Clarence... a brighter place

DEVELOPMENT APPLICATION

PDPLANPMTD-2023/040953

PROPOSAL: Dwelling

LOCATION: 4 Dama Road, Cambridge

RELEVANT PLANNING SCHEME: Tasmanian Planning Scheme - Clarence

ADVERTISING EXPIRY DATE: 08 February 2024

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

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

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

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

Clarence City Council

Clarence... a brighter place

APPLICATION FOR DEVELOPMENT / USE OR SUBDIVISION

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

Proposal: Proposed 3 Bedroom Dwelling

Location:

Address 4 Dama Road

Suburb/Town Cambridge *Postcode* 7170

Current Owners/s:

Applicant:

Personal Information Removed

Estimated cost of development $ 400,000

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

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

If you had pre-application discussions with a Council Officer, please give their name N/A

Current Use of Site: Vacant Site

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

Clarence City Council

DEVELOPMENT/USE OR SUBDIVISION DECLARATION

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Declaration:

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

Acknowledgement:

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

Applicant's Signature:

Signature ..... *Date* 05/12/2023

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

Documentation required:

1. **MANDATORY DOCUMENTATION**

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

- ❑ Details of the location of the proposed use or development.
- ❑ A copy of the current Certificate of Title, Sealed Plan, Plan or Diagram and Schedule of Easements and other restrictions for each parcel of land on which the use or development is proposed.
- ❑ Full description of the proposed use or development.
- ❑ Description of the proposed operation.

  May include where appropriate: staff/student/customer numbers; operating hours; truck movements; and loading/unloading requirements; waste generation and disposal; equipment used; pollution, including noise, fumes, smoke or vibration and mitigation/management measures.
- ❑ Declaration the owner has been notified if the applicant is not the owner.
- ❑ Crown or Council consent (if publically-owned land).
- ❑ Any reports, plans or other information required by the relevant zone or code.
- ❑ Fees prescribed by the Council.

  (please refer to http://www.ccc.tas.gov.au/fees or phone (03) 6217 9550 to determine applicable fees).

2. **ADDITIONAL DOCUMENTATION**

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

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

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

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

OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.

FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3

GRANTEE:
PART OF 1956 ACRES GRANTED TO GEORGE STOKELL
PART OF LOT 36879, 104.3ha GRANTED TO THE
DIRECTOR-GENERAL OF HOUSING & CONSTRUCTION

PLAN OF SURVEY

BY SURVEYOR: T. W. COX of
LEARY, COX & CRIPPS SURVEYORS
Unit G04 40 Molle Street, HOBART TAS 7000
P 03 6118 2030
E admin@learyandcox.com

