

PLANNING NOTICE

An application has been received for a Permit under s.57 of the Land Use Planning Approvals Act 1993:

APPLICANT:	M Schleiger - PA\24\0014
PROPERTY ADDRESS:	126 Dexter Street WESTBURY (CT's: 15169/1 & 1080791/1)
DEVELOPMENT:	Subdivision (2 lots to 48 lots, road lot, stormwater detention lot), Demolition of Residential outbuildings (2) - lot design, new road, traffic generation.

The application can be inspected until **Monday**, **12 February 2024**, at www.meander.tas.gov.au or at the Council Office, 26 Lyall Street, Westbury (during normal office hours).

Written representations may be made during this time addressed to the General Manager, PO Box 102, Westbury 7303, or by email to planning@mvc.tas.gov.au. Please include a contact phone number. Please note any representations lodged will be available for public viewing.

If you have any questions about this application please do not hesitate to contact Council's Planning Department on 6393 5320.

Dated at Westbury on 27 January 2024.

Jonathan Harmey
GENERAL MANAGER

APPLICATION FORM



PLANNING PERMIT

Land Use Planning and Approvals Act 1993

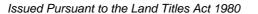
- Application form & details MUST be completed IN FULL.
- Incomplete forms will not be accepted and may delay processing and issue of any Permits.

	OFFICE USE ONLY		
Property No:	Assessment No:		
DA\	PA\ PC\		
Have you alread	on the result of an illegal building work?		
PROPERTY DE	ΓAILS:		
Address:	126 Dexter Street & Dexter Street Certificate of Title: 15169/1 & 108079/1		
Suburb:	Westbury 7303 Lot No:		
Land area:	$1.308 \& 2.564$ m^2 / ha		
Present use of land/building:	Residential & Vacant (vacant, residential, rural, industrict commercial or forestry)	rial,	
 Does the application involve Crown Land or Private access via a Crown Access Licence: ☐ Yes ☐ No Heritage Listed Property: ☐ Yes ☐ No 			
DETAILS OF U	SE OR DEVELOPMENT:		
Indicate by ✓ box	□ Building work □ Change of use □ Subdivision □ Demolition □ Forestry □ Other		
Total cost of deve (inclusive of GST):	s 30,000 Includes total cost of building work, landscaping, road works and infrastructure	е	
Description 50 of work:	Lot Subdivision		
Use of building:	(main use of proposed building – dwelling, garage, farm building factory, office, shop)	g,	
New floor area:	m ² New building height: m		
Materials:	External walls: Colour:		
	Roof cladding: Colour:		



RESULT OF SEARCH

RECORDER OF TITLES





SEARCH OF TORRENS TITLE

VOLUME	FOLIO
108079	1
EDITION	DATE OF ISSUE
2	10-Feb-2005

SEARCH DATE : 22-Jan-2024 SEARCH TIME : 03.16 PM

DESCRIPTION OF LAND

Town of WESTBURY

Lot 1 on Diagram 108079

Derivation: Part of 9A-2R-11Ps. Granted to John Peyton Jones

Derived from W319

SCHEDULE 1

C616149 ASSENT to JOHN WILLIAM JOHNSTON Registered 10-Feb-2005 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



L.T.ACT 1980 OWNER

FOLIO REFERENCE W.319

GRANTEE

PART OF 9-2-II GTD. TO JOHN PEYTON JONES, WHOLE OF 9-3-17 GTD. TO CORNELIUS KEEFE & WHOLE OF 9-2-16 GTD. TO ADYE DOUGLAS

PLAN OF TITLE

TOWN OF WESTBURY (SEC. E2, E5 & E7)

COMPILED FROM C1/132L.O.

COMPILED BY

SCALE 1: 3000 LENGTHS IN METRES

D.108079

APPROVED 1 1 OCT 1993

Recorder of Titles

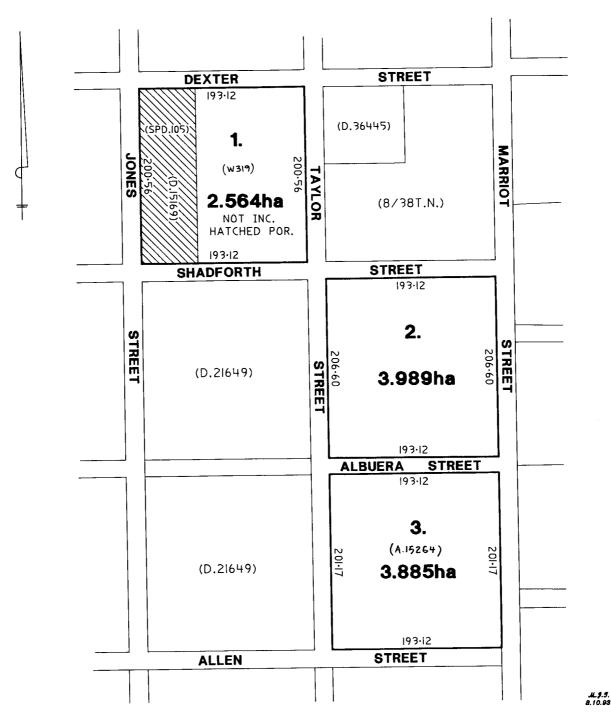
STATE MUNICIPAL CODE No. 65

LAST UPI No. 2362,63#66

LAST SURVEY PLAN No.

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



Search Date: 22 Jan 2024

Search Time: 03:17 PM

Volume Number: 108079

Revision Number: 01

Page 1 of 1



RESULT OF SEARCH

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
15169	1
EDITION	DATE OF ISSUE
4	25-Mar-2003

SEARCH DATE : 22-Jan-2024 SEARCH TIME : 03.16 PM

DESCRIPTION OF LAND

Town of WESTBURY

Lot 1 on Diagram 15169

Formerly SPD 105

Derivation: Part of 9R-2R-11Ps. John Peyton Jones

Derived from W317

SCHEDULE 1

C333126 TRANSFER to JOHN WILLIAM JOHNSTON and JENNIFER MARIA

JOHNSTON Registered 08-Oct-2001 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any C424911 MORTGAGE to Commonwealth Bank of Australia Registered 25-Mar-2003 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

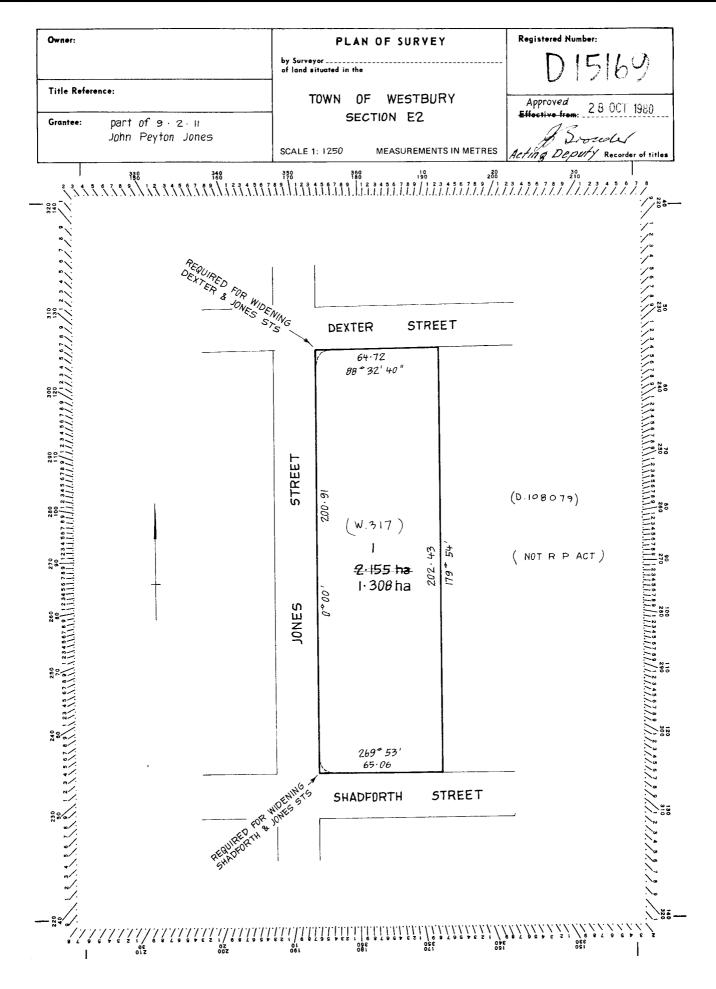


FOLIO PLAN

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



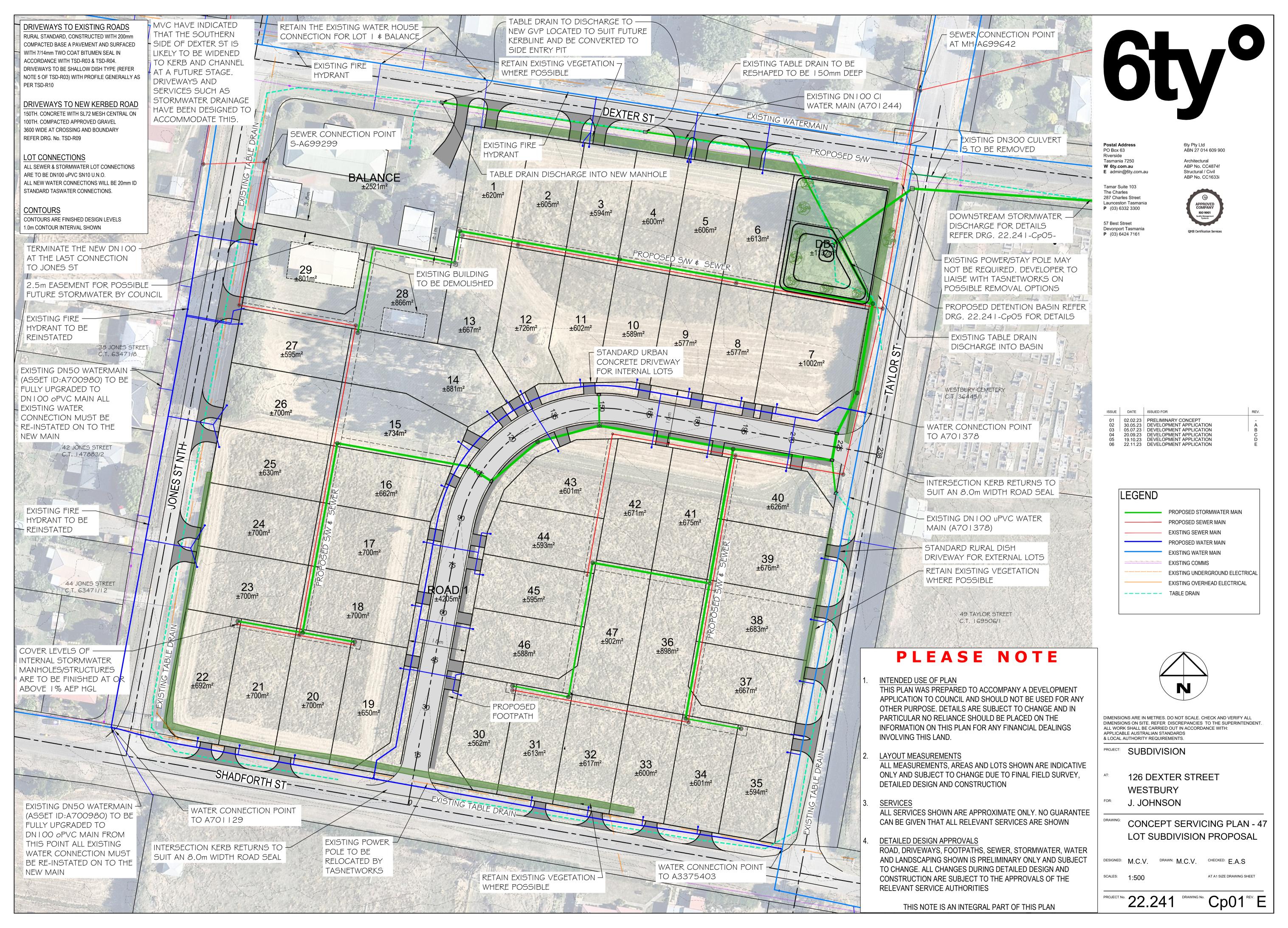
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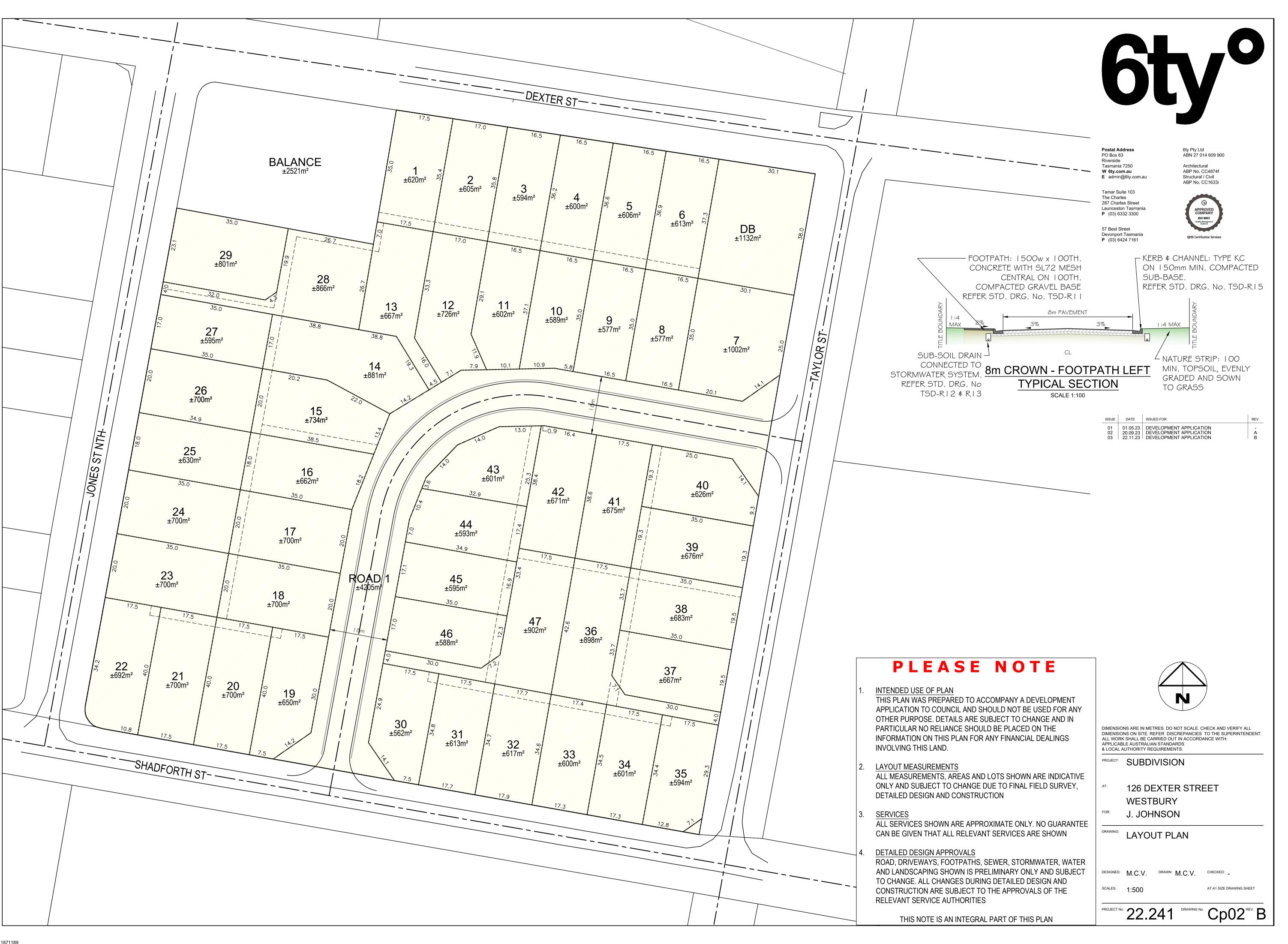
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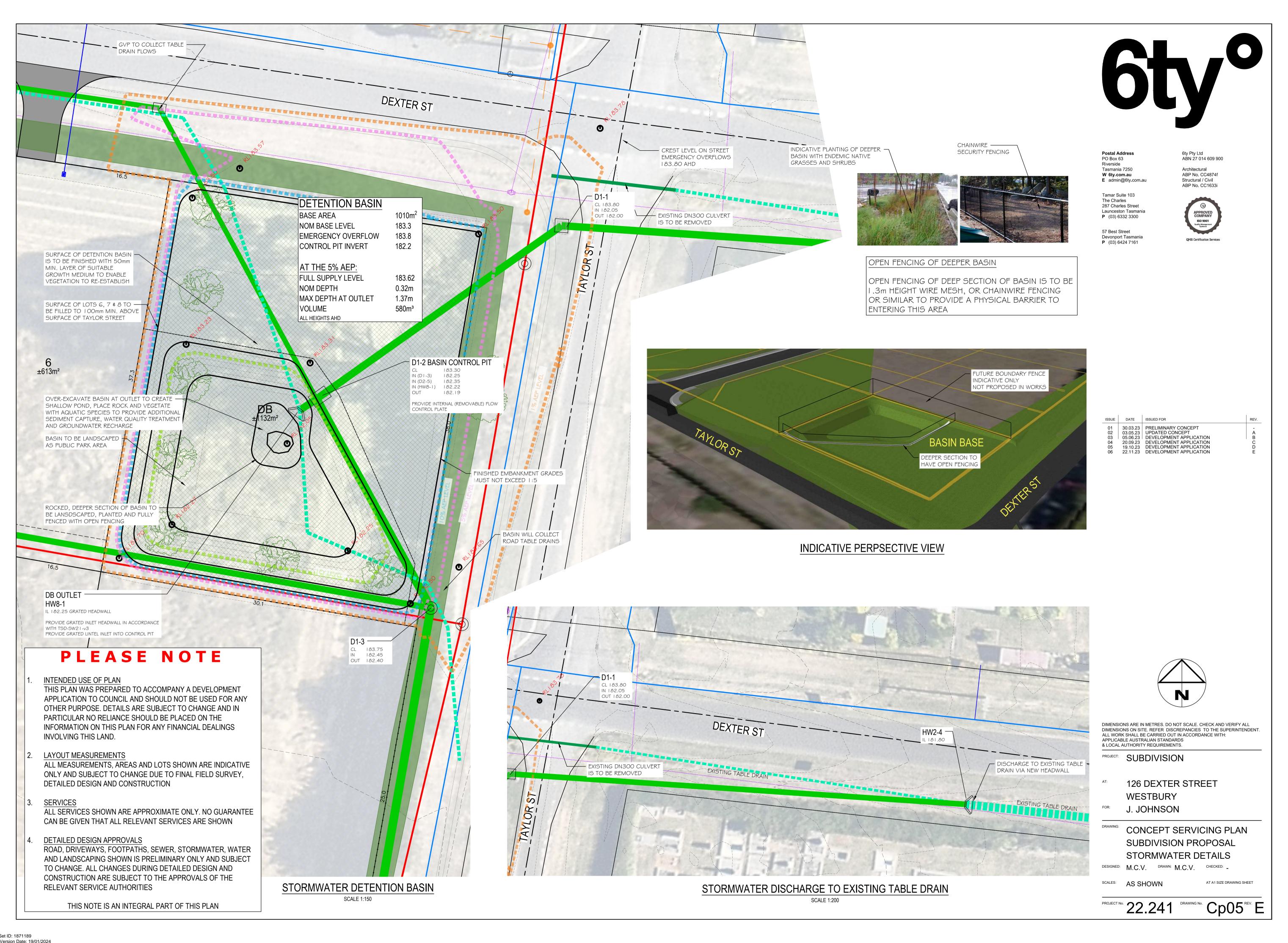
Volume Number: 15169

