that works:

    (a) do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and

    (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.

    Any specific hazard reduction or protection measures recommended in the report are to be incorporated in the engineering design drawings and implemented prior to the sealing of the Plan of Survey for the subdivision.

Sewer & Water

55. Each lot must be connected to a reticulated potable water supply.

56. Each lot must be connected to a reticulated sewerage system.

57. The development must meet all required Conditions of approval specified by Tas Water Submission to Planning Authority Notice TWDA 2021/00008-BTN, dated 15/01/2021.

Telecommunications and electrical reticulation

58. Electrical and telecommunications services must be provided underground to each lot in accordance with the requirements of the responsible authority and to the satisfaction of Council's Municipal Engineer.

59. Prior to the work being carried out a drawing of the electrical reticulation and street lighting, and telecommunications reticulation in accordance with the appropriate authority's requirements and relevant Australian Standards must be submitted to and endorsed by the Council's Municipal Engineer.

60. Prior to sealing the final plan of survey the developer must submit to Council:

(a) A "Provisioning of Telecommunications Infrastructure – Confirmation of final payment" or "Certificate of Practical Completion of Developer's Activities" from NBN Co.

(b) A Letter of Release, or equivalent, from TasNetworks confirming that all conditions of the Agreement between the Owner and authority have been complied with and that future lot owners will not be liable for network extension or upgrade costs, other than individual property connections (basic connection) at the time each lot is further developed.

Water quality

61. A soil and water management plan (here referred to as a 'SWMP') prepared in accordance with the guidelines Soil and Water Management on Building and Construction Sites, by the Derwent Estuary Programme and NRM South, must be approved by Council's Municipal Engineer before development of the land commences.

62. Temporary run-off, erosion and sediment controls must be installed in accordance with the approved SWMP and must be maintained at full operational capacity to the satisfaction of Council's Municipal Engineer until the land is effectively rehabilitated and stabilised after completion of the development.

63. The topsoil on any areas required to be disturbed must be stripped and stockpiled in an approved location shown on the detailed soil and water management plan for reuse in the rehabilitation of the site. Topsoil must not be removed from the site until the completion of all works unless approved otherwise by the Council's Municipal Engineer.

64. All disturbed surfaces on the land, except those set aside for roadways, footways and driveways, must be covered with topsoil and, where appropriate, re-vegetated and stabilised to the satisfaction of the Council's Municipal Engineer.

Construction amenity

65. The development must only be carried out between the following hours unless otherwise approved by the Council's Manager Development Services

Monday to Friday	7:00 AM to 6:00 PM
Saturday	8:00 AM to 6:00 PM
Sunday and State-wide public holidays	10:00 AM to 6:00 PM

66. All subdivision works associated with the development of the land must be carried out in such a manner so as not to unreasonably cause injury to, or unreasonably prejudice or affect the amenity, function, and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of -

(a) Emission from activities or equipment related to the use or development, including noise and vibration, which can be detected by a person at the boundary with another property.

(b) Transport of materials, goods, or commodities to or from the land.

(c) Appearance of any building works or materials.

67. Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the site in an approved manner. No burning of such materials on site will be permitted unless approved in writing by the Council's Manager Development Services

68. Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the project during the construction period.

Maintenance and Defects Liability Period

69. The subdivision must be placed onto a twelve (12) month maintenance and defects liability period in accordance with Council Policy following the completion of the works in accordance with the approved engineering plans and permit conditions.

70. Prior to placing the subdivision onto the maintenance and defects liability period the Supervising Engineer must provide certification that the works comply with the Council's Standard Drawings, specification and the approved plans.

THE FOLLOWING ADVICE APPLIES TO THIS PERMIT: -

A. This permit does not imply that any other approval required under any other legislation or by-law has been granted.

B. This permit does not take effect until all other approvals required for the use or development to which the permit relates have been granted.

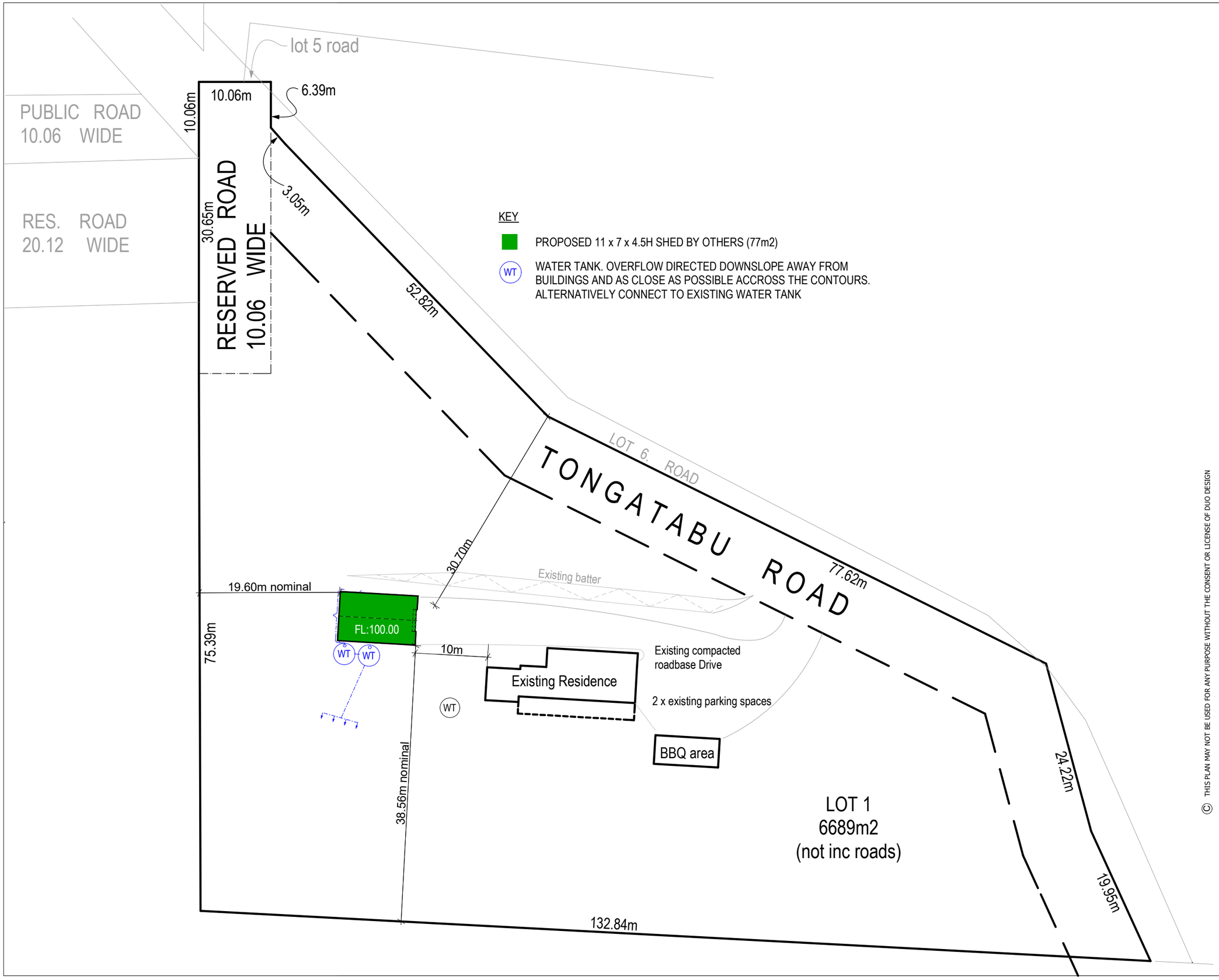
C. The owner is advised that an engineering plan assessment and inspection fee of 1% of the value of the approved engineering works (minimum of $300.00), or as otherwise specified in Council's Schedule of Fees, must be paid to Council prior to the approval of engineering plans.

D. The issue of this permit does not ensure compliance with the provisions of the *Threatened Species Protection Act* 1995 or the *Environmental Protection and Biodiversity Protection Act* 1999 (Commonwealth). The applicant may be liable to complaints in relation to any non-compliance with these Acts and may be required to apply to the Threatened Species Unit of the Department of Tourism, Arts, and the Environment or the Commonwealth Minister for a permit.

E. The issue of this permit does not ensure compliance with the provisions of the Aboriginal Relics Act 1975. If any aboriginal sites or relics are discovered on the land, stop work, and immediately contact the Tasmanian Aboriginal Land Council and Aboriginal Heritage Unit of the Department of Tourism, Arts, and the Environment. Further work may not be permitted until a permit is issued in accordance with the *Aboriginal Relics Act* 1975.

F. This planning approval shall lapse at the expiration of two (2) years from the date of the commencement of planning approval if the development for which the approval was given has not been substantially commenced. Where a planning approval for a development has lapsed, an application for renewal of a planning approval for that development shall be treated as a new application.

DECISION:



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JOB : NEW SHED

AT : 71 TONGATABU ROAD
DROMEDARY 7030

FOR : LUKE FENTON

DRAWING TITLE :

SITE PLAN

DRAWN:	DATE:	DWG NO. :
MJD	16.6.2021	01
SCALE:A3	ISSUE:	
1:500	DA	

DUO DESIGN

LOT 6. ROAD

TONGATABU ROAD

LOT 1
6689m2
(not inc roads)

30.70m

Existing batter

77m2

FL:100.00

WT

WT

10m

127m2
Existing Residence

WT

Existing compacted roadbase Drive

2 x existing parking spaces

36m2
BBQ area

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JOB : NEW SHED

AT : 71 TONGATABU ROAD
DROMEDARY 7030

FOR : LUKE FENTON

DRAWING TITLE :

SITE PLAN

DRAWN:	DATE:	DWG NO. :
MJD	6.7.2021	01a
SCALE:A3	ISSUE:	
1:200	DA	

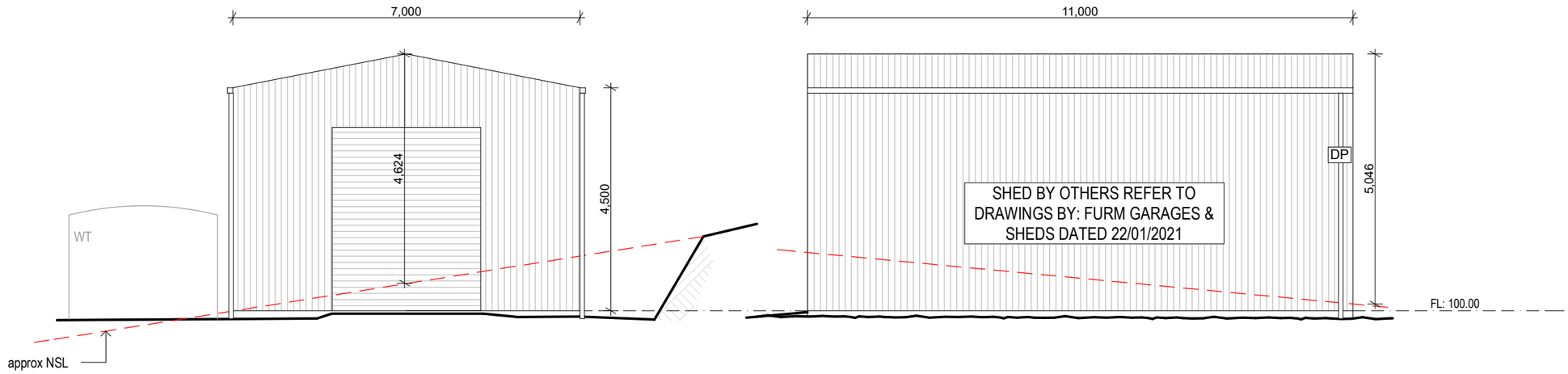
DUO DESIGN

BUILDER MUST VERIFY ALL DIMENSIONS AND LEVELS
PRIOR TO COMMENCING CONSTRUCTION

USE WRITTEN DIMENSIONS-DO NOT SCALE

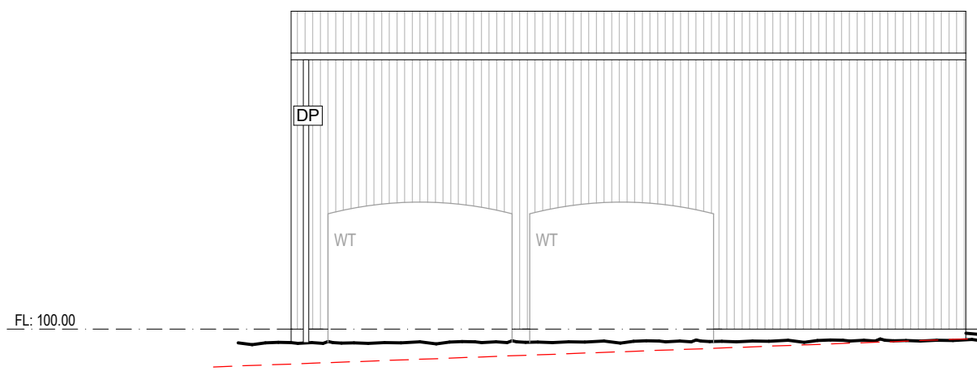
ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN
ACCORDANCE WITH THE STATE BUILDING REGULATIONS
LOCAL COUNCIL BY-LAWS AND CURRENT NCC

NOTIFY DESIGNER AND OR ENGINEER OF ANY CHANGES
BEFORE CONSTRUCTION. NO RESPONSABILITY TAKEN FOR
CHANGES MADE WITHOUT DESIGNERS AND OR ENGINEERS
CONSENT AND APPROVAL

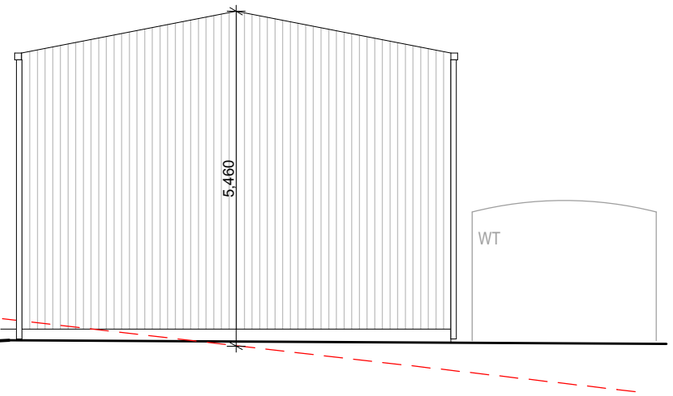


SOUTH ELEVATION

EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

PROPOSED 11 x 7 x 4.5H SHED BY OTHERS (77m2)

FLOOR LEVEL IS RELATIVE ONLY AND NOT THE RESULT
OF A SITE CONTOUR SURVEY

NO EXISTING VEGETATION TO BE REMOVED

ALL PLUMBING AND DRAINAGE TO BE IN ACCORDANCE
WITH LOCAL BUILDING AND HEALTH AUTHORITY

WATER TANK. OVERFLOW DIRECTED DOWNSLOPE AWAY FROM BUILDINGS AND
AS CLOSE AS POSSIBLE ACCROSS THE CONTOURS.
ALTERNATIVELY CONNECT TO EXISTING WATER TANK

Belinda Weston
Mark Day

155 Fergusson Rd,
Brighton. TAS. 7030

Ph : 03 62680063
M : 0409 537 337
or 0434 147 747

Email :
duodesign@bigpond.com

JOB : 6.7.2021

JOB : NEW SHED

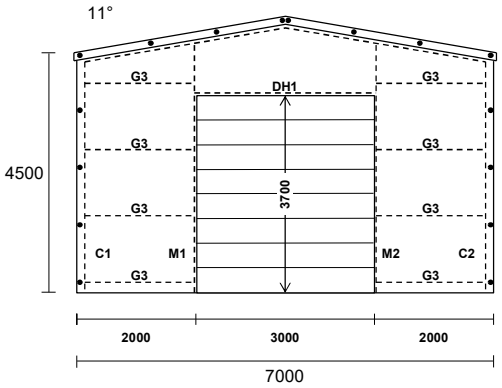
AT : 71 TONGATABU ROAD
DROMEDARY 7030

FOR : LUKE FENTON

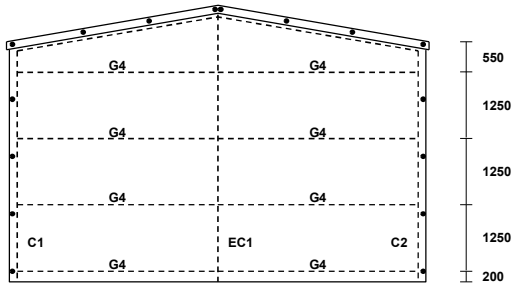
DRAWING TITLE :

SHED ELEVATIONS

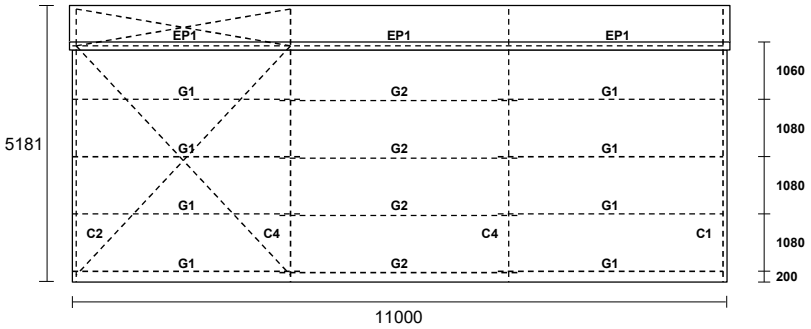
DRAWN:	DATE:	DWG NO. :
MJD	16.6.2021	02
SCALE:A3	ISSUE:	
1:100	DA	



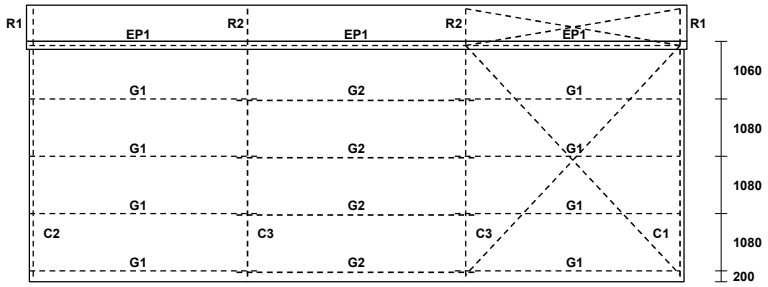
FRONT ELEVATION



REAR ELEVATION



RIGHT ELEVATION



LEFT ELEVATION

GENERAL NOTES

ALL DIMENSIONS ARE IN MILLIMETRES UNO.

THIS BUILDING DESIGN IS SUITABLE FOR A DESIGN CLASS OF 10a. THIS BUILDING IS NOT DESIGNED FOR, AND CANNOT BE USED FOR, HUMAN HABITATION (CLASS 1).

THIS SITE SPECIFIC DETAIL REFERS TO THE STRUCTURAL SUITABILITY OF THE STRUCTURAL DESIGN ONLY. THE ENGINEER AND THE SUPPLIER TAKE NO RESPONSIBILITY FOR ANY COMPLIANCE WITH ANY LOCAL GOVERNMENT BY-LAWS, TOWN PLANNING REQUIREMENTS OR INDIVIDUAL SITE CIRCUMSTANCES THAT MAY EFFECT THE SUITABILITY OF THE INSTALLATION OF THE STRUCTURE AT THE ACTUAL SITE.

THESE DESIGNS WHEN CONSTRUCTED IN ACCORDANCE WITH THIS ENGINEERING COMPLIES WITH THE FOLLOWING STANDARDS AND REGULATIONS:-

AS1170.0 TO AS1170.4-2006, AS3600-2009,
AS4055-2011, AS4100-1998 & AS4600-2005
NCC 2018

THE FRAMING MEMBERS, ROOF PURLIN MEMBERS AND CLADDING WITHIN THESE DESIGNS ARE BASED ON THE SECTIONAL DESIGN PROPERTIES OF THE ROLLFORMED PRODUCTS MANUFACTURED BY LYSAGHT BUILDING PRODUCTS.

ALL SCREW FIX FASTENERS TO COMPLY WITH AS3566. ALL CONNECTION BOLTS TO COMPLY WITH AS1252 IN ACCORDANCE AS4100. ALL SCREW FASTENERS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS. FRAMING BOLTS TO BE TIGHTENED TO A SHANK TENSION OF 90kN.

REFER TO PAGE 2 FOR FLOOR PLAN & MEMBER TABLE & WALL CLADDING DETAILS, PAGE 3 FOR FOOTING AND FOUNDATION DETAILS, PAGE 4 FOR ROOF PLAN AND ROOF CLADDING DETAILS AND PAGES 5&6 FOR FRAME AND MEMBER CONNECTION DETAILS.
THIS BUILDING IS TO BE CONSTRUCTED IN ACCORDANCE WITH GOOD PRACTICE. DURING CONSTRUCTION THE STRUCTURE MUST BE MAINTAINED IN A STABLE MANNER AND SUFFICIENTLY BRACED TO PREVENT OVERSTRESSING OF FRAME. THE ENGINEER AND THE SUPPLIER ACCEPT NO RESPONSIBILITY FOR ANY MISTAKES, FROM WHATEVER SOURCE, THROUGH PLEA OF IGNORANCE OF THE OWNER/BUILDER/ERECTOR.

INCLUSIONS

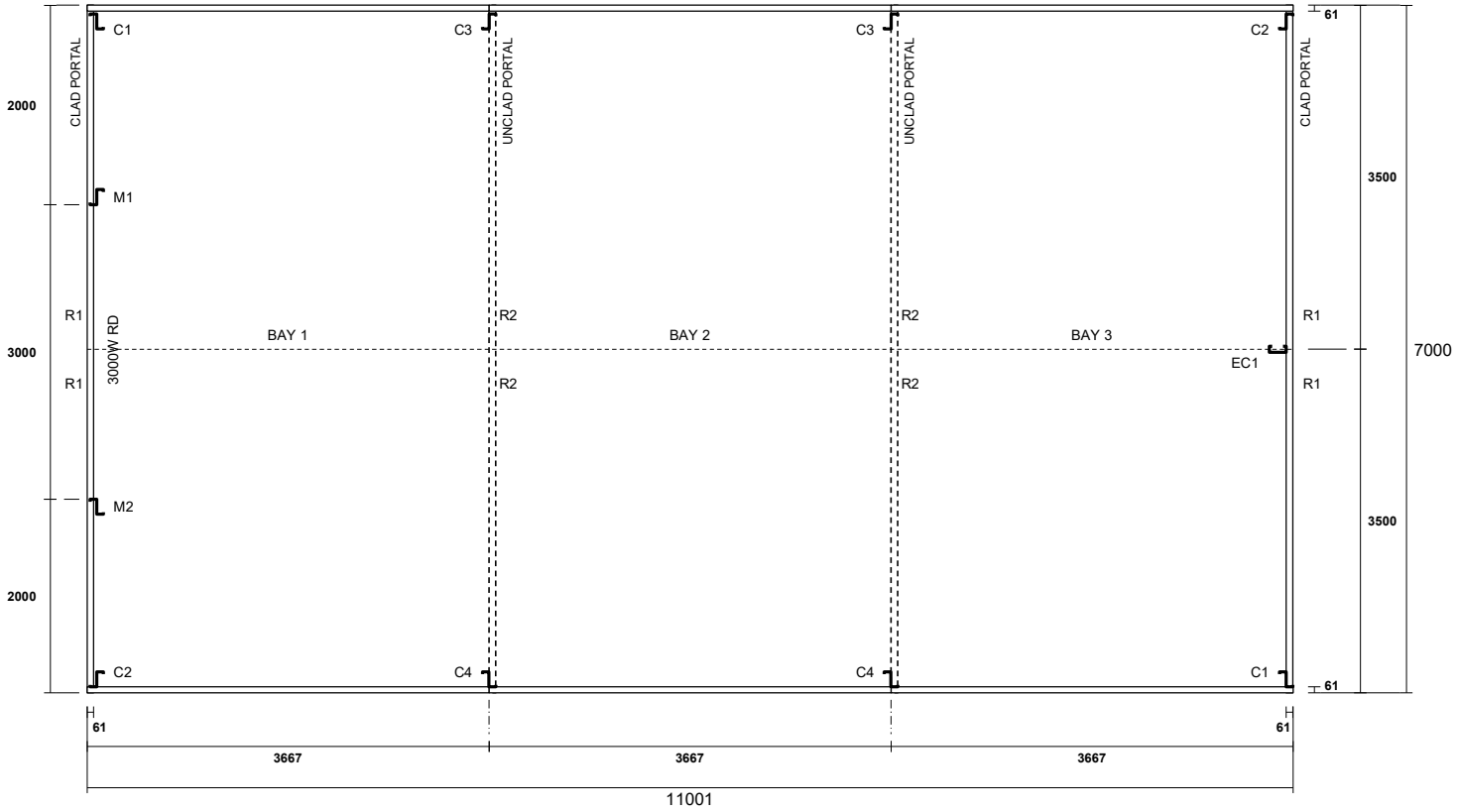
STANDARD STRAMIT 3700H 3000W DOOR TO CTR FRT GBL

EMMANUEL DELLAS P/L
E. DELLAS BE
CC164C (TAS)
EC22717 (Vic)

Furm
Garages & Sheds
23 DALMATIAN CRT LEGANA TAS 7277
PH / FAX 1800 790 569

PROPERTY DETAILS: OWNER: LUKE FENTON - SITE ADDRESS: 71 TONGATABU ROAD DROMEDARY 7030
MUNICIPAL DISTRICT: BRIGHTON COUNCIL

STRUCTURAL DRAWING NO. LEG1009-4 - DATE 22/01/2021



FLOOR PLAN

(SCHEMATIC DRAWING - FRAME DETAILS NOT TO SCALE)

PROPERTY DETAILS: OWNER: LUKE FENTON - SITE ADDRESS: 71 TONGATABU ROAD DROMEDARY 7030

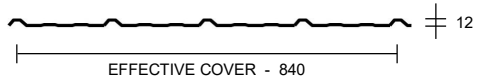
MUNICIPAL DISTRICT: BRIGHTON COUNCIL

MEMBER TABLE

DESCRIPTION	MEMBER
CLAD COLUMNS (C1/C2)	Z15015
CLAD RAFTERS (R1)	C15015
UNCLAD COLUMNS (C3/C4)	Z20015
UNCLAD RAFTERS (R2)	C20015
KNEE BRACES (KB)	C10015
KNEE BRACE TO UNCLAD PORTAL FRAMES	
CLAD END WALL COLUMNS (EC1)	C15019
ROLLER DOOR MULLIONS (M1/M2)	Z15019
ROLLER DOOR HEAD (DH1)	TOPSPAN 6110
EAVE PURLINS (EP1)	C10012
ROOF PURLINS (P1/P2)	TOPSPAN 6110
WALL GIRTS (G1-G4)	TOPSPAN 6110
STRAP BRACING	32 x 1.2
ROOF CLADDING	0.42 TRIMDEK
WALL CLADDING	0.35 MULTICLAD

WALL CLADDING AND FASTENING DETAILS

WALL CLADDING - 0.35 MULTICLAD



FASTEN TO EACH WALL GIRT/EAVE PURLIN WITH
1 OF 10/16x16 CL3 TEK IN PAN ADJACENT TO EACH EAVE

BRACING STRAP NOTE

BRACING STRAP TO FRAME AS DETAILED. BRACING STRAP TO BE FIXED UNDER TENSION PRIOR TO CLADDING BUILDING TO PREVENT MOVEMENT OF FRAME. FIX TO FRAME WITH 2 OFF 14/10x20 CL3 TEKS TO EACH END

EMMANUEL DELLAS P/L
E. DELLAS BE
CC164C (TAS)
EC22717 (Vic)

Furm
Garages & Sheds
23 DALMATIAN CRT LEGANA TAS 7277
PH / FAX 1800 790 569

STRUCTURAL DRAWING NO. LEG1009-4 - DATE 22/01/2021

DELE REPORT – RURAL LIVING ZONE

APPLICATION DETAILS		
DA#:	**DA 2021 / 00013**	
Applicant:	**Luke S Fenton (owner/occupier/applicant)**	
Description for Advertising (Update in RegApps)	**Address:**	**71 Tongatabu Road, Dromedary**
	Proposal:	**Outbuilding**

ENGINEERING CODE ASSESSMENT

Mark discretionary clauses red

Parking & Access Code	Clause:	Proposed	Complies with AS			PC Assessment/Comments
Number of Spaces	E6.6.1 – E6.6.4 A1	2+	**Yes** ☒	**No** ☐	**N/A** ☐	
Number of Accesses	E6.7.1 A1	1	**Yes** ☒	**No** ☐	**N/A** ☐	Is compliant with the standards, present access does not detract from neighbour's amenity and does not dominate the streetscape.
Design of Accesses	E6.7.2 A1		**Yes** ☒	**No** ☐	**N/A** ☐	Is compliant, sight lines of 95m to the north and 47m to the south. North is compliant and being uphill having the greater need and south whilst not compliant has the same sight lines as that of the entry opposite to 62 Tongatabu. The present access is considered acceptable as it addresses conflict avoidance, ease of access requirements and is suitable for commercial vehicles.
Passing	E6.7.3 A1		**Yes** ☒	**No** ☐	**N/A** ☐	
Turning	E6.7.4 A1		**Yes** ☐	**No** ☐	**N/A** ☒	Whilst not required the design and location allows for the turning of larger vehicles on site. Adequate space exists in front and to the side of the proposed shed to accommodate truck turning.