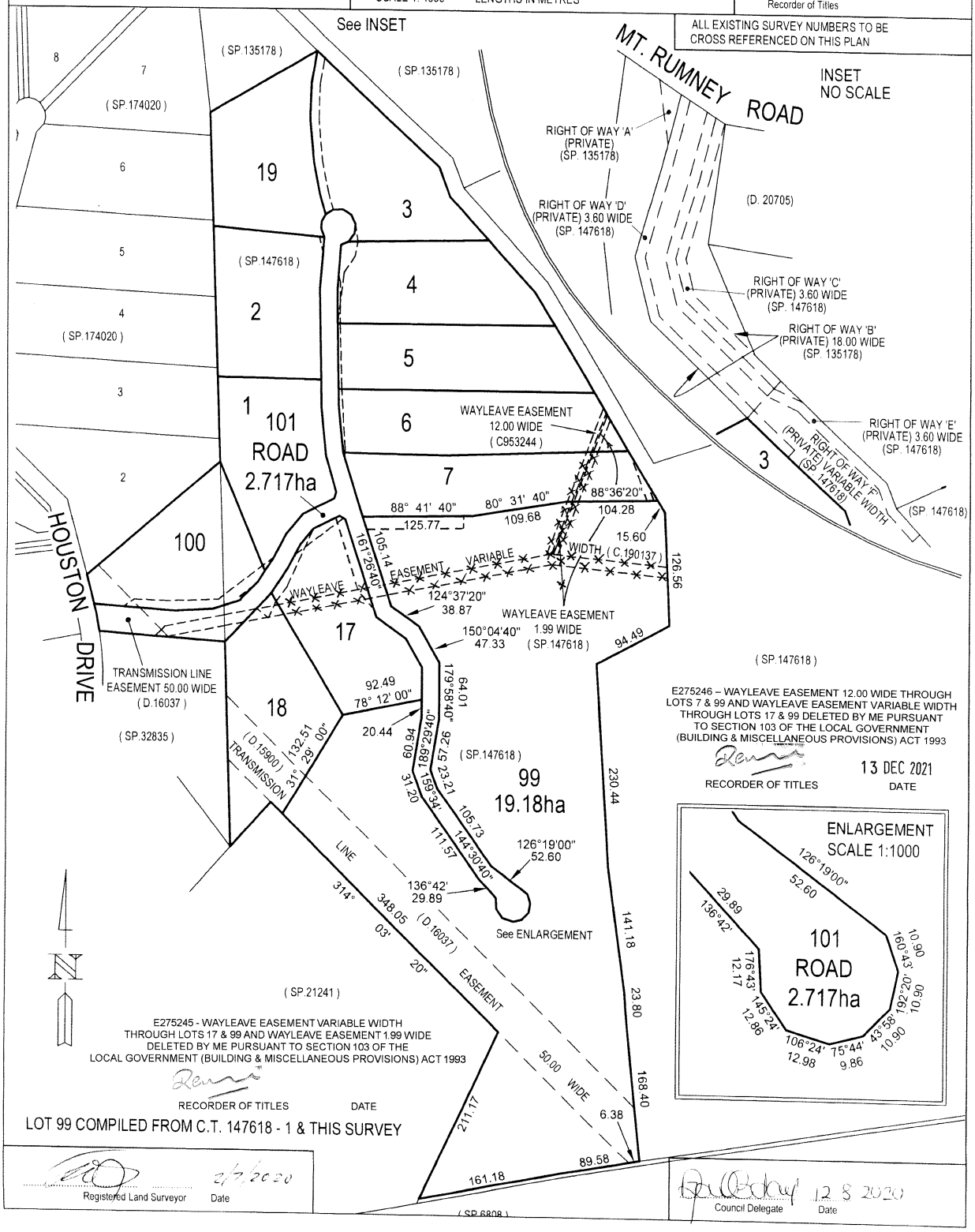
LOCATION: CITY OF CLARENCE

SCALE 1: 4000 LENGTHS IN METRES

REGISTERED NUMBER
SP179423

~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020

Recorder of Titles



PLAN OF SURVEY
ANNEXURE SHEET

SHEET 1 OF 3 SHEETS

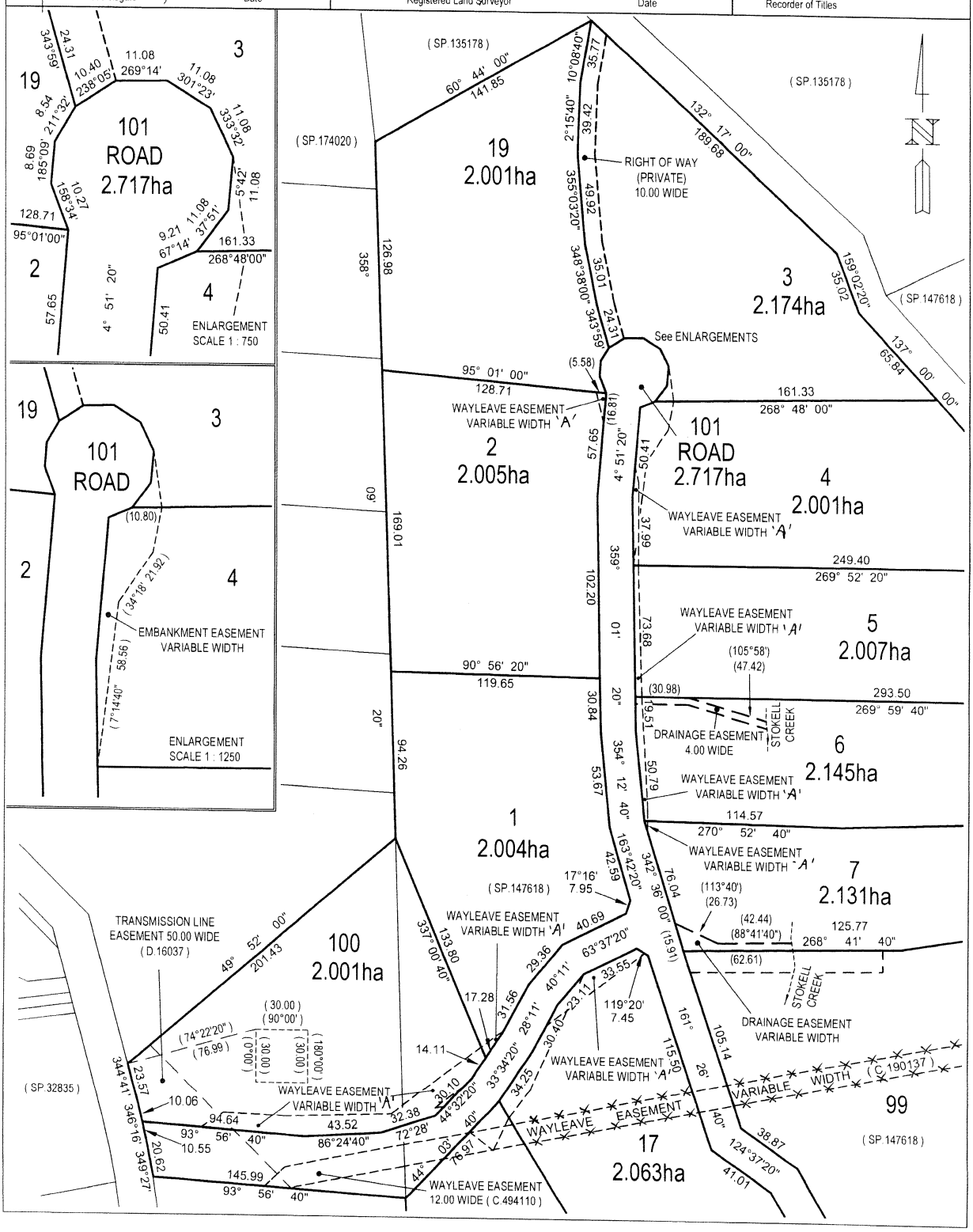
OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.
FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3
SCALE 1: 2000 LENGTH IN METRES

Registered Number
SP179423

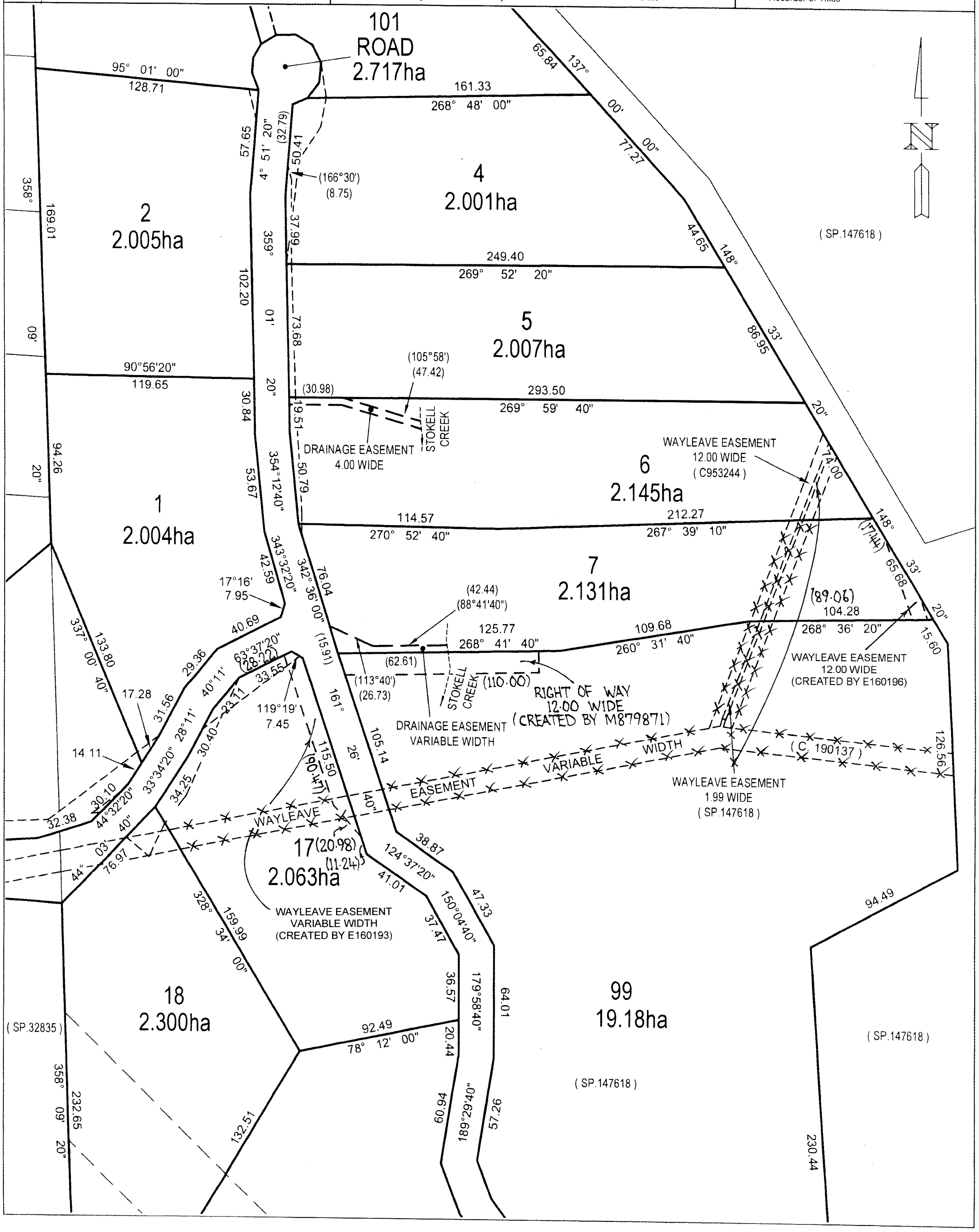
SIGNED FOR IDENTIFICATION PURPOSES
Council Delegate 12.8.2020 Date

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN.
Registered Land Surveyor 2/7/2020 Date

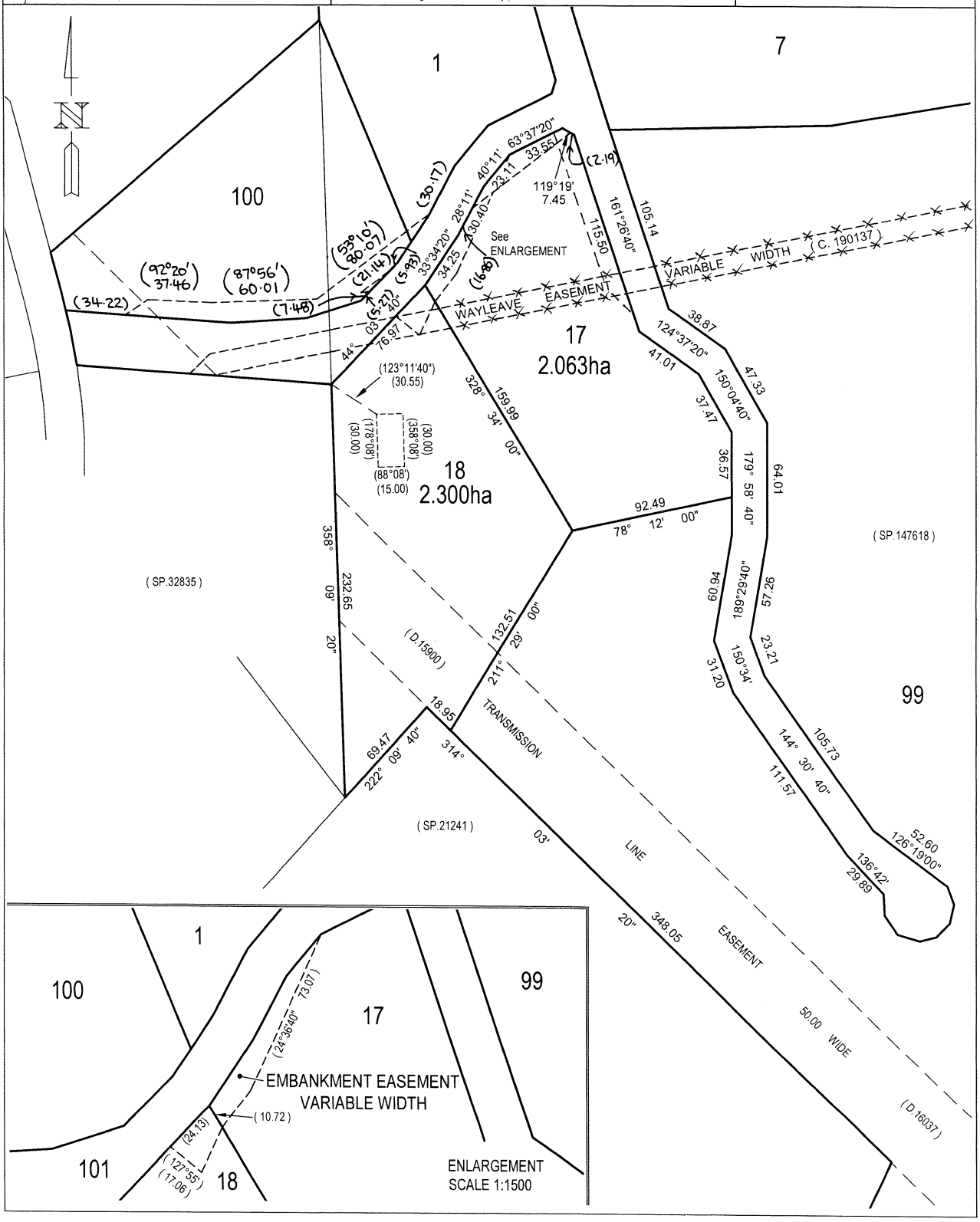
~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020
Recorder of Titles