Revision Number: 01

Page 1 of 1









Application for subdivision – 50 lots (47 residential lots; 1 detention lot; 1 road lot; 1 balance lot)

Dexter Street, Westbury

July 2023

Job Number: L171204

Prepared by: Michelle Schleiger (<u>michelle@woolcottsurveys.com.au</u>)

Town Planner

Reviewed by: James Stewart (james@woolcottsurveys.com.au)

Senior Planner

Rev. no	Description	Date
1	Draft	21 January 2022
2	Revision	27 January 2022
3	Final	3 February 2022
4	Draft version 2	3 July 2023
5	Review	6 July 2023
6	Final version 2	7 July 2023
7	RFI version 2	24 November 2023
8	Review	16 January 2024

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1. Introduction

This report has been prepared in support of a planning permit application under Section 57 of the Land Use Planning and Approval Act 1993 (the 'Act') to develop land at 126 Dexter Street, Westbury (the 'subject site').

This application is to be read in conjunction with the following supporting documentation:

Document	Consultant
Proposal Plan	6ty°
Services Report	6ty°
Bushfire Hazard Assessment	Woolcott Surveys
Traffic Impact Assessment	Midson Traffic Pty Ltd

2. Subject site and proposal

2.1 Site details

Address	126 Dexter Street Westbury	Dexter Street Westbury
Property ID	7012792	7012784
Title:	15169/1	108079/1
Land area	1.308ha	2.564ha
Planning Authority	Meander Valley Council	
Covenants or Agreements	None on title	
Application status	Discretionary application	
Existing Access	Existing access to the existing dwelling on Jones Street North and Dexter Street (two access points).	
Proposed development	Subdivision – 47 residential lots, 1 road lot, 1 drainage lot, 1 balance lot (50 lots)	
Zone	General Residential	
Overlay/s	Bushfire Prone Areas	
Existing development	Existing dwelling and associated outbuildings.	Vacant.
Existing services and infrastructure		
Water	Existing reticulated main	
Sewer	Existing reticulated main	
Stormwater	Existing table drains	

2.2 Proposal

The proposal is for a subdivision of the land to create 50 lots. The subdivision will comprise 48 residential lots, with 47 being vacant residential lots and one containing the existing development; one road lot; and, one lot set aside for stormwater detention/drainage. Infrastructure for the provision of reticulated services is proposed and detailed in Annexures 2 and 3 of this application. Existing outbuildings on proposed Lots 28 and 29 will be demolished where they are outside the new boundaries.

2.3 Images



Figure 1 Aerial view of the subject site (Source: LISTMap)

3. Planning context

3.1 Zoning and overlays

The site is zoned General Residential under the scheme.

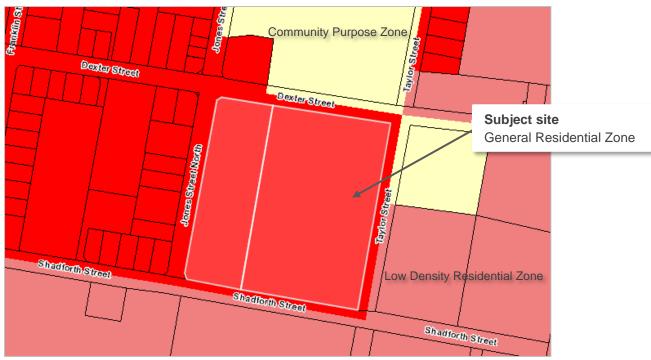


Figure 2 Zoning of the subject site and surrounding area (Source: LISTMap)

The subject site is affected by the Bushfire Prone Areas Overlay (hatched area).

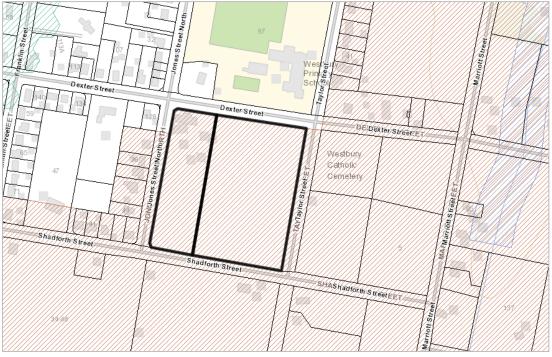


Figure 3 Overlays affecting the subject site (Source: LISTMap)

4. Planning Scheme Zone Assessment

4.1 Zone assessment

- 7.10 Development not Required to be Categorised into a Use Class
- 7.10.1 An application for development that is not required to be categorised into one of the Use Classes under subclause 6.2.6 of this planning scheme and to which 6.8.2 applies, excluding adjustment of a boundary under subclause 7.3.1, may be approved at the discretion of the planning authority.
- 6.2.6 Notwithstanding subclause 6.2.1 of this planning scheme, development which is for subdivision, a sign, land filling, retaining walls or coastal protection works does not need to be categorised into one of the Use Classes.

Response

The proposed subdivision does not need to be categorised into a use class. The subdivision is consistent with the purpose of the zone. The proposed balance lot will retain the existing residential use class.

8 General Residential Zone

8.1 Zone Purpose

- 8.1.1.1 To provide for residential use or development that accommodates a range of dwelling types where full infrastructure services are available or can be provided.
- 8.1.1.2 To provide for the efficient utilisation of available social, transport and other service infrastructure.
- 8.1.1.3 To provide for non-residential use that:
 - a) primarily serves the local community; and
 - b) does not cause an unreasonable loss of amenity through scale, intensity, noise, activity outside of business hours, traffic generation and movement, or other off site impacts.
- 8.1.1.4 To provide for Visitor Accommodation that is compatible with residential character.

8.6 Development Standards for Subdivision

8.6.1 Lot design

Objective

That each lot:

- a) has an area and dimensions appropriate for use and development in the zone;
- b) is provided with appropriate access to a road;
- c) contains areas which are suitable for development appropriate to the zone purpose, located to avoid natural hazards; and
- d) is orientated to provide solar access for future dwellings.

Acceptable Solutions		Performance Criteria	
А	Each lot, or a lot proposed in a plan of subdivision, must:	P1 Each lot, or a lot proposed in a plan of subdivision, must have sufficient useable area and dimensions suitable for its intended	

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- a) have an area of not less than 450m² and:
 - i. be able to contain a minimum area of 10m x 15m with a gradient not steeper than 1 in 5, clear of:
 - a. all setbacks required by clause 8.4.2
 A1, A2 and A3, and 8.5.1 A1 and A2;
 and
 - b. easements or other title restrictions that limit or restrict development; and
 - ii. existing buildings are consistent with the setback required by clause 8.4.2 A1, A2 and A3, and 8.5.1 A1 and A2;
- b) be required for public use by the Crown, a council or a State authority;
- c) be required for the provision of Utilities; or
- d) be for the consolidation of a lot with another lot provided each lot is within the same zone.

use, having regard to:

- the relevant requirements for development of buildings on the lots;
- the intended location of buildings on the lots;
- c) the topography of the site;
- d) the presence of any natural hazards;
- e) adequate provision of private open space; and
- f) the pattern of development existing on established properties in the area.

Response

- A1 The acceptable solution (a) is achieved. The minimum lot size is met for all lots.
 - Each lot is dimensioned to contain a 10m x 15m area and the topography is not challenging to siting dwellings with the area being flat overall. Easements, existing and proposed are accounted for.
- A2 Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must have a frontage not less than 12m.
- P2 Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be provided with a frontage or legal connection to a road by a right of carriageway, that is sufficient for the intended use, having regard to:
 - a) the width of frontage proposed, if any;
 - the number of other lots which have the land subject to the right of carriageway as their sole or principal means of access:
 - c) the topography of the site;
 - the functionality and useability of the frontage;
 - e) the ability to manoeuvre vehicles on the site; and
 - f) the pattern of development existing on established properties in the area,

and is not less than 3.6m wide.

Response

- P2 The performance criteria are addressed. The majority of lots will have frontage of at least 12m. Lots 11, 13, 28, 36, and 47 will have reduced frontage with lots 13, 28, 36 and 47 being internal lots with 4m access strip.
 - a) The proposed reduced frontages will be minimum 4m (internal lots).
 - b) Within the proposal there are no other lots that are dependent on right of way for access.

- c) The site is flat and even.
- d) Four lots will be internal with the frontage being access strip, but all lots have single and direct access.
- e) The site is flat and even, there are no identified land hazards that present any challenges to access.
- f) Surrounding development is generally regular and confined to the existing grid pattern of development. There are examples of internal lots at 109a Dexter Street, 45 Shadforth Street, 49A, 51A and 51B Adelaide Street; 32, 38 and 40 Taylor Street and 30a, 24 and 37 Jones Street North.

All accesses are more than 3.6m wide.

A3 Each lot, or a lot proposed in a plan of subdivision, must be provided with a vehicular access from the boundary of the lot to a road in accordance with the requirements of the road authority.

- P3 Each lot, or a lot proposed in a plan of subdivision, must be provided with reasonable vehicular access to a boundary of a lot or building area on the lot, if any, having regard to:
 - a) the topography of the site;
 - the distance between the lot or building area and the carriageway;
 - c) the nature of the road and the traffic;
 - d) the anticipated nature of vehicles likely to access the site; and
 - e) the ability for emergency services to access the site.

Response

- A3 The acceptable solution is achieved. Each lot will have vehicular access in accordance with the prescribed standards.
 - A4 Any lot in a subdivision with a new road, must have the long axis of the lot between 30 degrees west of true north and 30 degrees east of true north.
- P4 Subdivision must provide for solar orientation of lots adequate to provide solar access for future dwellings, having regard to:
 - a) the size, shape and orientation of the lots:
 - b) the topography of the site;
 - the extent of overshadowing from adjoining properties;
 - d) any development on the site;
 - e) the location of roads and access to lots; and
 - f) the existing pattern of subdivision in the area.

Response

- P4 The performance criteria are addressed. While the majority of proposed lots are north facing there are lots proposed on the east west axis.
 - a) The lots in question, on the east-west axis are minimum 593m². They are generally rectangular, with the exception of Lot 43, which is on a corner and has dual orientation.
 - b) The site is flat and even. The topography poses no challenge to solar access.

- c) The lots will be vacant, apart from the balance lot. The lots in question have adequate dimensions to allow setbacks to prevent overshadowing and future development will be subject to the planning provisions that aim to prevent overshadowing.
- d) The existing development (proposed balance lot) is north facing with a rear setback of approximately 20m from the dwelling, and approximately 2.2m from the outbuilding to Lot 28. Lot 28 will have a length of 28m for dwelling development and will have room to allow for private open space and dwelling with minimal overshadowing.
- e) Each lot has direct, unencumbered access to a road.
- f) The existing pattern of subdivision demonstrates an overall grid pattern with varied subdivision pattern within each block, including infill development. Lots to the south and east are less developed and differently zoned.

8.6.2 Roads

Objective

That the arrangement of new roads within a subdivision provides for:

- (a) safe, convenient and efficient connections to assist accessibility and mobility of the community;
- (b) the adequate accommodation of vehicular, pedestrian, cycling and public transport traffic; and
- (c) the efficient ultimate subdivision of the entirety of the land and of surrounding land.