Layout	E6.7.5 A1		**Yes** ☒	**No** ☐	**N/A** ☐	Adequate space exists in front and to the side of the proposed shed to accommodate a truck turning and any loading/unloading requirements expected, such as one delivering firewood or household water. Existing parking in front of the BBQ area services family and visitor passenger vehicle requirements and additional areas provide by the development are not used by visitors.
Surfacing	E6.7.6 A1		**Yes** ☒	**No** ☐	**N/A** ☐	Whilst compliant, parking and turning areas meet the performance requirements of suitability, use and nuisance mitigation. All surfaces are bearing on the excavated rock shelf and well drained.
Lighting	E6.7.7 A1		**Yes** ☐	**No** ☐	**N/A** ☒	
Landscaping	E6.7.8 A1		**Yes** ☐	**No** ☐	**N/A** ☒	Whilst not a requirement applicant has verbally outlined plans to landscape to support banks and minimise erosion.
Motorcycles	E6.7.9 A1		**Yes** ☐	**No** ☐	**N/A** ☒	
Bicycles	E6.7.10 A1 & A2		**Yes** ☐	**No** ☐	**N/A** ☒	
Bicycle End of trip	E6.7.11 A1		**Yes** ☐	**No** ☐	**N/A** ☒	
Siting of parking	E6.7.12 A1		**Yes** ☐	**No** ☐	**N/A** ☒	Whilst not a requirement parking as proposed will not be visible from the roadway above.
Commercial vehicles	E6.7.13 A1		**Yes** ☐	**No** ☐	**N/A** ☒	Whilst not a requirement applicant has designed all aspects to accommodate larger vehicles including loading, unloading, and manoeuvring.
Road access	E6.7.14 A1		**Yes** ☒	**No** ☐	**N/A** ☐	Whilst not a requirement access to the public road is not compromised with the development and meets all the requirements of the authority.
Stormwater Code	**Clause:**	**Proposed**	**Complies with AS**			**PC Assessment/Comments**
Gravity Connection	E7.7.1 A1	On-site management required (tanks proposed)	**Yes** ☐	**No** ☒	**N/A** ☐	Proposed is to use the additional roof space for rainwater collection and storage. Given the environment is categorised a “dry sclerophyll forest” with a neighbouring steep gully, uncaptured overflow stormwater will be directed to the present overland flow path in a much-reduced

						capacity. It is envisaged a nett reduction in frequency and volume from the development.
WSUD	E7.7.1 A2		**Yes** ☐	**No** ☐	**N/A** ☒	
Minor SW			**Yes** ☐	**No** ☐	**N/A** ☒	
Major SW			**Yes** ☐	**No** ☐	**N/A** ☒	

Standard Engineering conditions (delete ones that will not go into permit).

Standard Conditions

Services

(1) The developer must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the development. Any work required is to be specified or undertaken by the authority concerned.

Parking and Access

(2) At least two (2) additional car parking spaces must be provided on the land at all times for the use of the development, in accordance with Standards Australia (2004) Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney.

(3) The internal driveway and areas set-aside for parking and associated access and turning must be provided in accordance with Standards Australia (2004): Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney and to the satisfaction of Council's Municipal Engineer, and must include all of the following;

(a) Constructed with a durable all weather gravel pavement.

(b) Minimum carriageway width of 4 metres

(c) Drained to the present overland flow path via swale drains as required located above and below batters.

(4) The internal driveway and areas set-aside for parking and associated access and turning must be designed, constructed, and maintained to avoid dust or mud generation, erosion and sediment transfer off site or de-stabilisation of the soil on site or on adjacent properties to the standard required by Council's Municipal Engineer

Access to Road

(5) Unless approved otherwise by Council's General Manager the existing vehicular access, from the road carriageway to the property boundary, must be maintained to comply with Standard Drawings TSD-R03-v1 *Rural Roads Typical Property Access,* TSD-R04-v1 *Rural Roads Typical Driveway Profile* and TSD-RF01-v1 *Guide To Intersection And Domestic Access Sight Distance* and to the satisfaction of Council's General Manager.

Stormwater

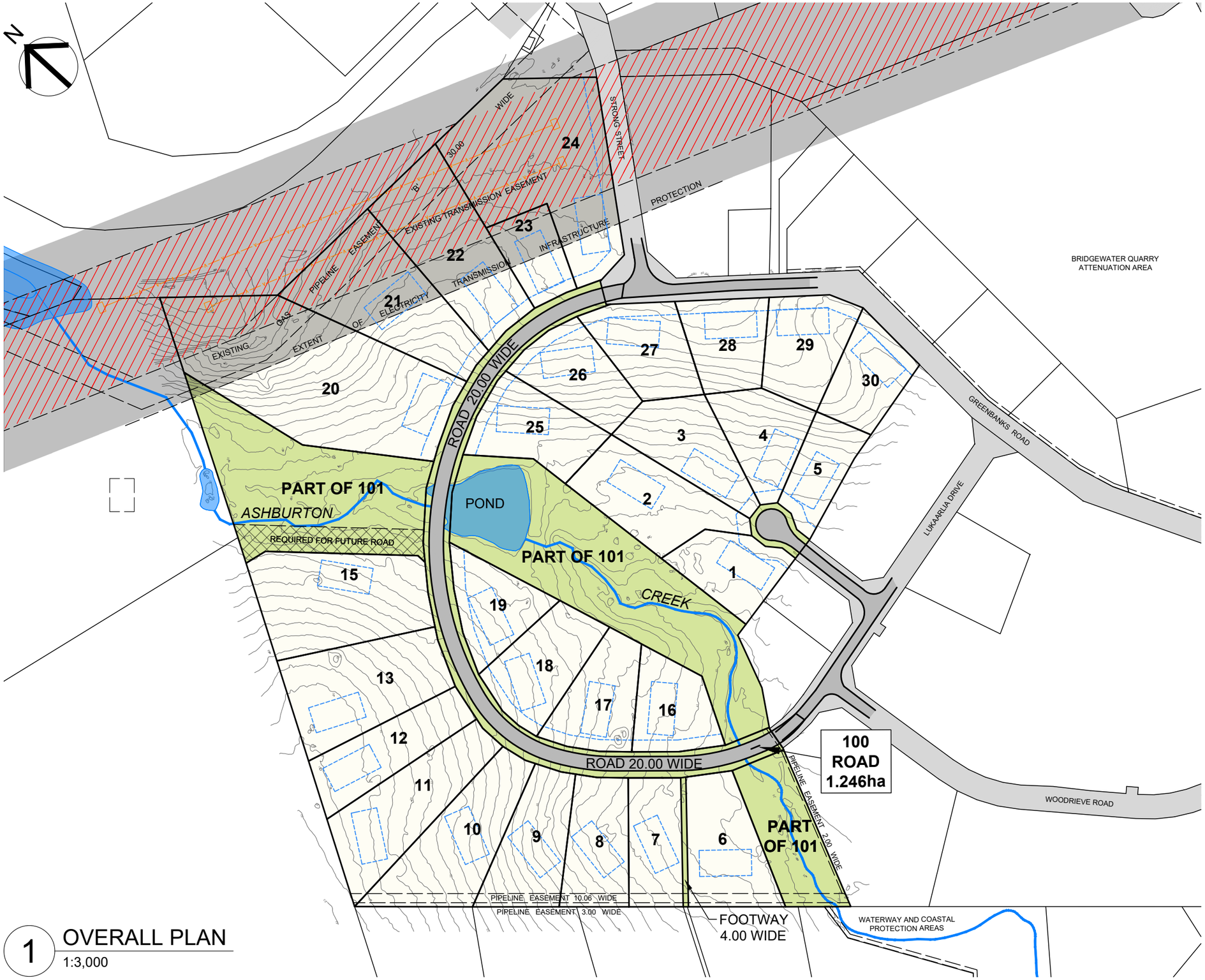
(6) Stormwater from the proposed development must be retained on site and excess drained to the neighbouring gully via dispersion to the satisfaction of Council's General Manager and in accordance with a Certificate of Likely Compliance or Plumbing permit issued by the Permit Authority in accordance with the *Building Act 2016.*

Soil and Water Management

(7) Before any work commences install temporary run-off, erosion and sediment controls and maintain these at full operational capacity until the land is effectively rehabilitated and stabilised after completion of the development in accordance with the guidelines Soil and Water Management on Building and Construction Sites, by the Derwent Estuary Programme and NRM South and to the satisfaction of Council's General Manager.

DISCUSSION

Discussion (non-standard conditions, correspondence, referrals, anything else)
All work undertaken supports the development, is to a good standard and is considered normal domestic improvements. Stormwater erosion and impact claims made by the sole representation do not match what is shown on site or the contours would suggest. The gullies to the south and west of the applicants property effectively offer protection from surrounding overland flow. Any stormwater experienced downstream would be from minor road and easterly collection and entirely naturally occurring. It is doubtful that the development at 71 Tongatabu will negatively influence any neighbour below. Claims made by the representation that removal of trees or shrubs has/will influence soil coverage, impact on erosion, overland flow paths and thus impact on their amenity is not substantiated. The area is classified as dry sclerophyll forest that is characterised by little topsoil coverage, sparse vegetation, and dry creeks. On inspection tree density was as expected given the need for occupation requirements (parking and open space) and bushfire risk mitigation practices. Tying together any past activities on 71 Tongatabu as having a negative impact on the amenity of neighbouring properties is not substantiated for parking, access, and stormwater.



1 OVERALL PLAN
1:3,000

CONTENTS

PROPERTY DETAILS

Owners
Denise Sutcliffe PTY LTD & Sutcliffe Earthmoving PTY LTD

Title References
FR 176402/1

Address
Lot 1 Greenbanks Road, Bridgewater

Council
Brighton Council

Planning scheme
Brighton Interim Planning Scheme 2015
Zone
25.0 General Industrial

Zone Overlay
117.Attenuation Area; Industrial precinct & Bridgewater quarry,
117. Waterway and Coastal Protection Area
117. Electricity Transmission Infrastructure Protection

Map reference
'New Norfolk 15' 5026-15

PID
9633391,
Point of interest GDA94 MGA55
518650E, 5269840N

Schedule of Easements
Existing Easements to be carried forward.
Pipeline and Service Easements and Drainage easements as required and Nil.

NOTES

1. This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and areas are subject to final survey.

2. The Relevant Planning Scheme Overlays are not shown on these plans for plan clarity.

REV	AMENDMENTS	DRAWN	DATE	APPR.
E	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	RD	17-06-2021	CT
D	FUTURE ROAD RESERVE INCORPORATED LOT 15 & PART OF 101 AREA REVISED	RD	21-04-2021	CT

SCALE: 0 12 30 60 150m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
10 FEBRUARY 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
for PAUL SUTCLIFFE

PDA Surveyors Incorporating WALTER SURVEYS
Surveying, Engineering & Planning
ABN 71 217 806 325
127 Bathurst Street
Hobart, Tasmania, 7000
www.pda.com.au
Also at: Kingston, Launceston & Burnie
PHONE: +61 03 6234 3217
FAX: +61 03 6234 5085
EMAIL: pda.hbt@pda.com.au

SCALE	PAPER
1:3000	(A3)
JOB NUMBER	DRAWING
45549CT - 2E	

LEGEND

- Proposed boundary
- Easement
- Indicative building area 20 m x 40 m (Avg slope <1:10)
- Frontage set back (10m)
- Contour 1.0m interval
- Existing overhead power
- Transmission Easement
- Transmission Infrastructure Protection Zone

N

24
1.386ha

23
3006m²

22
8559m²

21
9077m²

20
1.813ha

PART OF 101
1.434ha

27

28

26

25

3

2

30.00 WIDE STRONG STREET

'B' EXISTING TRANSMISSION EASEMENT PROTECTION

PIPELINE EASEMENT

INFRASTRUCTURE

TRANSMISSION

ELECTRICITY

GAS

OF

EXTENT

EXISTING

ROAD 20.00 WIDE

SEE SITE PLAN B

POND

PART OF 101

ASHBURTON CREEK

REQUIRED FOR FUTURE ROAD

2 SITE PLAN A
1:1,500

REV	AMENDMENTS	DRAWN	DATE	APPR.
E	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	RD	17-06-2021	CT
D	FUTURE ROAD RESERVE INCORPORATED LOT 15 & PART OF 101 AREA REVISED	RD	21-04-2021	CT

SCALE: 0 3 6 15 30 75m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
10 FEBRUARY 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
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EMAIL: pda.hbt@pda.com.au

SCALE	PAPER
1:1500	(A3)
JOB NUMBER	DRAWING
45549CT	- 3E

66

LEGEND

- Proposed boundary
- Easement
- Indicative building area 20 m x 40 m (Avg slope <1:10)
- Frontage set back (10m)
- Contour 1.0m interval
- Existing overhead power
- Transmission Easement
- Transmission Infrastructure Protection Zone

N

ROAD 20.00 WIDE

GREENBANKS ROAD

LUKAARLIA DRIVE

ASHBURTON CREEK

POND

PART OF 101

SEE SITE PLAN A

SEE SITE PLAN C

1	3976m²
2	6186m²
3	5033m²
4	4295m²
5	3295m²
25	4973m²
26	4649m²
27	4676m²
28	4129m²
29	4786m²
30	3956m²

3 SITE PLAN B
1:1,500

REV	AMENDMENTS	DRAWN	DATE	APPR.
E	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	RD	17-06-2021	CT
D	FUTURE ROAD RESERVE INCORPORATED LOT 15 & PART OF 101 AREA REVISED	RD	21-04-2021	CT

SCALE: 0 3 6 15 30 75m

SURVEYOR: -	GEOCIVIL: -
DRAWN: BM/MK	CHECKED: CT
DATE: 10 FEBRUARY 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
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SCALE	PAPER
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JOB NUMBER	DRAWING
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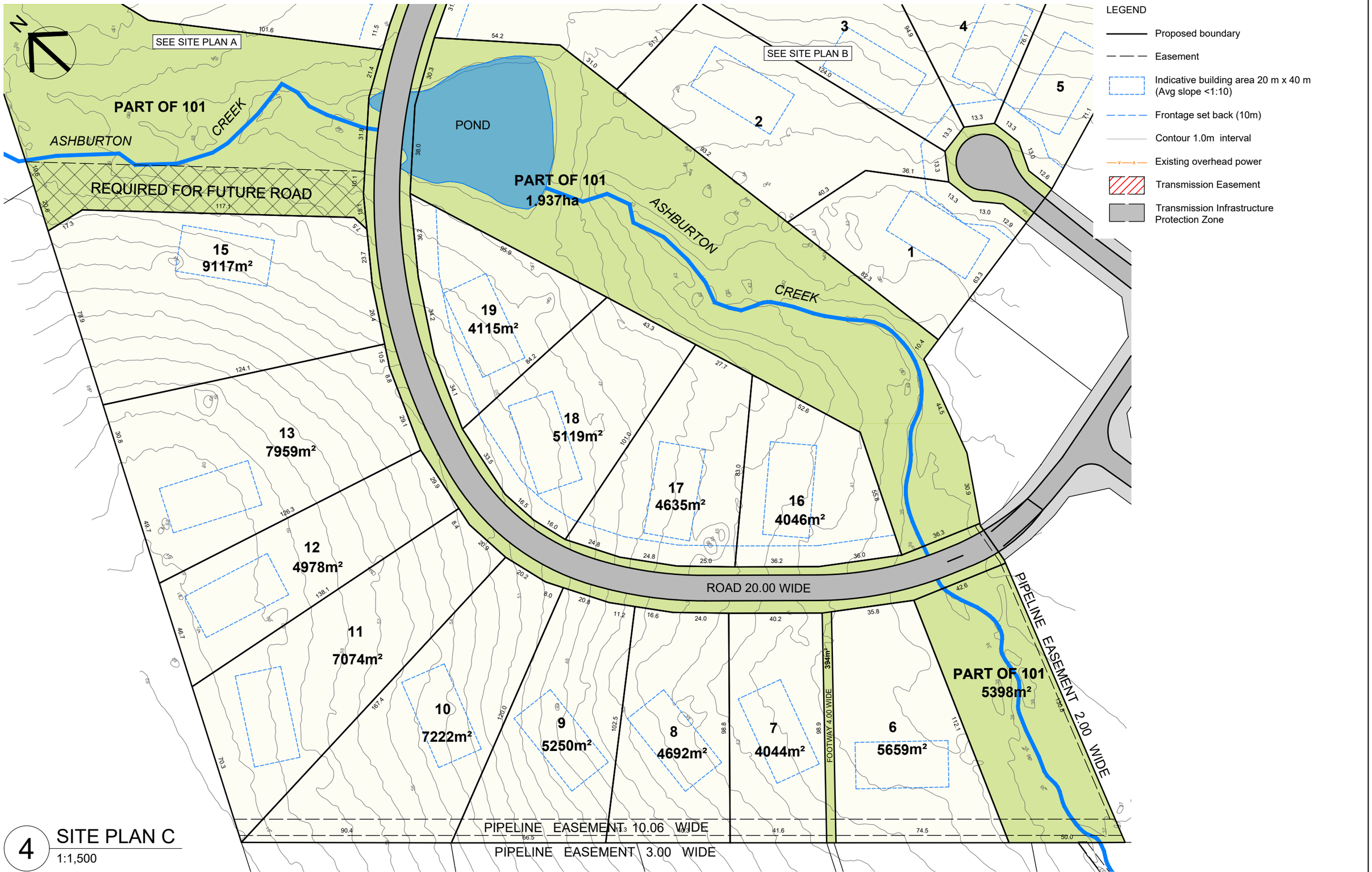

4 SITE PLAN C

1:1,500

REV	AMENDMENTS	DRAWN	DATE	APPR.
E	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	RD	17-06-2021	CT
D	FUTURE ROAD RESERVE INCORPORATED LOT 15 & PART OF 101 AREA REVISED	RD	21-04-2021	CT

SCALE: 0 3 6 15 30 75m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
10 FEBRUARY 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
for PAUL SUTCLIFFE

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SCALE	PAPER
1:1500	(A3)
JOB NUMBER	DRAWING
45549CT - 5E	

COUNCIL REQUEST FOR ADDITIONAL INFORMATION DATED - 11 June 2021

APPLICATION FOR PLANNING PERMIT

SA 2020 / 00050, LOT 1 GREENBANKS ROAD, BRIDGEWATER

1. **The proposed stormwater system relies on future on-site detention on individual lots. This method is not supported by Council. Advice:**

   Advice:

   The minor system should be designed based on:

   a) Min. 80% impervious area
   b) No individual lot detention
   c) No increase in pre-development flows in the creek where it leaves the subject property. Detention within the public open space land would be acceptable. Detention within the creek itself may be considered subject to impact on any natural values.

   An amended design is to be provided based on the above information.

   Response: -

   - The attached Drains model and concept engineering plans have been amended to conform with the advice as detailed above with retention basins proposed at the discharge points

2. (a) Stormwater treatment needs to be provided for the subdivision. It is accepted that in an industrial zone individual lots will require stormwater treatment prior to discharging to the public system. A part 5 agreement in this instance is acceptable.

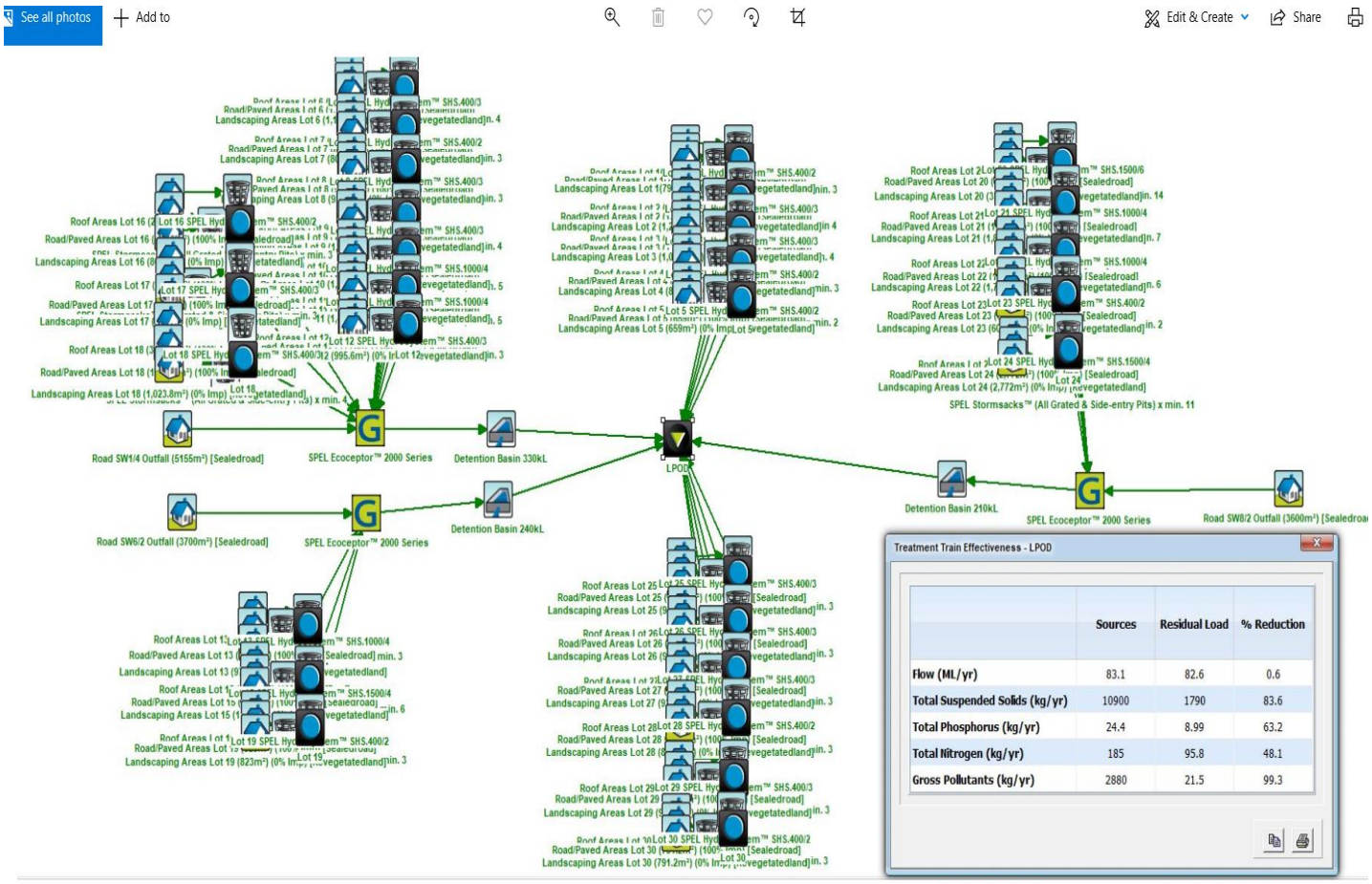
   (b) The stormwater treatment provided as part of the subdivision will need to cater for all reserves (including roads), open space and undeveloped lots.

   (C) An amended music model should be provided removing the onsite detention to be included in the advertising documentation.

   Response

   - The treatment of the stormwater was modelled with MUSIC software to meet the acceptable stormwater quality and quantity targets based on the advice as provided by Council in item 2 above.