PLAN OF SURVEY ANNEXURE SHEET SHEET 2 OF 3 SHEETS	OWNER: WESTWOOD PROPERTIES PTY. LTD. QUE RIVER PTY. LTD. FOLIO REFERENCE: C.T. 174020 - 1 C.T. 147618 - 3 SCALE 1: 2000 LENGTH IN METRES	Registered Number SP 179423
SIGNED FOR IDENTIFICATION PURPOSES [signature] 12.8.2020 Council Delegate Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN [signature] 2/7/2020 Registered Land Surveyor Date	~~APPROVED~~ EFFECTIVE ~~FROM~~ 27 OCT 2020 [signature] Recorder of Titles



PLAN OF SURVEY ANNEXURE SHEET SHEET 3 OF 3 SHEETS	OWNER: WESTWOOD PROPERTIES PTY. LTD. QUE RIVER PTY. LTD. FOLIO REFERENCE: C.T. 174020 - 1 C.T. 147618 - 3 SCALE 1: 2000 LENGTH IN METRES	Registered Number SP 179423
SIGNED FOR IDENTIFICATION PURPOSES Council Delegate 12-8-2020 Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. Registered Land Surveyor 2/7/2020 Date	~~APPROVED~~ EFFECTIVE ~~FROM~~ 27 OCT 2020 Recorder of Titles



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
179423	18
EDITION	DATE OF ISSUE
3	14-Sep-2023

SEARCH DATE : 05-Dec-2023
SEARCH TIME : 05.15 PM

DESCRIPTION OF LAND

City of CLARENCE
Lot 18 on Sealed Plan 179423
Derivation : Part of 1956 Acres Gtd. to George Stokell & Part of Lot 36879, 104.3ha Gtd. to Director-General of Housing & Construction
Prior CT 147618/3

SCHEDULE 1

N154614 TRANSFER to SAMUEL ROBERT MCVILLY and JAYDE VERONICA ALLANBY Registered 14-Sep-2023 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP179423 EASEMENTS in Schedule of Easements
SP179423 COVENANTS in Schedule of Easements
SP179423 FENCING COVENANT in Schedule of Easements
SP179423 WATER SUPPLY RESTRICTION
SP 21241 COVENANTS in Schedule of Easements
SP 2414, 11402 & SP147618 FENCING PROVISION in Schedule of Easements
SP 21241 COUNCIL NOTIFICATION under Section 468(12) of the Local Government Act 1962
SP147618 WATER SUPPLY RESTRICTION
SP147618 SEWERAGE AND/OR DRAINAGE RESTRICTION
A607497 FENCING PROVISION in Transfer

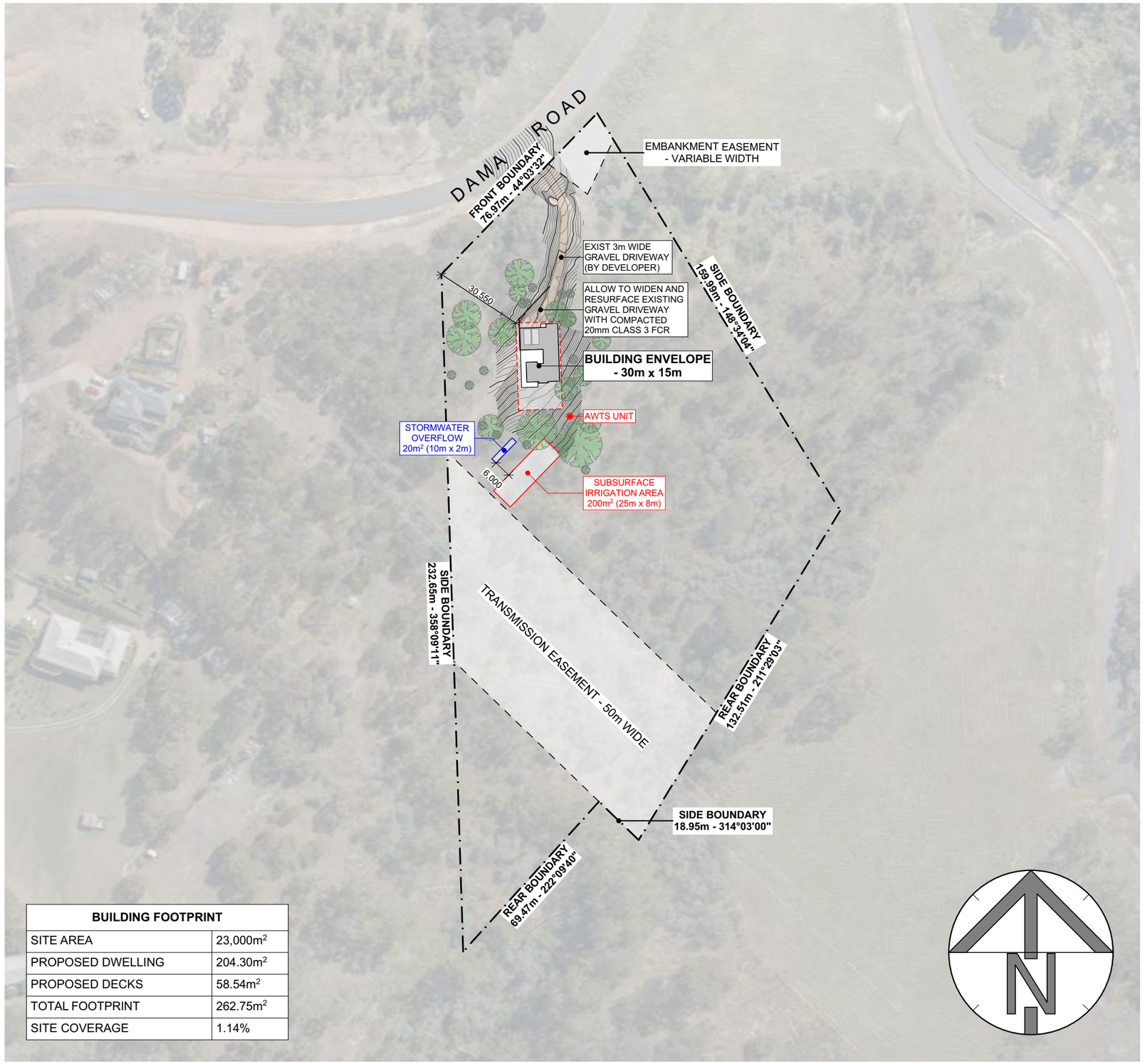
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

DEVELOPMENT APPLICATION: PROPOSED DWELLING AT 4 DAMA ROAD, CAMBRIDGE

DIRECTOR'S LIST:

FOR:	SAM McVILLY
SITE:	4 DAMA RD, CAMBRIDGE 7170
LAND TITLE:	179423/18
PLANNING PERMIT:	TBD
ZONING:	RURAL LIVING
SITE AREA:	23,000m^2
PROPOSED FOOTPRINT:	262.75m^2
SITE COVERAGE:	1.14%
BAL:	BAL 12.5
SOIL CLASSIFICATION:	CLASS 'P'