Acceptable Solutions	Performance Criteria
A1 The subdivision includes no new roads.	P1 The arrangement and construction of roads within a subdivision must provide an appropriate level of access, connectivity, safety and convenience for vehicles, pedestrians and cyclists, having regard to:
	 a) any road network plan adopted by the council;
	b) the existing and proposed road hierarchy;
	 the need for connecting roads and pedestrian and cycling paths, to common boundaries with adjoining land, to facilitate future subdivision potential;
	 maximising connectivity with the surrounding road, pedestrian, cycling and public transport networks;
	 e) minimising the travel distance between key destinations such as shops and services and public transport routes;
	f) access to public transport;
	g) the efficient and safe movement of pedestrians, cyclists and public transport;
	h) the need to provide bicycle infrastructure on new arterial and collector roads in accordance with the Guide to Road Design Part 6A: Paths for Walking and Cycling 2016;
	i) the topography of the site; and
	j) the future subdivision potential of any

balance lots on adjoining or adjacent land.

Response

- P1 The performance criteria are addressed.
 - a) This application is dependent on any road network plan that has been adopted by Council;
 - b) The existing roads are local Council maintained roads. The proposed would join this network.
 - c) The proposed road facilitates the subject site subdivision development only.
 - d) The proposed road will connect to existing transport networks.
 - e) The road is joined to the local transport network joining Shadforth Street and Taylor Street.
 - f) All bus stops are on Meander Valley Road. The proposed road allows access to Meander Valley Road via Taylor Street.
 - g) The road will allow for pedestrian movement. There is limited pedestrian and cyclist infrastructure to connect to in the immediate area.
 - h) Not applicable
 - i) The site is flat and even and presents no challenge to the safe use of the road network.
 - j) The balance lot may have subdivision potential based on the lot size and positioning within the development. The lot has an existing dwelling and outbuildings. The construction of the road has no impact on the subdivision potential of this lot.

8.6.3 Services

Objective			
	That the subdivision of land provides services for the future use and development of the land.		
Acc	eptable Solutions	Performance Criteria	
A1	Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must have a connection to a full water supply service.	P1	A lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must have a connection to a limited water supply service, having regard to: a) flow rates; b) the quality of potable water; c) any existing or proposed infrastructure to provide the water service and its location; d) the topography of the site; and e) any advice from a regulated entity.
A2	Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must have a connection to a reticulated sewerage system.	P2	No Performance Criterion.
A3	Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of connecting to a public stormwater system.	P3	Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of accommodating an on-site stormwater management system adequate for the future use and development of the land,

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having regard to:
a) the size of the lot;
b) topography of the site;
c) soil conditions;
d) any existing buildings on the site;
 e) any area of the site covered by impervious surfaces; and
f) any watercourse on the land.

Response

- A1 The acceptable solution is achieved. Each lot has the ability to connect to reticulated water.
- A2 The acceptable solution is achieved. Each lot has the ability to connect to reticulated sewer.
- A3 The acceptable solution is achieved. The proposed subdivision includes a detention basin to allow for increased flows to the public system.

A separate report on servicing for the subdivision is provided at Annexure 3 detailing servicing of all reticulated services for the site.

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4.2 Code Assessment

The following Codes under the Scheme are considered applicable to this application.

Code		Comments	
C1	Signs Code		
C2	Car Parking and Sustainable Transport Code	Applicable; refer to the following section of the report	
C3	Road and Railway Assets Code	Applicable; refer to the TIA at Annexure 4	
C4	Electricity Transmission Infrastructure Protection Code		
C5	Telecommunications Code		
C6	Local Historic Heritage Code		
C7	Natural Assets Code		
C8	Scenic Protection Code		
C9	Attenuation Code		
C10	Coastal Erosion Hazard Code		
C11	Coastal Inundation Hazard Code		
C12	Flood Prone Area Hazard Code		
C13	Bushfire-prone Areas Code	Applicable – Refer to Bushfire Pack at Annexure 5	
C14	Potentially Contaminated Land Code		
C15	Landslip Hazard Code		
C16	Safeguarding of Airports Code		

C2 Parking and Sustainable Transport Code

C2.5 Use Standards

C2.5.1 Car parking numbers

Table E6.1 Parking Space Requirements (extract)

Use: Residential	Parking Requirements
If a 1 bedroom or studio dwelling in the General Residential Zone (including all rooms capable of being used as a bedroom)	1 space per dwelling.
If a 2 or more bedroom dwelling in the General Residential Zone (including all rooms capable of being used as a bedroom)	2 spaces per dwelling

Objective

To ensure that an appropriate level of car parking is provided to service use.

Acceptable Solutions		Performance Criteria			
A1	The number of car parking spaces must not be less than the requirements of:		P1.1 The number of car parking spaces must have regard to: (a-h)		e number of car parking spaces provided st have regard to: (a-h)
	a)	Table E6.1; or	P1.2		
	b)	a parking precinct plan contained in Table E6.6: Precinct Parking Plans (except for dwellings in the General Residential Zone).		The number of car parking spaces for dwellings must meet the reasonable needs the use, having regard to:	
				a)	the nature and intensity of the use and car parking required;
				b)	the size of the dwelling and the number of bedrooms; and
				c)	the pattern of parking in the surrounding area.

Response:

- A1 The Acceptable Solution is achieved. All proposed residential lots will have adequate car parking space for 2+ vehicles with manoeuvring room.
- C2.6 Development Standards for Buildings and Works

 Not applicable as there is no development proposed beyond the subdivision as a part of this application. The balance lot containing the dwelling will retain access and parking as existing.
- C3.0 Road and Railway Assets Code
 Please refer to Annexure 4 for a response to this code.
- C13.0 Bushfire-Prone Areas Code
 Please refer to Annexure 5 for a response to this code.

5. Conclusion

The proposed development is for a 50 lot subdivision. The project will result in 47 new vacant residential lots in the General Residential Zone. The new lots are compliant to the zone standards and suitable for residential development. The existing residence will be contained to a balance lot of 2521m². The project will include one road lot and one lot set aside for stormwater detention. Reticulated services will be made for the new lots.

The proposal is appropriate to the zone and meets the provisions of the Scheme. Approval for the subdivision is sought from Council.

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Annexure 1 - Certificate of Title Plan and Folio Text

Annexure 2 – Subdivision proposal plan

Annexure 3 – Servicing report

Annexure 4 – Traffic Impact Assessment

Annexure 5 – Bushfire Hazard Assessment



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47 Lot Subdivision 126 Dexter Street, Westbury.

June 2023

Job number: L171204

WS133

Prepared by: James Stewart

Town Planner & Bushfire Hazard Practitioner BFP 157

Rev. no	Description	Date
1	FINAL	12 th December 2022
2	UPDATED PLAN - FINAL	14 TH June 2023
3	RFI	7 th August 2023

Disclaimer

This report deals with the potential bushfire risk only, all other statutory assessments sit outside of this report. This report is not to be used for future or further development on the site, other then what has been specifically provided for in the certified plans attached. Woolcott Surveys Pty Ltd accepts no responsibility to any purchaser, prospective purchaser or mortgagee of the property who in any way rely on this report. This report sets out the owner's requirements and responsibilities and does not guarantee that buildings will survive in the event of a bushfire event. If characteristics of the property change or are altered from those which have been identified, the BAL classification may be different to that which has been identified as part of this report. In this event the report is considered to be void.

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Executive Summary

Development of a 47 lot residential subdivision is proposed for 126 Dexter Street, Westbury. The subdivision consists of 47 residential lots, a balance lot, drainage lot and one road lot. The subdivision will be undertaken over two titles. Staging of the development is not yet determined. Access to lots will be via the new internal road, Taylor Street, Dexter Street, Shadfourth Street and Jones Street.

The site is entirely within the boundary of a bushfire prone area shown on an overlay of a planning scheme map for the *Tasmanian Planning Scheme – Meander Valley*. A bushfire event at this site or within the immediate area is likely to impact on future buildings at this location and subject development to considerable radiant heat and ember attack.

A bushfire hazard management plan has been prepared and is provided as an appendix to this report. The plan sets out the owner's responsibilities to maintain a managed area for each lot, taking into consideration the relevant requirements under Australian Standard AS3959-2018 Construction of buildings in bushfire-prone areas.

Conclusions and recommendations

- a) Hazard management areas meeting the requirements of BAL 12.5 can be achieved for lots 7, 19-22, and 30-40
- b) Lots 1-6, 8-18, 23-29, 41-47, and balance lot, are considered an insufficient increase in risk to warrant specific bushfire requirements. These lots are over 50m from grassland, which is the only identified bushfire prone vegetation within 100m of the site.
- c) Road 1, the proposed road, must be in compliance with Table C13.1, Element A, as shown in section 5.3 of this report.
- d) New hydrants are required in accordance with the TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2:0. Hydrants to have a separation of not more than 60m.
- e) As part of the subdivision, the balance lot, is to be managed in accordance with section 5.2 of this report, this area is to be maintained in perpetuity.
- f) Prior to Council sealing a final plan of survey for any stage, a 50m managed buffer is to be provided around the boundary of each stage. This 50m wide hazard management area it to be maintained in perpetuity, until such time as a final plan of survey for the following stage is complete. Should the road not be constructed in one stage, a temporary turning head with an outer radius of 12m is required at the conclusion of the road.
- g) All lots are to be treated as a hazard management area. Maintenance of all hazard management areas must be in perpetuity.

Signed:

Author: James Stewart

Position: Town Planner and Accredited Bushfire Practitioner BFP 157

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1. Introduction

This Bushfire Hazard Report and Bushfire Hazard Management Plan (BHMP) has been prepared in support of a proposed 47 lot subdivision at 126 Dexter Street, Westbury.

1.1 The subject site

The following is a summary of the application information:

Property address	126 Dexter Street, Westbury.
Certificate of title	CT108079/1 & CT15169/1
Property ID (PID)	7012790 & 7012784
Property Owners	John William Johnston and Jennifer Maria Johnston
Existing Use and Development	Single Dwelling and outbuildings (CT15169/1).
	Vacant Land (108079/1)
Existing Zoning	General Residential Zone.
Planning Scheme	Tasmanian Planning Scheme – Meander Valley
Identified on a Bushfire Overlay Map	Yes
Priority Habitat identified	No
Proposed Works	47 Lot Subdivision including Road Lot.
Water Supply	Reticulated water supply
Vehicular Access	Council Roads (multiple).

1.2 Bushfire Assessment

A bushfire assessment is a process of analysing information about the potential impacts on a proposed development that is likely to have in a bushfire hazard scenario. A 'bushfire-prone area' is an area where a bushfire event is likely to occur that may result in significant adverse impact on buildings and even lives. In Tasmania, most local Councils have a planning scheme overlay map that identifies bushfire-prone areas. Subdivision within a bushfire-prone area triggers the assessment of the Bushfire-Prone Areas Code under the planning schemes and subsequently requires assessment against the provisions of the Code. The assessment generally requires a BHMP to be provided as part of the application.

The bushfire assessment will determine the Bushfire Attack Level (BAL) for the future lots, which measures the possible exposure of a building to bushfire hazard. The BAL is assessed in accordance with Australian Standard AS 3959-2018 construction of buildings in bushfire-prone areas.

The subject site falls within the municipal area of Meander Valley. The assessment has been undertaken in accordance with C13.0 Bushfire-Prone Areas Code and to accompany a subdivision

application under the *Tasmanian Planning Scheme – Meander Valley*. Please refer to Section 6 of the report for detail.

A BAL assessment is required to understand the fuel management requirements for the subject site and to demonstrate that future new buildings within each proposed new lots can be constructed to a BAL19 level under the *Building Act 2016*.

1.3 References

The following documents were referred in the preparation of, and should be read in connection with, this bushfire assessment report:

- C13.0 Bushfire-Prone Areas Code Tasmanian Planning Scheme.
- Tasmanian State Government, Director's Determination Bushfire Hazard Areas
- Tasmanian Planning Scheme Meander Valley Council
- Australian Standard, AS3959-2018 construction of buildings in bushfire-prone areas.
- Building Act 2016
- Tasmanian Fire Service, Bushfire Hazard Advisory Notes

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2. Site Description

2.1 Site context

A 47-lot subdivision is being undertaken at 126 Dexter Street, Westbury. The site consists of two regular shaped titles, which have a total area of 3.9ha. The land is generally located in the southern part of Westbury.

The site is vacant, with no use or development on site. The land is currently used for residential purposes, with some low-level grazing occurring on the vacant parcel of land.

The site is the last urban allotment on the southern part of Westbury. Land to the west is also within the General Residential Zone, while land to the south and east transitions into lifestyle lots. The Westbury Primary School is located to the north.

The site is bounded by Council maintained roads on all sides, typical of the grid pattern associated with Westbury. Dexter Street lies to the north, Shadfourth Street to the south, Taylor Street to the east and Jones Street to the West.

The site is level with no noticeable fall.



Figure 1 - Aerial view of the subject site (source: The LIST Map)

The subject site will be serviced by a reticulated water supply maintained by TasWater. There are currently hydrants located along Dexter Street, Taylor Street, and Jones Street.

2.2 Planning controls

The site is within the municipal area of the Meander Valley Council. Therefore, the planning instrument is the *Tasmanian Planning Scheme – Meander Valley* (The Scheme).

The subject site is currently within the General Residential Zone. The subject site adjoins the General Residential Zone to the north, and west the site. The Community purpose zone (school and cemetery) lies to the north and east, along with the Low-Density zone to the south and east.

The subject site also entirely falls within the Bushfire-Prone Areas Overlay.

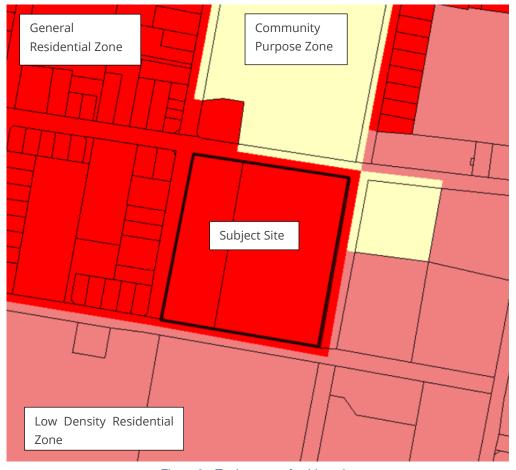


Figure 2 - Zoning map of subject site.

3. The Proposal

It is proposed to subdivide the subject site into 47 residential lots. The lots are intended for residential development, ranging from 577m² to 949m² in size. There will be a balance lot which retains a size of 2521m². A new road will provide vehicular access from Taylor Street to Shadforth Street, while all other lots will access off either Dexter, Shadforth, or Jones Street. All lots will be connected to reticulated water, sewer and stormwater.



Figure 3 - Extract of proposal plan for 47 lot subdivision

4. Bushfire Site Assessment

4.1 Vegetation Analysis

4.1.1 TasVeg Mapping

The TasVeg map 4.0 provides general information indicating potential bushfire prone vegetation in the area.

The mapping shows the vegetation community across the subject site as FAG, being agricultural land. This is consistent with the characteristics of the subject site as grassland, as well as land to the south and east, which is all used as pasture and large residential lots. Land to the north and west south is developed for urban purposes, and correctly identified as managed land.

No other vegetation has been identified in proximity of the subject site.



Figure 4 - Extract of vegetation mapping from TasVeg 4.0

4.1.2 Vegetation Type and Separation

A site visit was conducted on the 16^{th} of December 2021. An analysis of the land and bushfire prone vegetation within 120m from the subject site is provided below.