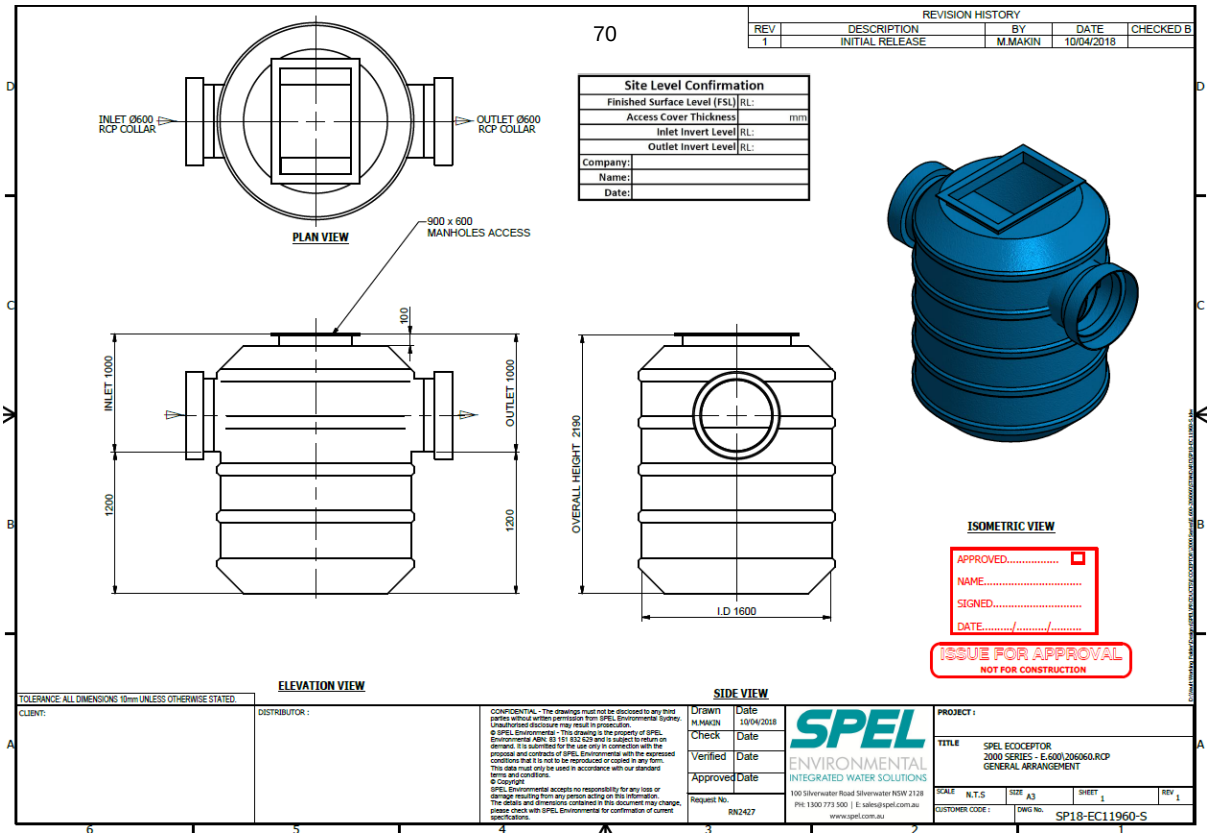
Screen dump of MUSIC Model



	Sources	Residual Load	% Reduction
Flow (ML/yr)	83.1	82.6	0.6
Total Suspended Solids (kg/yr)	10900	1790	83.6
Total Phosphorus (kg/yr)	24.4	8.99	63.2
Total Nitrogen (kg/yr)	185	95.8	48.1
Gross Pollutants (kg/yr)	2880	21.5	99.3

The conceptual MUSIC model details compliance with the acceptable stormwater quality and quantity targets based on the following

- On site treatment is to be installed on each lot
- Detention basins for the development are to be installed at the time of development of the site
- GPT's are to be installed on Municipal Infrastructure prior to discharge into the environment at the time of subdivision



Lot #	Primary Treatment		Detention	Tertiary Treatment (Hydrosystem)					
	Min# Stormsacks	Ecoceptor 2000	m3	HS.400/2	HS.400/3	HS.1000/4	HS.1500/4	HS.1500/5	HS.1500/6
1	3		0	1					
2	4		0		1				
3	4		0		1				
4	3		0	1					
5	2		0	1					
6	4		0		1				
7	3		0	1					
8	3		0		1				
9	4		0		1				
10	5		0			1			
11	5		0			1			
12	3		0		1				
13	3		0			1			
15	6		0				1		
16	3		0	1					
17	3		0		1				
18	4		0		1				
19	3		0	1					
20	14		0						1
21	7		0			1			
22	6		0			1			
23	2		0	1					
24	11		0				1		
25	3		0		1				
26	3		0		1				
27	3		0		1				
28	3		0	1					
29	3		0		1				
30	3		0	1					
SW1/1		1	330						
SW6/1		1	240						
SW8/1		1	210						
TOTAL	123	3	780	9	12	5	2	0	1

LOT 1 GREENBANKS ROAD, BRIDGEWATER 45549CT

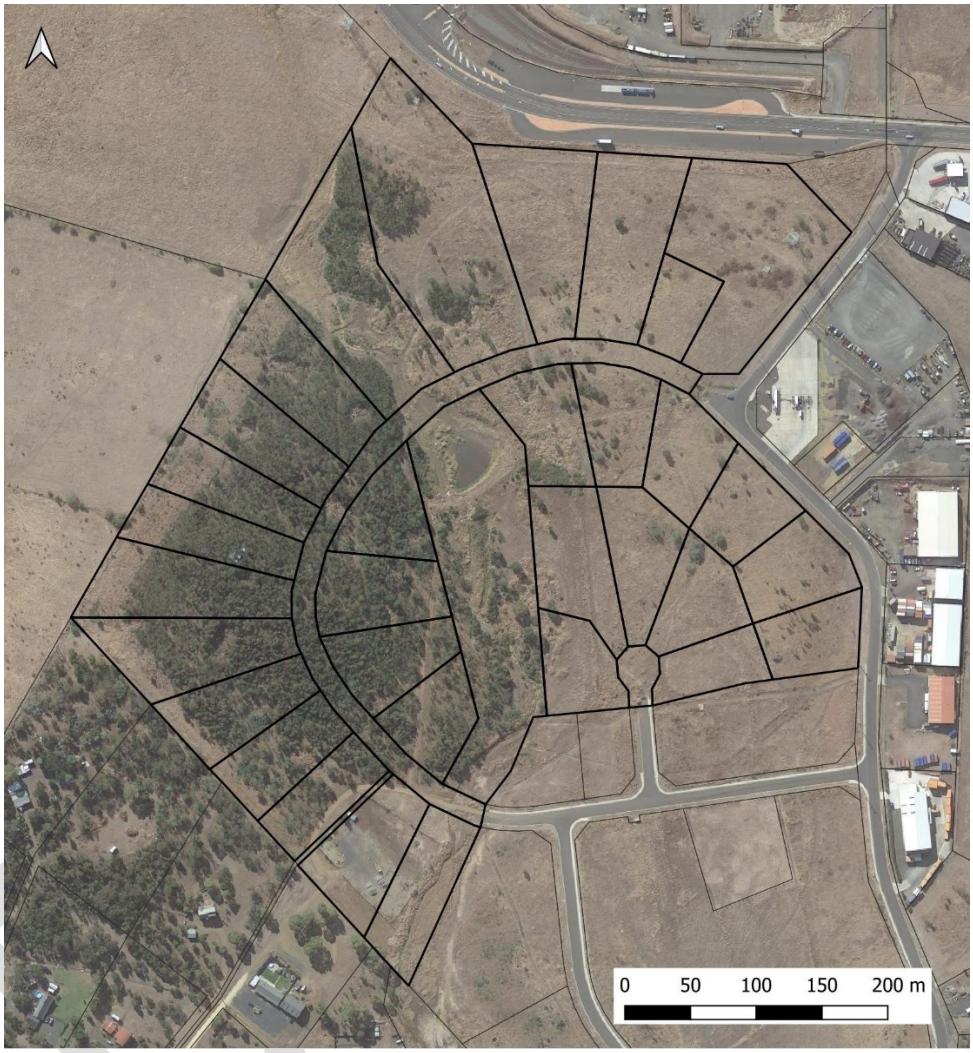
It be noted that all the stormwater parameters and proposed infrastructure will be reviewed, adjusted and confirmed during the detail design

In addition to the following written response, the following is also provided to support this response:

- Concept Stormwater Plans – DWG No 45549CT
- Drains Model

Bushfire Hazard Report

For proposed 30 lot subdivision at Greenbanks Rd, Bridgewater



Landowner: Denise Sutcliffe Pty Ltd & Sutcliffe Earthmoving Pty Ltd

Author: Jim Mulcahy

Date of Assessment: 11th August 2020 & 3rd December 2020

Version: V1 – December 2020

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Contents

Executive Summary

The following *Bushfire Hazard Report* has been prepared in support of a proposed 30 lot subdivision located in the 'Brighton Industrial Estate' at Greenbanks Rd Bridgewater (CT 176402/1).

The proposed subdivision occurs in a bushfire prone area pursuant to *E1.0 Bushfire Prone Areas Code* (the Code) of the *Brighton Interim Planning Scheme 2015* (the Scheme). Regardless of the industrial zoning and improbability of any future residential development on lots arising from the subdivision, the Scheme requires that the bushfire risk to the development and appropriate hazard management responses to those risks be considered during the planning process.

The proposed subdivision has been assessed against the requirements of the Code and *AS 3959-2009 Construction of Buildings in Bushfire Prone Areas* (AS 3959). A *Bushfire Hazard Management Plan* has been prepared, showing *Indicative Building Areas* and *Hazard Management Areas* which demonstrate the potential for any future dwellings on lots arising from the subdivision to achieve a *Bushfire Attack Level* (BAL) rating of BAL-19 under Table 2.4.4 of AS 3959.

The *Bushfire Hazard Management Plan* demonstrates compliance with the acceptable solutions for subdivision under the Code and has been submitted to the *Tasmania Fire Service* (TFS) for endorsement. A certified version of the plan will accompany the final version of this report and will be provided to Brighton Council as part of a development application for the proposed subdivision.

Andy Welling – Enviro-dynamics Pty Ltd

ACCREDITED BUSHFIRE ASSESSOR (BFP-135)

CERTIFICATE No: ED0275 DATE: 21/12/2020

Signed:

Disclaimer

All reasonable steps have been taken to ensure that the information and advice contained in this report is an accurate reflection of the fire hazard affecting the proposed development at the time of the assessment and the hazard management measures necessary to meet the standards prescribed in *E1.0 Bushfire Prone Areas Code* of the *Brighton Interim Planning Scheme 2015* and *Australian Standard AS 3959-2009*.

The prescribed hazard management measures are designed to reduce bushfire risk to any dwelling(s) constructed on the site. The effectiveness of these measures relies on their implementation in full and their maintenance for the life of the development. No liability can be accepted for actions by landowners or third parties that undermine or compromise the integrity of prescriptions and recommendations contained in this report.

Due to the unpredictable nature of bushfires, particularly under extreme weather conditions, landowners should be aware that implementation and maintenance of the hazard management measures outlined in this report cannot guarantee that a building will survive a bushfire event.

Australian Standards

AS3959 – 2009 Construction of Buildings in Bushfire-Prone Areas has recently been superseded by *AS3959:2018*.

AS3959 2009 remains relevant for this report and will remain relevant until *E1.0 Bushfire Prone Areas Code* of the various Interim Planning Schemes has been updated to reference the new standard.

In respect of Bushfire Attack Level (BAL) determinations based on vegetation type and slope, the content of Table 2.4.4 in AS3959-2009 is the same as Table 2.6 in AS3959:2018. The new standard does include some changes to the description of Low threat vegetation and the Classification of Vegetation, but these changes do not materially affect the analysis contained in this report. As a result, to the best of the author's knowledge and understanding, the conclusions and prescribed separation distances contained in this report and the attached *Bushfire Hazard Management Plan* are consistent with the provisions of both AS3959-2009 and AS3959:2018.

1. Introduction

The following *Bushfire Hazard Report* has been undertaken to address the provisions of *E1.0 Bushfire-Prone Areas Code* (the Code) of the *Brighton Interim Planning Scheme 2015* (the Scheme). The report provides an assessment of the bushfire hazard affecting the development and outlines protective features and controls that must be incorporated into the design and layout of the subdivision to ensure compliance with the Code in respect of hazard management areas, access for fire-fighting and water supplies for fire-fighting.

The analysis in this report has been used to prepare a *Bushfire Hazard Management Plan* (BHMP) which demonstrates the capacity of all lots arising from the subdivision to support a building area which meets the requirements of BAL-19 under *AS 3959-2009 Construction of Buildings in Bushfire Prone Areas* (AS3959).

1.1Site Details

Landowner: Denise Sutcliffe Pty Ltd & Sutcliffe Earthmoving Pty Ltd

Location: Greenbanks Rd Brighton

Title: CT 176402/1 (PID 9535328)

Municipality: Brighton Council

Zoning: General Industrial

Planning Overlays: *Bushfire Prone Areas* (whole site)

Attenuation Area – Industrial Precinct (whole site)

Waterway & Coastal Protection Area (along Ashburton Creek)

Type of Development: 30 lot subdivision

Date of Assessment: 11th August 2020 & 3rd December 2020

Reference Number: ED0275

1.2Subdivision Proposal (see proposal plan at Figure 1)

The proposed subdivision will create 30 industrial lots ranging in size from 3041m^2 to 1.816ha, along with new public road (Lot 100) and a Public Open Space lot along Ashburton Creek (Lot 101).

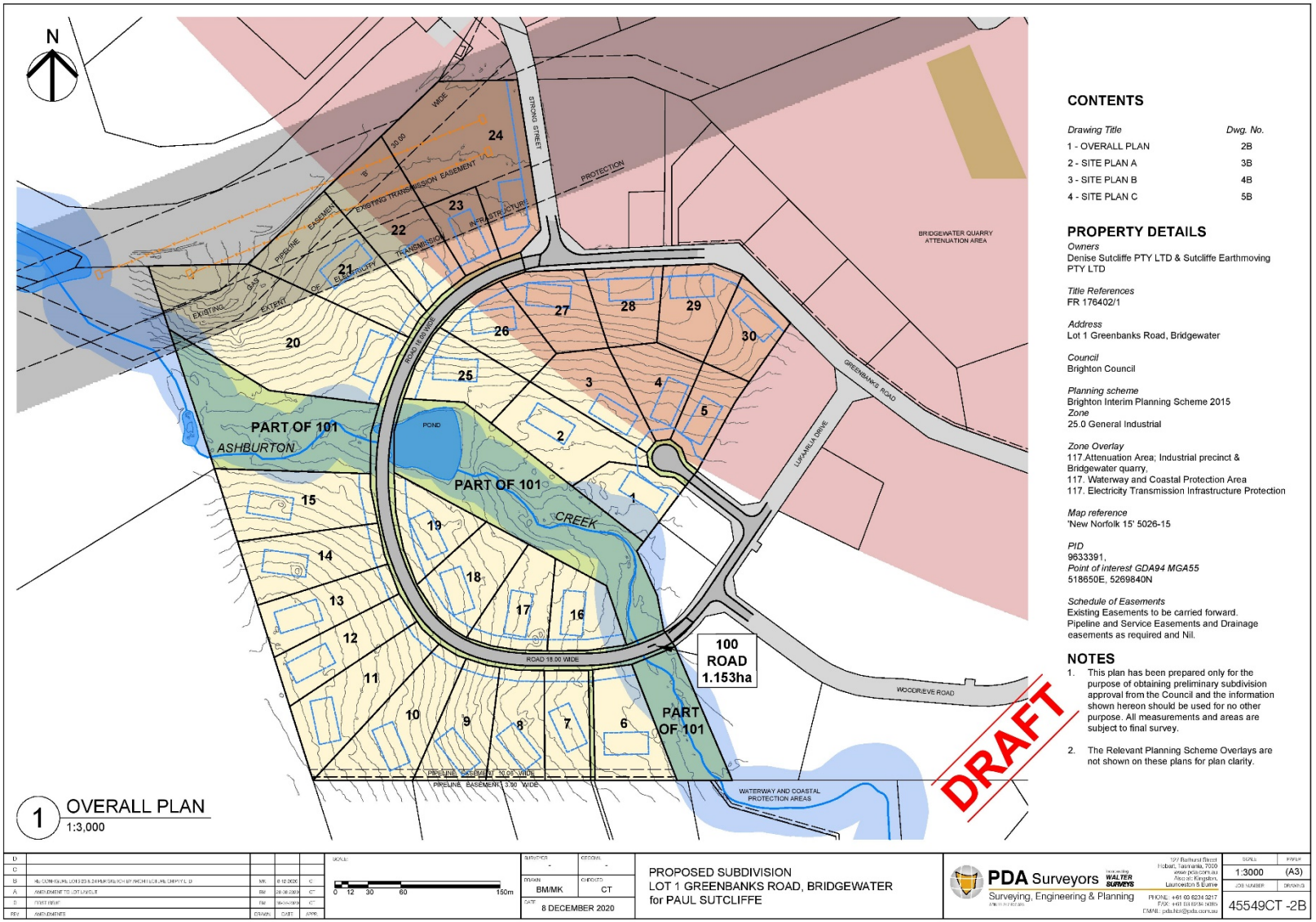


Figure 1 – Proposal Plan (PDA Surveyors, December 2020)

1.3 Site Description (see location and context maps at Figures 2 & 3)

The subject land is a single title occupying 22.99ha within the *Brighton Industrial Estate* at Greenbanks Road, Bridgewater. It does not currently contain any built infrastructure except towers associated with high voltage electricity transmission lines that cross the land from west to east near the northern boundary.

The land is bisected from north-west to south-east by Ashburton Creek, with a large in-stream dam lying roughly in the centre of the site. To the north and east of the creek, the land has a southerly aspect, descending from a maximum height of approximately 67m above sea level asl in the north-west corner to approximately 39m asl in the south-east corner. To the south and west of the creek, the land has an easterly aspect, descending from a maximum height of approximately 62m asl in the south-west corner to approximately 39m asl in the south-east corner. Slopes across the land are generally in the range of 5-10^0, with small areas of less than 5^0 on areas of floodplain east of the creek and in the north-east corner.

Vegetation across the site is predominantly grassland and pasture containing only scattered small trees and tall shrubs. Until recently, land west of the creek was occupied by dense regrowth scrub, but this area was cleared in October 2020 and is now mostly bare ground (compare aerial photography in figures with photos at Appendix A). Along Ashburton Creek there are areas of scrub and woodland with potential to succeed to forest over time.

Properties to the west, north and east of the subject land are also zoned *General Industrial* and are predominantly occupied by grassland or pasture, with small patches of scrub and woodland. To the south are *Rural Living* properties containing existing dwellings. Vegetation on these blocks is comprised of a mix of managed land, grassland/pasture and scrub or woodland with the potential to succeed to forest if left unmanaged. The broader landscape around the subject land includes large areas of contiguous woodland and forest to the west.

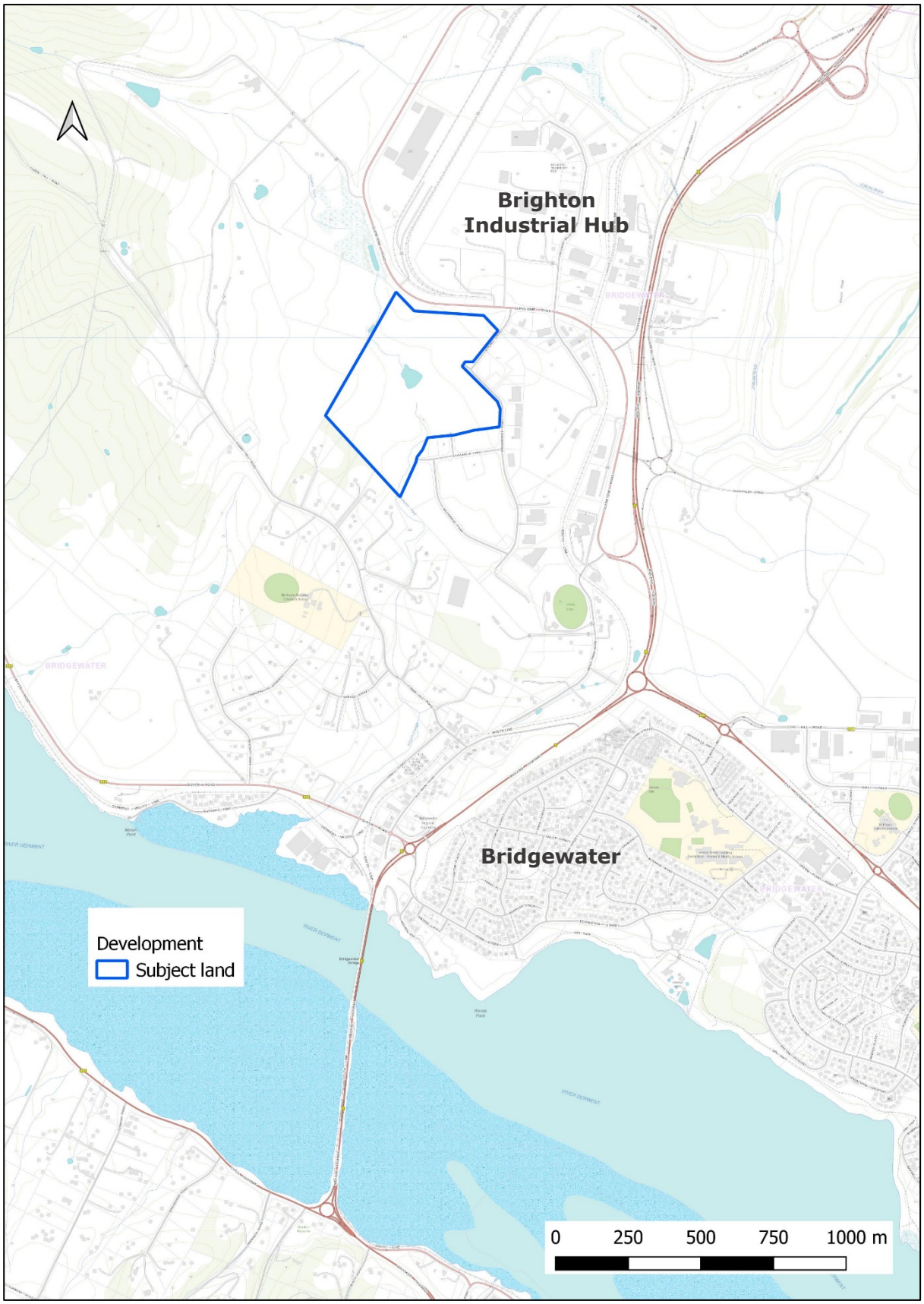


Figure 2 – Site Location (Source: theLIST, 2020)

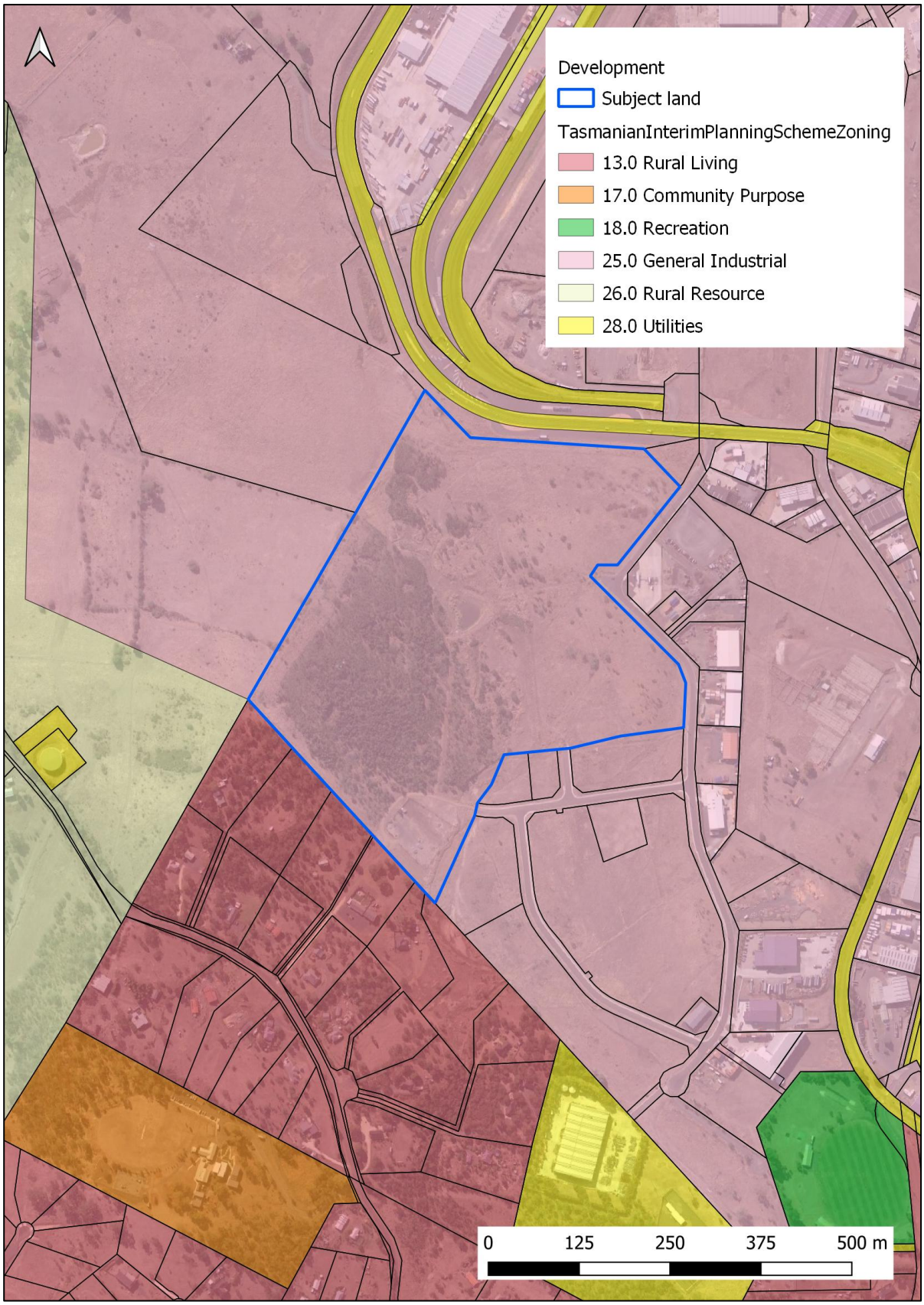


Figure 2 – Site Context and Zoning (Source: theLIST, 2020)

2. Bushfire Hazard Assessment

Bushfire Hazard: slope and classified vegetation.

Potential Bushfire Attack Mechanisms: radiant heat, ember attack, wind, flame and smoke.

Bushfire Threat

In terms of the probability of extreme fire weather conditions, the main threat is from the north. In terms of vegetation, the main threat is from scrub and woodland on surrounding properties to the south and in the proposed Public Open Space lot along Ashburton Creek. Management of these areas in a fuel-reduced state in future cannot be presumed and the vegetation they contain has the potential to succeed over time (eg from wattle dominated scrub to eucalypt forest).

In terms of slope, the main threat is from the scrub within the proposed Public Open Space lot, which is downslope of surrounding lots. The threat is mitigated by the narrow width of the vegetation in this area, which would result in only a short fire-run upslope to the west or east.

Fire History: the fire history of the area indicates that the subject land and immediate surrounds have not been impacted by bushfire in the past, although the woodland and forest on Genappe Spur to the west of the site were impacted by bushfire in 2002/03.

Fire Danger Index: FDI 50 (this index applies across Tasmania).

Classified Vegetation: Vegetation was assessed within 500m of the site for context and in more detail within 100m in all directions from the edge of the proposed subdivision. For the purposes of this assessment, vegetation was classified as per Table 2.3 of *AS 3959*-2009:

- all pasture and grassland within and surrounding the subject land has been classified as *G(i) Grassland* (actual and potential);
- 'grassland' in the proposed Public Open Space lot along Ashburton Creek has been classified as *D. Scrub* (potential); and
- wattle dominated scrub on surrounding properties to the south and in the proposed Public Open Space lot has been classified as *A. Forest* (potential).

Significant Natural Values (potentially limiting hazard management works)

The area of proposed Lots 28-30 is occupied by lowland native grassland dominated by kangaroo grass (GTL). This community is not listed as threatened in Tasmania but is considered endangered and is listed as such under Commonwealth legislation. Two threatened plant species have been recorded within the area of GTL – the grassland flaxlily (*Dianella amoena*) and the grass cushion (*Isoetopsis graminifolia*).

Hazard Assessment

The subject land and surrounds were surveyed by the author on 11th August 2020 & 3rd December 2020 with reference to the draft subdivision layout. Information and images were collected which allowed assessment of *Bushfire Attack Level* (BAL) using *Method 1 (Simplified Procedure)* of AS3959 (see Table 1.).