DRAWING SCHEDULE:

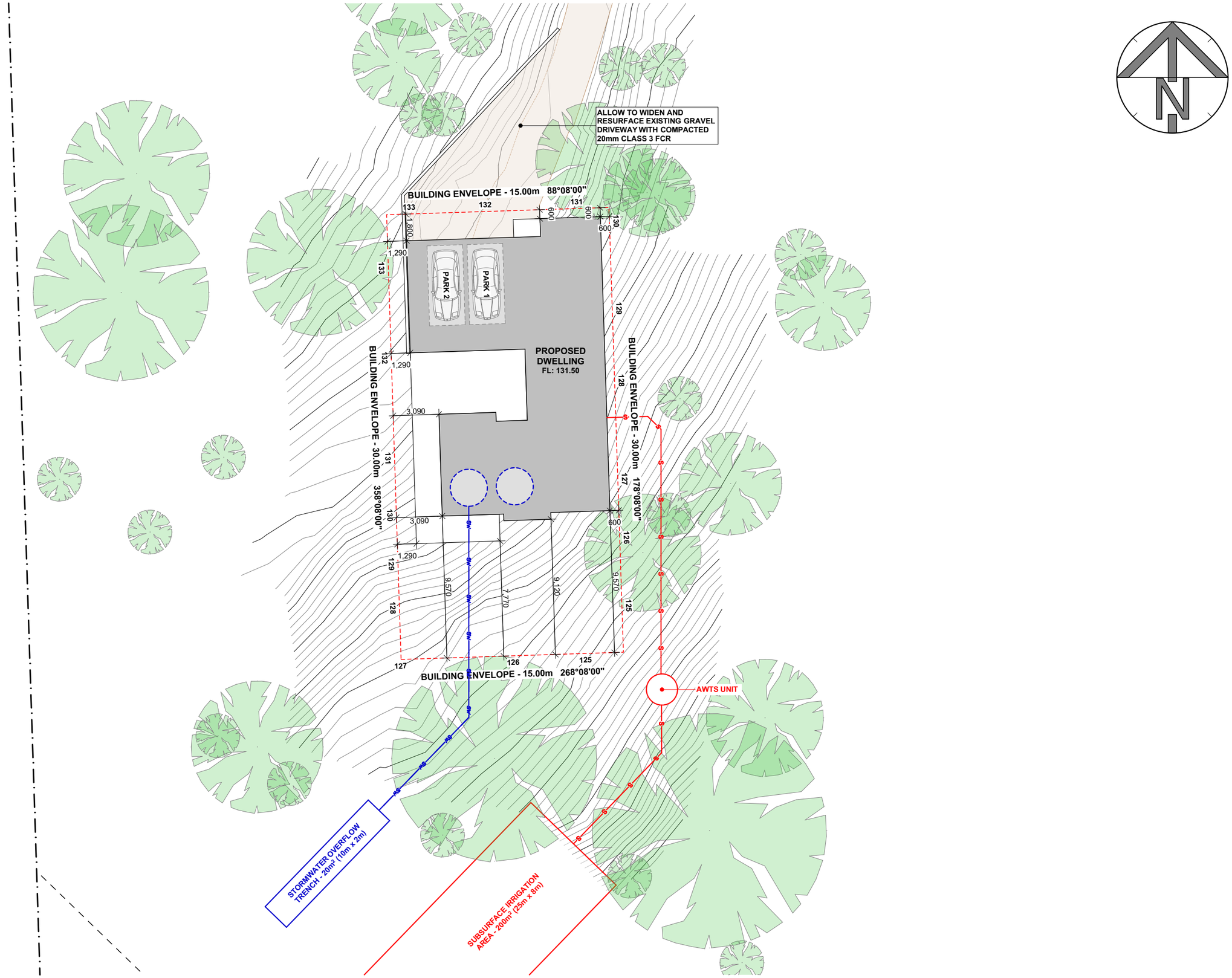
DA.01	SITE PLAN	18.01.24
DA.02	PART-SITE PLAN	18.01.24
DA.03	FLOOR PLAN	18.01.24
DA.04	ELEVATIONS 1 OF 2	18.01.24
DA.05	ELEVATIONS 2 OF 2	18.01.24
DA.06	3D PERSPECTIVE 1 OF 3	18.01.24
DA.07	3D PERSPECTIVE 2 OF 3	18.01.24
DA.08	3D PERSPECTIVE 3 OF 3	18.01.24

BUILDING FOOTPRINT	
SITE AREA	23,000m^2
PROPOSED DWELLING	204.30m^2
PROPOSED DECKS	58.54m^2
TOTAL FOOTPRINT	262.75m^2
SITE COVERAGE	1.14%

JJD DESIGN
LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT:	**DRAWING TITLE:**	**CLIENT:**	DRAWN: J DWYER
PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170	DA.01 SITE PLAN	SAM McVILLY	SCALE: 1:1500 @A3
			DATE: 18.01.24



JJD DESIGN **LICENSE:** 179730619 **PHONE:** 0439336257 **EMAIL:** info@jjjd.design **ADDRESS:** 19 TILANBI STREET, HOWRAH, TAS, 7018	**Ammendments**	**DO NOT SCALE OFF DRAWINGS. CONTRACTORS TO CONFIRM WITH J DWYER ANY DIMENSIONS OR LEVELS IF NECCESSARY. ALL GLAZING TO AS 1288/2047. THIS DOCUMENT IS COPYRIGHTED AND MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN CONSENT OF J DWYER**	**PROJECT:** PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170	**DRAWING TITLE:** DA.02 PART-SITE PLAN	**CLIENT:** SAM McVILLY	DRAWN: J DWYER SCALE: 1:250 @A3 DATE: 18.01.24