Direction	Analysis
North	Land to the north is zoned General Residential and Community Purpose. There is no bushfire prone vegetation within 100m of the site.
South	Land to the south is classified as grassland. The lots are large residential lots, however only appear to maintain an area around the existing dwelling. The lots are large residential lots, however only appear to maintain an area around the existing dwelling.
East	Land to the east is classified as grassland. The cemetery to the north east is considered as managed. The lots are large residential lots, however only appear to maintain an area around the existing dwelling.
West	Land to the west is classified as urban land. There is no bushfire prone vegetation within 100m of the site.

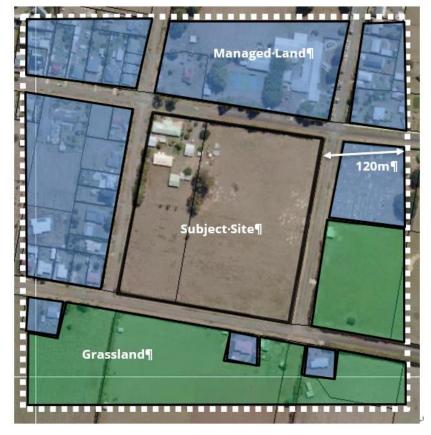


Figure 5 - Vegetation analysis within 100-120m of subject site

4.2 Slope Analysis

Figure 6 below shows the effective slope which is the slope of land under the classified vegetation **in relation to** the subject site. The identified bushfire prone vegetation occurs on land that is flat



Figure 6 - slope under bushfire prone vegetation

4.3 Photos



Figure 7 – Looking west from Taylor Street, over lot 7.



Figure 8 – Looking south Down Taylor Street.



Figure 9 – Looking east from Taylor Street, Managed land at Westbury Cemetery.



Figure 10 – Looking east from Taylor Street, opposite lot 40.



Figure 11 – Looking south from Shadforth Street, opposite lot 35. Fire plug in right of photo.



Figure 12 – Looking south from Shadforth Street, opposite lot 30.



Figure 13 – Looking east over subject site from lot 23.



Figure 14 – Looking north west, on Jones Street, urban area on left of photo.



Figure 15 – Looking north at school, from Dexter Street. Managed land.



Figure 16 – Looking north east from Taylor and Dexter. Westbury Primary. Managed land.

5. Bushfire Protection Measures

5.1 BAL Rating and Risk Assessment

The purpose of the BAL rating assessment in this report is to identify the minimum separation between the bushfire prone vegetation to a building area within each proposed lot. The assessment aims to achieve the requirements of **BAL 19** (as per the acceptable solution C13.6.1 A1b under the Scheme, see Section 6 below for detail) and/or lower rating in a bushfire event that hazard management areas can be implemented.

The definition of BAL 19 and BAL 12.5 is highlighted as follows:

Bushfire attack level (BAL)	Predicted bushfire attack and exposure level
BAL-LOW	Insufficient risk to warrant specific construction requirements
BAL-12.5	Ember attack, radiant heat below 12.5kW/m²
BAL-19	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5-19kW/m ²
BAL-29	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19-29kW/m ²
BAL-40	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 29-40kW/m ²
BAL-FZ	Direct exposure to flames radian heat and embers from the fire front.

The distances from each lot to the classified vegetation is presented below, along with the slope and type of vegetation. To better demonstrate the required separation as hazard management areas, a 10m x 15m building area is shown on each lot. As per the analysis in Section 4.1, the only identified bushfire-prone vegetation around the site is grassland.

Lots 1-6, 8-18, 23-29, 41-47 and balance lot are all over 50m from grassland. These lots are therefore classified as insufficient risk to warrant specific bushfire requirements.

Note: BAL setbacks are noted as 'No Setback Requirement', as entire lot can be developed at BAL 12.5. There are no need for building setbacks to meet BAL 12.5.

Lot 7	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -30m Managed 30m-100m+ Grassland	0m -100m Managed	0m -100m Managed
Slope (degrees, over 100m)	NA	Flat	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 19	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -100m Managed	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement		No setback requirement	No setback requirement

Lot 20	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -100m Managed	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 21	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -100m Managed	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 22	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -100m Managed	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement		No setback requirement	No setback requirement

Lot 30	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -100m Managed	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement		No setback requirement	No setback requirement

Lot 31	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -80m Managed 80m-100m+ Grassland	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 32	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -70m Managed 70m-100m+ Grassland	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 33	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -50m Managed 50m-100m+ Grassland	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 34	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -40m Managed 40m-100m+ Grassland	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 35	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -22m Managed 22m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 36	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -50m Managed 50m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 37	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -55m Managed 55m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 38	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -70m Managed 70m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 39	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -95m Managed 95m-100m+ Grassland	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

Lot 40	North	East	South	West
Vegetation within 100m of site	0m -100m Managed	0m -20m Managed 20m-100m+ Grassland	0m -100m Managed	0m -100m Managed
Slope (degrees, over 100m)	NA	NA	NA	NA
BAL 12.5 Setbacks	No setback requirement	No setback requirement	No setback requirement	No setback requirement

5.2 Hazard Management Areas

As outlined in C13.0 *Bushfire-Prone Areas Code*, a Bushfire Hazard Management Area (BHMA) will be managed in accordance with the provided plan. Existing vegetation needs to be strategically modified and then maintained within this area in accordance with the Bushfire Hazard Management Plan (BHMP) to achieve the following outcomes:

- to reduce the quantity of windborne sparks and embers reaching buildings;
- to reduce radiant heat at the building; and
- to halt or check direct flame attack.

The BHMA will be developed within and up to the property boundaries to provide access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present that will significantly contribute to the spread of a bushfire.

The BHMA will be achieved by adoption of the following strategies:

Maintenance of Fuel Management Areas

It is the responsibility of the property owner to maintain and manage the landscaping in accordance with the BHMP.

This area is to be regularly managed and maintained. Landscaping in this area will be minimised:

- Grass maintained to a maximum height of 100mm, with fuel loads kept to less than 2 tonnes per hectare which will be maintained at this level.
- Trees and any undergrowth will be clear of (BCA) class 1 9 buildings on all sides.
- All undergrowth and understorey of trees (up to 2m) will be removed within the bushfire hazard management area.
- Pathways to 1 metre surrounding the buildings and landscaping material, will be non-combustible (stone, pebbles etc.).
- The total shrub cover will be a maximum of 20% of the available area.
- There will be a clear space from the buildings of at least four (4) times the mature height of any shrubs planted.
- Shrubs will not be planted in clumps, this is to avoid build-up of debris and dead vegetation materials.

Landscaping

- vegetation along the pathways to comprise non-flammable style succulent ground cover or plants (avoid plants that produce fine fuel which is easily ignited, plants that produce a lot of
 - debris, trees and shrubs which retain dead material in branches or which shed long strips of bark, rough fibrous bark or drop large quantities of leaves in the spring and summer, vines on walls or tree canopies which overhang roofs)
- timber woodchip and flammable mulches cannot be used and brush and timber fencing should be avoided where possible

5.3 Roads

Roads must be constructed as per the following table. In this instance, the criteria will be met as there are no cul de sacs or dead end roads.

Eleme	ent	Requirement
A. Ro	pads	Unless the development standards in the zone require a higher standard, the following apply:
		(a) two-wheel drive, all-weather construction;
		(b) load capacity of at least 20t, including for bridges and culverts;
		(c) minimum carriageway width is 7m for a through road, or 5.5m for a dead-end or cul-de-sac road;
		(d) minimum vertical clearance of 4m;
		(e) minimum horizontal clearance of 2m from the edge of the carriageway;
		(f) cross falls of less than 3 degrees (1:20 or 5%);
		(g) maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads;
		(h) curves have a minimum inner radius of 10m;
		(i) dead-end or cul-de-sac roads are not more than 200m in length unless the carriageway is 7 meters in width;
		(j) dead-end or 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 <i>Australian Standard AS1743-2001 Road signs-Specifications</i> .

5.4 Property Access

Private access roads must be constructed as per the following table C13.2. Crossovers will need to be provided as part of the subdivision works, however private access for future dwellings does not need to completed as part of the subdivision. All future access for dwellings will comply with element A due to the presence of fire hydrants in the road reserve.

Ele	ement	Requirement
Α.	Property access length is less than 30m; or access is not required for a fire appliance to access a fire fighting water point.	There are no specified design and construction requirements.
В.	Property access length is 30m or greater; or access is required for a fire appliance to a fire fighting water point.	The following design and construction requirements apply to property access: (a) all-weather construction; (b) load capacity of at least 20t, including for bridges and culverts; (c) minimum carriageway width of 4m; (d) minimum vertical clearance of 4m; (e) minimum horizontal clearance of 0.5m from the edge of the carriageway; (f) cross falls of less than 3 degrees (1:20 or 5%); (g) dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; (h) curves with a minimum inner radius of 10m; (i) maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and (j) terminate with a turning area for fire appliances provided by one of the following: (i) a turning circle with a minimum outer radius of 10m; or (ii) a property access encircling the building; or (iii) a hammerhead "T" or "Y" turning head 4m wide and 8m long.
C.	Property access length is 200m or greater.	The following design and construction requirements apply to property access: (a) the requirements for B above; and (b) passing bays of 2m additional carriageway width and 20m length provided every 200m.
D.	Property access length is greater than 30m, and access is provided to 3 or more properties.	The following design and construction requirements apply to property access: (a) complies with requirements for B above; and (b) passing bays of 2m additional carriageway width and 20m length must be provided every 100m.

5.5 Fire Fighting Water Supply

Table C13.4 Reticulated water supply for fire fighting. Hydrants will be provided as part of the development. Indicative location of hydrants has been shown on the BHMP.

Ele	ement	Requirement
Α.	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.
В.	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.
С	Hardstand	 A hardstand area for fire appliances must be provided: 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) with 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.

6. Bushfire-Prone Areas Code Assessment

An assessment of C13.0 Bushfire-Prone Areas Code under the Scheme is provided as follows.

C13.6 Development Standards for Subdivision

C13.6.1 Subdivision: Provision of hazard management areas

Objective

Subdivision provides for hazard management areas that:

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

Acceptable solutions		Proposed solutions	
Acc A1 (a) (b)	TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of hazard management areas as part of a subdivision; or The proposed plan of subdivision: (i) shows all lots that are within or partly within a bushfire-prone area, including those developed at each stage of a staged subdivision; (ii) shows the building area for each lot; (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	Prop A1a) A1b) i) iii) iiv)	Lots over 50m from grassland have been classified as BAL LOW. These lots are considered an insufficient increase in risk to warrant provision of bushfire hazard management areas. The acceptable solution is achieved. The BHMP: shows all lots within the bushfire prone area. Each lot can provide for a building area. shows a HMA associated with each building area demonstrating the separation distances required for BAL 19 in Table 2.4.4 of AS 3959 – 2018 Construction of buildings in bushfire-prone area. is prepared by an accredited bushfire hazard
		A1c)	practitioner. not applicable as Part 5 agreement is not required.
	areas; and (iv) is accompanied by a bushfire hazard management plan that addresses all the individual lots and that is certified by the TFS or accredited person, showing hazard management areas equal to, or greater than the separation distances required for BAL 19 in Table 2.6 of Australian Standard AS3959:2018 Construction of buildings in bushfire-prone Areas; and		
(c)	If hazard management areas are to be located on land external to the proposed subdivision the application is		

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accompanied by the written consent of the owner of that land to enter into an agreement under section 71 of the Act that will be registered on the title of the neighbouring property providing for the affected land to be managed in accordance with the bushfire hazard management plan.

C13.6.2 Subdivision: Public and firefighting access

Objective

Access roads to, and the layout of roads, tracks and trails, in a subdivision:

- (a) allow safe access and egress for residents, fire fighters and emergency service personnel;
- (b) provide access to the bushfire-prone vegetation that enables both property to be defended when under bushfire attack and for hazard management works to be undertaken;
- (c) are designed and constructed to allow for fire appliances to be manoeuvred;
- (d) provide access to water supplies for fire appliances; and
- (e) are designed to allow connectivity, and where needed, offering multiple evacuation points.

Acceptable solutions Proposed solutions A1 A1a) Lots over 50m from grassland have been classified as BAL LOW. These lots are a) TFS or an accredited person certifies that considered an insufficient increase in risk to there is an insufficient increase in risk from warrant provision of bushfire access provisions. bushfire to warrant specific measures for public access in the subdivision for the A1b) A proposed plan of subdivision is included as purposes of fire fighting; or part of the BHMP, the plan shows that roads b) A proposed plan of subdivision showing the will comply with Table C13.1. There are no layout of roads and fire trails, and the private access requirements or fire trails location of property access to building proposed. areas, is included in a bushfire hazard management plan that demonstrates proposed roads will comply with Table C13.1, proposed property accesses will comply with Table C13.2 and proposed fire trails will comply with Table C13.3 ii. is certified by the TFS or an accredited person

C13.6.3 Subdivision: Provision of water supply for fire fighting purposes

Objective

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 bushfire-prone areas.

Acce	Acceptable solutions		oosed solutions
A1	In areas serviced with reticulated water by the water corporation:	A1a	Lots over 50m from grassland have been classified as BAL LOW. These lots are considered an insufficient increase in risk to
(a)	TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of a		warrant provision of bushfire access provisions.
(b)	water supply for fire fighting purposes; A proposed plan of subdivision showing	A1b)	Acceptable solution achieved. The proposed plan of subdivision shows the layout of hydrants and building areas. The plan is
	the layout of fire hydrants, and building areas, is included in a bushfire hazard management plan approved by the TFS or		approved by an accredited person as being compliant with Table C13.4
	accredited person as being compliant with Table C13.4; or	A1c)	Not applicable.
(c)	A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and lives in the event of a bushfire.		
A2	In areas that are not serviced by reticulated water by the water corporation:	A2a) A2b)	Not applicable.
(a)	The TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant provision of a water supply for fire fighting purposes;	A2c)	Not applicable.
(b)	The TFS or an accredited person certifies that a proposed plan of subdivision demonstrates that a static water supply, dedicated to fire fighting, will be provided and located compliant with Table C13.5; or		
(c)	A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and lives in the event of a bushfire.		

7. Assessment of Risk – Lots 1-6, 8-18, 23-29, 41-47, and balance lot

The majority of lots proposed as part of the subdivision have been deemed exempt as part of the assessment. These lots are all over 50m from the identified grassland. The grassland is the only vegetation within 100m of the site. In accordance with Table 2.6, and section 2.2.3.2 of AS3959: 2018, development over 50m from grassland, where that is the only identified vegetation, can be considered as low threat. There will be a requirement to maintain the entirety of the balance lot as low threat vegetation, noting that this lot is already managed by the owners.

Based on the overall impact, it is assessed that the above-mentioned lots, as shown on the bushfire hazard management plan, are suitable to be classified as exempt under clause C13.4 of the *Tasmanian Planning Scheme - Meander Valley*.

8. Staging of Subdivision (if applicable)

Staging of the development is not yet determined. Should the subdivision be staged, the following general principles apply. A recommendation has been included that a 50m hazard management area be provided around all lots at the conclusion of each stage. This ensures there will always be a 50m buffer from any potential bushfire prone vegetation onsite. Should the proposed road not be completed in one stage, a temporary 12m outer radius turning head is required at the conclusion of the road. An example of staging and works required as part of a stage is shown below.

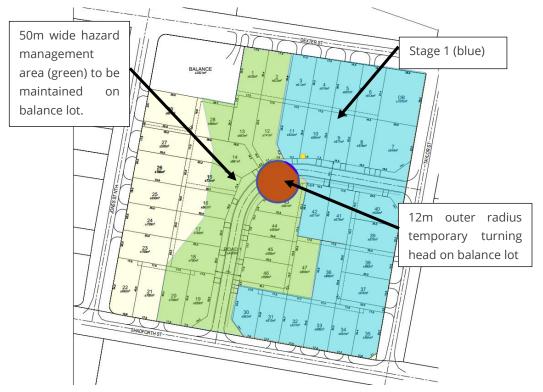


Figure 17 - Example of possible staging and bushfire works required for a stage.