Table 1 – Separation distance calculations for Indicative Building Areas on Lots 1 & 2

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
1	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland, low threat* & non-veg*	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-27	BAL-FZ	11-<16	27m
		A. Forest (potential)	Downslope 0-5^0	27-85	BAL-19	27-<34	
		G (i). Grassland	Upslope	85-100	BAL Low		
2	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-27	BAL-FZ	11-<16	27m
		A. Forest (potential)	Downslope 0-5^0	27-100	BAL-19	27-<34	
3	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-68	BAL-FZ	11-<16	11m
		A. Forest (potential)	Downslope 0-5^0	68-100	BAL-12.5		

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
4	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
5	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland, low threat* & non-veg*	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
6	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	Downslope 0-5^0	0-22	BAL-FZ	10-<14	22m
		D. Scrub (potential)	Downslope 0-5^0	22-70	BAL-19	22-<31	
		G (i). Grassland	Upslope	70-100	BAL Low		
	South West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
7	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	Downslope 0-5^0	0-23	BAL-FZ	11-<16	23m
		A. Forest (potential)	Upslope	23-50	BAL-19	23-<32	
		G (i). Grassland & low threat*	Upslope	50-100	BAL Low		
8	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	Upslope	0-23	BAL-FZ	11-<16	23m
		A. Forest (potential)	Upslope	23-100	BAL-19	23-<32	
9	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10<14	10m
	South East	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13-<19	13m
	South West	G (i). Grassland	Upslope	0-32	BAL-FZ	11-<16	23m
		A. Forest (potential)	Upslope	32-100	BAL-19	23-<34	

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
10	**North**	G (i). Grassland	+/- flat to upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13-<19	13m
	South	G (i). Grassland	Downslope 0-5^0	0-51	BAL-FZ	11<16	11m
		A. Forest (potential)	Downslope 0-5^0	51-100	BAL-12.5		
	South West	G (i). Grassland	+/- flat across slope	0-29	BAL-FZ	11-<16	23m
		A. Forest (potential)	+/- flat across slope	29-100	BAL-12.5	23-<32	
11	**North**	G (i). Grassland	Upslope to +/- flat	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South West	G (i). Grassland	+/- flat across slope	0-64	BAL-FZ	10-<14	10m
		A. Forest (potential)	+/- flat across slope	64-100	BAL-12.5		
12	**North**	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
13	**North**	G (i). Grassland	+/- flat to downslope 0-5^0	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	14m
	West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
14	**North West**	G (i). Grassland	+/- flat to downslope 0-5^0	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13-<19	13m
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
15	**North West**	G (i). Grassland	+/- flat to downslope 0-5^0	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	Downslope 5-7^0	0-27	BAL-FZ	13-<19	22m
		D. Scrub (potential)	Downslope 0-5^0	27-100	BAL-12.5	22-<31	
	South East	G (i). Grassland	Downslope 0-5^0	0-40	BAL-FZ	11-<16	11m
		D. Scrub (potential)	Downslope 0-5^0	40-100	BAL-12.5		
	South West	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
16	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Downslope 0-5^0	0-27	BAL-FZ	11-<16	27m
		A. Forest (potential)	Downslope 0-5^0	27-100	BAL-19	27-<38	
	South East	G (i). Grassland	Downslope 0-5^0	0-32	BAL-FZ	11-<16	27m
		A. Forest (potential)	Downslope 0-5^0	32-70	BAL-FZ	27-<38	
		G (i). Grassland	Upslope	70-100	BAL Low		
	South West	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
17	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to downslope 0-5^0	0-51	BAL-FZ	11-<16	11m
		A. Forest (potential)	Downslope 0-5^0	51-100	BAL-12.5		
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
18	**North West**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	+/- flat to downslope 0-5^0	0-70	BAL-FZ	10-<14	10m
		A. Forest (potential)	Downslope 0-5^0	70-100	BAL-12.5		
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	+/- flat across slope+/- flat across slope	0-100	BAL-FZ	10-<14	10m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
19	**North**	G (i). Grassland	+/- flat to downslope 0-5^0	0-90	BAL-FZ	10-<14	10m
		D. Scrub (potential)	Downslope 0-5^0	90-100	BAL-12.5		
	East	G (i). Grassland	Downslope 0-5^0	0-27	BAL-FZ	11-<16	27m
		A. Forest (potential)	Downslope 0-5^0	27-100	BAL-19	27-<38	
	South	G (i). Grassland	+/- flat to downslope 0-5^0	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
20	**North**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	Downslope 0-5^0	0-31	BAL-FZ	11-<16	11m
		D. Scrub (potential) & non-veg. (dam)*	Downslope 0-5^0	31-100	BAL-12.5		
	South West	G (i). Grassland	Downslope 0-5^0	0-22	BAL-FZ	11<16	22m
		D. Scrub (potential)	Downslope 0-5^0	22-84	BAL-19	22-<31	
		G (i). Grassland	Upslope	84-100	BAL Low		
21	**North**	G (i). Grassland & non-veg. (road)	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	Downslope 5-7^0	0-31	BAL-FZ	13<19	13m
	West	G (i). Grassland	+/- flat to downslope 0-5^0	0-100	BAL-FZ	10<16	10m+

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
22	**North**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat to downslope 7^0	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	11-<16	11m
23	**North**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat to downslope 5^0	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11<16	11m
24	**North**	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland & low threat* & non-veg*	+/- flat to downslope 5^0	0-100	BAL-FZ	10-<14	10m
	West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11<16	11m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
25	**North West**	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	South West	G (i). Grassland	Downslope 0-5^0	0-22	BAL-FZ	11-<16	22m
		D. Scrub (potential) & non-veg. (dam)*	Downslope 0-5^0	22-100	BAL-19	22-<31	
26	**North West**	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	South West	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13<19	13m
27	**North West**	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<14	10m
	South West	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13<19	13m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

Table 1 continued

Lot	Direction	Vegetation Classification#	Effective Slope under vegetation	Approx. distance from IBA (m)	Current BAL rating	Separation distance for BAL-19 (m)	Prescribed minimum hazard management area
28	**North West**	G (i). Grassland & low threat* & non-veg*	+/-flat across slope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	Downslope 5-7^0	0-100	BAL-FZ	13-<19	13m
29	**North West**	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	North East	G (i). Grassland & low threat* & non-veg*	+/-flat to upslope	0-100	BAL-FZ	10-<14	10m
	South East	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
	South West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11-<16	11m
30	**North**	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	East	G (i). Grassland & low threat* & non-veg*	Upslope	0-100	BAL-FZ	10-<14	10m
	South	G (i). Grassland	+/- flat across slope	0-100	BAL-FZ	10-<16	10m
	South West	G (i). Grassland	Downslope 0-5^0	0-100	BAL-FZ	11<16	11m
	West	G (i). Grassland	Upslope	0-100	BAL-FZ	10-<14	10m

* Exclusion under AS3959-2009 2.2.3.2 # Classification as per AS3959-2009 amendment 3, Table 2.3 and Figures 2.4(A)-2.4(G)

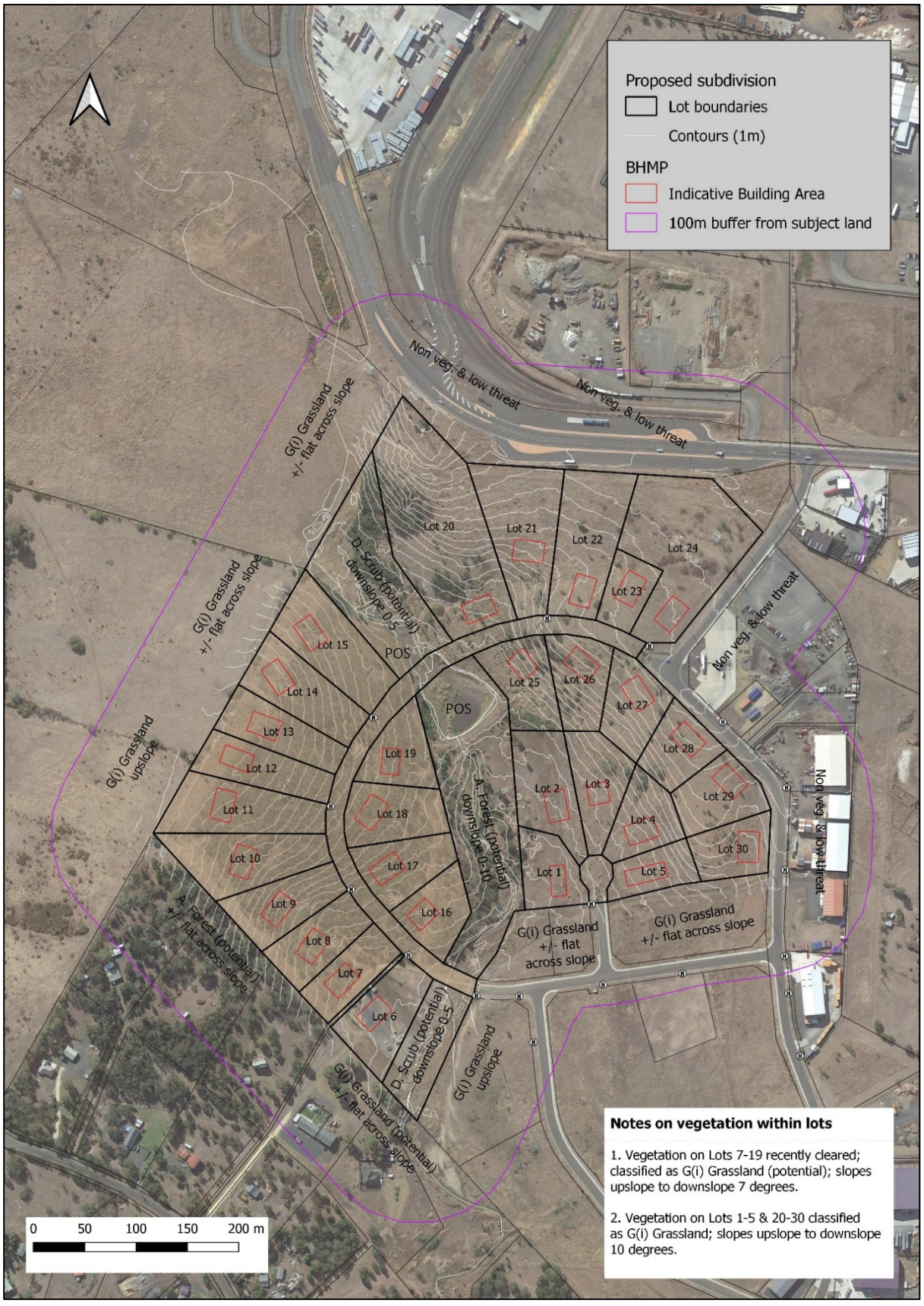


Figure 4 – Bushfire Hazard Assessment Map (Source: TheList 2020)

3. Bushfire Management Measures

The site is within the *Bushfire-Prone Areas* overlay of the *Brighton Interim Planning Scheme 2015* (the Scheme). The subject land is occupied by and surrounded by bushfire-prone vegetation as defined under AS3959, predominantly in the form of infrequently managed pasture and native grassland (*G(i) Grassland*).

The subject land is zoned *General Industrial* and is unlikely to support habitable buildings in future. Nevertheless, the requirements for subdivision in a bushfire-prone area apply to all zones and are set out under clause E1.6.1 of *E1.0 Bushfire-Prone Areas Code* (the Code). They include:

- provision of *Hazard Management Areas* (E1.6.1);
- access for fire-fighting (E1.6.2); and
- provision of water supply for fire-fighting purposes (E1.6.3).

The proposed subdivision must comply with the following clauses of the Code (shaded clauses in Table 2).

Table 2 – Compliance with E1.0

CLAUSE	ISSUE
E1.2	**Application of Code**
E1.3	Definition of terms in this Code
E1.4	Use or development exempt from this Code
E1.5	Use Standards
E1.5.1	Vulnerable Uses
E1.5.2	Hazardous Uses
E1.6	**Developments Standards**
E1.6.1	**Development Standard for Subdivision: Provision of hazard management areas (HMA) for habitable buildings**
E1.6.2	**Subdivision: Public and fire-fighting access**
E1.6.3	**Subdivision: Provision of water supply for fire-fighting purposes**

3.2 Hazard Management Areas

The objectives of providing *Hazard Management Areas* (HMAs) are:

- to facilitate an integrated approach between subdivision and subsequent building on a lot; and
- to provide for sufficient separation of building areas from bushfire-prone vegetation to reduce radiant heat levels, direct flame attack and ember attack at the building area.

HMAs provide cleared space between buildings and bushfire hazards. Any vegetation in this area needs to be maintained in a low fuel state to protect buildings from direct flame contact, ember attack and intense radiant heat, thereby allowing them to be defended from lower intensity bushfires.

Further information on the maintenance of 'defendable spaces' (which are equivalent to HMAs) are provided in the Tasmania Fire Service document: *Guidelines for Development in Bushfire Prone Areas of Tasmania (2005)*.

Requirements

The acceptable solutions under E1.6.1 A1 of the Code require that:

b) The proposed plan of subdivision: …

(ii) shows the building area for each lot; (and)

(iii) shows hazard management areas between bushfire-prone vegetation and each building area that have dimensions equal to, or greater than, the separation distances required for BAL 19 in Table 2.4.4 of AS3959; …

Compliance

- The bushfire hazard assessment (see Table 1 and Figure 4) indicates that all lots require HMAs to provide separation distances that will allow any future habitable buildings to meet the requirements of BAL-19 under *Table 2.4.4 of AS3959*.
- All lots can support *Building Areas* with separation distances from the lot boundaries that are sufficient for HMAs meeting the requirements of BAL-19 to be accommodated entirely within the lot boundaries.
- The *Bushfire Hazard Management Plan* (BHMP) at Attachment A shows *Indicative Building Areas* for all lots. Most lots have *Indicative Building Area*s 30mX20m in size, but site constraints have resulted in smaller *Indicative Building Area*s on several lots. Nevertheless, all *Indicative Building Area*s are larger than would generally be required to accommodate a single residence.
- The BHMP defines HMAs with sufficient separation distances from bushfire prone vegetation to allow any future habitable buildings to meet the requirements of BAL-19.

Maintenance of Hazard Management Areas

HMAs (as defined on the attached BHMP) must be established if and when any habitable buildings are constructed on lots arising from the subdivision and must be maintained for the life of the development.

To minimise bushfire hazard to future dwellings, HMAs must be maintained as low threat vegetation and/or non-vegetated land (as defined by Clause 2.2.3.2 of AS3959-2009). The need to maintain effective HMAs into the future must be considered when planting gardens and making landscaping choices associated with any residential occupation and use of the lots. An annual inspection and maintenance of HMAs should be conducted prior to the bushfire season or any other identified period of high fire risk and any flammable material such as leaves, litter, wood piles should be removed.

3.3 Public and Fire-fighting Access

The objectives for roads, property access and fire trails within a subdivision are:

- to allow safe access and egress for residents, fire fighters and emergency services personnel;
- to provide access to the bushfire-prone vegetation that allows both property to be defended when under bushfire attack and for hazard management works to be undertaken;
- to provide access to water supplies for fire appliances;
- that design and construction allow for fire appliances to be manoeuvred; and
- that design allows connectivity, and where needed, offers multiple evacuation points.

Requirements

Property access is not required to access a fire-fighting water point. The requirements for roads within a subdivision are detailed in E1.6.2 and Table E1 of the Code:

(b) A proposed plan of subdivision showing the layout of roads … is included in a bushfire hazard management plan that:

(i) demonstrates proposed roads will comply with Table E1...; and

(ii) is certified by the TFS or accredited person.

Current conditions

Existing roads required to service the subdivision (Glenstone Road, Strong St, Greenbanks Road and Lukaaarlia Drive) are all at least 7m wide and are compliant with the Code.

Compliance

- The attached BHMP shows the location and alignment of proposed new roads which are capable of being constructed compliant with Table E1, including a compliant cul-de-sac turning area design to the north of Lukaarlia Drive.
- At the time of construction, the developer must ensure that new roads are constructed compliant with Table E1 as outlined below.
- Unless the development standards in the zone require a higher standard, proposed new roads within the sub-division must meet the following standards:
    - two-wheel drive, all-weather construction;

- load capacity of at least 20t, including for bridges and culverts;
- minimum carriageway width of 7m (through road)/5.5m (dead-end or cul-de-sac road;
- minimum vertical clearance of 4m;
- minimum horizontal clearance of 2m from the edge of the carriageway;
- cross falls of less than 3 degrees (1:20 or 5%);
- maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads/ 10 degrees (1:5.5 or 18%) for unsealed roads; and
- curves have a minimum inner radius of 10m;
- dead-end and cul-de-sac roads are not more than 200m in length unless the carriageway is 7 metres in width;
- dead-end and cul-de-sac roads have a turning circle with a minimum 12m outer radius; and
- carriageways less than 7m wide have 'No Parking' zones on one side, indicated by a road sign that complies with *Australian Standards AS1743-2001 Road Signs-Specifications.*

3.4 Fire-fighting Water Supply

The objective in provision of water supply for fire-fighting purposes is that:

- adequate, accessible and reliable water supply for the purposes of fire-fighting can be demonstrated at the subdivision stage and allow for the protection of life and property associated with the subsequent use and development of bush fire-prone areas.

Requirements

The development occurs in an area serviced with reticulated water supply and all lots can be serviced by existing or new water hydrants. The requirements for provision of reticulated water supplies for fire-fighting purposes are detailed in E1.6.3 A1 and Table E4 of the Code.

The acceptable solutions under E1.6.3 A1 of the Code require that:

(b) a proposed plan of subdivision showing the location of fire hydrants, and building areas, is included in a bushfire hazard management plan approved by the TFS or accredited person as being compliant with Table E4.

Current conditions

There are existing compliant hydrants on the frontage to Strong St, Greenbanks Road and Lukaarlia Drive that can service some lots arising from the subdivision.

Compliance

- The attached BHMP shows *Existing hydrants* and *Indicative new hydrants* which are capable of servicing the subdivision, with no part of any *Indicative Building Area* more than 120m hose lay from a hydrant.

- At the time of installation, the developer must ensure that new reticulated water supply and hydrants comply with Table E4 as outlined below.
- Reticulated water supply servicing the subdivision must meet the following standards to comply with the Code.

A. Distance between building area to be protected and water supply

The following requirements apply:

a) the building area to be protected must be located within 120m of a fire hydrant; and

b) the distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.

B. Design criteria for fire hydrants

The following requirements apply:

a) fire hydrant system must be designed and constructed in accordance with *TasWater Supplement to Water Supply Code of Australia WSA 03 – 2011-3.1 MRWA 2nd Edition*; and

b) fire hydrants are not installed in parking areas.

C. Hardstand

A hardstand area for fire appliances must be:

a) no more than 3m from the hydrant, measured as a hose lay;

b) no closer than 6m from the building area to be protected;

c) a minimum width of 3m constructed to the same standard as the carriageway; and

d) connected to the property access by a carriageway equivalent to the standard of the property access.

3.5 Construction of Habitable Buildings

Given that the subject land is zoned *General Industrial*, it is unlikely that any habitable buildings will be constructed on the lots arising from the subdivision, but this report demonstrates the capacity for the lots to accommodate dwellings or other habitable structures.

The attached BHMP only certifies that a habitable building constructed within any of the *Indicative Building Areas* can achieve the separation distances from bushfire-prone vegetation required to allow construction to BAL-19. Habitable buildings constructed to BAL-19 may be located anywhere within the *Indicative Building Areas* and HMAs adjusted to match the actual building footprint, provided prescribed separation distances from bushfire-prone vegetation are maintained.

Pursuant to Section 11F (2) (a) of the *Tasmanian Building Act 2016 – Building Amendment (Bushfire-Prone Areas) Regulations 2016*, a BHMP undertaken for the purposes of a subdivision approval can be utilised to satisfy the bushfire planning requirements of a subsequent application to build on a lot arising from that subdivision, *"unless that bushfire hazard management plan is more than 6 years old."*

4. Conclusion

The *Bushfire Hazard Management Plan* at Attachment A demonstrates the capacity of the subdivision to comply with the Code and AS3959 in respect of (*Indicative) Building Areas*, *Provision of hazard management areas*, *Public and fire-fighting access* and *Provision of water supply for fire-fighting purposes.* As a result, the *Bushfire Hazard Management Plan* has been certified.

5. Glossary and Abbreviations

AS – Australian Standard

BAL – Bushfire Attack Level – a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared, and the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire (AS3959-2009).

BFP – Bush Fire Practitioner certified to undertake assessments of bushfire hazard and certify Bushfire Hazard Management Plans.

BHMP – Bushfire Hazard Management Plan – plan for individual house or subdivision identifying separation distances required between a dwelling(s) and bushfire prone vegetation based on the BAL for the site. The BHMP also indicates requirements for construction, property access and fire-fighting water.

Class 1a building – is a single dwelling being a detached house; or one of a group of attached dwellings being a town house, row house or the like (NCC 2016).

FDI – fire danger index – relates to the chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects (AS3959-2009).

ha – hectares; m – meters

HMA – Hazard Management Area – the area, between a habitable building or building area and the bushfire-prone vegetation, which provides access to a fire front for fire-fighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire.

6. References

AS3959-2009. *Australian Standard for Construction of buildings in bushfire-prone areas.* SAI Global Limited Sydney, NSW Australia.

Brighton Interim Planning Scheme 2015.
http://www.iplan.tas.gov.au/pages/plan/book.aspx?exhibit=sorips

Building Act 2016. The State of Tasmania Department of Premier and Cabinet.
https://www.legislation.tas.gov.au/view/html/inforce/current/act-2016-025

Building Act 2016. Director's Determination – Requirements for Building in a Bushfire-Prone Area DOC/17/62962. Director of Building Control
https://www.cbos.tas.gov.au/__data/assets/pdf_file/0011/405011/Directors-Determination-Requirements-building-bushfire-prone-areas.pdf

Building Regulations 2016. The State of Tasmania Department of Premier and Cabinet.
https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2016-110.

Guidelines for Development in Bushfire prone Areas of Tasmania. Living with Fire in Tasmania. Bushfire Planning Group of Tasmania Fire Service, Tasmania (2005).

LISTMap 2020. Land Information System Tasmania, Tasmania Government.
https://maps.thelist.tas.gov.au/listmap/app/list/map

National Construction Code 2016 Vol Two, Building Code of Australia Class 1 and Class 10 Buildings. Australian Building Codes Board, Australia (2016).

APPENDIX 1 – Illustrative photos of vegetation

Photo 1: Pasture (G(i) Grassland) south of the subdivision (foreground); wattle dominated scrub (A. Forest potential) in the proposed public open space lot (mid-ground at right) and wattle dominated scrub (A. Forest potential) on adjoining property south of Lots 7-10 (background)

Photo 2: Pasture (G(i) Grassland) on Lots 1-5 (foreground); wattle dominated scrub (A. Forest potential) in the proposed public open space lot (mid-ground) and wattle dominated scrub (A. Forest potential) on adjoining properties south of Lots 7-10 (background at left)

Photo 3: Native grassland dominated by kangaroo grass with emergent native box on Lots 29-30 (G(i) Grassland)

Photo 4: Pasture and native grassland on on Lots 27-30 (G(i) Grassland)

Photo 5: Pasture (G(i) Grassland) on Lots 25-26 (foreground); wattle dominated scrub (A. Forest potential) in the proposed public open space lot (mid-ground at left) and recently cleared land (G(i) Grassland potential) on Lots 11-15 (background at right)

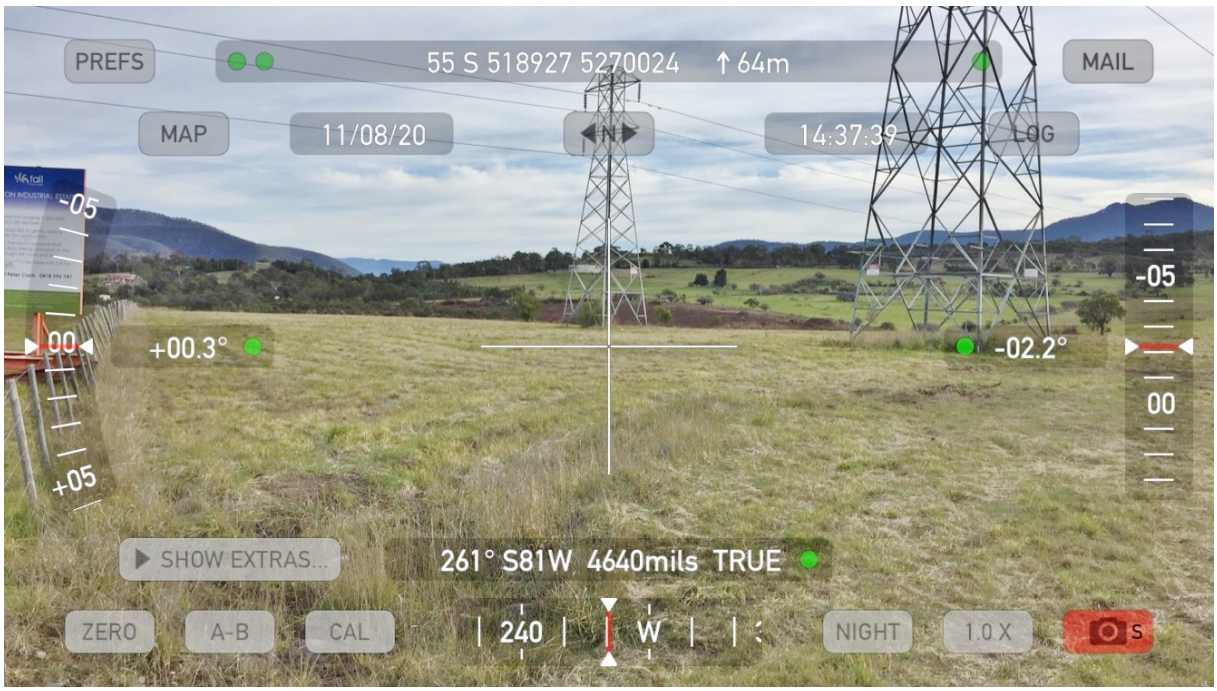


Photo 6: Pasture (G(i) Grassland) and high voltage transmission lines on Lots 22-24

Photo 7: Pasture (G(i) Grassland) on Lots 20-24

Photo 8: Looking south across pasture (G(i) Grassland) on eastern side of proposed subdivision, with creek on Ashburton Creek in proposed public open space lot at centre right

Photo 9: Looking south across pasture (G(i) Grassland) and recently cleared land (G(i) Grassland potential) on western side of proposed subdivision

Photo 10: Weedy grassland along Ashburton Creek in the proposed public open space lot north of the dam (D. Scrub potential)

Photo 11: Wattle dominated scrub (A. Forest potential) in proposed public open space lot east of Lots 16-18 (vegetation at right has now been cleared)

Photo 12: Recently cleared land on Lots 11-14 & 17-19 (G(i) Grassland potential) and wattle dominated scrub (A. Forest potential) in proposed public open space lot (mid-ground

Photo 13: Looking north across recently cleared land (G(I) Grassland) from the south-west corner of the subject land

Photo 14: Looking east from the south-west corner of the subject land with recently cleared land (G(I) Grassland) at left and wattle dominated scrub (A. Forest potential) on adjoining properties at right

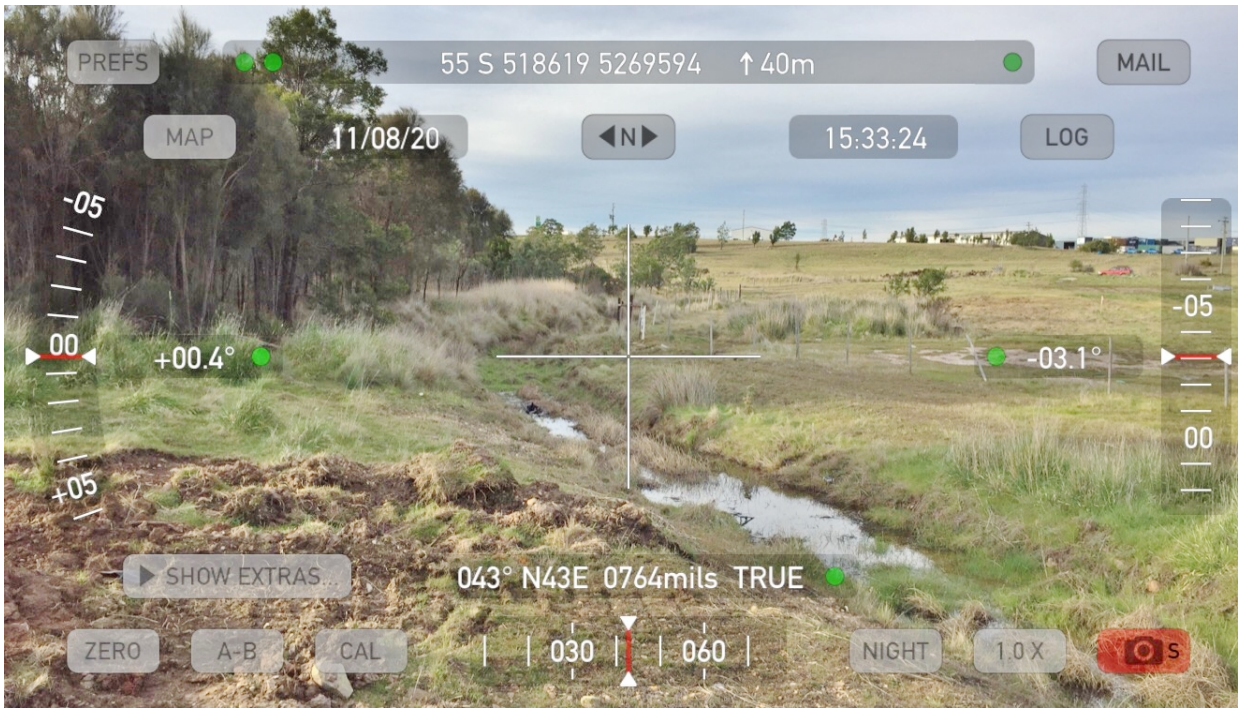


Photo 15: Looking north along Ashburton Creek in th eproposed public open space lot with wattle dominated scrub (A. Forest potential) at left

ATTACHMENT 1 – Bushfire Hazard Management Plan – December 2020

This plan is to be printed at A3 and read in conjunction with the preceding Bushfire Hazard Report (Enviro-dynamics December 2020).