A/P ROOF ACCESS PANEL

SD SMOKE ALARM

AJ ARTICULATION JOINT

MB METER BOX

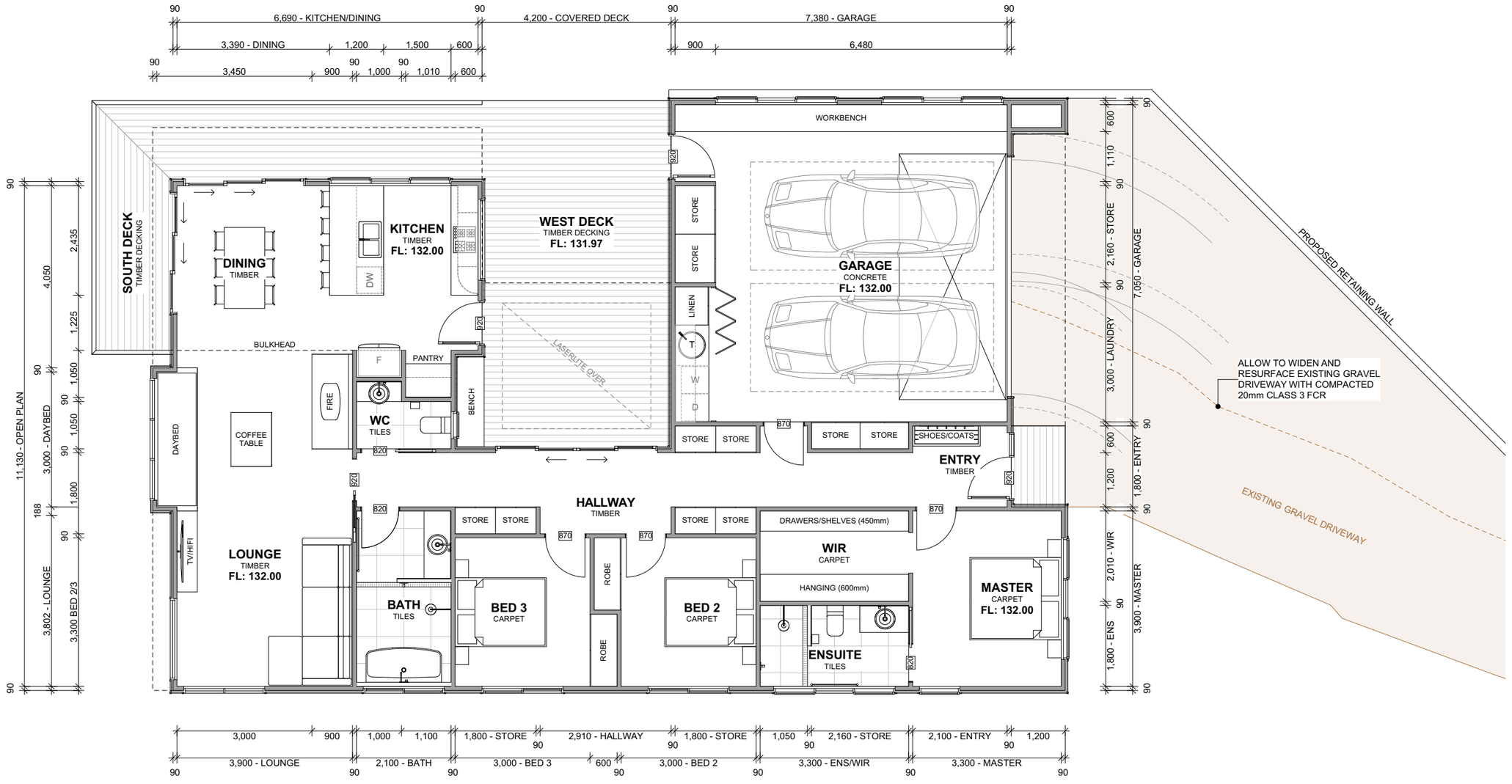
HWC HOT WATER CYLINDER

300x300 GRATED SUMP

CONSTRUCTION OF SANITARY COMPARTMENTS 3.8.3.3 OF CURRENT BCA

THE DOOR TO A FULLY ENCLOSED SANITARY COMPARTMENT MUST -

- OPEN OUTWARDS; OR
- SLIDE; OR
- BE READILY REMOVABLE FROM THE OUTSIDE OF THE COMPARTMENT.

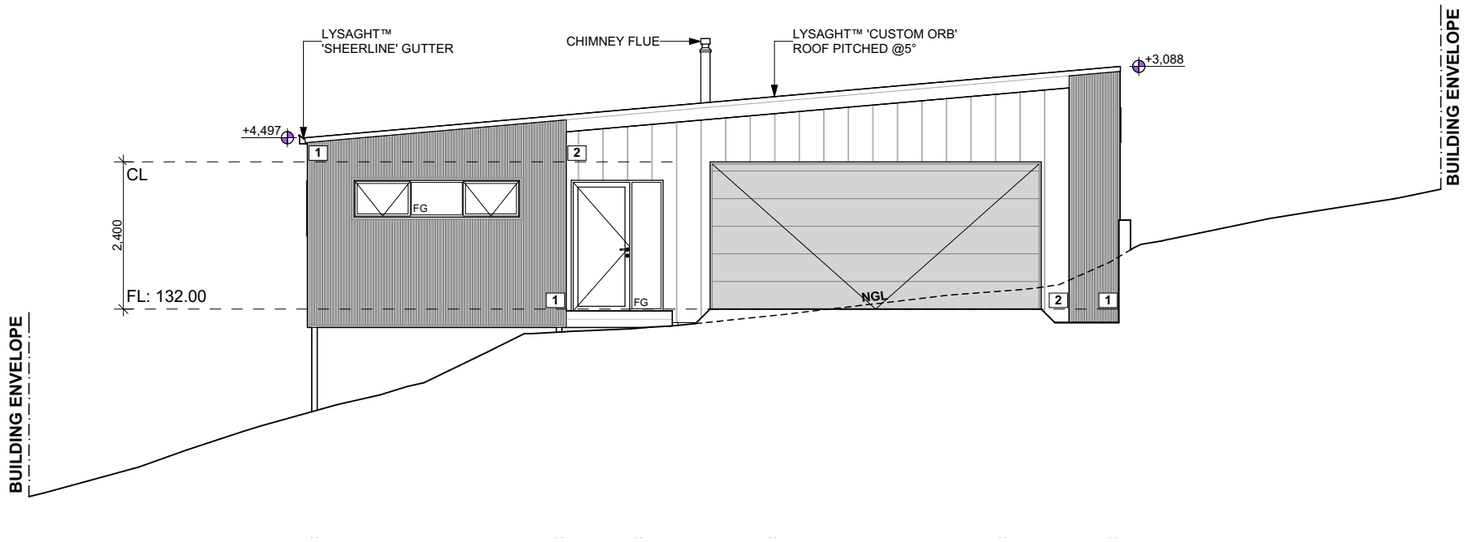


DWELLING FLOOR AREA: 204.30m^2

JJD DESIGN LICENSE: 179730619 PHONE: 0439336257 EMAIL: info@jjd.design ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018	Ammendments	DO NOT SCALE OFF DRAWINGS. CONTRACTORS TO CONFIRM WITH J DWYER ANY DIMENSIONS OR LEVELS IF NECCESSARY. ALL GLAZING TO AS 1288/2047. THIS DOCUMENT IS COPYRIGHTED AND MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN CONSENT OF J DWYER	PROJECT: PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170	DRAWING TITLE: DA.03 FLOOR PLAN	CLIENT: SAM McVILLY	DRAWN: J DWYER SCALE: 1:100 @A3 DATE: 18.01.24

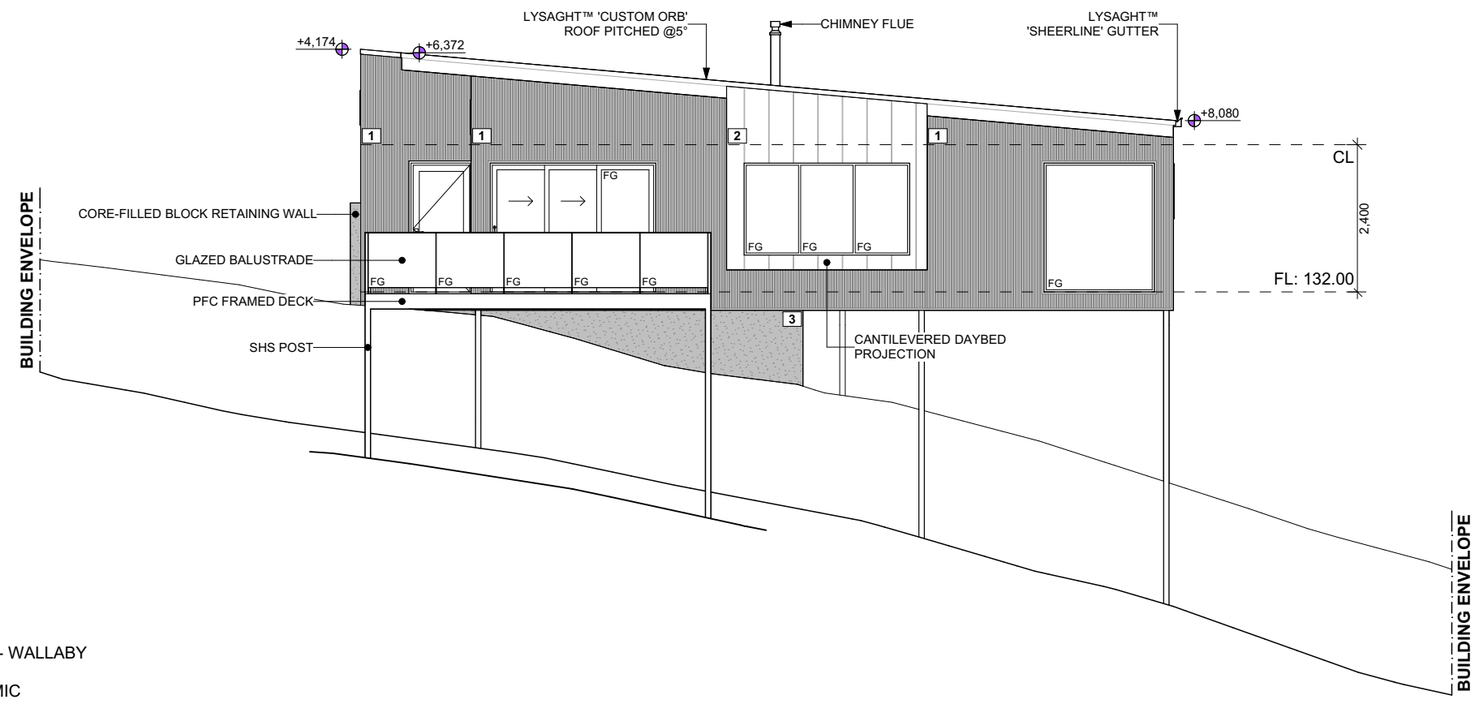
NORTH ELEVATION

SCALE 1:100 @A3



SOUTH ELEVATION

SCALE 1:100 @A3



LEGEND:

FG	FIXED GLAZING
NGL	NATURAL GROUND LINE
+1,234	HEIGHT ABOVE NGL
1	LYSAGHT™ 'SPANDEK' METAL SHEET CLADDING - WALLABY
2	SCYON™ 'AXON 400' 9mm FRC CLADDING - COSMIC
3	RENDERED CORE-FILLED BLOCKWORK - WALLABY

JJD DESIGN
LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT: PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170

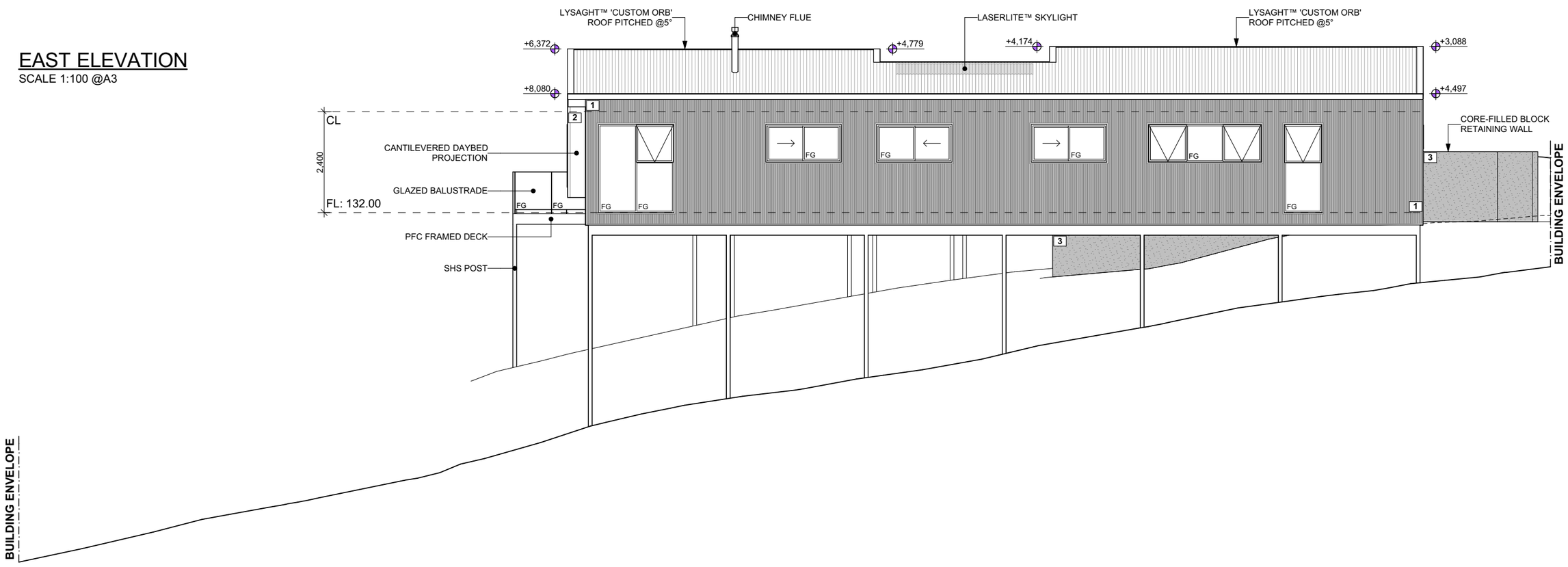
DRAWING TITLE: DA.04 ELEVATIONS 1 OF 2

CLIENT: SAM McVILLY

DRAWN: J DWYER
SCALE: 1:100 @A3
DATE: 18.01.24

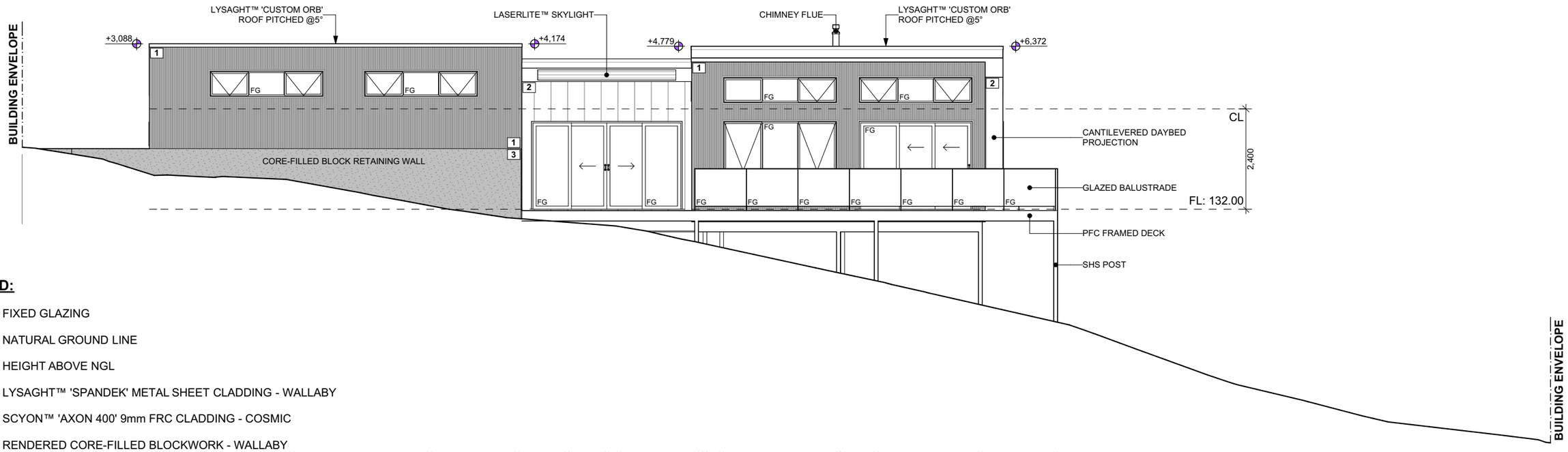
EAST ELEVATION

SCALE 1:100 @A3



WEST ELEVATION

SCALE 1:100 @A3



LEGEND:

FG	FIXED GLAZING
NGL	NATURAL GROUND LINE
+1,234	HEIGHT ABOVE NGL
1	LYSAGHT™ 'SPANDEK' METAL SHEET CLADDING - WALLABY
2	SCYON™ 'AXON 400' 9mm FRC CLADDING - COSMIC
3	RENDERED CORE-FILLED BLOCKWORK - WALLABY

J.J.D DESIGN

LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT:
PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170