9. Conclusions and Recommendations

The proposal seeks planning approval for a 47-lot residential subdivision at 126 Dexter Street, Westbury. The proposal will utilise existing Council roads, as well as constructing a through road between Taylor Street and Shadforth Street.

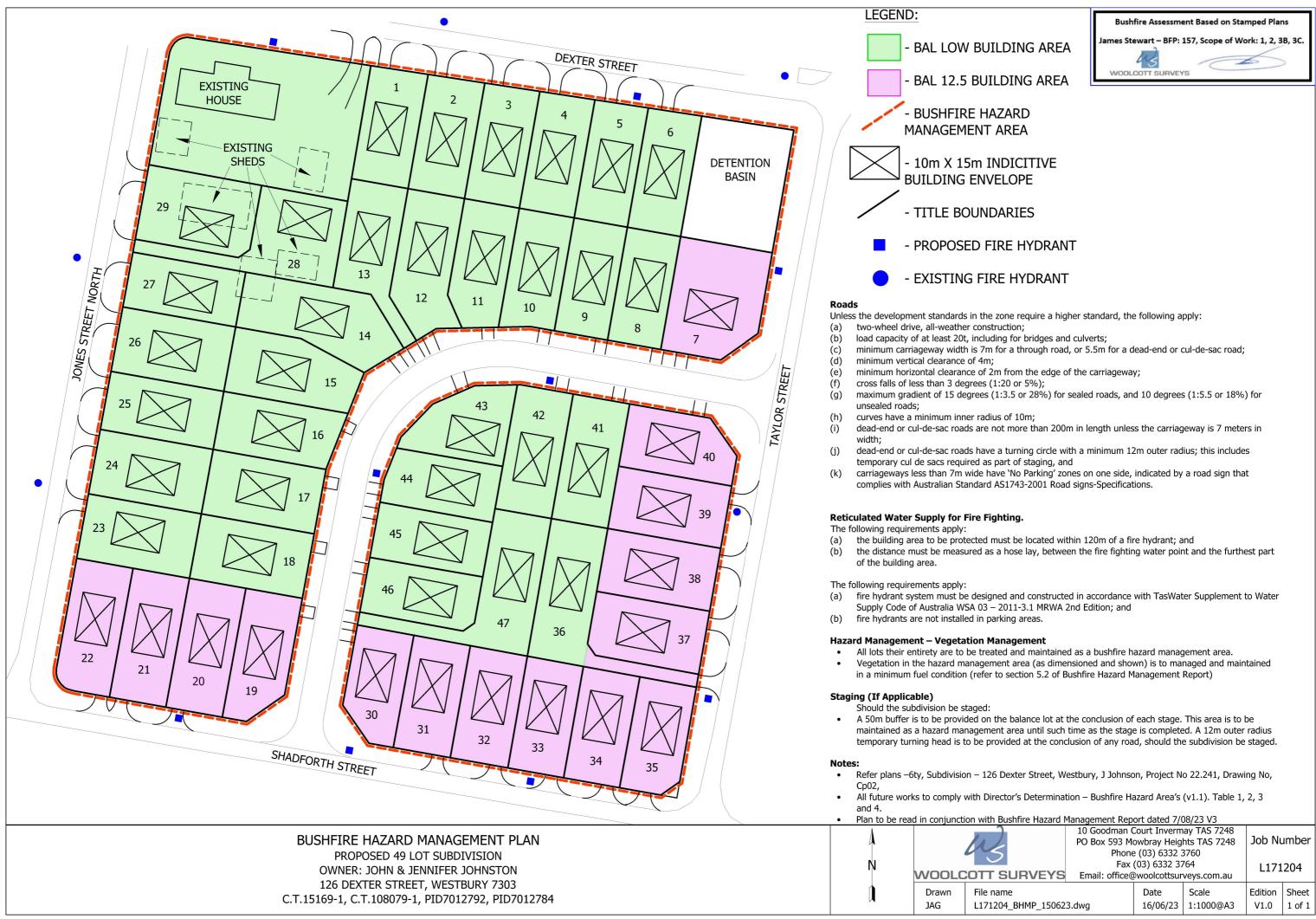
All of the lots have demonstrated that a building area can be provided in an area meeting the requirements of BAL 12.5, with many future dwellings expecting to be located in areas subject to BAL LOW. Hydrants will be provided along the proposed road and surrounding Council roads of Taylor and Shadforth Street, thus ensuring all building areas can be adequately protected in a bushfire event. Access to each of the lots will be less than 30m in length, thus negating the need for any specific access considerations.

The report provides the following conclusions:

- a) Hazard management areas meeting the requirements of BAL 12.5 can be achieved for lots 7, 19-22, and 30-40
- b) Lots 1-6, 8-18, 23-29, 41-47, and balance lot, are considered an insufficient increase in risk to warrant specific bushfire requirements. These lots are over 50m from grassland, which is the only identified bushfire prone vegetation within 100m of the site.
- c) Road 1, the proposed road, must be in compliance with Table C13.1, Element A, as shown in section 5.3 of this report.
- d) New hydrants are required in accordance with the TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2:0. Hydrants to have a separation of not more than 60m.
- e) As part of the subdivision, the balance lot, is to be managed in accordance with section 5.2 of this report, this area is to be maintained in perpetuity.
- f) Prior to Council sealing a final plan of survey for any stage, a 50m managed buffer is to be provided around the boundary of each stage. This 50m wide hazard management area it to be maintained in perpetuity, until such time as a final plan of survey for the following stage is complete. Should the road not be constructed in one stage, a temporary turning head with an outer radius of 12m is required at the conclusion of the road.
- g) All lots are to be treated as a hazard management area. Maintenance of all hazard management areas must be in perpetuity.

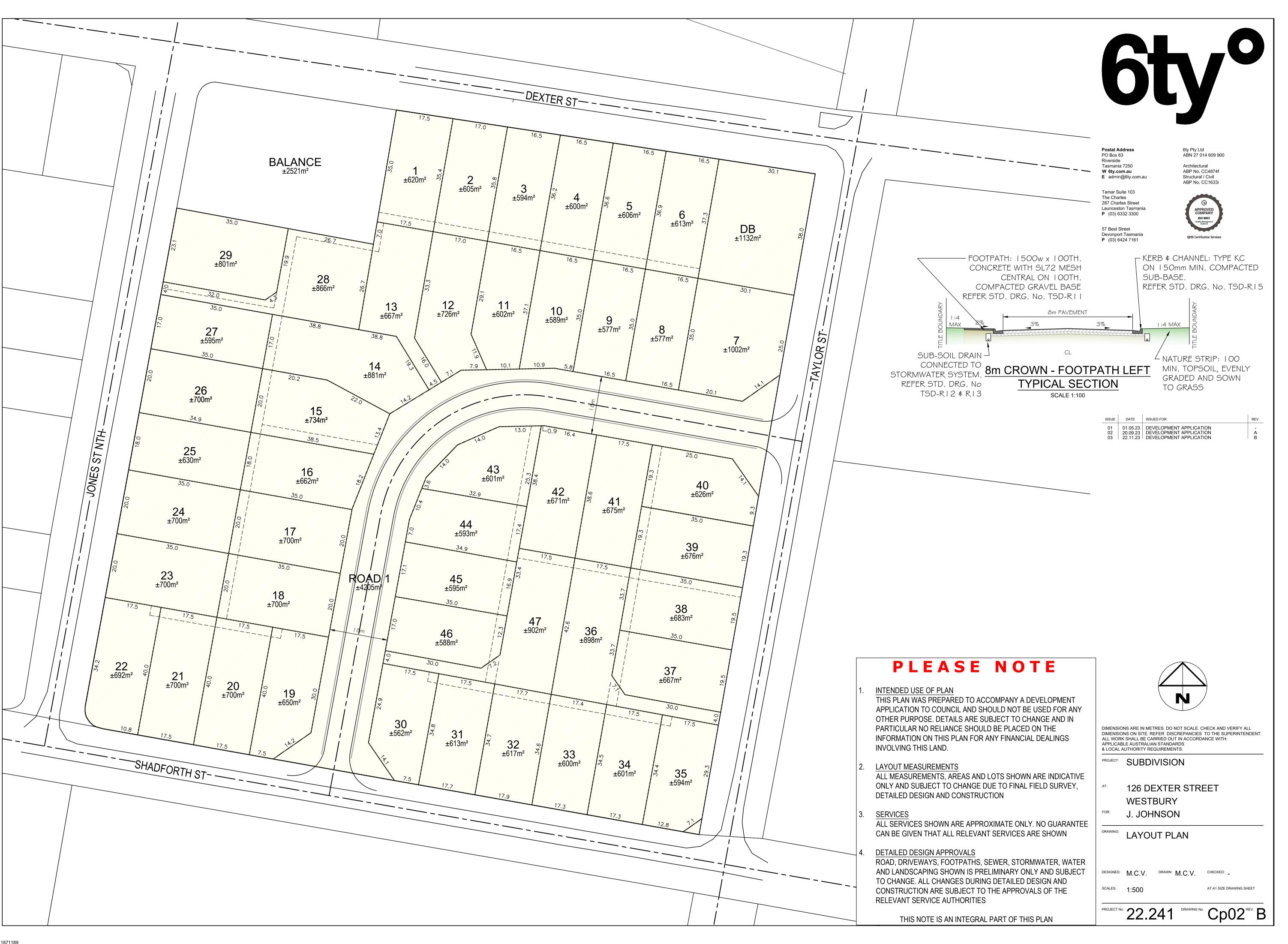
Annexure 1 - Bushfire Hazard Management Plan

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Annexure 2 – Subdivision Proposal Plan

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Annexure 3 - Planning Certificate

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE¹ 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: 126 Dexter Street, Westbury

CT15169/1 & CT108079/1. PID 7012792, **Certificate of Title / PID:** PID7012784

2. Proposed Use or Development

Description of proposed Use and Development:

47 Lot Subdivision

Applicable Planning Scheme:

Tasmanian Planning Scheme – Meander Valley

Page 1 of 4

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Bushfire Hazard Report	Woolcott Surveys	07/08/2023	3
Subdivision Proposal Plan (22.241, Cp02)	6ty°	-	В
Bushfire Hazard Management Plan	Woolcott Surveys	16/06/2023	1

Planning Certificate from a Bushfire Hazard Practitioner v5.0

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

\boxtimes	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. (Lots 1-6, lots 8-18, lots 23-29), 41-47 and balance lot.	
\boxtimes	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	

Planning Certificate from a Bushfire Hazard Practitioner v5.0

\boxtimes	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.	
\boxtimes	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk. (Lots 1-6, lots 8-18, lots 23-29), 41-47 and balance lot.	
\boxtimes	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables	

\boxtimes	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. (Lots 1-6, lots 8-18, lots 23-29), 41-47 and balance lot.	
	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:

James Stewart

Phone No:

0467 676 721

Postal Address:

PO BOX 593, Mowbray, Tas, 7248

Email Address:

james@woolcottsurveys.com.au

Accreditation No:

BFP - 157

Scope:

1, 2, 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 П 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 \boxtimes 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:

James Stewart

15/02/2024 Date:

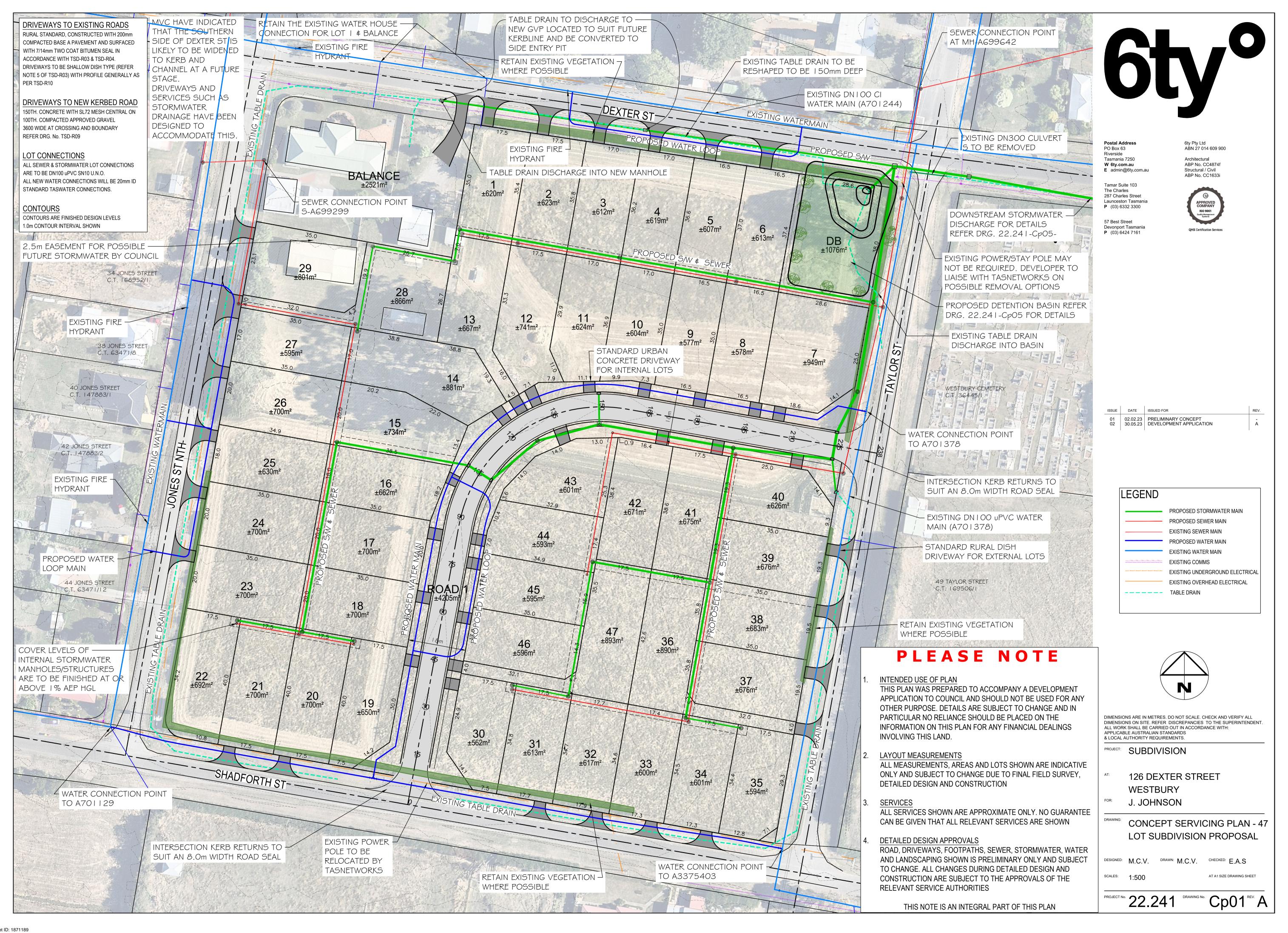
Certificate Number:

WS-133

(for Practitioner Use only)

Annexure 4 – 6ty Engineering Design for subdivision.

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Woolcott Surveys

126 Dexter Street, Westbury Traffic Impact Assessment

January 2024







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1. Introduction

1.1 Background

Midson Traffic were engaged by Woolcott Surveys to prepare a traffic impact assessment for a proposed residential subdivision development at 126 Dexter Street, Westbury.