For: Denise Sutcliffe P/L & Sutcliffe Earthmoving P/L

Title: CT 176402/1

December 2020 Assessment #: 0275

enviro-dynamics
environmental solutions for a changing world

Andy Welling – Enviro-dynamics Pty Ltd
ACCREDITED BUSHFIRE ASSESSOR (BFP-135)
CERTIFICATE No: ED0275 DATE: 21/12/20
Signed:

Hazard Management Areas (HMAs)

- Numbers within HMAs indicate the minimum separation distances (in metres) for *Indicative Building Areas* to meet the requirements of BAL-19.
- HMAs must be established if and when any habitable buildings are constructed on a lot and must be maintained as 'low threat vegetation' or 'non-vegetated land' (as defined by Clause 2.2.3.2 of AS3959) for the life of the development.
- No trees should overhang dwellings and trees should ideally be sited 1.5 times their mature height away from dwellings.
- Trees and shrubs should be separated to create discontinuous 'clumps' and a minimum 20m separation should be maintained between clumps.
- A minimum 2m horizontal separation should be maintained between tree canopies and low branches should be removed to create a minimum 2m vertical separation between tree canopy and underlying shrubs or ground cover.
- Grassland, pasture and lawn must be kept short (less than 100mm).
- Fine fuels such as leaves, bark and twigs should be removed from the ground periodically, particularly leading into summer or any other identified period of high fire risk.
- Flammable vegetation should not be retained or planted under or directly adjacent to dwellings (particularly decks, flammable cladding and glazed elements) or in corridors which can act as a 'wick' to channel fire to dwellings.
- Flammable material such as firewood, building materials, organic mulch and fuel should not be stored under decks or dwellings nor directly adjacent to dwellings.

Public and Fire-fighting Access

- Existing roads are at least 7m wide and are compliant with E1.0 *Bushfire Prone Areas Code* (the Code).
- This plan shows proposed new roading to service the subdivision which is 7m wide and is capable of being constructed compliant with the Code. It features a new compliant cul-de-sac north of Lukaarlia Drive.
- At the time of construction, the developer must ensure that new roads comply with Table E1 of the Code.

Reticulated Water Supply for Fire-fighting

- The plan shows *Existing hydrants* and *Indicative new hydrants*, with no part of any *Indicative Building Area* more than 120m hose lay from a hydrant.
- At the time of installation, the developer must ensure that new hydrants comply with Table E4 of the Code.

Construction Standards

- This plan only certifies that any future habitable buildings constructed within *Indicative Building Areas* can achieve the separation distance required to allow construction to BAL-19.

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE[1] UNDER S51(2)(d) *LAND USE PLANNING AND APPROVALS ACT 1993*

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:	Lot 1 Greenbanks Rd Bridgewater 7030
Certificate of Title / PID:	176402/1

2. Proposed Use or Development

Description of proposed Use and Development:	30 lot subdivision
Applicable Planning Scheme:	*Brighton Interim Planning Scheme 2015*

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Bushfire Hazard Report – for proposed 30 lot subdivision at Greenbanks Rd. Bridgewater	Enviro-dynamics	December 2020	1
Bushfire Hazard Management Plan – for proposed 30 lot subdivision at Greenbanks Rd. Bridgewater	Enviro-dynamics	December 2020	1

[1] This document is the approved form of certification for this purpose and must not be altered from its original form.

4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

☐	**E1.4 / C13.4 – Use or development exempt from this Code**	
	Compliance test	**Compliance Requirement**
☐	E1.4(a) / C13.4.1(a)	Insufficient increase in risk

☐	**E1.5.1 / C13.5.1 – Vulnerable Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.1 P1 / C13.5.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.1 A2 / C13.5.1 A2	Emergency management strategy
☐	E1.5.1 A3 / C13.5.1 A2	Bushfire hazard management plan

☐	**E1.5.2 / C13.5.2 – Hazardous Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.2 P1 / C13.5.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.2 A2 / C13.5.2 A2	Emergency management strategy
☐	E1.5.2 A3 / C13.5.2 A3	Bushfire hazard management plan

☐	**E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.1 P1 / C13.6.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.1 A1 (a) / C13.6.1 A1(a)	Insufficient increase in risk
☒	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as ‘balance’)
☐	E1.6.1 A1(c) / C13.6.1 A1(c)	Consent for Part 5 Agreement

☐	**E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.2 P1 / C13.6.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk
☒	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

☐	**E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Insufficient increase in risk
☒	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply complies with relevant Table
☐	E1.6.3 A1 (c) / C13.6.3 A1 (c)	Water supply consistent with the objective
☐	E1.6.3 A2 (a) / C13.6.3 A2 (a)	Insufficient increase in risk
☐	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply complies with relevant Table
☐	E1.6.3 A2 (c) / C13.6.3 A2 (c)	Static water supply consistent with the objective

5. Bushfire Hazard Practitioner

Name:	Andrew Welling	**Phone No:**	0400151205
Postal Address:	16 Collins Street Hobart	**Email Address:**	andy.welling@enviro-dynamics.com.au
Accreditation No:	BFP – 135	**Scope:**	1, 2, 3A, 3B, 3C

6. Certification

I certify that in accordance with the authority given under Part 4A of the *Fire Service Act 1979* that the proposed use and development:

☐ Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or

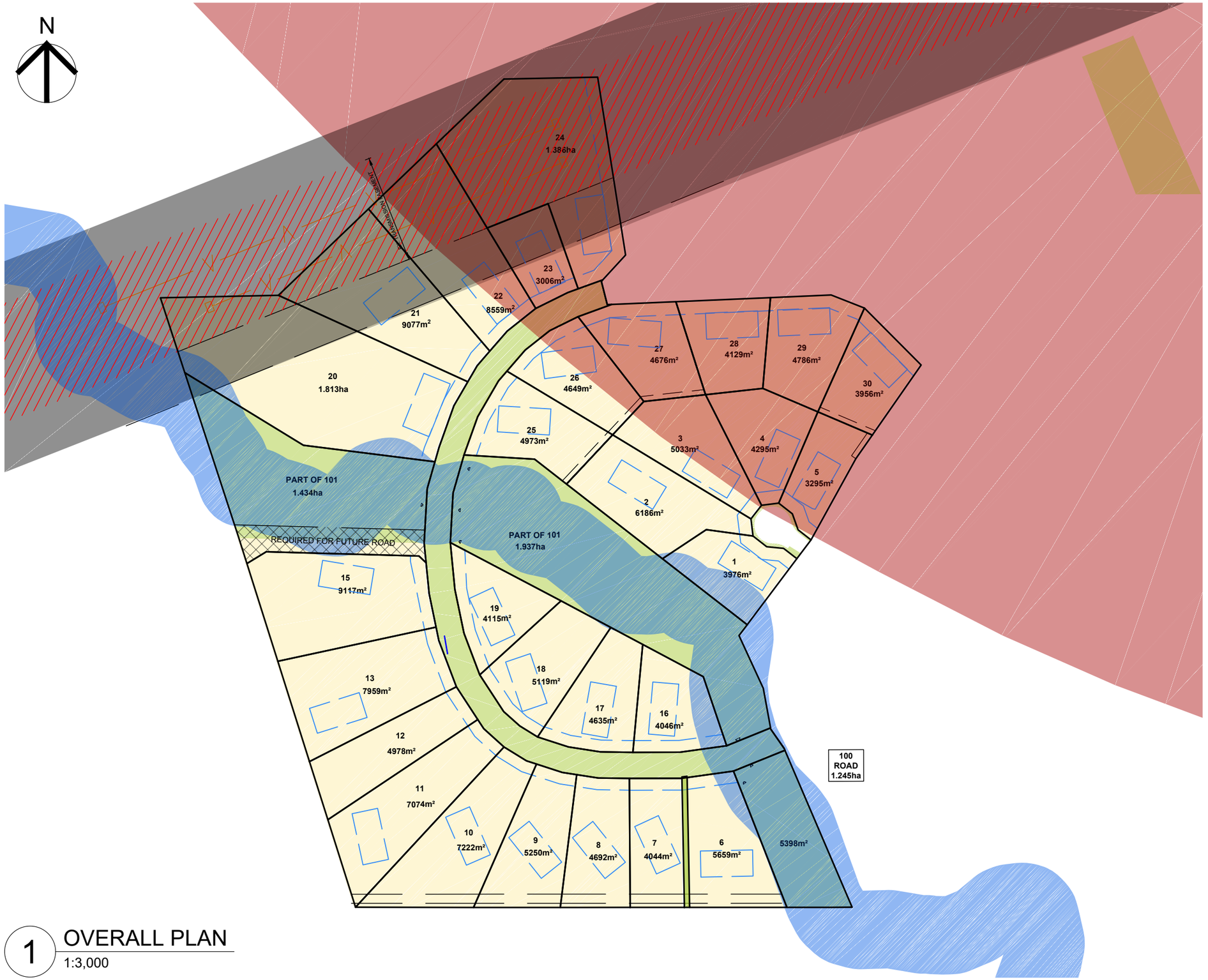
☒ The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate.

Signed:
certifier

Name: Andrew Welling **Date:** 21/12/2020

Certificate Number: BP0275

(for Practitioner Use only)



1 OVERALL PLAN
1:3,000

CONTENTS

PROPERTY DETAILS

Owners
Denise Sutcliffe PTY LTD & Sutcliffe Earthmoving PTY LTD

Title References
FR 176402/1

Address
Lot 1 Greenbanks Road, Bridgewater

Council
Brighton Council

Planning scheme
Brighton Interim Planning Scheme 2015
Zone
25.0 General Industrial

Zone Overlay
117.Attenuation Area; Industrial precinct & Bridgewater quarry,
117. Waterway and Coastal Protection Area
117. Electricity Transmission Infrastructure Protection

Map reference
'New Norfolk 15' 5026-15

PID
9633391,
Point of interest GDA94 MGA55
518650E, 5269840N

Schedule of Easements
Existing Easements to be carried forward.
Pipeline and Service Easements and Drainage easements as required and Nil.

NOTES

1. This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and areas are subject to final survey.

2. The Relevant Planning Scheme Overlays are not shown on these plans for plan clarity.

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

SCALE: 0 12 30 60 150m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
21 JUNE 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
for PAUL SUTCLIFFE

PDA Surveyors Incorporating WALTER SURVEYS
Surveying, Engineering & Planning
ABN 71 217 806 325
127 Bathurst Street
Hobart, Tasmania, 7000
www.pda.com.au
Also at: Kingston, Launceston & Burnie
PHONE: +61 03 6234 3217
FAX: +61 03 6234 5085
EMAIL: pda.hbt@pda.com.au

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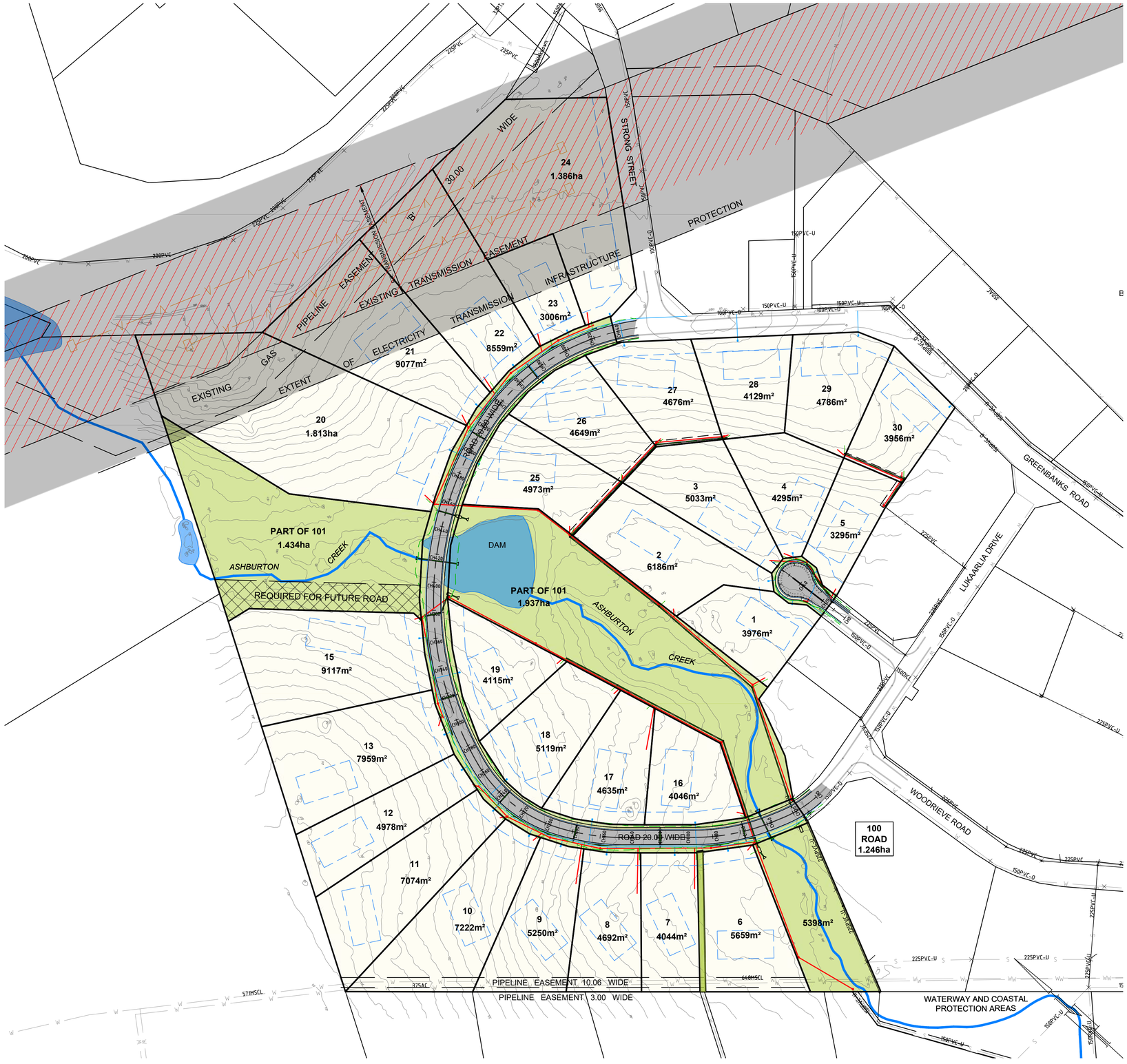
45549CT - 2	



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A	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	R.D	17/06/2021	C.T

NOTES:

SURVEYOR	SURVEYING JOB No.
--	45549CT

DRAWN	DESIGNED	CHECKED
BL	BL	MW

DATE
18 FEB 2021

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
OVERALL CONCEPT SERVICING PLAN

PDA Surveyors Incorporating WALTER SURVEYS
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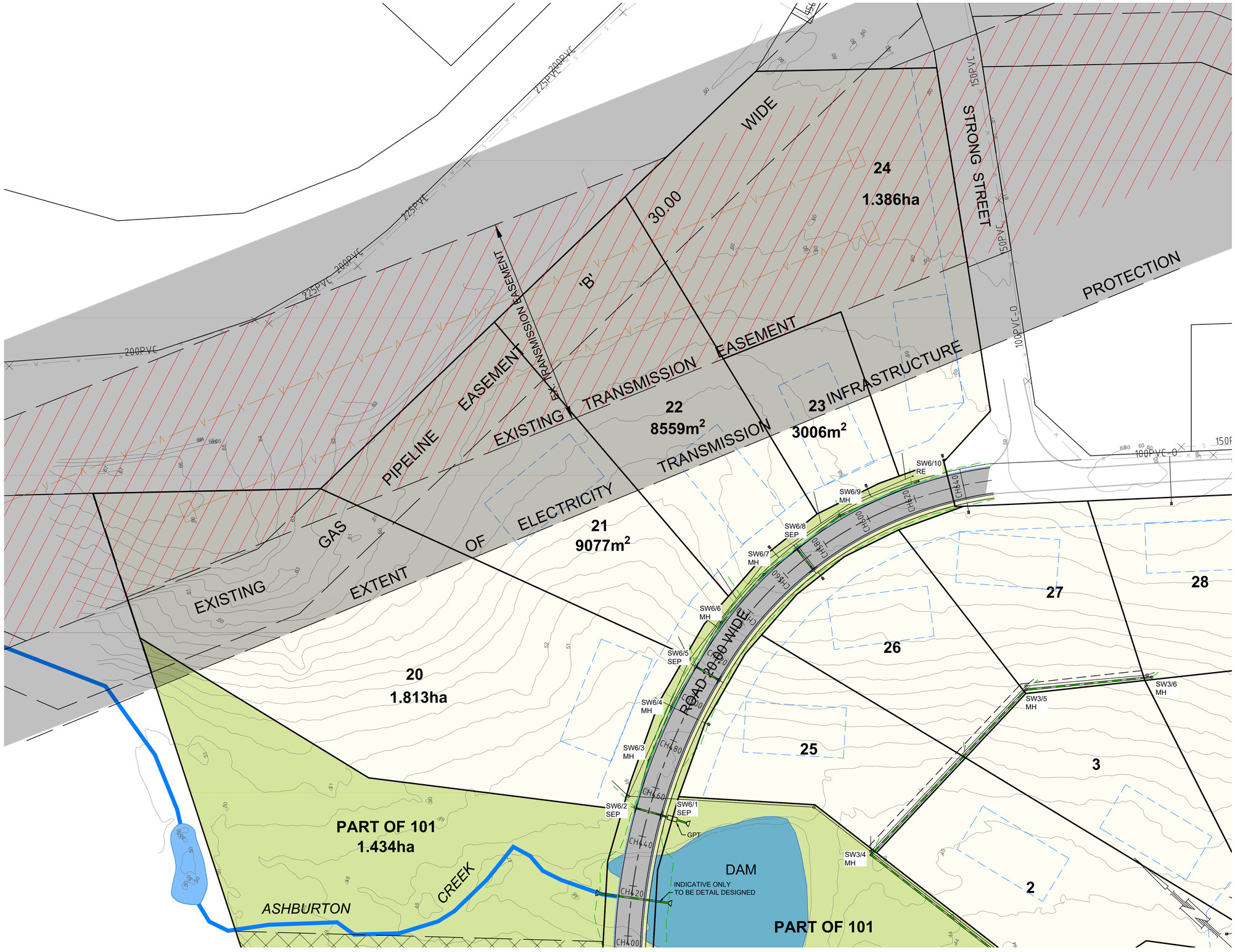

LEGEND:

- NEW STORMWATER
- NEW SEWER
- NEW WATER
- SW — EX. STORMWATER
- S — EX. SEWER
- W — EX. WATER
- OVERHEAD ELECTRICAL
- EX. FENCE
- TOP/TOE BANK
- EP — EX. ELECTRICITY POLE
- RE — ROD EYE
- SEP — SIDE ENTRY PIT
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- ASPHALT
- CONCRETE

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DRAWN	DESIGNED	CHECKED
BL	BL	MW

DATE: 18 FEB 2021

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT STORMWATER PLAN 1/3

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EMAIL: pda.hbt@pda.com.au

SCALE	PAPER	
1 : 750	(A1)	
JOB NUMBER	DRG	REV
45549CT	11A	A

LEGEND:

- NEW STORMWATER
- NEW SEWER
- NEW WATER
- EX. STORMWATER (SW)
- EX. SEWER (S)
- EX. WATER (W)
- OVERHEAD ELECTRICAL
- EX. FENCE
- TOP/TOE BANK
- EP — EX. ELECTRICITY POLE
- RE — ROD EYE
- SEP — SIDE ENTRY PIT
- MH — MANHOLE
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--	45549CT

DRAWN	DESIGNED	CHECKED
BL	BL	MW

DATE: 18 FEB 2021

PAUL SUTCLIFFE
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LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT STORMWATER PLAN 2/3

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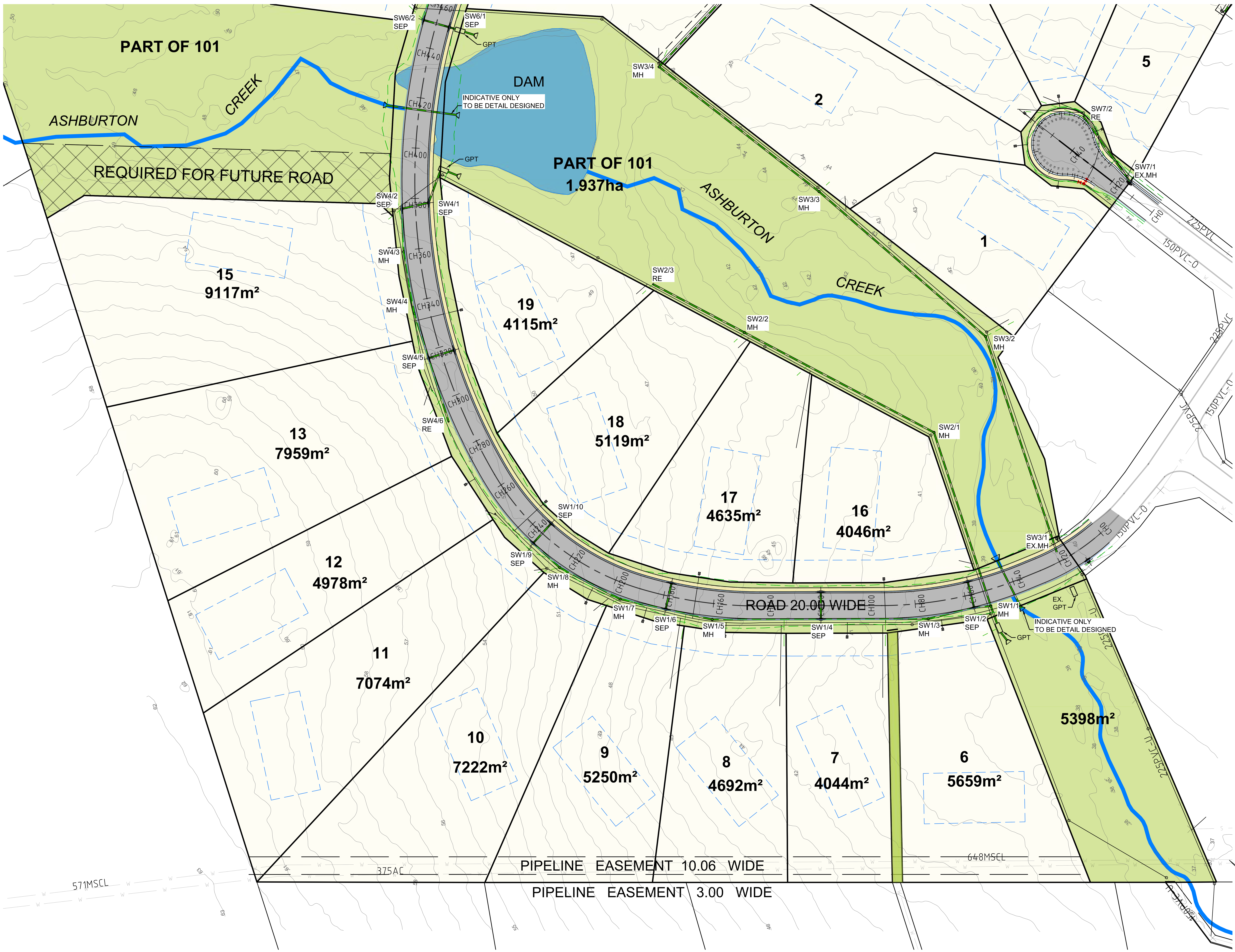

LEGEND:

- NEW STORMWATER
- NEW SEWER
- NEW WATER
- SW — EX. STORMWATER
- S — EX. SEWER
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BL	BL	MW
DATE		
18 FEB 2021		

PAUL SUTCLIFFE
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LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT STORMWATER PLAN 3/3

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SCALE	PAPER	
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JOB NUMBER	DRG	REV
45549CT	11C	A

LEGEND:

NEW STORMWATER
NEW SEWER
NEW WATER
SW EX. STORMWATER
S EX. SEWER
W EX. WATER
OVERHEAD ELECTRICAL
EX. FENCE
TOP/TOE BANK
EP EX. ELECTRICITY POLE
RE ROD EYE
SEP SIDE ENTRY PIT
MH MANHOLE