DRAWING TITLE:
DA.05 ELEVATIONS 2 OF 2

CLIENT:
SAM McVILLY

DRAWN: J DWYER
SCALE: 1:100 @A3
DATE: 18.01.24

NORTH VIEW

NORTH-WEST VIEW

WEST VIEW

SOUTH-WEST VIEW

JJD DESIGN

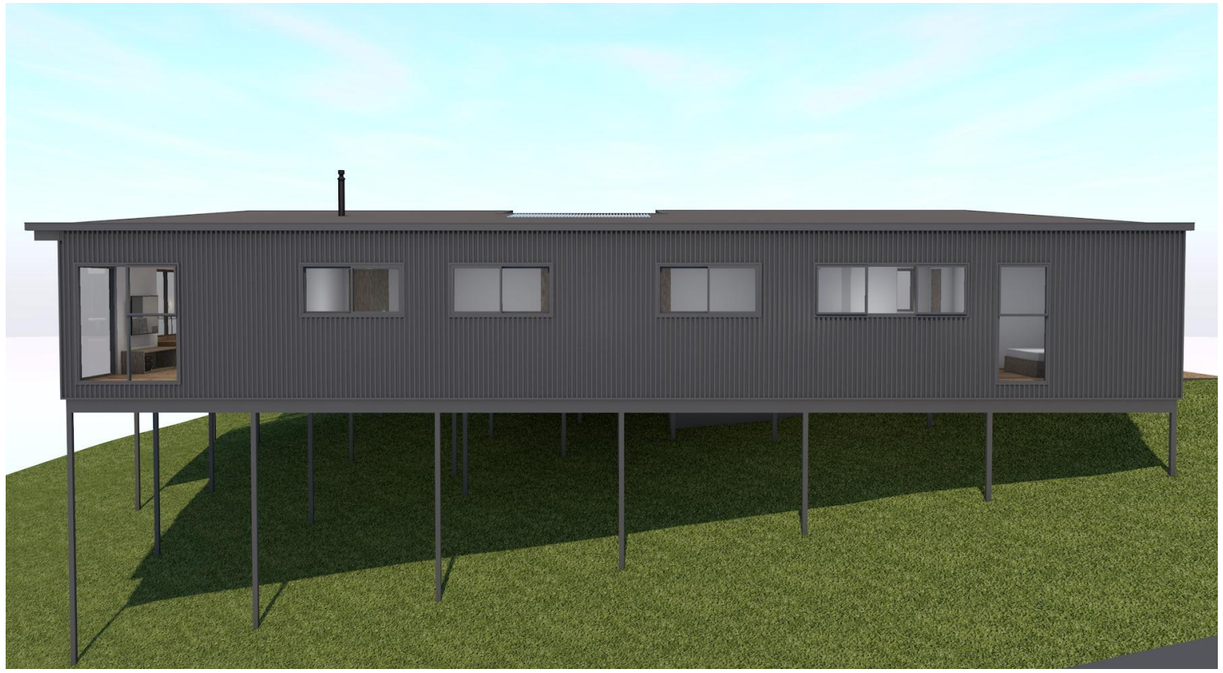
LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT:	DRAWING TITLE:	CLIENT:	DRAWN: J DWYER
PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170	DA.06 3D PERSPECTIVE 1 OF 3	SAM McVILLY	SCALE: N/A @A3
			DATE: 18.01.24

SOUTH VIEW

SOUTH-EAST VIEW



EAST VIEW

NORTH-EAST VIEW

JJD DESIGN

LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT:
PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170

DRAWING TITLE:
DA.07 3D PERSPECTIVE 2 OF 3

CLIENT:
SAM McVILLY

DRAWN: J DWYER
SCALE: N/A @A3
DATE: 18.01.24

KITCHEN

DINING

LOUNGE

DAYBED PROJECTION

JJD DESIGN

LICENSE: 179730619
PHONE: 0439336257
EMAIL: info@jjjd.design
ADDRESS: 19 TILANBI STREET, HOWRAH, TAS, 7018

Ammendments

PROJECT:
PROPOSED DWELLING AT 4 DAMA RD, CAMBRIDGE, TAS 7170

DRAWING TITLE:
DA.08 3D PERSPECTIVE 3 OF 3

CLIENT:
SAM McVILLY

DRAWN: J DWYER
SCALE: N/A @A3
DATE: 18.01.24

AS2870:2011 SITE ASSESSMENT

4 Dama Road

Cambridge

January 2022

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Grace Stearnes
Site Address:	4 Dama Road, Cambridge
Date of Inspection:	16/12/2021
Proposed Works:	New house
Investigation Method:	Hand Auger
Inspected by:	A. Plummer

Site Details

Certificate of Title (CT):	179423/18
Title Area:	Approx. 2.3 ha
Applicable Planning Overlays:	Low landslip hazard band, Priority vegetation area, Airport obstacle limitation area, Bushfire-prone area, Electricity transmission corridor.
Slope & Aspect:	6-15° E facing slope
Vegetation:	Bush Disturbed

Background Information

Geology Map:	MRT 1:25000
Geological Unit:	Triassic
Climate:	Annual rainfall 730mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	AS2870:2011, AS1726:2017 & AS4055:2021

Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below. Tests were conducted across the site to obtain bearing capacities of the material at the time of this investigation.

Soil Profile Summary

BH 1 Depth (m)	BH 2 Depth (m)	USCS	Description
0.00-0.20		SW	TOPSOIL: **Silty SAND**: grey, dry, medium dense.
0.20-0.50	0.00-0.10	SC	**CLAYEY SAND**: grey-yellow, dry, very dense, refusal on weathered sandstone.

Site Notes

The soils on site consist of silty sand topsoil overlying clay sand subsoils which have developed on weathered Triassic sandstone deposits.

Site Classification

The site has been assessed and classified in accordance with AS2870:2011 *"Residential Slabs and Footings".*

The site has been classified as:

Class P

Y_s range: **0-20mm**

Notes: This site has been classified as problematic, due to trees on the site which may need to be removed prior to construction and the landslip hazard area.

The removal of these trees will disturb the ground conditions and may cause differential movement and settlement across the building area.

The site is on a low classified landslip hazard area but there is a medium landslide classified area in very close proximity to the building site to the south and east.

Wind Loading Classification

According to *"AS4055:2021 - Wind Loads for Housing"* the house site is classified below:

Wind Classification: N3

Region:	A
Terrain Category:	2.5
Shielding Classification:	PS
Topographic Classification:	T2
Wind Classification:	N3
Design Wind Gust Speed – m/s ($V_{h,u}$):	50

Construction Notes & Recommendations

The site has been classified as **Class P** - see 'Site Classification' above.

It is recommended the foundations be placed on the underlying bedrock to minimise the potential for significant foundation movement.

All earthworks on site must comply with AS3798:2012, and I further recommend that consideration be given to drainage and sediment control on site during and after construction. Care should also be taken to ensure there is adequate drainage in the construction area to avoid the potential for weak bearing and foundation settlement associated with excessive soil moisture.

I also recommend that during construction that I and/or the design engineer be notified of any major variation to the foundation conditions as predicted in this report.

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director

Explanatory Notes

1 Scope of Works

The methods of description and classification of soils used in this report are based largely on Australian Standard 1726 – Geotechnical Site Investigations (AS1726:2017), with reference to Australian Standard 1289 – Methods for testing soils for engineering purposes (AS1289), for eventual Site Classification according to Australian Standard 2870 (AS2870:2011) – Residential Slabs and Footings and Australian Standard 1547 (AS1547:2012) On-site domestic wastewater management.

1.1 Site Classification AS2870:2011

Site classification with reference to the above Australian Standards are based on site reactivity.

Class	Foundation Conditions	Characteristic Surface Movement
A	Most sand and rock sites with little or no ground movement from moisture changes.	**0mm**
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes.	**0 – 20mm**
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.	**20 – 40mm**
H-1	Highly reactive clay sites, which may experience high ground movement from moisture changes.	**40 – 60mm**
H-2	Highly reactive clay sites, which may experience very high ground movement from moisture changes.	**60 – 75mm**
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes.	**>75mm**

*Note: Soils where foundation performance may be significantly affected by factors other than reactive soil movement are classified as **Class P**.*

A site is classified as **Class P** when:

- The bearing capacity of the soil profile in the foundation zone is generally less than 100kpa
- If excessive foundation settlement may occur due to loading on the foundation.
- The site contains uncontrolled fill greater than 0.8m in depth for sandy sites and 0.4m in depth for other soil materials.
- The site is subject to mine subsistence, landslip, collapse activity or coastal erosion.
- The site is underlain by highly dispersive soils with significant potential for erosion
- If the site is subject to abnormal moisture conditions which can affect foundation performance

1.2 Soil Characterisation

This information explains the terms of phrase used within the soil description area of the report.

It includes terminology for cohesive and non-cohesive soils and includes information on how the Unified Soil Classification Scheme (USCS) codes are determined.

NON COHSIVE – SAND & GRAVEL		
Consistency Description	**Field Test**	**Dynamic Cone Penetrometer blows/100 mm**
Very loose (VL)	Easily penetrated with 13 mm reinforcing rod pushed by hand.	0 - 1
Loose (L)	Easily penetrated with 13 mm reinforcing rod pushed by hand. Can be excavated with a spade; 50 mm wooden peg can be easily driven.	1 - 3
Medium dense (MD)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, - hard shovelling.	3 - 8
Dense (D)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, requires pick for excavation: 50 mm wooden peg hard to drive.	8 - 15
Very dense (VD)	Penetrated only 25 - 50 mm with 13 mm reinforcing rod driven with 2 kg hammer.	>15

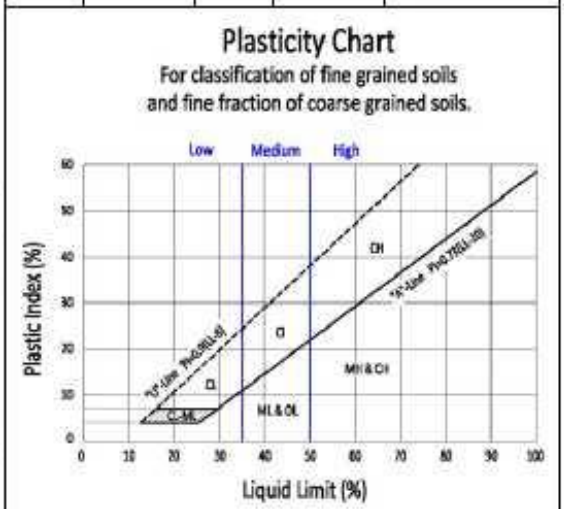
COHESIVE - SILT & CLAY		
Consistency Description	**Field Test**	**Indicative undrained shear strength kPa**
Very soft	Easily penetrated >40 mm by thumb. Exudes between thumb and fingers when squeezed in hand.	<12
Soft	Easily penetrated 10 mm by thumb. Moulded by light finger pressure	>12 and <25
Firm	Impression by thumb with moderate effort. Moulded by strong finger pressure	>25 and <50
Stiff	Slight impression by thumb cannot be moulded with finger.	>50 and <100
Very Stiff	Very tough. Readily indented by thumbnail.	>100 and <200
Hard	Brittle. Indented with difficulty by thumbnail.	>200

1.3 USCS Material Descriptions

Soils for engineering purposes are the unconsolidated materials above bedrock, they can be residual, alluvial, colluvial or aeolian in origin.