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, *Traffic Impact Assessment Guidelines*, August 2020. 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 contained in Codes C2, *Parking and Sustainable Transport Code*, and C3, *Road and Railway Assets Code*, of the Tasmanian Planning Scheme – Meander Valley.

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, *Traffic Impact Assessment Guidelines*, August 2020, as well as Council's requirements.

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

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

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- 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 126 Dexter Street, Westbury. The site consists of two titles that are contained in the block bound by Dexter Street, Jones Street North, Shadforth Street and Taylor Street. The site currently has a residential dwelling and a number of building structures.

The site is located opposite Westbury Primary School in Dexter Street.

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

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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:

- Tasmanian Planning Scheme Meander Valley, 2021 (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, 2021
- Department of State Growth, Traffic Impact Assessment Guidelines, 2020
- 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 Dexter Street, Jones Street North, Taylor Street and Shadforth Street. Whilst not directly impacted by the proposed subdivision, consideration was also given to Meander Valley Road, which is located approximately 700 metres from the subject site.

2.1.1 Meander Valley Road

Meander Valley Road is a rural collector road that connects between the Highland Lakes Road/ Bowerbank Link Road roundabout at its western end and Bass Highway at its eastern end.

It is a two-lane/ two-way road with a sealed pavement width of 12 metres. It has a posted speed limit of 60-km/h through Westbury, with some portions being 50-km/h. Meander Valley Road carries approximately 3,000 vehicles per day through the town centre of Westbury¹. Meander Valley Road carries 11.5% heavy vehicles.

Peak flows on Meander Valley Road are typically 300 to 350 vehicles per hour. Hourly flows by day of week are shown in Figure 2.

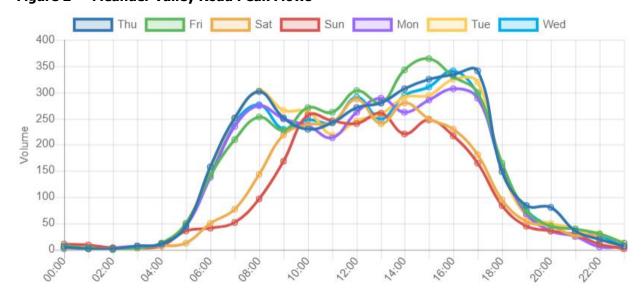


Figure 2 Meander Valley Road Peak Flows

Source: Department of State Growth, 2022 traffic data

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¹ Department of State Growth traffic data, 170 metres east of Emu Plains Road, 2,974 vehicles per day, 2022.



2.1.2 Dexter Street

Dexter Street connects between Arthur Street North at its western end and Five Acre Row at its eastern end. It provides east-west connectivity to a predominantly residential area south of Westbury town centre, as well as access to Westbury Primary School. The general urban speed limit of 50-km/h is applicable to Dexter Street, with a 40-km/h school zone being applicable during school drop-off and pick-up periods. Based on the surrounding land uses that connect to Dexter Street, traffic volumes are estimated to be approximately 300 vehicles per day near the subject site.

Dexter Street has a sealed pavement width varies between 5.2 and 5.5 metres near the subject site (noting that angle parking opposite the site provides additional width for parking and manoeuvring purposes). It has wide road verges with a footpath provided on the school side of the road. Angle parking is provided adjacent to the school, opposite the site, for approximately 30 cars. Dexter Street adjacent to the subject site is shown in Figure 3.





2.1.3 Jones Street North

Jones Street North is a local access road that provides access to residential properties along its length. It connects between Meander Valley Road at its northern end and Shadforth Street at its southern end. Jones Street North has a sealed road pavement of approximately 5 metres adjacent to the subject site. It has wide road verges with no formal footpath. The general urban speed limit of 50-km/h is applicable to Jones Street North.

Jones Street North, adjacent to the subject site, is shown in Figure 4.

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Figure 4 Jones Street North



2.1.4 Shadforth Street

Shadforth Street connects between Marriot Street at its eastern end and Arthur Street North at its western end. It has a sealed road pavement of approximately 6 metres adjacent to the subject site and has wide road verges with no formal footpath.

The general urban speed limit of 50-km/h is applicable to Shadforth Street.

2.1.5 Taylor Street

Taylor Street connects between Meander Valley Road at its northern end and Shadforth Street at its southern end. It provides north-south accessibility for predominantly residential properties to and from Meander Valley Road. Based on its surrounding land use it is estimated to carry approximately 1,500 vehicles per day towards its northern end, and approximately 500 vehicles per day towards its southern end.

The general urban speed limit of 50-km/h is applicable to Taylor Street, with a 40-km/h school zone being applicable during school drop-off and pick-up periods to the north of Dexter Street.

Taylor Street has a sealed road pavement of approximately 4.6 metres adjacent to the subject site. It has wide road verges with no formal footpath.

Currently Taylor Street is discontinuous at Shadforth Street, however the road reservation extends through rural land to an extension of Suburb Street (also discontinuous at this juncture). Future development may result in Taylor Street being constructed south of Shadforth Street.

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Taylor Street adjacent to the subject site is shown in Figure 5.

Figure 5 Taylor Street



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 five-year period between 1st January 2017 and 31st December 2021 for the following road links:

- Dexter Street between Marriott Street and Jones Street North
- Shadforth St between Taylor Street and Jones Street North
- Jones Street North between Shadforth St and Dexter Street
- Taylor Street between Shadforth Street and Dexter Street

The findings of the crash data analysis are summarised as follows:

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- No crashes were reported in Taylor Street, Jones Street North or Shadforth Street.
- 3 crashes were reported in Dexter Street.
- Severity. 1 crash involved minor injury; 2 crashes involved property damage only.
- Day of week. 2 crashes were reported on Tuesdays; 1 crash was reported on a Saturday.
- <u>Time of day</u>. 2 crashes were reported during the evening (7:20pm and 10:00pm); 1 crash was reported at 2:40pm.
- <u>Crash types</u>. All crashes were 'cross-traffic' collisions between two vehicles at intersections.
 Importantly no crashes were reported that involved parking manoeuvres associated with the angle parking at Westbury Primary School in Taylor Street or Dexter Street.
- <u>Crash locations</u>. 2 crashes were reported at the intersection of Marriott Street and Dexter Street;
 1 crash was reported at the intersection of Taylor Street.
- <u>Vulnerable road users</u>. No crashes were reported that involved vulnerable road users (pedestrians, bicycles or motorcycles).

The crash data does not provide an indication that there are any road safety deficiencies in the network that may be exacerbated by traffic generated by the development proposal.



3. Proposed Development

3.1 Development Proposal

The proposed development is a 48-lot residential subdivision. This includes 47 new lots and balance of land (containing the existing dwelling). A new road connection will connect between Taylor Street and Shadforth St, (servicing a total of 21 lots). The balance of lots will have driveway access to street frontage.

The proposed subdivision layout is shown in Figure 6.

2.5m EASEMENT FOR PO FUTURE STORMWATER BY 10 27 ±505m° 26 15 ±734m² 25 ±630m 43 =001m 16 ±662m² 42 ±071m* 24 ±700m° 17 ±700m° 39 ±575m* 23 ±700m² 45 ±505m* 36 ±898m* 46 37 INTERSECTION KERB RETURNS TO SUIT AN 8.0m WIDTH ROAD SEAL WATER CONNECTO A3375403

Figure 6 Proposed Subdivision Plans



Traffic Impacts 4.

4.1 **Trip Generation**

Traffic generation rates were sourced from the RMS Guide. The RMS Guide states the following traffic generation rates for residential dwellings:

Daily vehicle trips 7.4 trips per dwelling per day Weekday peak hour vehicle trips 0.78 trips per dwelling per hour

Based on these trip generation rates, the new traffic generation from the proposed new units is 355 vehicles per day with a peak of 37 vehicles per hour.

4.2 **Trip Assignment**

The traffic generation of the subdivision will occur at the following locations:

New access at Taylor Street 12 lots total generation 89 vpd with a peak of 9 vph New access at Shadforth Street 10 lots total generation 74 vpd with a peak of 8 vph Taylor Street driveways 5 driveways total generation 37 vpd, peak 4 vph **Dexter Street driveways** 7 driveways total generation 52 vpd, peak 5 vph Jones Street North driveways 8 driveways total generation 59 vpd, peak 6 vph Shadforth Street driveways 6 driveways total generation 44 vpd, peak 5 vph **TOTAL** 355 vpd, peak 37 vph

The majority of traffic will travel to/ from Meander Valley Road. This will result in traffic utilising Jones Street North and Taylor Street with traffic volumes as follows:

Jones Street North, north of Dexter Street 115 vpd, peak 11 vph Taylor Street, north of Dexter Street 240 vpd, peak 26 vph

In terms of directional peak movements, the following will be applicable to the traffic generation in Jones Street North and Taylor Street north of Dexter Street:

Jones St North, north of Dexter St AM: 6 vph northbound; 5 vph southbound Taylor St, north of Dexter St AM: 11 vph northbound; 15 vph southbound

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4.3 **Network Impacts**

The traffic generation of the proposed subdivision was considered in the context of the broader road network.

4.3.1 **Meander Valley Road**

The existing volume of 3,000 vehicles per day is well within the road's capacity. It is noted that the longterm growth rate of MVR between 2014 and 2022 is 1.6%. A 1.6% compound traffic growth over 10 years results in a traffic volume of 3,516 vehicles per day, which is also well within the road's capacity and operating at a high level of service. Major collector roads typically can cater for 10,000 to 20,000 vehicles per day. It is an important consideration to ensure that MVR can cater for future traffic volumes to ensure the ongoing economic viability of Westbury.

It is important to note that background traffic growth is a function of land use development within and connecting to an area. The proposed development will contribute to the ongoing growth rate for MVR, as will other future developments that connect to it. In this context the proposed development is considered a component of the ongoing growth rate of 1.6%.

The responsibility of the management and operation of MVR is with the road authority. The proposed development does not directly connect or access MVR and therefore would not normally warrant detailed investigations of existing intersections that do not immediately connect to the proposed development. It is noted that the junctions of Taylor Street and Jones Street North are ~700+ metres from the subject site. Traffic generation from the proposed subdivision will defray within the network along other roads such as King Street, Lonsdale Promenade, William Street, Marriot Street, etc.

Some detailed comments are provided in the context of intersections that will carry some of the traffic generation associated with the subdivision onto Meander Valley Road (MVR):

- Junction capacity. MVR has peak hour traffic flow of approximately 300 vehicles per hour during both AM and PM weekday periods. This provides a high-level gap acceptance capacity of the junction of approximately 700 vehicles per hour (this is the side road approach volume capacity). The connecting roads of Jones St North and Taylor St have peak volumes significantly lower than this amount.
- The total traffic generation of the proposed subdivision is 24 vehicles per hour. If this volume is split between Jones St North and Taylor St, noting that some of the traffic generation may not even access MVR, then the increased volume at the junctions is likely to be 12 vehicles per hour, which represents an increase of less than 1 vehicle every 5 minutes on average.
- Given the high-level capacity calculation above, the increased side road access of 12 vehicles per hour (two-way flow, a proportion of which will enter the junction and some will exit) will not have any significant adverse impacts on their operational efficiency.
- The existing intersections of Jones St North and Taylor St with MVR are well defined through alignment and give-way pavement markings. The junctions are considered appropriate for the function of the road and the existing and forecast traffic volumes of MVR.

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4.3.2 School Impacts

The subject site is located opposite Westbury Primary School. Schools generate peak traffic and parking demands during the morning peak period and afternoon period (typically between 2:30pm and 3:30pm).

The intersections shared by the proposed subdivision and the school are Dexter Street/ Jones Street and Dexter Street/ Taylor Street.

The increased traffic volume associated with the proposed subdivision at the intersections of Dexter Street/ Jones Street North and Dexter Street/ Taylor Street will not have any significant adverse impacts on operational efficiency or road safety. These junctions are typical of nearby intersections within Westbury, with low traffic volumes, straight alignment, good sight distance and well-defined priority. Existing peak flows in Dexter Street are in the order of 30 vehicles per hour through both intersections.

It is noted that 90-degree angle parking is provided in Taylor Street adjacent to the school.

In terms potential school traffic and parking impacts, the following is relevant:

- Schools are typically located within residential areas. They are usually located in areas to service a residential catchment.
- The location of the proposed development will enable students and parents to walk between the new residential lots and the school, thus encouraging active transport and the principles of transport sustainability.
- The school's angle parking in Taylor Street is not ideal. 90-degree angle on-street parking typically has a higher rate of angle collisions than parallel parking and should be avoided if possible. The parking arrangements are existing and the school and Council (as road authority) should monitor the appropriateness of the parking over time. By direct comparison it is noted that angle parking is also provided in Meander Valley Road near The Taylor Street junction the traffic flow is considerably higher in Meander Valley Road compared to Dexter Street.
- The peak traffic generation of the development will only occur simultaneously with the school during the morning peak period. The likely traffic generation associated with the proposed subdivision utilising Talyor Street will be less than 17 vehicles per hour during the morning peak period. Typically, the afternoon peak period has the most intensive school traffic generation and the higher rate of crashes. The afternoon peak period will not coincide with the evening peak traffic generation of the proposed subdivision (commuter peak occurs later than school afternoon peak).
- The crash history of Taylor Street does not indicate that there are any pre-existing road safety issues associated with the 90-degree angle parking.

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4.4 Access Impacts

The Acceptable Solution A1.2 of Clause C3.5.1 of the Planning Scheme states "For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority".

Written consent has not been received by the road authority (Council) for either access. The Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme states:

"Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:

- (a) any increase in traffic caused by the use;
- (b) the nature of the traffic generated by the use;
- (c) the nature of the road;
- (d) the speed limit and traffic flow of the road;
- (e) any alternative access to a road;
- (f) the need for the use;
- (g) any traffic impact assessment; and
- (h) any advice received from the rail or road authority".

The following is relevant with respect to the development proposal:

- a. <u>Increase in traffic</u>. The site is currently has traffic generation associated with a single residential lot. The proposed development will generate 355 vehicles per day across multiple driveways, a new access on Shadforth Street and a new access on Taylor Street. The peak generation will be 37 vehicles per hour. This increase in traffic is therefore 347 vehicles per day (increased peak generation of 36 vehicle per hour) can be absorbed in the surrounding road network without any loss of efficiency.
- b. <u>Nature of traffic</u>. The traffic will be residential in nature. This is consistent with existing traffic currently utilising the road network that connects to the subject site.
- c. <u>Nature of road</u>. Taylor Street, Dexter Street, Jones Street North and Shadforth Street are minor collector roads and local access roads that provide access to predominantly residential property along their lengths. The roads are suitable and appropriate to service the traffic generated by the proposed subdivision.
- d. <u>Speed limit and traffic flow</u>. The posted speed limit of the roads is 50-km/h. Dexter Street carries approximately 300 vehicles per day, and other roads carry less than 200 vehicles per day. The speed limit and traffic flow of these roads is compatible with the access requirements and traffic generation of the proposed development.

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- e. <u>Alternative access</u>. No alternative access is considered necessary. The traffic generation of subdivision will be defrayed across multiple access locations, thus spreading the impacts across multiple road frontages.
- f. <u>Need for use</u>. The accesses are required to provide connectivity between the on-site car parking and the surrounding transport network.
- g. <u>Traffic impact assessment</u>. This report documents the findings of a traffic impact assessment.
- h. Road authority advice. The road authority requires a TIA to be prepared.

Based on the above assessment, the proposed development meets the requirements of Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme. This is primarily due to the basis that the traffic generation can safely and efficiently be absorbed in the surrounding transport network.