PROPOSED EASEMENT
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BL	BL	MW
DATE 18 FEB 2021		

PAUL SUTCLIFFE
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LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT SEWER PLAN

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SCALE	PAPER	
1 : 1000	(A1)	
JOB NUMBER	DRG	REV
45549CT	12	A

NOTES:
WATER CONNECTIONS TO EACH LOT ARE INDICATIVE ONLY TO SHOW ALL CAN BE SERVICED
NOT REQUIRED TO SHOW ON DESIGN PLANS FOR AN INDUSTRIAL SUBDIVISION

EXISTING GAS EXTENT OF ELECTRICITY EASEMENT
PIPELINE EASEMENT
EXISTING TRANSMISSION EASEMENT
TRANSMISSION INFRASTRUCTURE

ROAD 20.00 WIDE
GREENBANKS ROAD
LUKAARLIA DRIVE
WOODRIEVE ROAD

20 1.813ha
21 9077m²
22 8559m²
23 3006m²
26 4649m²
27 4676m²
28 4129m²
29 4786m²
30 3956m²
25 4973m²
3 5033m²
4 4295m²
5 3295m²
2 6186m²
1 3976m²
15 9117m²
19 4115m²
18 5119m²
17 4635m²
16 4046m²
13 7959m²
12 4978m²
11 7074m²
10 7222m²
9 5250m²
8 4692m²
7 4044m²
6 5659m²
5398m²
100 ROAD 1.246ha

PART OF 101 1.434ha
PART OF 101 1.937ha
REQUIRED FOR FUTURE ROAD
DAM
CREEK
ASHBURTON

LEGEND:
- NEW STORMWATER
- NEW SEWER
- NEW WATER
- SW EX. STORMWATER
- S EX. SEWER
- W EX. WATER
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DRAWN: BL	DESIGNED: BL
CHECKED: MW	
DATE: 18 FEB 2021	

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT WATER PLAN

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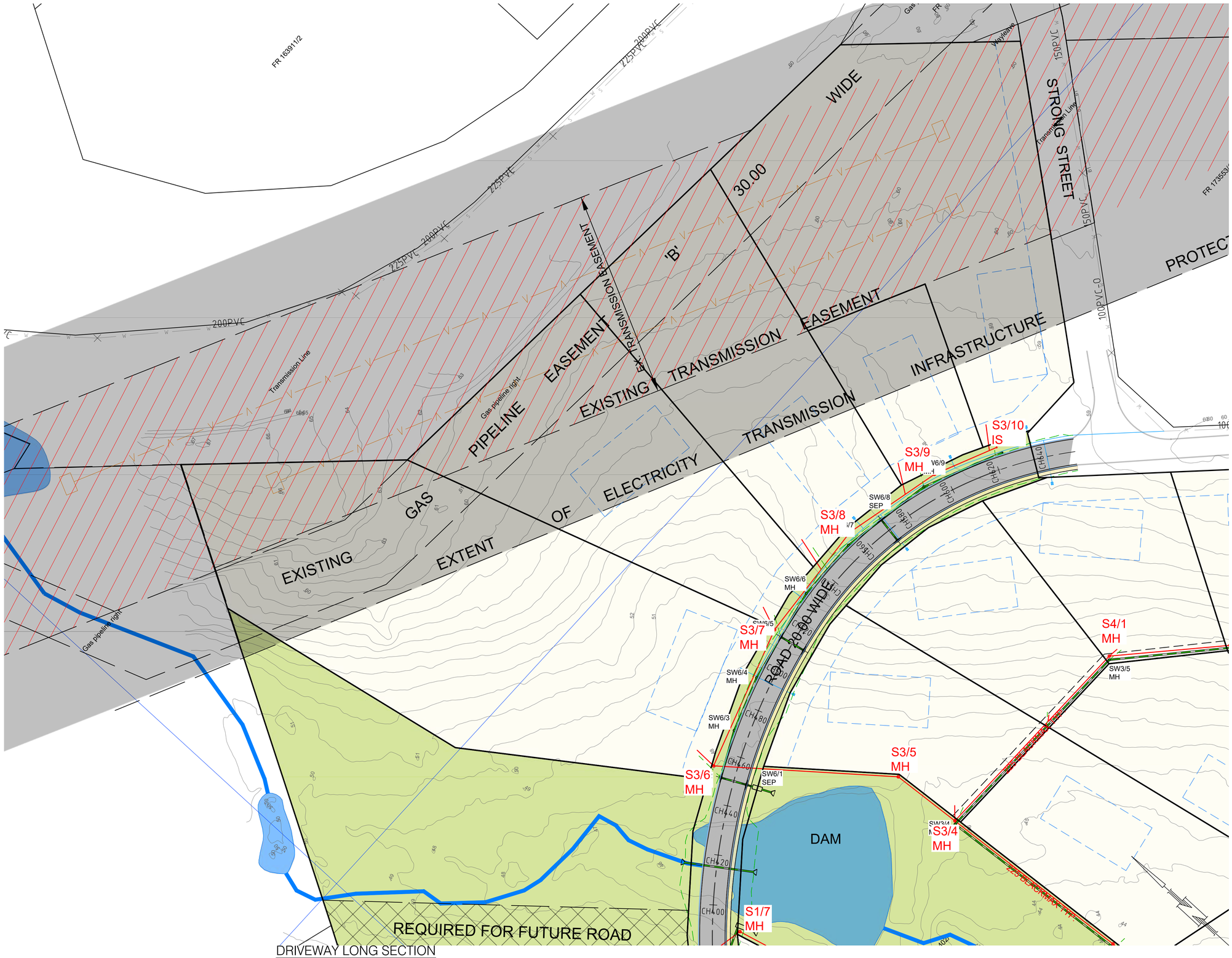

DRIVEWAY LONG SECTION
SCALE 1:100 (A1)

LEGEND:

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NOTES:

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--	45549CT

DRAWN	DESIGNED	CHECKED
BL	BL	MW

DATE: 18 FEB 2021

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
DRIVEWAY SECTION A & LONG SECTION

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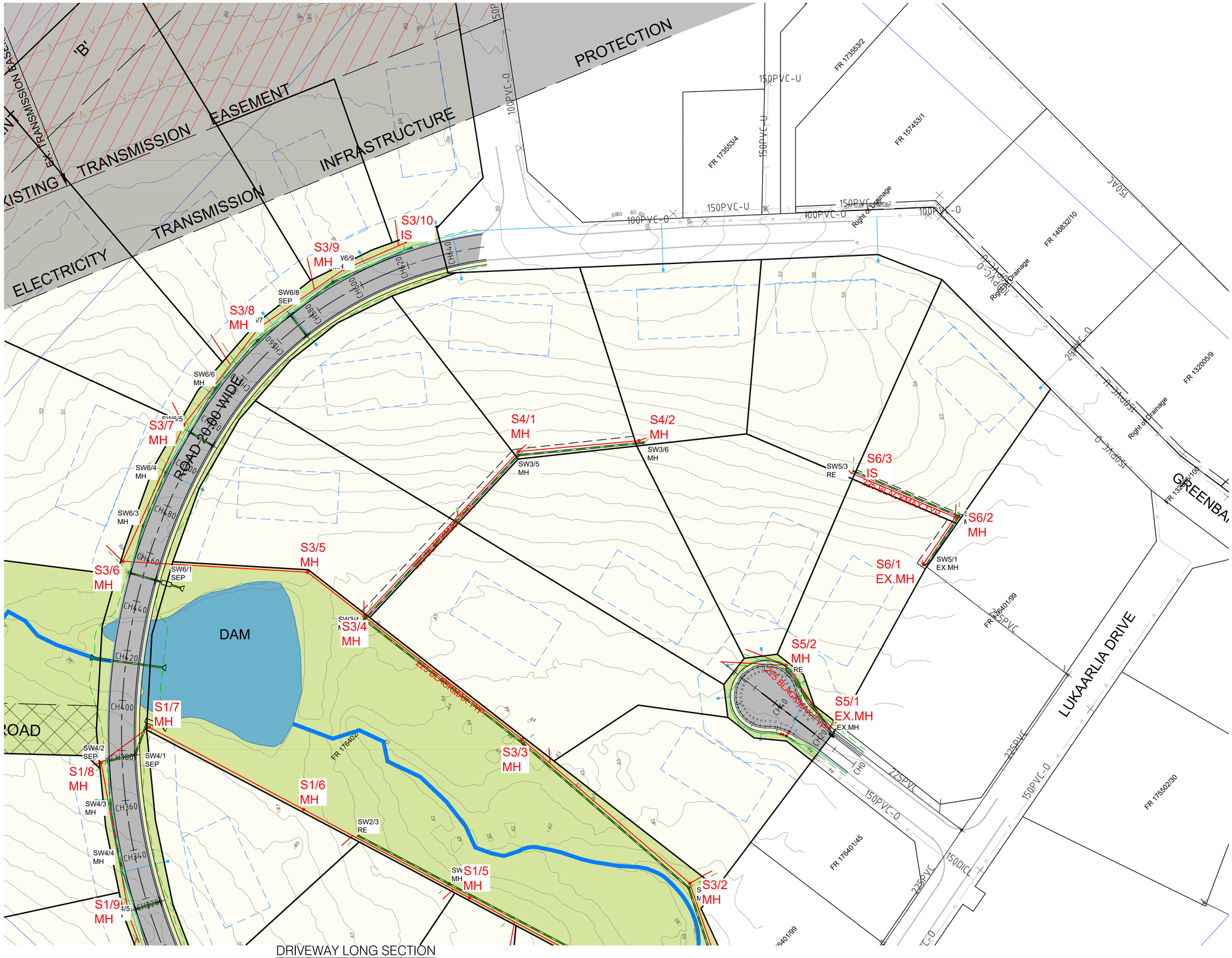

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SCALE 1:100 (A1)

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PAUL SUTCLIFFE
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DRIVEWAY SECTION A & LONG SECTION

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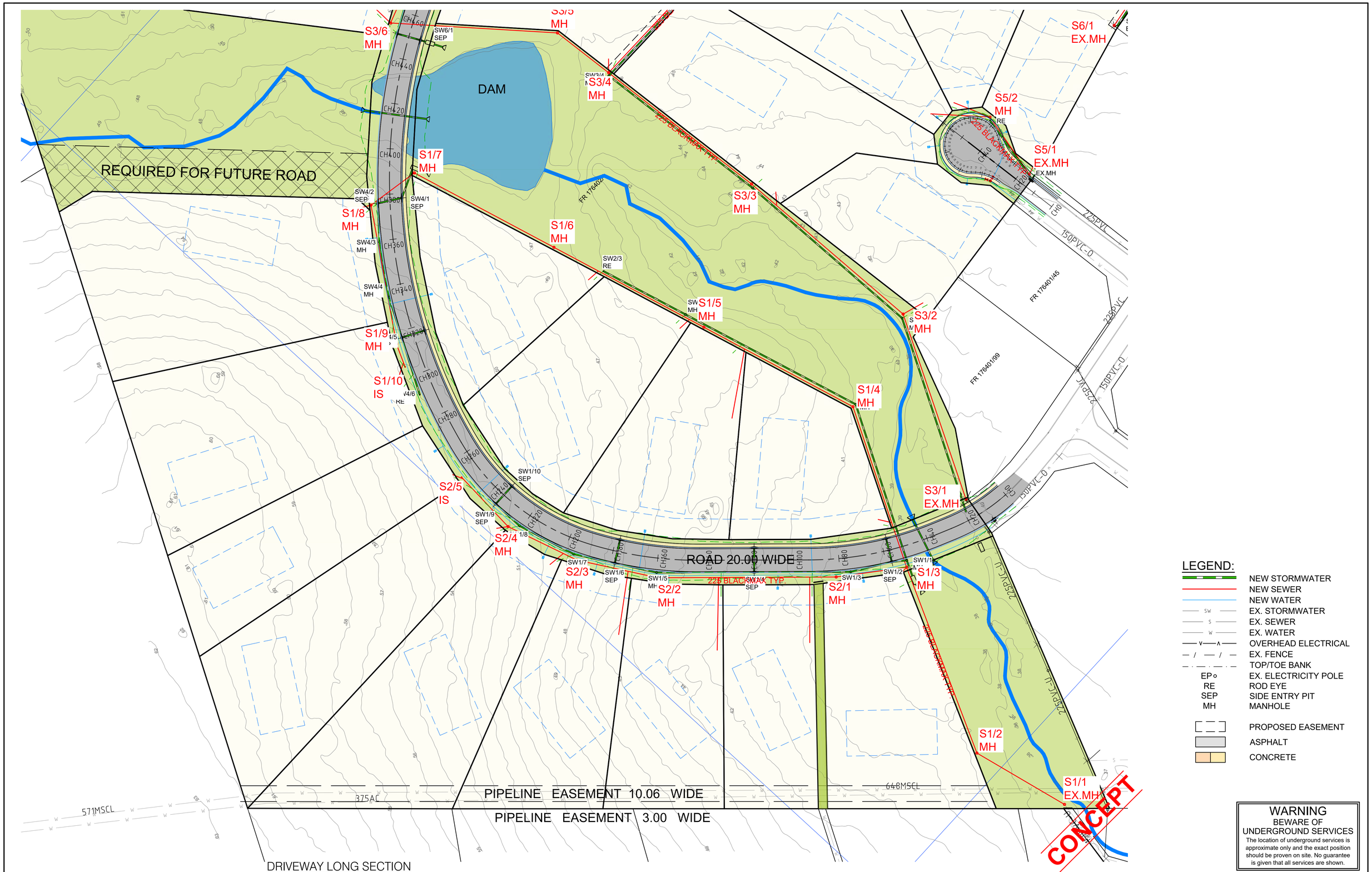

DRIVEWAY LONG SECTION
SCALE 1:100 (A1)

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NOTES:

SURVEYOR: --	SURVEYING JOB No.: 45549CT	
DRAWN: BL	DESIGNED: BL	CHECKED: MW
DATE: 18 FEB 2021		

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
DRIVEWAY SECTION A & LONG SECTION

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SCALE	PAPER
1 : 750	(A1)
JOB NUMBER	DRG / REV
45549CT	13 / A

PAVEMENT DESIGN

50 ASPHALT
150 X 20 FCR BASE
250 X 40 FCR SUB-BASE
300 CAPPING LAYER (SUBGRADE IMPROVEMENT) COMPACTED TO 95% MDD - MIN CBR = 6
ON APPROVED SUBGRADE

(DESIGN CBR = 2.5
ESA FOR INDUSTRIAL ROAD = 1 X 10^7
20 YEAR DESIGN LIFE)
SUBGRADE TO BE TESTED AT TIME OF FORMATION
FOR CBR LESS THAN 2.5 - AMENDED PAVEMENT DESIGN TO BE SUBMITTED TO COUNCIL FOR APPROVAL

FOOTPATH
150 CONCRETE (SL82 CENTRAL)
100 X 20 FCR BASE
APPROVED SUB-GRADE

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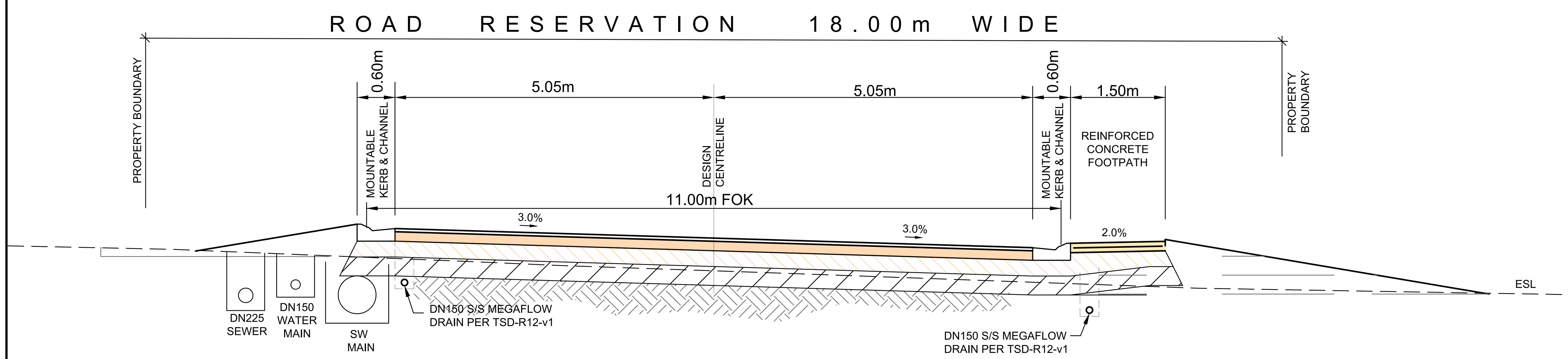
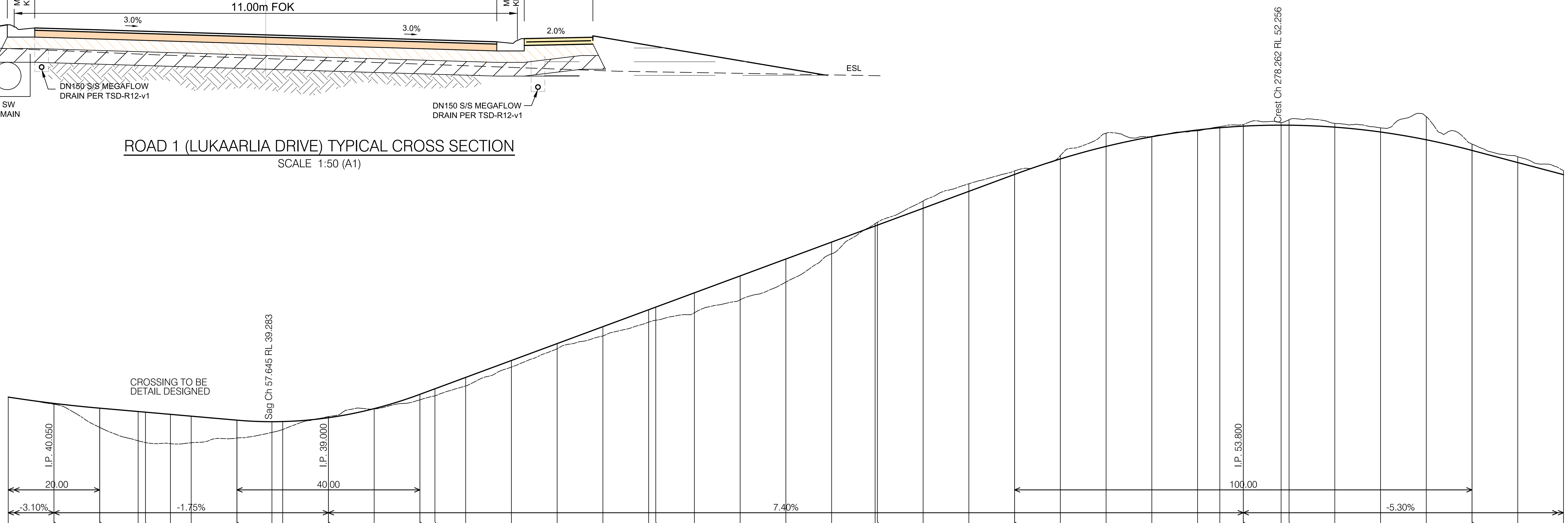


ROAD 1 (LUKAARLIA DRIVE) TYPICAL CROSS SECTION
SCALE 1:50 (A1)



CHAINAGE	CUT / FILL	DESIGN ROAD CENTRELINE	EXISTING SURFACE
0.000	-0.003	40.360	40.363
9.994	+0.037	40.084	40.047
10.000	+0.038	40.084	40.046
19.994	+0.840	39.875	39.035
20.000	+0.841	39.875	39.034
28.401	+1.279	39.728	38.449
30.000	+1.330	39.700	38.370
35.455	+1.281	39.604	38.323
40.000	+1.163	39.525	38.362
49.994	+0.782	39.350	38.568
50.000	+0.782	39.350	38.568
57.645	+0.468	39.283	38.815
60.000	+0.348	39.289	38.941
69.994	-0.051	39.458	39.509
70.000	-0.052	39.458	39.510
80.000	+0.012	39.855	39.843
89.994	+0.242	40.480	40.238
90.000	+0.241	40.480	40.239
93.278	+0.309	40.723	40.414
100.000	+0.375	41.220	40.845
110.000	+0.287	41.960	41.673
120.000	+0.223	42.700	42.477
130.000	+0.404	43.440	43.036
140.000	+0.542	44.180	43.638
141.557	+0.573	44.296	43.723
150.000	+0.871	44.920	44.049
160.000	+1.045	45.660	44.615
170.000	+1.008	46.400	45.392
180.000	+0.513	47.140	46.627
189.508	-0.102	47.844	47.946
190.000	-0.127	47.880	48.007
200.000	-0.319	48.620	48.939
210.000	-0.334	49.360	49.694
219.994	-0.153	50.100	50.253
220.000	-0.154	50.100	50.254
230.000	-0.152	50.777	50.929
240.000	-0.580	51.326	51.906
250.000	-0.017	51.749	51.766
260.000	+0.035	52.044	52.009
264.861	-0.045	52.142	52.187
269.994	-0.069	52.212	52.281
270.000	-0.069	52.213	52.282
278.262	-0.117	52.256	52.373
280.000	-0.241	52.254	52.495
290.000	-0.166	52.168	52.334
300.000	-0.184	51.956	52.140
310.000	-1.013	51.616	52.629
319.994	-0.278	51.150	51.428
320.000	-0.277	51.150	51.427
330.000	-0.255	50.620	50.875
340.000	-0.172	50.090	50.262

HORIZONTAL GEOMETRY:
0.000 0.000
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28.401 35.455 L=7.055 B=295°13'02"
L=57.823 R=150.000
93.278
L=48.279 B=317°18'14"
141.557
L=47.951 R=165.000
189.508
L=75.353 R=100.000
264.861
L=257.085 R=230.812

ROAD 1 (LUKAARLIA DRIVE) LONG SECTION 1/2
SCALE HOR 1:500 VER 1:100 (A1)

REV	AMENDMENTS	DRAWN	DATE	APPR.
A	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	R.D	17/06/2021	C.T

NOTES:

SURVEYOR: --
SURVEYING JOB No.: 45549CT
DRAWN: BL
DESIGNED: BL
CHECKED: MW
DATE: 18 FEB 2021

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT ROAD 1 LONG SECTION 1/2

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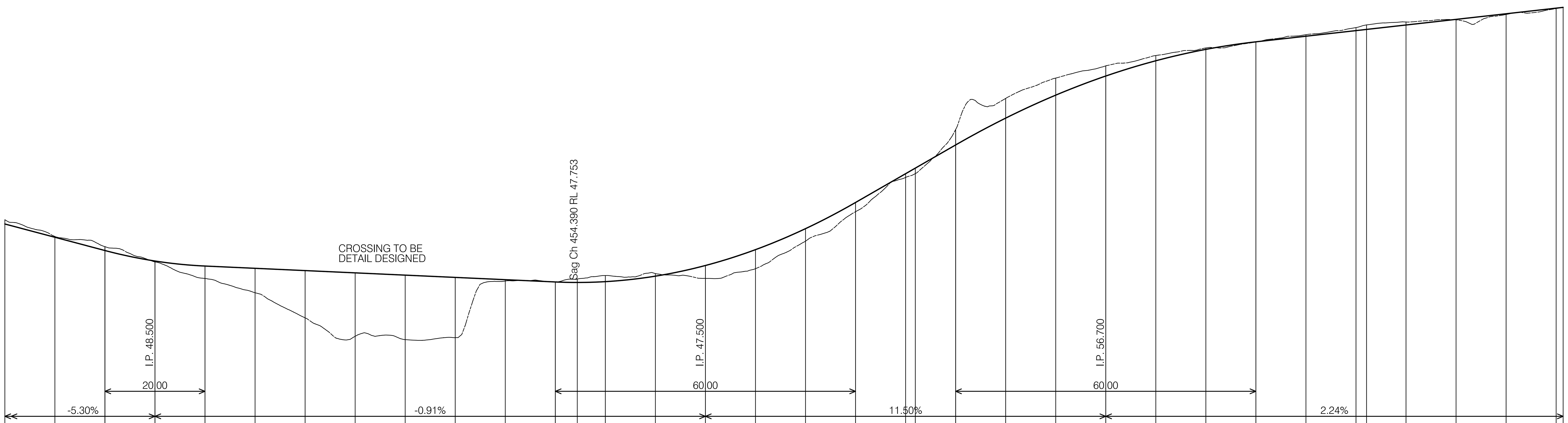
SCALE: 1 : 500
PAPER: (A1)
JOB NUMBER: 45549CT
DRG: 14
REV: A

WARNING
BEWARE OF
UNDERGROUND SERVICES
The location of underground services is approximate only and the exact position should be proven on site. No guarantee is given that all services are shown.