4.5 Sight Distance

The Australian Standards, AS2890.1, provides the relevant sight distance requirements for residential and domestic driveways. For a frontage road speed of 50-km/h, the required sight distance is 40 metres. The available sight distance at each of the individual driveways connecting to Dexter Street, Taylor Street, Jones Street North and Shadforth Street exceeds this requirement.

Sight distance requirements for road junctions are set out in Austroads Part 4A. For a 50-km/h road, the required Safe Intersection Sight Distance for the new road junction that will connect to Taylor Street is 97 metres. The available sight distance exceeds this value in both directions along Taylor Street and Shadforth Street from the proposed new junctions.

4.6 Pedestrian Impacts

The proposed development is well connected to the surrounding road network's pedestrian infrastructure. The surrounding road network typically has a footpath on at least one side of the streets that connect to the site. Informal footpaths appear to have formed in Jones Street North and Taylor Street immediately adjacent to the site.

The proposed development will generate some level of pedestrian activity (to/from Westbury town centre, school, recreational facilities, etc). These movements can be accommodated safely and efficiently in the network.

Footpaths will be provided within the subdivision's internal road network in accordance with Tasmanian Standard Drawings guidelines.

4.7 Network Efficiency Impacts

Traffic accessing the site will utilise the broader network of Meander Valley Road, utilising various connecting roads to connect to the roads that front to the subject site.

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Capacity impacts are measured using peak hour flows. The traffic generation of the development will be 355 vehicles per day, with a peak of 37 vehicles per hour. The peak generation will be split between Taylor Street, Dexter Street, Jones Street North and Shadforth Street (as detailed in Section 0 – peak volumes of 11 and 26 vehicles per hour in Jones Street North and Taylor Street north of Dexter Street respectively). The relatively low peak generation will not have any significant adverse impacts on the capacity or operational efficiency of either road.

It is noted that Westbury Primary School is located opposite the site in Dexter Street. particular attention was therefore given to Dexter Street and Taylor Street, where the majority of school drop-off and pick-up activity occurs. During school drop-off and pick-up activity, Taylor Street has a relatively high amount of parking activity immediately north of the Dexter Street junction. The presence of the parking activity is clear and obvious for all road users (with clear sight lines from the intersection), and the speed limit is reduced to 40-km/h. The additional 26 vehicles per hour in Taylor Street (slightly less than 1 vehicle movement every two minutes on average) will not have any significant adverse impacts on the operational efficiency of Taylor Street. It is important to note that no crashes have been reported in Taylor Street in the most recent five-year period.

Dexter Street will have a small increase in traffic volume as a result of the development proposal. The majority of traffic generation on Dexter Street from the development will be associated with lots with direct frontage to Dexter Street, with some cross-over traffic to/ from Jones Street North and Taylor Street. The increased peak traffic generation on Dexter Street is likely to be 5 to 10 vehicles per hour. As with Taylor Street, this relatively low level of traffic generation will not have any significant adverse impacts on the operational efficiency of road safety of Dexter Street.

The existing traffic volumes of surrounding road network can adequately absorb the low traffic generation of the proposed development.

4.8 Internal Road Design

The subdivision will create new short length of new subdivision road that will connect between Taylor Street and Shadforth Street.

Council relies on the design criteria of LGAT Tasmanian Standard Drawings and Subdivision Guidelines, 2020. The requirements for residential subdivision roads are reproduced in Table 1. The following standards are applicable for the internal road network:

- Road design should be in accordance with Austroads Guidelines.
- LGAT Standard Drawings and Tasmanian Subdivision Guidelines.



Table 1 LGAT Standard Drawings – Road Requirements, Residential

ROAD TYPES	ROAD TYPE	ROAD LENGTH / NUMBER OF TENEMENTS	MINIMUM ROAD WIDTH	MINIMUM RESERVATION WIDTH	MINIMUM FOOTPATH REQUIREMENTS	
1 — Arterial	Debit design construct					
2 - Sub Arterial		Detail design required				
3 - Collector	Through Road	Any length 11.0m		20.0m	Both Sides	
4 - Local	Through Road	Any length	8.9m	18.0m	One Side Only	
	Cul-De-Sac	Length > 150m	8.9m	18.0m	One Side Only	
	Cul-De-Sac	Length \leq 150m and $/$ or No. of equiv. tenements \leq 15	6.9m	15.0m	One Side Only	

The appropriate road design for the internal road within the subdivision is a road reservation width of 18 metres with a sealed road width of 8.9 metres. The subdivision layout caters for this requirement.

The new road junctions at Taylor Street and Shadforth Street should be a standard T-junction design with the existing roads having priority. The junction design should be in accordance with Council requirements, with an appropriate design vehicle being an 8.8-metre service vehicle.

4.9 Access Width

The Acceptable Solution A1.1(a)(iii) of Clause C2.6.2 of the Planning Scheme states "*Parking, access ways, manoeuvring and circulation spaces must either – have an access width not less than the requirements of Table C2.2 ... OR (b): comply with Australian Standards AS2890 Parking facilities, Parts 1-6"*.

The Acceptable Solution therefore requires an assessment of the Planning Scheme tables directly, or compliance with the relevant sections of Australian Standards for parking. For completeness, this response will investigate both options.

Table C2.2 of the Planning Scheme provides recommendations for internal access way widths for vehicles. In this case each of the access ways connecting to lots 28, 36 and 47 have an access width of 4 metres and will access 2 or 3 parking spaces (noting that parking requirements for single dwellings are typically 2 spaces). Table C2.2 therefore requires an access with not less than 3 metres. It also specifies a passing bay every 30 metres, with an additional width of 2 metres and length of 5 metres.

The access lengths are as follows:

- Lot 28 32.0 metres
- Lot 36 32.0 metres
- Lot 47 32.1 metres

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It can be seen that all three driveways exceed 30 metres in length and do not have a passing bay provision. An assessment under the Performance Criteria would therefore be required.

Australian Standards, AS2890.1, Off-Street Parking, 2004, is the appropriate standard when assessing the development under Acceptable Solution A1.1(b).

AS2890.1 provides guidance on access driveway widths based on the amount of car parking that the driveway services, the type of parking, and the frontage road type. In this case each of the driveway accesses will service approximately 2-3 residential parking spaces each, fronting onto a local road. AS2890.1 defines these as 'Category 1' accesses which has an entry width requirement of 3.0 to 5.5 metres. The provided width of 4.0 metres complies with this requirement.

AS2890.1 states the following with respect to Category 1 access driveways:

"Where the circulation roadway leading from a Category 1 access driveway is 30 m or longer, or sight distance from one end to the other is restricted, and the frontage road is an arterial or subarterial road, both the access driveway and the circulation roadway for at least the first 6 m from the property boundary shall be a minimum of 5.5 m wide. In other cases subject to consideration of traffic volumes on a case-by-case basis, lesser widths, down to a minimum of 3.0 m at a domestic property, may be provided. As a guide, 30 or more movements in a peak hour (in and out combined) would usually require provision for two vehicles to pass on the driveway, i.e. a minimum width of 5.5 m. On long driveways, passing opportunities should be provided at least every 30 m".

In this case the following is relevant to the three driveways:

- The driveways have a straight alignment. There are no sight distance constraints associated with the geometry of the driveway accesses.
- Traffic generation within each driveway will be in the order of 8 vehicles per day with a peak of 1 vehicle per hour. This is well below the 30 vehicles per hour threshold outlined in AS2890.1.
- The driveway accesses are only slightly longer than 30 metres. Given the very low traffic volumes (traffic generation only relates to a single residential dwelling for each driveway access), the length of the access is considered appropriate without the need to provide passing bays.

On this basis, the driveway accesses associated with lots 28, 36 and 47 comply with the requirements of AS2890.1 and therefore comply with the requirements of Acceptable Solution A1.1(b) of the Planning Scheme.

4.10 Road Safety Impacts

No significant road safety impacts are foreseen for the proposed development. This is based on the following:

• Existing traffic volumes in the surrounding road network are relatively low. The network is capable of absorbing the relatively small estimated traffic generation of the proposed development (with

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a total peak generation estimated to be 24 vehicles per hour spread across multiple roads in the network).

- Sight distance at all driveway accesses on each frontage road and the internal lot access road on Taylor Street exceeds Australian Standards and Austroads requirements and therefore provides a safe access environment.
- The crash history of the surrounding road network near the subject site does not indicate that there are any specific road safety issues that are likely to be exacerbated by traffic generated by the proposed development. It is important to note that there were no crashes reported in Taylor Street or Dexter Street that involved parking manoeuvres associated with existing school activity.



5. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed residential subdivision development at 126 Dexter Street, Westbury.

The key findings of the TIA are summarised as follows:

- The traffic generation of the proposed development is likely to be 229 vehicles per day with a peak of 24 vehicles per hour.
- The traffic generation of the development meets the requirements of Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme. The broader road network can adequately absorb the low traffic generation without any loss of operational efficiency.

Based on the findings of this report the proposed development is supported on traffic grounds.



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126 Dexter St - Traffic Impact Assessment



Subdivision Development Application

Servicing Report

126 Dexter Street, Westbury

Prepared for:

Meander Valley Council



Measured form and function 6ty

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Subdivision Servicing Report



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1.0 Introduction

6ty Pty Ltd has been engaged to prepare a Subdivision Servicing Report to support a 48-lot subdivision application of a parcel of land at 126 Dexter Street, Westbury.

A preliminary analysis of existing civil infrastructure services has been undertaken to provide guidance on the extent of new services required to service the development.

1.1 Scope and limitations

It is envisaged that this report will form part of a planning submission which will help to facilitate the appropriate development of the subject site. This report has been prepared by 6ty° for John Johnston and may only be used and relied upon by John Johnston for the purpose agreed between 6ty° and John Johnston as set out in this report.

6ty° otherwise disclaims responsibility to any person other than John Johnston arising in connection with this report. 6ty° also excludes implied warranties and conditions, to the extent legally permissible.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of this report. 6ty° has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by 6ty° described in this report. 6ty° disclaims liability arising from any of the assumptions being incorrect.

6ty° acknowledges that a prior application was prepared for an alternate subdivision proposal which includes a report touching on the same infrastructure and servicing parameters. This report was written by JMG Engineers & Planners, dated September 2022. Although much of the underlying context is unchanged from the prior assessment, the proposed development has changed significantly enough to warrant a revised assessment of the servicing requirements.

6ty° has prepared this report based on information provided which 6ty° has not independently verified or checked beyond the agreed scope of work. 6ty° does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.2 Assumptions

This Subdivision Servicing Report was developed based on the following assumptions as well as other assumptions documented in this report:

 Proposed subdivision development is per dwg. No 22.241-Cp01-RE, 126 Dexter St Subdivision Layout Plan



- Pre and post development surface and infrastructure levels and locations are approximate and estimated based on existing site information and analysis. Information sources include:
 - The Land Information System Tasmania (the LIST)
 - Site detailed topographical survey provided by Woolcott Surveys.
 - Publicly accessible Lidar elevation & depth information

2.0 Subject Site and Site Characteristics

The subject site is identified below in Figure 1. It comprises two lots, bounded by Dexter, Taylor, Jones & Shadforth Streets. The site address is 126 Dexter St, Westbury (C.T. 15169/1 & C.T. 108079/1).

Figure 1 - Subject Site



Source: Base image and data from the LIST (www.thelist.tas.gov.au) © State of Tasmania

The site has a square shape, with each side approximately 200m long and a total area of 3.95ha.

The site currently contains a single dwelling.



Figure 2 - Aerial Image of Subject Site from the LIST (www.thelist.tas.gov.au) © State of Tasmania



3.0 Drainage

3.1 Topography & Drainage Features

The catchment boundaries for this site have been determined through analysis of a topographical model which has been prepared from survey and lidar data.

The site has a slight ridge which runs north south, and the entire site drains to the existing surrounding roads. There are no defined drains or flow paths through the site, and no external sites drain into the subject site. The total catchment area for the site which drains to the existing culvert under Taylor St has been assessed to be **4.77ha**.

The entire site drains toward its north-eastern corner where flows are currently carried under Taylor St by an existing DN300 culvert. From here flows are carried east within the table drain which runs along the southern side of Dexter St.

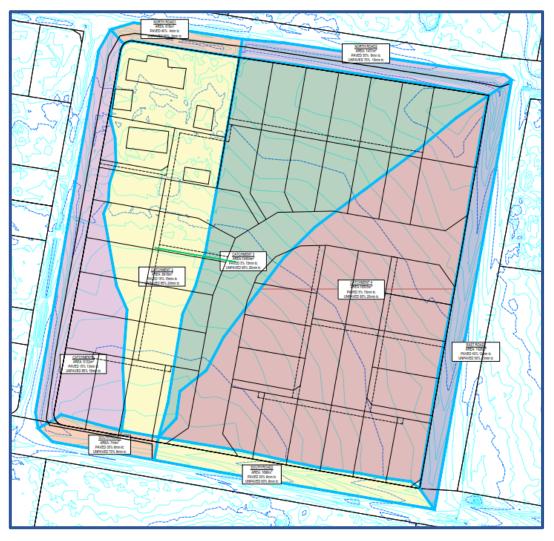


Figure 3 - Existing Site Catchment areas



3.2 Downstream Drainage System

The site flows travel east beyond Taylor St, crossing Marriot St subsequently turning North into an open channel which runs through 87 Dexter St.

The Stormwater Authority has advised that the downstream system is unable to accommodate an increase to the peak flowrate in this system for significant storm events.

3.3 Existing Catchment Flows

The existing catchments have been modelled using the Watercom DRAINS software package to estimate the likely flows around the site. The Drains model adopts the ARR 2019 methodology utilising the Horton ILSAX soil hydrological model running ensembles of storms from 5 mins to 2.0 hours in duration.

The model incorporates a climate change rainfall multiplier factor of 16.3% which is taken from the ARR data hub and represents the RCP 8.5 pathway 2090 (Australian Rainfall & Runoff, 2022).

The internal areas of the subject site are assumed to consist of between 80-95% pervious surfaces.

The results of the preliminary model in the Dexter St Table Drain are shown in Table 1.

Table 1 - Existing Catchment Flows

Downstream Existing Catchment Flows (L/s)					
Location	5% AEP	1% AEP			
Dexter St Table Drain - Pre-Development	150	380			

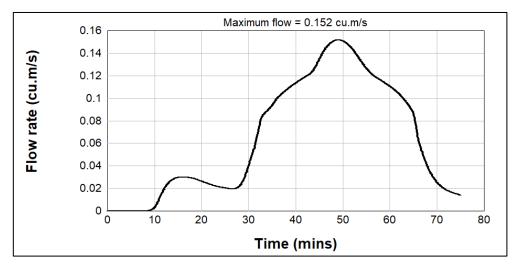


Figure 4 - 5% AEP Peak Flow – Offsite Table Drain – 45 in Burst – Storm 6

The results also predict that the existing table drains and culvert under Taylor St will be overwhelmed during the 1% AEP event resulting in surface overflows over Taylor St.



3.4 Proposed Drainage System/Strategy

The subdivision development is proposed to be drained by a piped gravity stormwater drainage system with the following characteristics:

- Lot Connection Standard DN100 gravity lot connections, capable of draining the entire lot by gravity.
- Flow Control Above ground surface detention storage (OSD) located in the north-eastern corner of the subject site. Detention storage and pipe system to be sized to control peak runoff flow rates to predevelopment levels for significant storm events (10%-1% AEP).
- Piped stormwater system designed and sized to keep overland flows safely contained and controlled during major storm events (1% AEP) and to generally eliminate overland flows during more frequent events (10% AEP).

Detention Basin design parameters

Meander Valley Council have confirmed that the existing downstream drainage system is not able to accept an increase in peak stormwater flow rates due to the development. This condition necessitates on site detention (OSD) to limit peak flow rates from the site to predevelopment levels. Given the residential setting of the site and its location adjacent a primary school, the community impacts of this stormwater infrastructure, including safety and amenity, is a key consideration.

The previous development application for the site included an offline surface detention storage located in the north-eastern most lot (Lot 201).

Lot 201 had an overall area of 1,148m² and this initial basin was shown as between 1.5-1.0m deep. Consultation with the infrastructure department at Meander Valley Council has confirmed that such a basin would be undesirable for several reasons which include:

- Maintenance of steep/deep embankments for mowing is difficult.
- The depth of flooding in the basin creates a hazard for vulnerable people which necessitates that the site be fenced. This is a poor outcome for the development and for community amenity.

The revised layout has shortened the corner lot but also widens the site, resulting in an overall area of 1132m².

The revised basin design was prepared using the following goals and parameters balancing safety, amenity and hydraulic functionality:

- Flow Control Basin to maintain peak flows for 10% AEP and 5% AEP events to predevelopment levels (i.e. no increase in flows in downstream table drain for 10-1% AEP event).
- **Safety** Basin to function in a safe manner for 1% AEP major storm events. A hybrid design, combining a deeper fenced area with a landscaped unfenced storage area was chosen.
 - Unfenced area designed not to exceed 'H2' Hazard Category during up to the 1%AEP storm event. Referring to the Australian Disaster



Resilience Guideline 7-3, this is considered to be generally safe for people and most vehicles (including children and the elderly) (Australian Institute for Disaster Resilience, 2017). This category generally requires that the depth (of unfenced sections) must not exceed 500mm and velocity not exceed 2.0m/s, with DxV remaining below 0.6m²/s.

- Gently graded basin edges, making it easy to exit basin during storm event.
- Over excavate basin base at outlet headwall to encourage groundwater recharge and reduce sediment/pollutants travelling downstream into piped system.
- Amenity Basin to be offline design to reduce the frequency of inundation, allowing the site to remain dry and usable as high value, community open space.
 - Utilise post and wire mesh fencing to maintain clear visibility and passive surveillance through the site.
 - A key focus is on making the detention basin area, which is required for drainage function, but which will also be a flat, dry, grassed lot, a dualpurpose space, which can be effectively managed as usable community parkland.
- **Maintenance** Embankment grades not to exceed 1:4 grade and base grade to be 1% Min. to encourage drainage and avoid ponding of the surface.
 - Flow control is to provide some flexibility for adjustments to be made in future.

Detention Basin Design Proposal and Performance

A reticulated piped stormwater network was modelled which achieved the goals of the drainage strategy for the developed site. The developed catchments have been modelled using the Watercom DRAINS software package to estimate the likely flows around the site. The Drains model adopts the ARR 2019 methodology utilising the Horton ILSAX soil hydrological model running ensembles of storms from 5 mins to 2.0 hours in duration. Figure 5 shows the sub catchments incorporated into the site post development model.

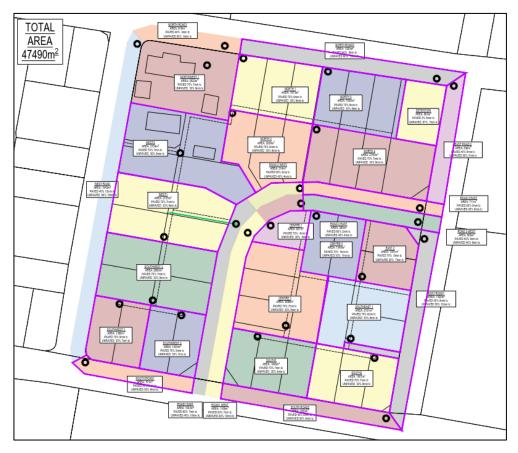


Figure 5 - Developed Site Catchments

The model incorporates a climate change rainfall multiplier factor of 16.3% which is taken from the ARR data hub and represents the RCP 8.5 pathway 2090 (Australian Rainfall & Runoff, 2022).

The new blocks are assumed to consist of 70% impervious surfaces (e.g. 420m² impervious area for 600m² block).

The network was directed to a single pit located on the corner of Taylor & Dexter Streets within which was proposed a basin control arrangement consisting of a steel internal weir and orifice sized to control flows to predevelopment levels.

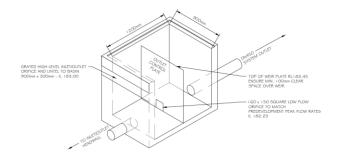


Figure 6 - Flow control pit, concept

For the purpose of the analysis, the south-western corner third of the lot has been designed as the "deeper" section of the surface storage. This section is proposed to be fenced to prevent public access. The proposed basin geometry is shown on drg. 22.241-Cp05-RB.

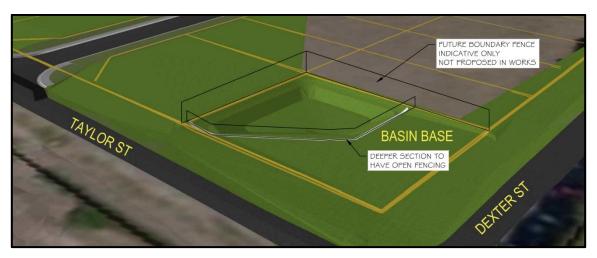
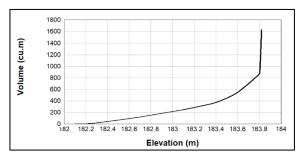


Figure 7 - Detention Basin Concept

The concept basin can contain a maximum of approximately 860m³ to the level of the Taylor St crown. Approximately 300m³ of this volume is contained within the "deeper" zone and modelling suggests about 830m³ is required to contain the 1% AEP event.

Figure 8 below shows the volume of the basin concept at various elevations, as well as the storage hydrograph for the 1% AEP event.



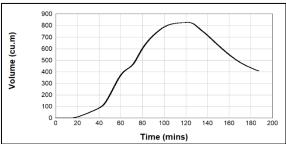


Figure 8 - Basin volume and 1 % AEP event storage graph



Table 2 shows a comparison of the resultant pre/post development flows in the Dexter St table drain downstream of the site.

Table 2 - Comparison of Dexter St Table Drain Flows (Pre/Post Development)

Downstream Flows (L/s)						
Location 10% AEP 5% AEP 1% AE						
Dexter St Table Drain - Post Development	120	150	200			
Dexter St Table Drain - Pre-Development	110	150	380			

Table 3 shows the properties of the modelled basin, and particularly shows that the maximum water level does not exceed the H2 category for the unfenced area of the basin. It also shows that more frequent events (1EY) are not predicted to result in inundation of the basin base.

Table 3 - Detention Basin Properties

Detention Basin				
	1 EY	10% AEP	5% AEP	1% AEP
Overall Potential Volume (m3)		86	50	
Taylor St Major Spill Level over Intersection		18.	3.8	
Basin Base Area (m2)	1010			
Minor (Deeper) Basin Base Level (m)	182.25			
Basin Base Level (m)	183.3			
Max Water Level	182.96 183.55 183.62 183.78			
Unfenced Water Max Depth (m)	-0.34 0.25 0.32 0.48			
Max Retained Volume (m3)	180 490 580 830			
Flows over Taylor St	0 0 0			
Flows over Taylor St (Pre Development)	0 0 30 230			

The control pit consists of a low flow orifice with a 0.9m width weir which begins to operate during events greater than the 5% AEP. This arrangement provides council with flexibility to make simple adjustments to the flow control in future, to adjust the basin performance as necessary.

The level of the crown on Taylor St at the intersection (Nom. 183.8m) functions as an ultimate "emergency weir" which will prevent inundation of private properties in the subject site, in the unlikely event of a system failure (i.e. blockage of a pipe during a major storm). Although the modelling does not anticipate this event, if flows were to



overtop the road formation they would be broad and slow moving crossing directly toward the table drains on the eastern side of Taylor St.

To provide additional flood protection, all new properties within the development which are adjacent the basin should be required to achieve a building floor level 200mm min. above the Taylor St crown to ensure protection.

This analysis is a proof of concept for a workable detention storage on the site which will service the development and meet the performance requirements. Further refinement is expected to occur during detailed design, with council input.

Alternative Arrangements

Arrangements which were analysed, but which did not meet performance targets, or which did not sufficiently improve performance to warrant consideration include:

- Deleting the deeper storage section. Despite several attempts, this
 desirable scenario was ultimately very sensitive and not effective at reducing
 peak flows to predevelopment levels for 5% AEP & 10%AEP events (note that
 the 1% AEP event was controlled to predevelopment levels and overflows to
 Taylor St were eliminated).
- Replacing the deeper open section of the basin with an underground chamber. Benefits of including this underground volume in the modelling were negligible and not viable to achieve.
- Moving the flow control pit to the Taylor St line and allowing the Dexter St line to bypass the control pit. This arrangement was not effective at controlling flows to predevelopment levels.

Conclusion

The stormwater analysis demonstrates that a detention basin which meets the performance requirements for the site is achievable within the context of the proposed development.



4.0 Transport

4.1 Roads

The existing streets surrounding the subject site are rural style, with a seal approximately 4.5m wide, grassed shoulders and table drains. No changes to the formation of the existing roads are proposed. Driveways which connect to existing roads are proposed to be rural 'dish' style driveways.

The new through road is proposed to be a type 4, 8m wide seal with 600mm kerb and channel constructed in accordance with TSD-R06-v3. Driveways which connect to the proposed new road are proposed to be standard concrete aprons constructed in accordance with TSD-R09-v3.

The proposed new road reservation is 18m wide and the road will incorporate a typical 1.5m width concrete footpath extending from Taylor St to Shadforth St.



Figure 9 - 3D model view of proposed new through road.



5.0 Sewer

TasWater operate a reticulated gravity sewerage system in the near vicinity of the development with DN150 gravity mains available to the north-western and north-eastern corners of the site.

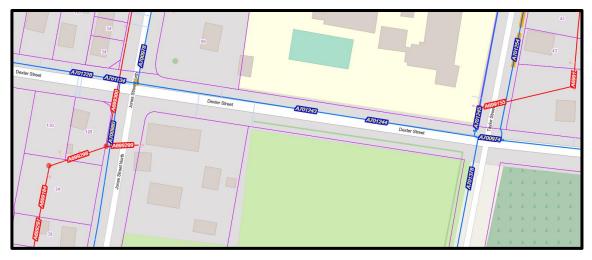


Figure 10 - TasWater Site Services (www.taswater.maps.arcgis.com) ©

The existing dwelling on the site is connected to the sewer in Jones St North (A699299).

5.1 Sewer Servicing Strategy

An extension of the existing sewer gravity reticulation system is proposed to service the new subdivision.

This would likely involve connection to the existing system on the western side of the site at Jones St North (A699299) and also northeast, within Taylor St (A699155). Survey has confirmed the location and depth of these existing services are capable of servicing the site via a new reticulated gravity sewer system. A preliminary servicing plan (22.241-Cp01) has been prepared for the development which shows a concept layout for the sewer extension to these locations.

Gravity mains servicing the site will be DN150, and each lot will be provided with a typical DN100 sewer connection point capable of servicing the building envelope for each block by gravity.

5.2 Sewer Flow Estimates

Noting the TasWater supplement design assumptions in section 5.5.5.2 below are the estimated sewer flow rates for the development at the proposed connection points.

Existing Jones St North Sewer Main - A699299

13 Lots = 14 ET

ADWF = 6.3 kL/d = 0.07 L/s

PDWF = 43.6 kL/d = 0.50 L/s



Existing Taylor St Sewer Main - A699155

31 Lots = 31 ET

ADWF = 14.0 kL/d = 0.16 L/s

PDWF = 84.5 kL/d = 0.98 L/s

6.0 Water

TasWater operate a water supply system in the vicinity of the development with DN100 mains existing within the road reservations of Taylor St (A701378) and Dexter St (A701243). The existing main in Jones (A700980) is identified as DN50 however this is considered to be potentially inaccurate, at least for the full extent shown as it currently serves several hydrants.



Figure 11 - TasWater Site Services (www.taswater.maps.arcgis.com) ©

6.1 Site Water Servicing Strategy

An extension of the existing water distribution system is proposed to service the new subdivision. The proposed extension is shown on the concept servicing plan 22.241-Cp01-RE.

In summery this system includes:

- A new DN100 main installed on Shadforth St between Jones St and Taylor St and connected to the existing system at both ends.
- A new DN100 main installed along the proposed new through road, connected to the external system at Taylor St and Shadforth St.
- A new DN100 main installed on the eastern side of Jones St North, connected to the existing Jones St main (A700980) opposite lot 29. This proposal would reclassify the existing main as a submain or loop main and is pending confirmation that A700980 is indeed DN50.



- Installation of new standard underground hydrants at locations which provide appropriate coverage to all new lots.
- Installation of standard underground domestic water connections for each lot as per TasWater requirements.
 - Note, the existing connections to the site are proposed to be retained to service the balance and lot 1.

6.2 Site Water Servicing Model

In February 2023, 6ty° sought advice from TasWater on the boundary conditions for the development.

Because there are multiple connection points to the existing system, the demand was evenly distributed around the site. TasWater have confirmed that their modelling indicates that there is capacity in the existing network to supply the proposed development without adversely impacting on existing customers.

Total boundary heads provided by TasWater are:

Table 4 - TasWater Boundary Conditions

	HGL (m)	HGL (m)	HGL (m)	HGL (m)
	A701378	A701244	A700980	New
	Taylor St	Dexter St	Jones St	Shadforth
	DN 100	DN100	DN50	DN100
Peak Hour	228	228	228	228
Peak Day +10 I/s fire	226	227	225	226

An EPANET model has been prepared using these figures, based on a nominal supply reservoir located at the South-Western and North-Eastern corners of the site, with a distribution network as per the concept servicing plan. This model confirms that anticipated supply pressures at all system nodes exceed the minimum 22m required by the TasWater Supplement.

A 10L/s fire demand was placed at a location internal to the site, and the model predicts a pressure of 38.8m which exceeds the minimum requirement of 250kPa.

The model, which is shown in Figure 12 is available for download and review here.

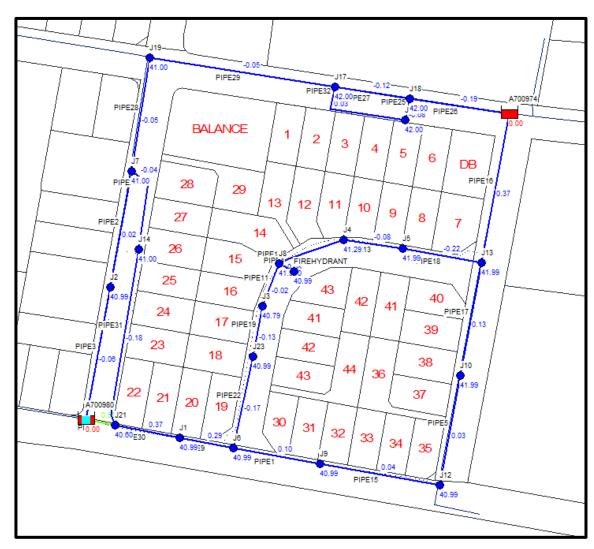


Figure 12 - Site EPANET water supply model

7.0 Conclusion

This report shows that the development is able to be adequately serviced by the proposed infrastructure, complying with authority requirements.



8.0 Appendix A - Concept Servicing Plans