CHAINAGE	EXISTING SURFACE	DESIGN ROAD CENTRELINE	CUT / FILL
340.000	50.262	50.090	-0.172
350.000	49.591	49.560	-0.031
359.994	49.186	49.030	-0.156
360.000	49.186	49.030	-0.156
369.994	48.572	48.610	+0.038
370.000	48.572	48.610	+0.038
379.994	47.912	48.409	+0.497
380.000	47.912	48.409	+0.497
390.000	47.342	48.318	+0.976
400.000	46.338	48.227	+1.889
410.000	45.599	48.136	+2.537
420.000	45.468	48.045	+2.577
430.000	45.546	47.954	+2.408
440.000	47.808	47.864	+0.056
449.994	47.781	47.773	-0.008
450.000	47.781	47.773	-0.008
454.390	47.889	47.753	-0.136
460.000	48.031	47.785	-0.246
470.000	48.108	48.005	-0.103
479.994	47.915	48.431	+0.516
480.000	47.915	48.431	+0.516
490.000	48.304	49.064	+0.760
500.000	49.404	49.904	+0.500
509.994	50.581	50.950	+0.369
510.000	50.582	50.951	+0.369
520.000	51.952	52.101	+0.149
521.945	52.105	52.324	+0.219
529.994	53.867	53.250	-0.617
530.000	53.869	53.251	-0.618
540.000	55.112	54.323	-0.789
550.000	55.925	55.242	-0.683
559.994	56.412	56.006	-0.406
560.000	56.412	56.006	-0.406
570.000	56.826	56.616	-0.210
580.000	57.129	57.072	-0.057
589.994	57.362	57.373	+0.011
590.000	57.362	57.373	+0.011
600.000	57.659	57.598	-0.061
610.000	57.944	57.822	-0.122
612.111	58.049	57.869	-0.180
620.000	58.167	58.046	-0.121
630.000	58.253	58.271	+0.018
640.000	58.467	58.495	+0.028
650.000	58.703	58.720	+0.017
651.400	58.751	58.751	+0.000

HORIZONTAL GEOMETRY: L=257.085 R=230.812; 521.945; L=90.165 R=150.000; 612.111; L=39.289 R=157.756; 651.400

ROAD 1 (LUKAARLIA DRIVE) LONG SECTION 2/2

SCALE HOR 1:500 VER 1:100 (A1)

REV	AMENDMENTS	DRAWN	DATE	APPR.
A	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	R.D	17/06/2021	C.T

NOTES:

SURVEYOR	SURVEYING JOB No.	
--	45549CT	
DRAWN	DESIGNED	CHECKED
BL	BL	MW
DATE	18 FEB 2021	

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT ROAD 1 LONG SECTION 2/2

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EMAIL: pda.hbt@pda.com.au

SCALE	PAPER	
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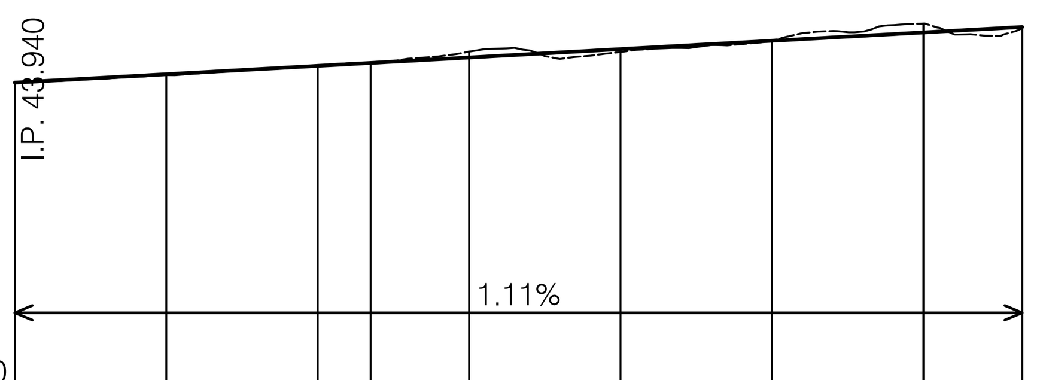
JOB NUMBER	DRG	REV
45549CT	15	A

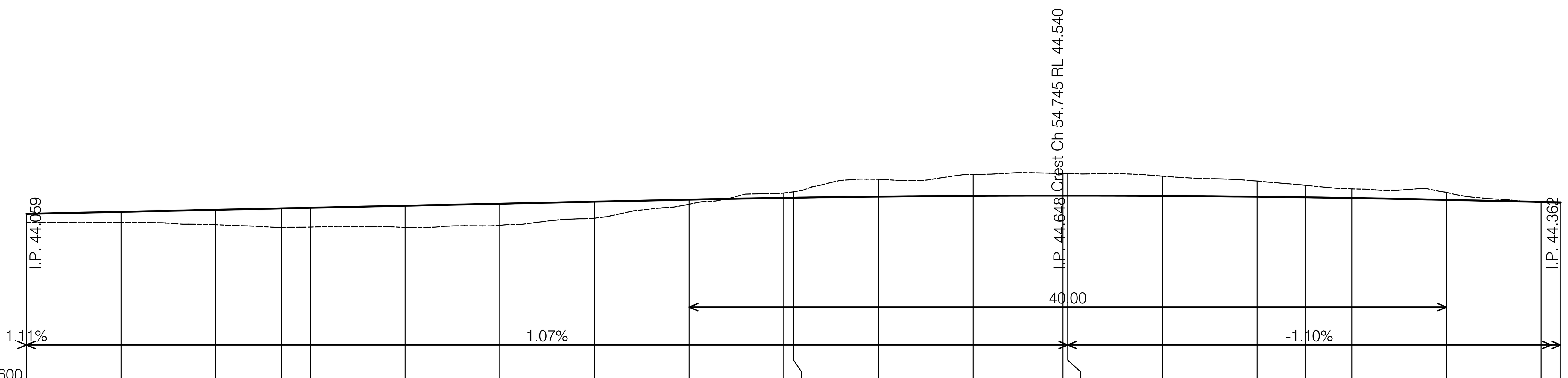
CUL-DE-SAC DETAIL

SCALE 1:200 (A1)



CUT FILL	+0.000	+0.012	-0.004	-0.007	-0.078	+0.038	-0.004	-0.117	+0.018
DESIGN ROAD CENTRELINE	43.940	44.050	44.161	44.199	44.271	44.382	44.492	44.603	44.675
EXISTING SURFACE	43.940	44.038	44.165	44.206	44.349	44.344	44.496	44.720	44.657
CHAINAGE	0.000	10.000	20.000	23.500	30.000	40.000	50.000	60.000	66.531
HORIZONTAL GEOMETRY	0.000 L=66.531 B=355°13'47"								

ROAD - LONG SECTION
SCALES: (H) 1 IN 500 (V) 1 IN 100 (A1)



CUT FILL	+0.231	+0.282	+0.393	+0.498	+0.508	+0.573	+0.569	+0.434	+0.123	-0.128	-0.156
DESIGN E.O.B.	44.059	44.113	44.166	44.203	44.220	44.273	44.327	44.380	44.434	44.481	44.485
EXISTING SURFACE	43.828	43.831	43.773	43.705	43.712	43.700	43.758	43.946	44.311	44.609	44.641
CHAINAGE	0.000	5.000	10.000	13.472	15.000	20.000	25.000	30.000	35.000	40.000	40.516

CUT FILL	-0.460	-0.569	-0.586	-0.584	-0.523	-0.416	-0.319	-0.243	-0.197	+0.022	+0.018
DESIGN E.O.B.	44.514	44.533	44.540	44.540	44.532	44.511	44.495	44.476	44.428	44.373	44.362
EXISTING SURFACE	44.974	45.102	45.126	45.124	45.055	44.927	44.814	44.719	44.625	44.351	44.344
CHAINAGE	45.000	50.000	54.745	55.000	60.000	65.000	67.561	70.000	75.000	80.000	81.033

CUL-DE-SAC - LONG SECTION
Scales: (H) 1 in 200 (V) 1 in 100 (A1)

REV	AMENDMENTS	DRAWN	DATE	APPR.
A	LOT 14 REMOVED AND LOTS 13 & 15 BOUNDARIES ADJUSTED ACCORDINGLY	R.D	17/06/2021	C.T

NOTES:

SURVEYOR	SURVEYING JOB No.	
--	45549CT	
DRAWN	DESIGNED	CHECKED
BL	BL	MW
DATE: 18 FEB 2021		

PAUL SUTCLIFFE
PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
CONCEPT ROAD 2 CUL-DE-SAC DETAIL

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SCALE	PAPER	
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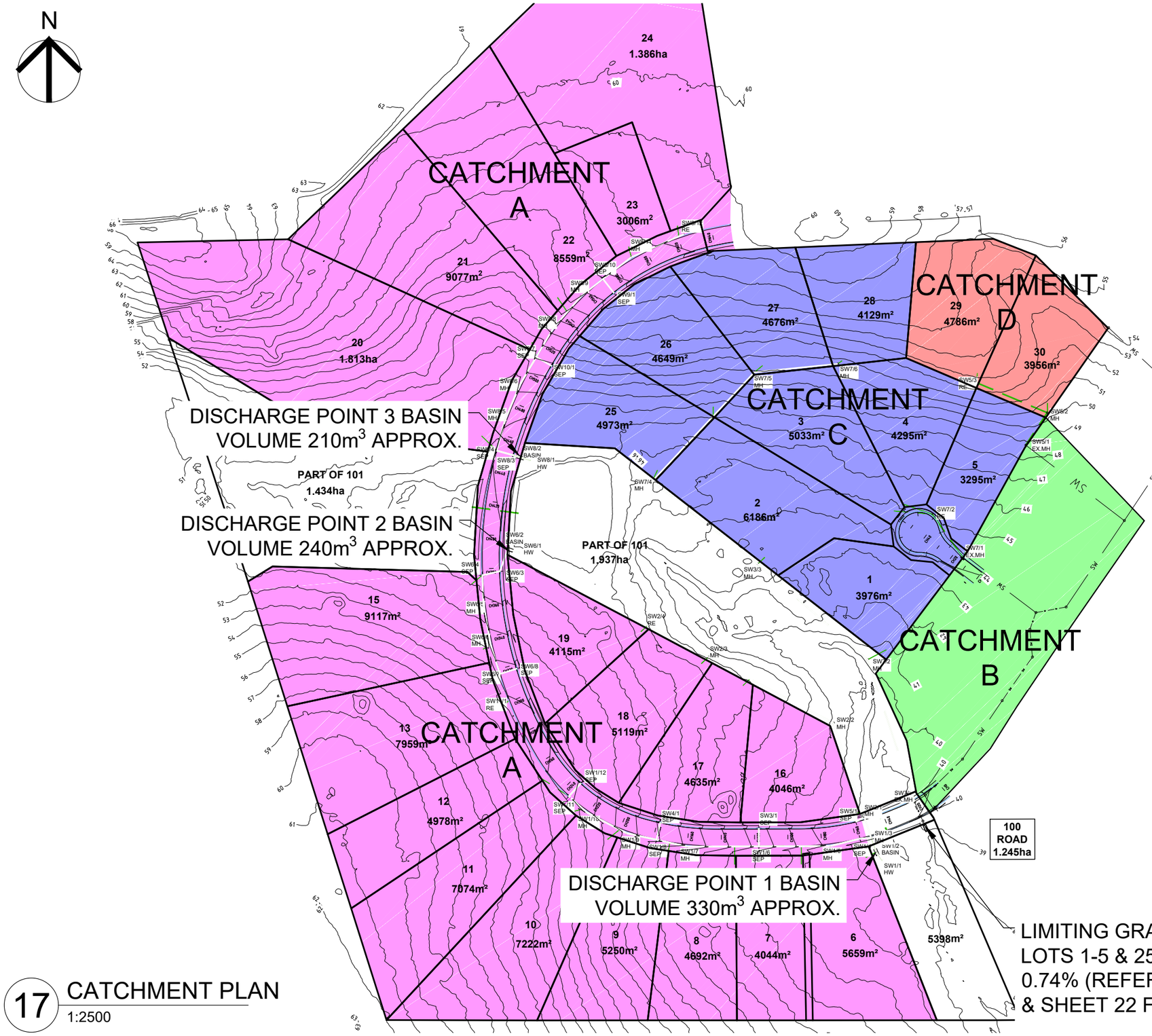
JOB NUMBER	DRG	REV
45549CT	16	A



NOTES:

PREDEVELOPMENT CASE:

TOTAL CATCHMENT AREA, A = 14ha

RAINFALL INTENSITY, i = 76.7mm/hr (FOR 10 MIN BURST IN 1 IN 50 YEARS STORM EVENT)

RUNOFF COEFFICIENT, c = 0.32

PEAK DISCHARGE , Q_{50} = 0.95 m^3/s

POST DEVELOPMENT CASE:

FROM DRAINS MODEL (REFER TO 45549CT-18-19) WITHOUT ANY DETENTION

PEAK DISCHARGE, Q_{50} = 1.18+0.356+0.670 = 2.21 m^3/s

FROM DRAINS MODEL (REFER TO 45549CT-18-19) WITH DETENTION BASINS AT THREE SEPARATE PROPOSED DISCHARGE POINTS.

PEAK DISCHARGE, Q_{50} = 0.529+0.098+0.313 = 0.94 m^3/s

DETENTION BASIN PARAMETERS TO BE FINALIZED DURING FINAL DESIGN

EXISTING PIPE CAPACITY FOR LOTS 1-5 & 25-30

PIPE CAPACITY OF EXISTING DN750 (SW8/2-SW8/3) @ 0.74% GRADE CATERING CATCHMENTS B,C & D = 1.18 m^3/s

COMBINED CATCHMENT AREA = 6.71 ha

USING RATIONAL METHOD FOR CATCHMENT B AND DRAINS MODEL FOR CATCHMENTS C & D, COMBINED PEAK DISCHARGE, Q_{50}= 0.188+.555+.426 = 1.16 m^3/s

BASED ON THE LIMITING GRADE OF SW8/2-SW8/3 SUFFICIENT CAPACITY EXISTS IN THE SYSTEM.

LIMITING GRADE OF EXISTING DN750 SERVICING LOTS 1-5 & 25-30 IS 0.74% (REFER TO H1017E SHEET 2 FOR PLAN VIEW & SHEET 22 FOR LONGSECTION - SW8/2-SW8/3)

17 CATCHMENT PLAN
1:2500

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

SCALE: 0 12 30 60 150m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
21 JUNE 2021	

PROPOSED SUBDIVISION
LOT 1 GREENBANKS ROAD, BRIDGEWATER
for PAUL SUTCLIFFE

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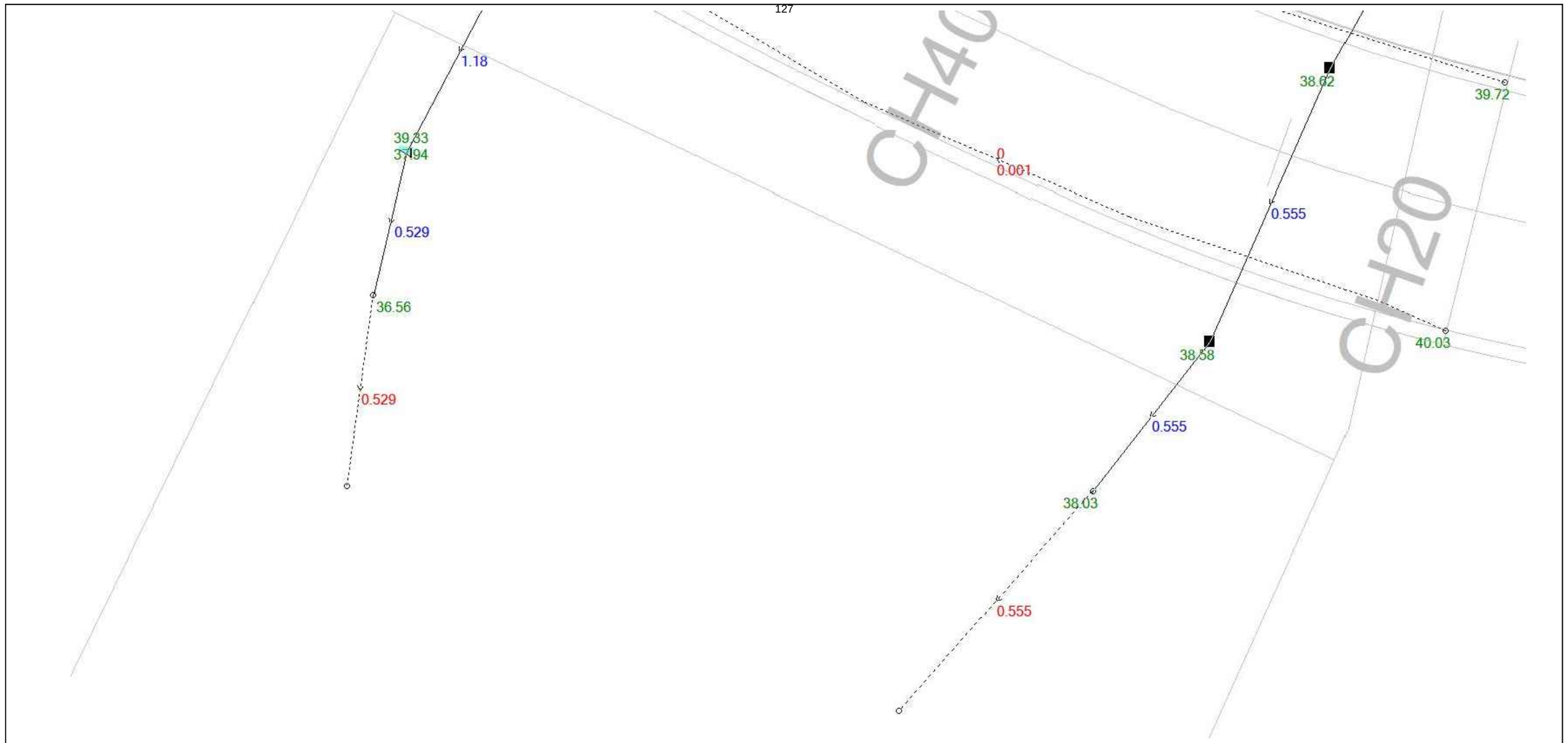

OUTFALL 1 & 2

18 DRAINS MODEL 1
NTS

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

SCALE: 0 12 30 60 150m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
21 JUNE 2021	

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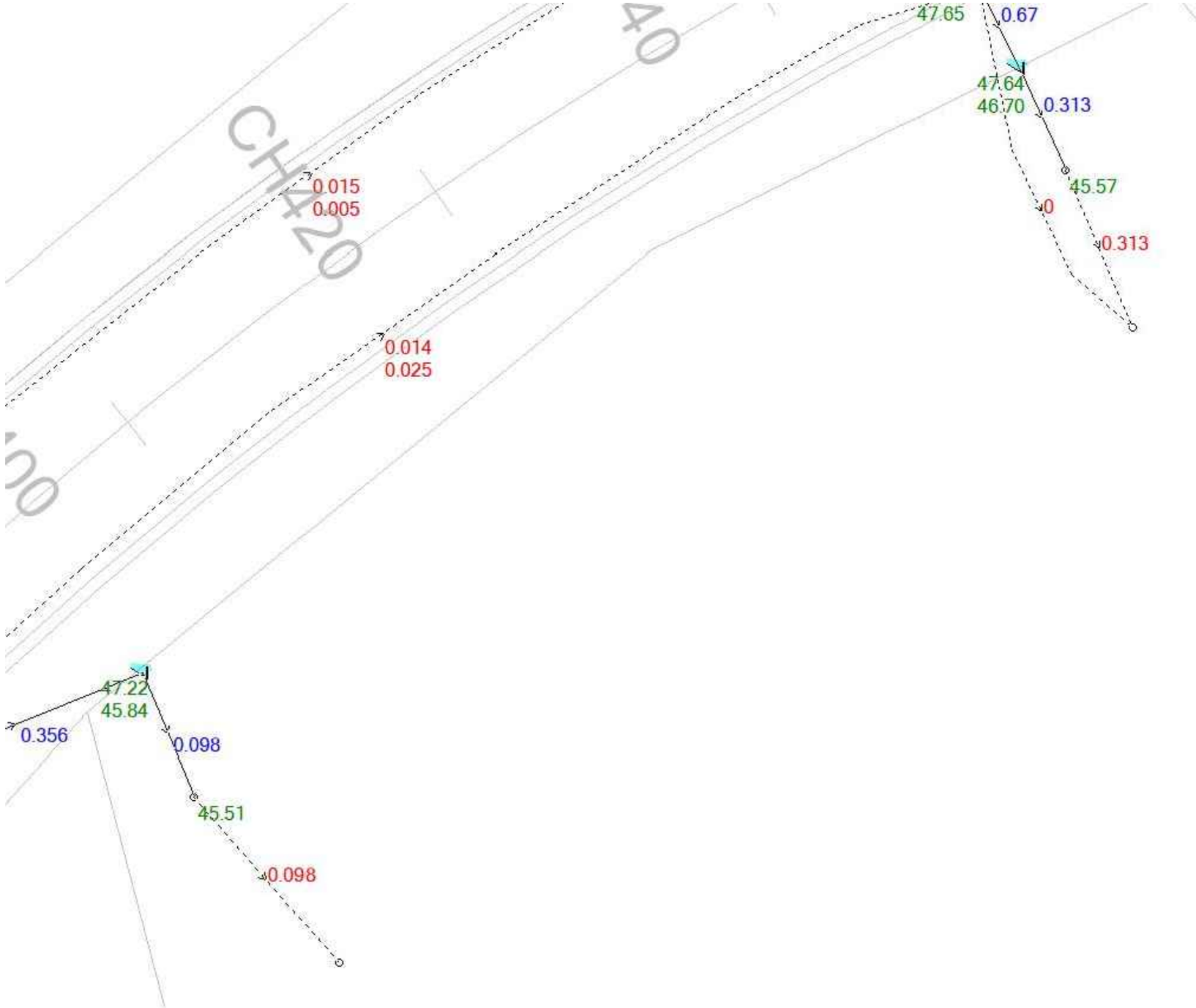

OUTFALL 3 & 4

19 DRAINS MODEL 2

NTS

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

SCALE: 0 12 30 60 150m

SURVEYOR	GEOCIVIL
-	-
DRAWN	CHECKED
BM/MK	CT
DATE	
21 JUNE 2021	

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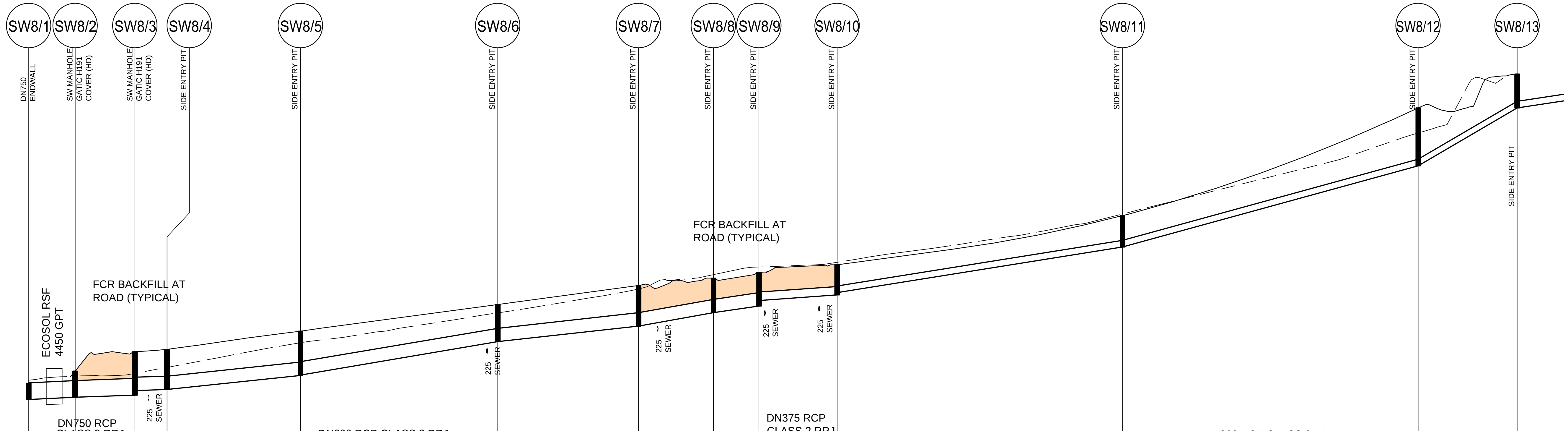


PIPE GRADE	0.96%	0.74%	0.69%	2.10%	3.38%	2.21%	3.56%	2.93%	1.42%	3.19%	5.49%	11.7%

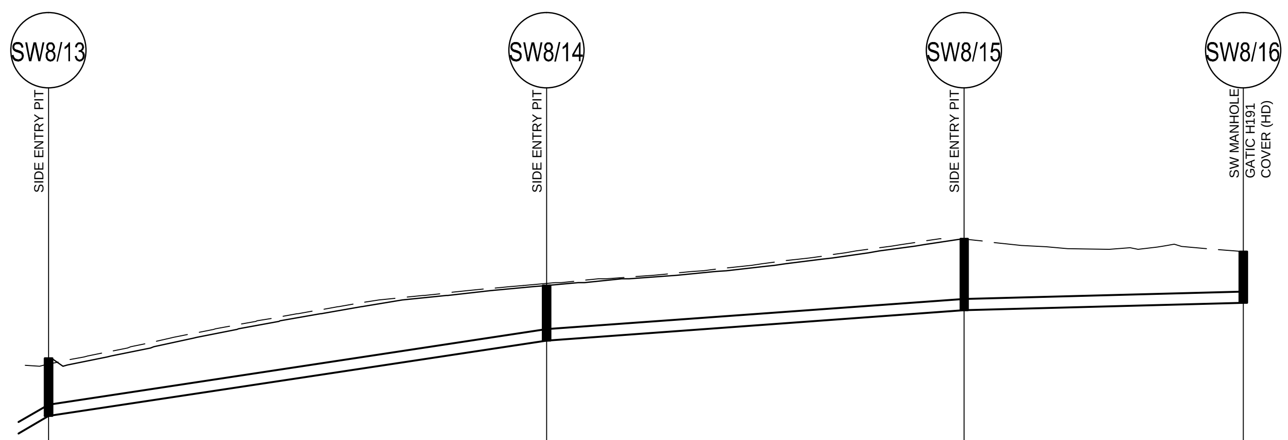
DATUM 35

	SW8/1	SW8/2	SW8/3	SW8/4	SW8/5	SW8/6	SW8/7	SW8/8	SW8/9	SW8/10	SW8/11	SW8/12	SW8/13
DEPTH TO INVERT	0.727	1.177	1.941 / 1.741	1.804	1.966	1.669	1.822	1.546	1.510 / 1.260	1.351 / 1.251	1.413	2.598	1.526
INVERT LEVEL	37.900	38.000	38.100 / 38.300	38.350	1.986 / 39.000	40.500	41.200	41.800	42.100 / 42.350	42.600 / 42.700	44.750	48.400	51.000
FINISHED SURFACE	38.627	39.177	40.041	40.154	38.980	42.169	43.022	43.346	43.610	43.951	46.163	50.998	52.526
EXISTING SURFACE	38.766	38.962	39.003	40.348	40.966	41.700	42.741	43.379	43.806	43.969	46.078	49.693	52.344
CHAINAGE	0.00	10.44	23.89	31.12	61.13	105.49	137.17	154.02	164.26	181.84	246.01	312.53	334.79

Lengths: 10.44, 13.45, 7.23, 30.02, 44.35, 31.68, 16.85, 10.24, 17.58, 64.17, 66.52, 22.26

STORM WATER LINE 8

SCALE H 1:500 V 1:100 (A1)



PIPE GRADE	3.02%	1.44%	0.54%

DATUM 48

	SW8/13	SW8/14	SW8/15	SW8/16
DEPTH TO INVERT	1.526	1.460	1.900	1.359
INVERT LEVEL	51.000	53.000	53.800	54.000
FINISHED SURFACE	52.526	54.460	55.700	55.359
EXISTING SURFACE	52.344	54.460	55.700	55.359
CHAINAGE	334.79	400.97	456.45	493.54

Lengths: 66.18, 55.48, 37.09

STORM WATER LINE 8 (CONT)

SCALE H 1:500 V 1:100 (A1)

HALF SCALE PRINT

Subdivision No ....07/024............
Refer Letter Dated ....
APPROVED
Municipal Engineer

Dean Panton
MIEAust CPEng
Chartered Professional Engineer
Membership No. 163547
I E Aust The Institution of Engineers, Australia

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

NOTES:

SURVEYOR	GEODATA
BINNY	XX
DESIGNER	CHECKED
DP	MM
DRAWN	DATE
LK	21 JAN 2010

DUDLEY CLARK PTY LTD
GREENBANKS ROAD, BRIDGEWATER
INDUSTRIAL SUBDIVISION
STORM WATER LONGITUDINAL SECTIONS 4/5

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SCALE	PAPER
1 : 500	(A1)
JOB NUMBER	DRAWING
H-1017E-22	

MIDSON traffic pty ltd

PDA Surveying Engineering and Planning

Greenbanks Road Industrial Estate Bridgewater Traffic Impact Assessment

December 2020

ENGINEERS AUSTRALIA

PROFESSIONAL ENGINEER OF THE YEAR INDIVIDUAL AWARDS TASMANIA WINNER 2016

Contents

Figure Index

Table Index

1. Introduction

1.1 Background

Midson Traffic were engaged by PDA Surveyors Engineers and Planners to prepare a traffic impact assessment for a proposed 30-lot industrial subdivision at Greenbanks Road, Bridgewater.

1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *A Framework for Undertaking Traffic Impact Assessments*, September 2007. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management,* Part 12: *Traffic Impacts of Developments*, 2019.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

This TIA also addresses the relevant clauses from E5.0, *Road and Railway Assets Code*, and E6.0, *Parking and Access Code*, of the Brighton Interim Planning Scheme 2015.

1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *A Framework for Undertaking Traffic Impact Assessments*, September 2007, as well as Council's requirements.

The TIA was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 25 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006
- Master of Traffic, Monash University, 2004

- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

1.4 Project Scope

The project scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development. Assessment of this parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.5 Subject Site

The subject site is located at

The subject site and surrounding road network is shown in Figure 1.

Figure 1 Subject Site & Surrounding Road Network

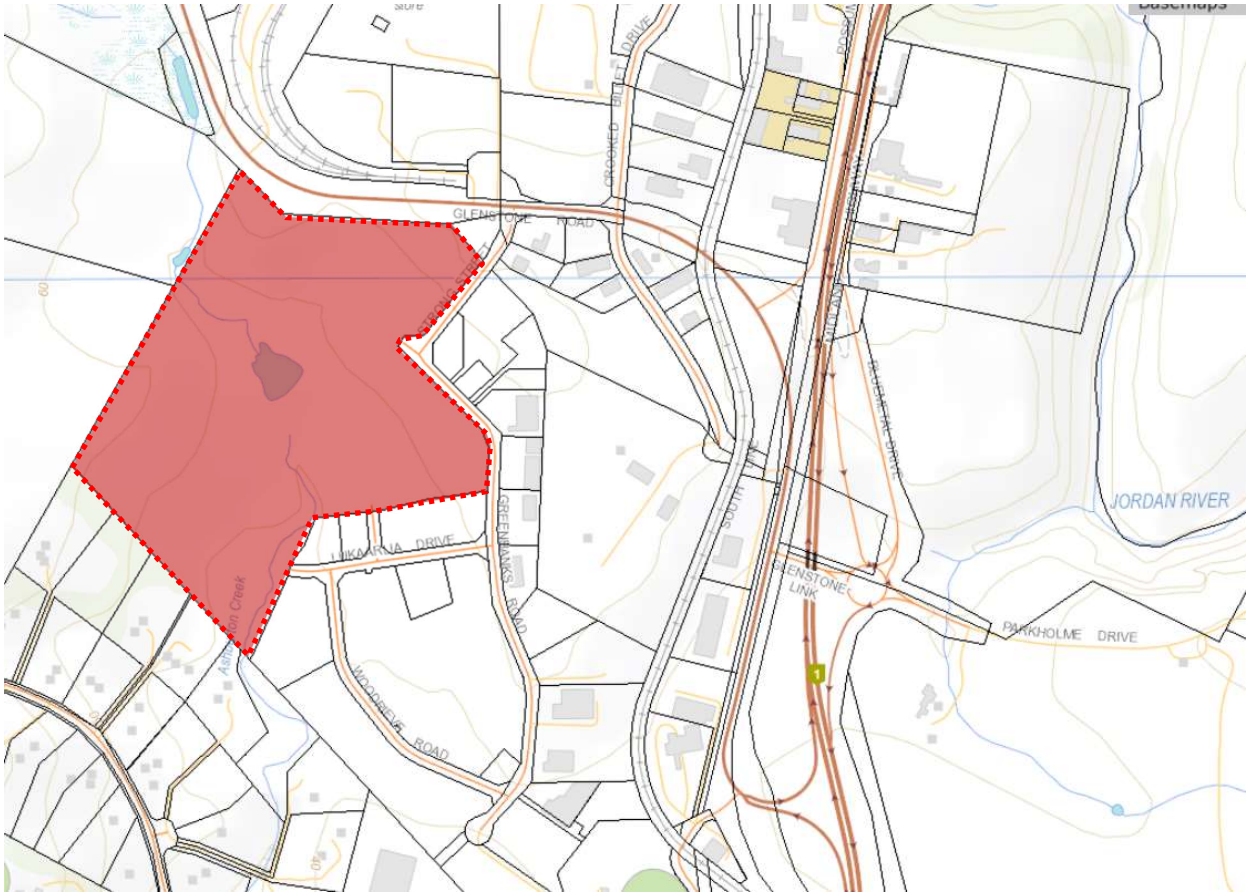


Image Source: LIST Map, DPIPWE

1.6 Reference Resources

The following references were used in the preparation of this TIA:

- Brighton Interim Planning Scheme, 2015 (Planning Scheme)
- Austroads, *Guide to Traffic Management,* Part 12: *Traffic Impacts of Developments*, 2019
- Austroads, Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, 2017
- Department of State Growth, *A Framework for Undertaking Traffic Impact Assessments*, 2007
- Roads and Maritime Services NSW, *Guide to Traffic Generating Developments*, 2002 (RMS Guide)
- Roads and Maritime Services NSW, *Updated Traffic Surveys,* 2013 (Updated RMS Guide)
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1:2004)

2. Existing Conditions

2.1 Transport Network

For the purposes of this report, the transport network consists of Glenstone Road, Greenbanks Road, Strong Street, Lukaarlia Drive and Woodrieve Road.

Glenstone Road is a major arterial road that services the Brighton industrial area from the Midland Highway. It connects between two grade separated interchanges at the Midland Highway and services the Intermodal transport hub and several industrial areas. Glenstone Road carries 3,505 vehicles per day[1] with a peak of 365 vehicles per hour (afternoon peak period). Glenstone Road carries 39.9% heavy vehicles (equating to 1,399 trucks per day). Glenstone Road connects to Strong Street at a T-junction with Glenstone Road having priority. The junction has a channelised right turn lane from Glenstone Road to Strong Street.

Strong Street is approximately 250 long and connects between Glenstone Road and Greenbanks Road. A number of industrial lots front onto Strong Street. Strong Street provides the solitary access to the subject site and surrounding industrial estate. Strong Street connects to Greenbanks Road at a wide T-junction. The existing configuration of the Strong Street/

Strong Street, viewed towards Greenbanks Road is shown in Figure 2

Figure 2 Strong Street

[1] Department of State Growth 2019 traffic data.

Greenbanks Road connects to Strong Street at its northern end and terminates at a cul-de-sac at its southern end. It provides access to Lukaarlia Drive and Woodrieve Road and numerous industrial properties along its length.

Greenbanks Road viewed towards the Strong Street intersection is shown in Figure 3.

Figure 3 Greenbanks Road

Lukaarlia Drive is a local access road that is approximately 290 metres long. It connects to Greenbanks Road at its eastern end and the subject site at its western end. Woodrieve Road connects to Lukaarlia Drive at a T-Junction with Lukaarlia Drive having priority.

Woodrieve Road is a local access road that is approximately 440 metres long. It connects between Lukaarlia Drive at its northern end and Greenbanks Road at its southern end. Woodrieve Road services a number of industrial sites along its length.

2.2 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in

determining whether traffic generation from the proposed development may exacerbate any identified issues.

Crash data was obtained from the Department of State Growth for a 5+ year period between 1st January 2015 and 31st October 2020 for Strong Street, Greenbanks Road, Woodrieve Road and Lukaarlia Drive. No crashes were reported in these roads during this time.

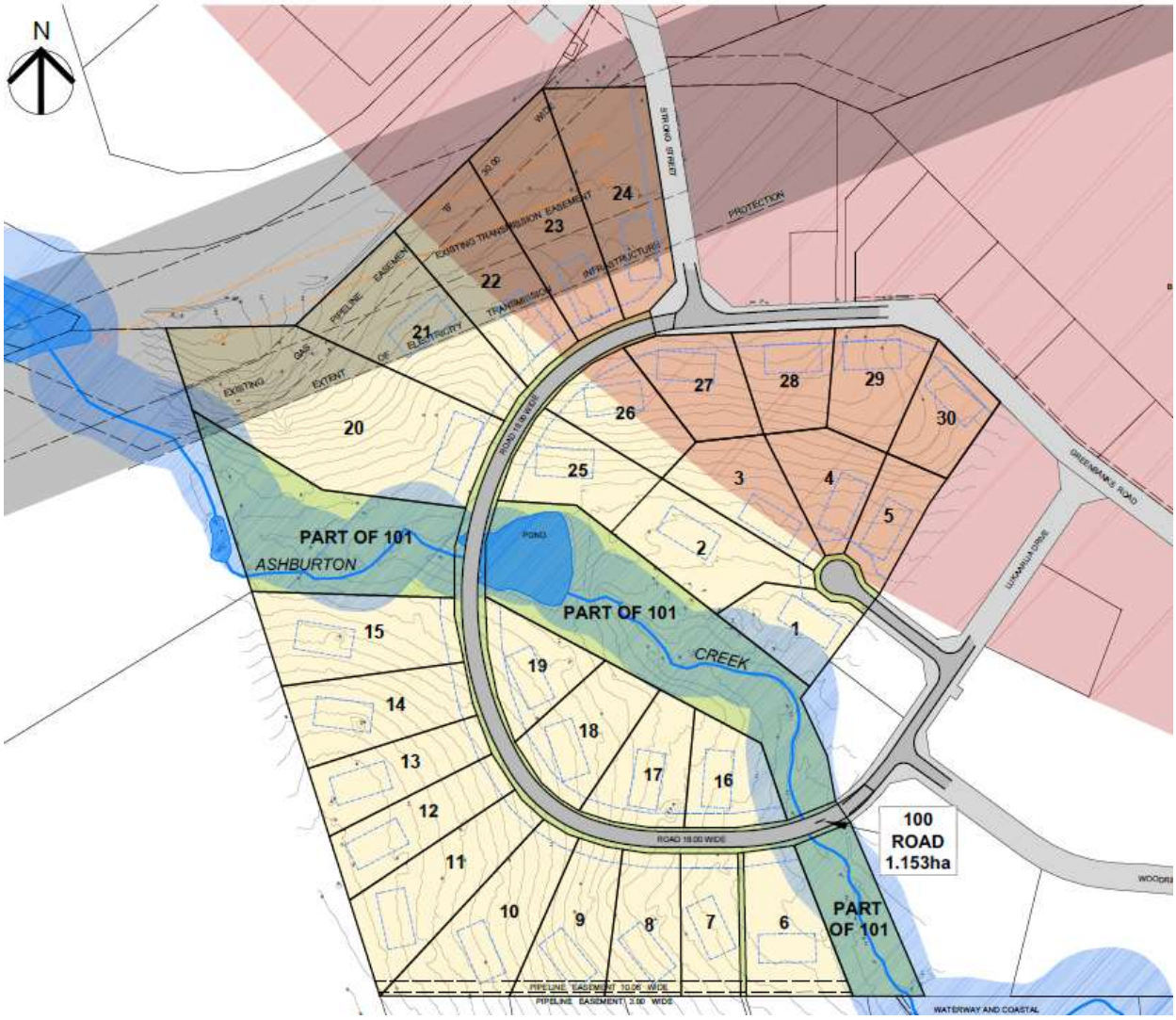
3. Proposed Development

3.1 Development Proposal

The proposed development is a 30-lot industrial subdivision accessed via Greenbanks Road and Lukaarlia Drive. A new road is proposed that will connect Greenbanks Road to Lukaarlia Drive.

The proposed subdivision layout is shown in Figure 4.

Figure 4 Proposed Development Plans



4. Traffic Impacts

4.1 Traffic Generation

Traffic generation rates were sourced from the Roads and Traffic Authority of NSW publication, *Guide to Traffic Generating Developments,* 2002 (RTA Guide). The RTA Guide provides the following equations for the peak hour traffic generation of Business Parks:

- Equation (a)

  Peak hour vehicle trips (PVT) = 1.1 vehicles per hour two-way per 100m^2 of total gross leasable floor area.

- Equation (b)

  Peak hour vehicle trips (PVT) = 1.2 vehicles per hour two-way per 100m^2 of gross leasable office/ showroom area + 1.0 vehicle per hour two-way per 100m^2 of gross leasable factory/ warehouse area.

In this case the breakdown of future land use within the industrial subdivision is not known. Equation (a) is the most appropriate method to determine the traffic generation.

Given a total developable site area of 23 hectares, the total gross leasable floor area is expected to be in the order of 34,500m^2 (approximately 15% of total site area). This results in a traffic generation as follows:

- Peak hour vehicle trips (PVT) = 380 vehicles per hour

The peak hour traffic generation is assumed to be 8.5% of the average weekday daily traffic volume, consistent with peak flows on Glenstone Road. The proposed industrial subdivision is therefore likely to generate in the order of 4,500 vehicles per day based on the total site area and peak hour rates set out in the RMS Guide when fully developed.

4.2 Trip Distribution

All traffic will access the site from Glenstone Road/ Strong Street. The design of the new road connecting between Greenbanks Road and Lukaarlia Drive will result in traffic approaching Strong Street from the west.

The following general traffic distribution has been assumed for the industrial subdivision:

- Morning peak hour 60% entering/ 40% exiting
- Evening peak hour 30% entering/ 70% exiting
- Origin-Destination Greenbanks Rd (west) 73%
- Origin-Destination Greenbanks Rd (east) 27%

No opposing traffic is currently accessing the junction from the western approach of Greenbanks Road. The proposed development will extend Greenbanks Road to the west of the Strong Street junction. As noted in Section 4.2, the likely proportion of traffic generation utilising the western approach is 73%. This is based on the effective number of lots that will utilise this approach for traffic access.

This equates to the traffic generation distribution at the Strong Street/ Greenbanks Road junction as shown in Table 1. Note that it has been assumed that traffic generation of the subdivision will not travel along Greenbanks Road from west to east through the Strong Street intersection, and vice versa. It is possible that some vehicle traffic generation movements may travel in these directions (ie. intra-travel between lots of the subdivision), but for simplicity all traffic is assumed to originate or terminate at Strong Street.

Table 1 Strong St/ Greenbanks Rd Traffic Generation Turning Movements

Peak	Approach	Left Turn	Right Turn
AM Peak	Greenbanks Rd West	111 vph	-
	Greenbanks Rd East	-	41 vph
	Strong St	62 vph	166 vph
PM Peak	Greenbanks Rd West	194 vph	-
	Greenbanks Rd East	-	72 vph
	Strong St	31 vph	83 vph

4.3 Intersection Future Movements

The key network impact of the traffic generation will be the intersection of Strong Street and Greenbanks Road. This intersection is currently operating with all traffic movements being left turn from Strong Street to Greenbanks Road, and right turn from Greenbanks Road to Strong Street.

Using the same assumptions for traffic generation for the balance of land accessed by Greenbanks Road, the future traffic volumes utilising the intersection excluding the proposed development is summarised in Table 2 (ie. all available land accessed via Greenbanks Road and connecting roads is fully developed with industrial lots).

Table 2 Strong St/ Greenbanks Rd Forecast Future Volumes

Peak	Approach	Left Turn	Through	Right Turn
AM Peak	Greenbanks Rd West	111 vph	20 vph	-
	Greenbanks Rd East	-	20 vph	205 vph
	Strong St	308 vph	-	166 vph
PM Peak	Greenbanks Rd West	194 vph	20 vph	-
	Greenbanks Rd East	-	20 vph	359 vph
	Strong St	154 vph	-	83 vph

4.4 Intersection Modelling

Intersection Analysis software, SIDRA Intersection (Akcelik and Associates), was used to determine the likely performance impacts of the Strong Street/ Greenbanks Road junction as a result of the intersection modifications and the traffic generated by the proposed subdivision.

SIDRA uses complex analytical traffic models coupled with iterative approximation technique to provide estimates of capacity and performance of intersections. SIDRA is endorsed as a modelling tool by Austroads.

The key outputs of the SIDRA modelling are defined as follows:

- Average delay for all vehicles (s)

  The average delay in seconds for all vehicles taking into account how many vehicles are performing each manoeuvre and the average delay for that movement.

- Worst movement average delay (s)

  The average delay in seconds for all vehicles undertaking the movement with the highest average delay.

- 95th percentile queue length (m)

  The queue length in metres not exceeded 95% of the time for the lane with the highest queue length.

- Average level of service (LOS)

  The average level of service for all vehicles taking into account how many vehicles are performing each manoeuvre and the level of service for that movement.

  Level of service is a representation of average delay and describes the quality of traffic service in terms of 6 levels with level of service A (LOS A) representing the best operating condition (i.e. at or close to free flow) and level of service F (LOS F) representing the worst (i.e. forced flow).

  In general, the target level of service in an urban environment such as the subject site is level of service D (LOS D).

- Worst movement level of service

  The level of service for all vehicles undertaking the movement with the worst level of service.

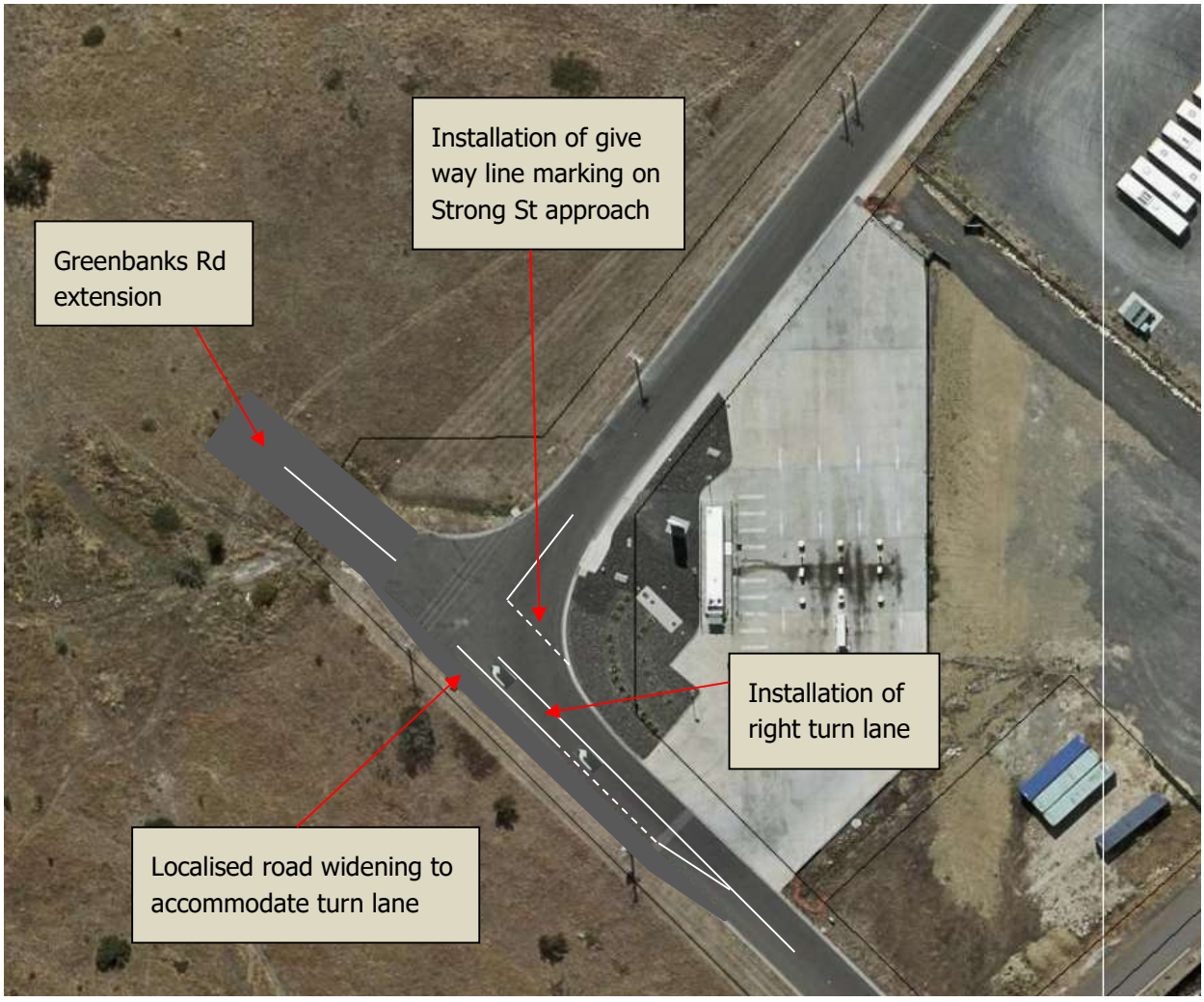
The LOS measurement criteria used in SIDRA modelling is summarised in Table 3.

Table 3 SIDRA Level of Service Criteria

LOS	Average Delay per vehicle (s/veh)	Traffic Signals/ Roundabout	Give Way and Stop Signs
LOS A	< 14	Good operation, ideal flow conditions	Good operation, ideal flow conditions
LOS B	15 – 28	Good operation with acceptable delays and spare capacity	Good operation with acceptable delays and spare capacity
LOS C	29 – 42	Satisfactory operating conditions.	Satisfactory operating conditions.
LOS D	43 – 56	Operating near capacity. Generally accepted limit for urban peak periods.	Operating near capacity. Generally accepted limit for urban peak periods.
LOS E	57 – 70	At capacity.	At capacity, requires alternative traffic management control method.
LOS F	> 70	Forced flow conditions.	Forced flow conditions.

The modelling indicated a right turn lane is required on the eastern approach of Greenbanks Road. This is shown conceptually in Figure 5.

Figure 5 Strong St/ Greenbanks Rd Conceptual Layout



4.5 Modelling Outputs

The SIDRA modelling for the AM and PM peak periods are shown in Table 4 and Table 5 respectively. The modelling incorporates the proposed right turn lane on the eastern approach of Greenbanks Road.

It can be seen that the intersection operates at an acceptable level of service (LOS) during both peak periods. The worst LOS is 'C' (Strong Street approach during both peak periods). Queuing extends a reasonable distance into Strong Street during the morning peak period, with the 95th percentile queue (the queue not exceeded 95% of the time) being 122 metres. Note that the queue is largely due to the high proportion of heavy vehicles in the traffic flow.

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Table 4 AM Peak SIDRA Modelling Output – Strong St/ Greenbanks Rd

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
East: Greenbanks Rd								
5	T	21	22.0	0.012	0.0	LOS A	0.0	0.0
6	R	216	22.0	0.210	10.4	LOS B	1.0	7.9
Approach		237	22.0	0.210	9.5	NA	1.0	7.9
North: Strong St								
7	L	324	22.0	0.791	22.8	LOS C	14.7	121.9
9	R	175	22.0	0.791	23.2	LOS C	14.7	121.9
Approach		499	22.0	0.791	23.0	LOS C	14.7	121.9
West: Greenbanks Rd								
10	L	117	22.0	0.085	9.0	LOS A	0.0	0.0
11	T	21	22.0	0.085	0.0	LOS A	0.0	0.0
Approach		138	22.0	0.085	7.6	NA	0.0	0.0
All Vehicles		874	22.0	0.791	16.9	NA	14.7	121.9

Level of Service (LOS) Method: Delay (HCM 2000).
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.

Table 5 PM Peak SIDRA Modelling Output – Strong St/ Greenbanks Rd

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
East: Greenbanks Rd								
5	T	21	22.0	0.012	0.0	LOS A	0.0	0.0
6	R	378	22.0	0.420	12.1	LOS B	2.6	22.0
Approach		399	22.0	0.420	11.4	NA	2.6	22.0
North: Strong St								
7	L	162	22.0	0.543	20.0	LOS C	4.1	34.0
9	R	87	22.0	0.543	20.3	LOS C	4.1	34.0
Approach		249	22.0	0.543	20.1	LOS C	4.1	34.0
West: Greenbanks Rd								
10	L	204	22.0	0.140	9.0	LOS A	0.0	0.0
11	T	21	22.0	0.140	0.0	LOS A	0.0	0.0
Approach		225	22.0	0.140	8.2	NA	0.0	0.0
All Vehicles		874	22.0	0.543	13.1	NA	4.1	34.0

Level of Service (LOS) Method: Delay (HCM 2000).
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.

4.6 Sight Distance

The Acceptable Solution A1 of Clause E5.6.4 of the Planning Scheme states that sight distances at an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1 and reproduced in Table 6.

Table 6 Planning Scheme Sight Distance Requirements

Vehicle Speed	Safe Intersection Sight Distance in metres, for speed limit of:	
km/h	60 km/h or less	Greater than 60 km/h
50	80	90
60	105	115
70	130	140
80	165	175
90		210
100		250
110		290

Table E5.1 requires a Safe Intersection Sight Distance (SISD) of 105 metres for a vehicle speed of 60-km/h within a speed limit of 60-km/h or less.

The subdivision creates a new access junction in Lukaarlia Drive. The available sight distance at this junction will exceed 105 metres. Each lot will also provide an access to the subdivision road network. The layout of the road network will provide sufficient sight distance at each lot to satisfy the SISD requirements of the Planning Scheme.

The Acceptable Solution A1 of Clause E5.6.4 of the Planning Scheme is met.

4.7 Road Safety Impacts

There are no significant detrimental road safety impacts foreseen for the proposed industrial subdivision. This is based on the following:

- The surrounding road network is able to adequately absorb the traffic generated by the proposed development (peak traffic generation of 380 vehicles per hour).
- The existing road safety performance of the road network does not indicate that there are any current road safety deficiencies that might be exacerbated by the proposed development. Noting specifically that there have been no crashes reported in the surrounding road network in the most recent five-year period.
- Adequate sight distance is available at the proposed accesses in relation to the prevailing vehicle speeds.

4.8 Parking Assessment

Each lot should provide adequate on-site parking in accordance with the requirements of E6.0 of the Planning Scheme.

5. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed 30-lot industrial subdivision at Greenbanks Road, Bridgewater.

Traffic generation of potential future lot development has been estimated based on general industrial development that may occur on the rezoned land. Detailed traffic impact assessments will need to be undertaken for the development of each individual lot to determine the specific impacts of each lot on the surrounding road network. This TIA therefore provides a high-level overview of potential impacts on the broader transport network.

The key findings of the TIA are summarised as follows:

- The traffic generation of the subdivision is likely to be 4,500 vehicles per day with a peak of 380 vehicles per hour.
- The subdivision will extend Greenbanks Road to the west of the Strong Street intersection. The intersection will need to be modified to a T-junction with a channelised right turn lane on the eastern approach of Greenbanks Road.
- SIDRA traffic modelling of the intersection indicates that the Strong Street/ Greenbanks Road intersection will operate at a high level of service during the morning and afternoon peak periods when the subdivision and all nearby industrial land is fully developed.

Based on the findings of this report and subject to the recommendations above, the proposed development is supported on traffic grounds.

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Document Status

Revision	Author	Review	Date
0	Keith Midson	Zara Kacic-Midson	1st December 2020

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ANNEXURE PAGE

Vol. ……. Fol. ..

ELECTRICITY INFRASTRUCTURE EASEMENT WITH THE BENEFIT OF A RESTRICTION AS TO USER OF LAND 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:

a) **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 Plan of Survey Registered Number …… (hereinafter called the "servient land");

b) **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;

c) **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;

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

e) **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;

f) **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.

SECONDLY the benefit of a covenant for TasNetworks and its successors with the registered proprietor/s for themselves and their successors in title of the servient land not to erect any buildings or place any structures, objects, or vegetation within the said easement without the prior written consent of TasNetworks 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 hereinbefore described.

SIGNED by the Transferor ……..……..