Major Divisions		Particle size mm	USCS Group Symbol	Typical Names	Laboratory Classification				
					% < 0.075 mm (2)	Plasticity of fine fraction	$C_u = \frac{D_{60}}{D_{10}}$	$C_c = \frac{(D_{30})^2}{(D_{10})(D_{60})}$	NOTES
COARSE GRAINED SOILS (more than half of material less than 63 mm is larger than 0.075 mm)	BOULDERS	200							
	COBBLES	63							
	GRAVELS (more than half of coarse fraction is larger than 2.36 mm)	coarse 20 medium 6 fine 2.36	GW	Well graded gravels and gravel-sand mixtures, little or no fines	0-5	—	>4	Between 1 and 3	(1) Identify fines by the method given for fine-grained soils. (2) Borderline classifications occur when the percentage of fines (fraction smaller than 0.075 mm size) is greater than 5% and less than 12%. Borderline classifications require the use of SP-SM, GW-GC.
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels	0-5	—	Fails to comply with above		
			GM	Silty gravels, gravel-sand-silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
			GC	Clayey gravels, gravel-sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
	SANDS (more than half of coarse fraction is smaller than 2.36 mm)	coarse 0.6 medium 0.2 fine 0.075	SW	Well graded sands and gravelly sands, little or no fines	0-5	—	>6	Between 1 and 3	
			SP	Poorly graded sands and gravelly sands, little or no fines	0-5	—	Fails to comply with above		
			SM	Silty sands, sand silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
			SC	Clayey sands, sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
FINE GRAINED SOILS (more than half of material less than 63 mm is smaller than 0.075 mm	SILTS & CLAYS (Liquid Limit ≤50%)		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity					
			CL CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays					
			OL	Organic silts and clays of low plasticity					
	SILTS & CLAYS (Liquid Limit >50%)		MH	Inorganic silts, mic- aceous or diato-maceous fine sands or silts, elastic silts					
			CH	Inorganic clays of high plasticity, fat clays					
			OH	Organic silts and clays of high plasticity					
	HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils					

Use the gradation curve of material passing 63 mm for classification of fractions according to the criteria given in 'Major Divisions'



Grain size analysis is performed by two processes depending on particle size. Sand silt and clay particles are assessed using a standardised hydrometer test, and coarse sand and larger is assessed through sieving by USCS certified sieves. For more detail see the following section.

Soil Classification	Particle Size
Clay	Less than 0.002mm
Silt	0.002 – 0.06mm
Fine/Medium Sand	0.06 – 2.0mm
Coarse Sand	2.0mm – 4.75mm
Gravel	4.75mm – 60.00mm

1.4 Bearing Capacities and DCP testing.

DCP and PSP weighted penetrometer tests – Dynamic Cone Penetrometer (DCP) and Perth Sand Penetrometer (PSP) tests are carried out by driving a rod into the ground with a falling weight hammer and measuring the blows for successive 100mm increments of penetration. Normally, there is a depth limitation of 1.2m but this may be extended in certain conditions by the use of extension rods. The methods for the two tests are quite similar.

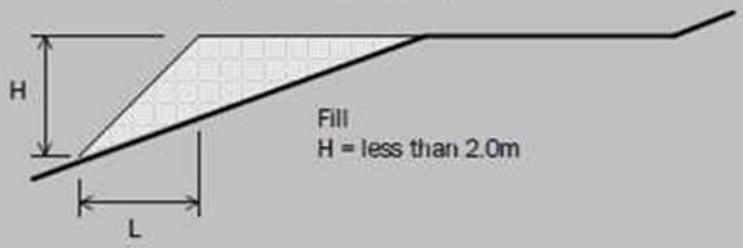
- Dynamic Cone Penetrometer – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS 1289, Test 6.3.2).
- Perth Sand Penetrometer – a 16mm diameter flat-ended rod is driven with a 9kg hammer, dropping 600mm (AS 1289 Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.

Site Anomalies – During construction GES will need to be notified of any major variation to the foundation conditions as predicted in this report.

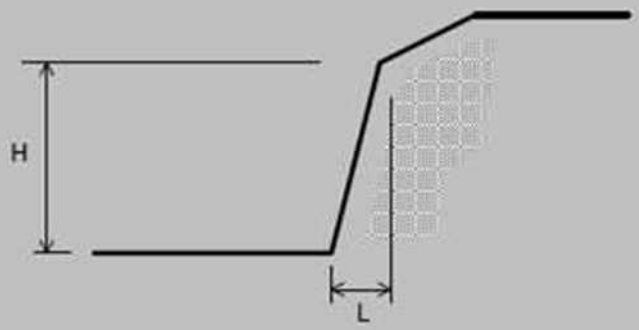
1.5 Batter Angles for Embankments *(Guide Only)*

Note : Retaining walls or other form of soil retaining methods must be adopted where the slope ratio is greater than that indicated in the table below :-

FILL EMBANKMENTS



CUT EMBANKMENTS



MATERIAL TYPE (refer soils report)		EMBANKMENT SLOPES (Height : Length)	
		Compacted Fill	Cutting
Stable Rock (A*)		2 : 3	6 : 1
Sand (A*)		1 : 2	2 : 3
Silt (P*)		1 : 4	1 : 4
Clay	Firm Clay	1 : 2	1 : 1
	Soft Clay	Not Suitable	2 : 3
Soft Soils (P*)		Not Suitable	Not Suitable

Glossary of Terms

Bearing Capacity – Maximum bearing pressure that can be sustained by the foundation from the proposed footing system under service loads which should avoid failure or excessive settlement.

Clay – (Mineral particles less than 0.002mm in diameter). Fine grained cohesive soil with plastic properties when wet. Also includes sandy clays, silty clays, and gravelly clays.

Dynamic Cone Penetrometer (DCP) – Field equipment used to determine underlying soil strength and therefore bearing capacity (kPa) by measuring the penetration of the device into the soil after each hammer blow.

Dispersive soil – A soil that has the ability to pass rapidly into suspension in water.

Footing – Construction which transfers the load from the building to the foundation.

Foundation – Ground which supports the building

Landslip – Foundation condition on a sloping site where downhill foundation movement or failure is a design consideration.

Qualified Engineer – A professional engineer with academic qualifications in geotechnical or structural engineering who also has extensive experience in the design of the footing systems for houses or similar structures.

Reactive Site – Site consisting of clay soil which swells on wetting and shrinks on drying by an amount that can damage buildings on light strip footings or unstiffened slabs. Includes sites classified as S, M, H-1, H-2 & E in accordance with AS2870-2011.

Sand – (Mineral particles greater than 0.02mm in diameter). Granular non-cohesive, non-plastic soil that may contain fines including silt or clay up to 15%.

Services – Means all underground services to the site including but not limited to power, telephone, sewerage, water & storm water.

Silt – (Mineral particles 0.002 – 0.02mm in diameter). Fine grained non-cohesive soil, non-plastic when wet. Often confers a silky smoothness of field texture, regularly includes clay and sand to form clayey silts, sandy silts and gravelly silts.

Site – The site title, as denoted by address, lot number, or Certificate of Title (CT) number, or Property Identification Number (PID).

Surface Movement (Ys) – Design movement (mm) at the surface of a reactive site caused by moisture changes.

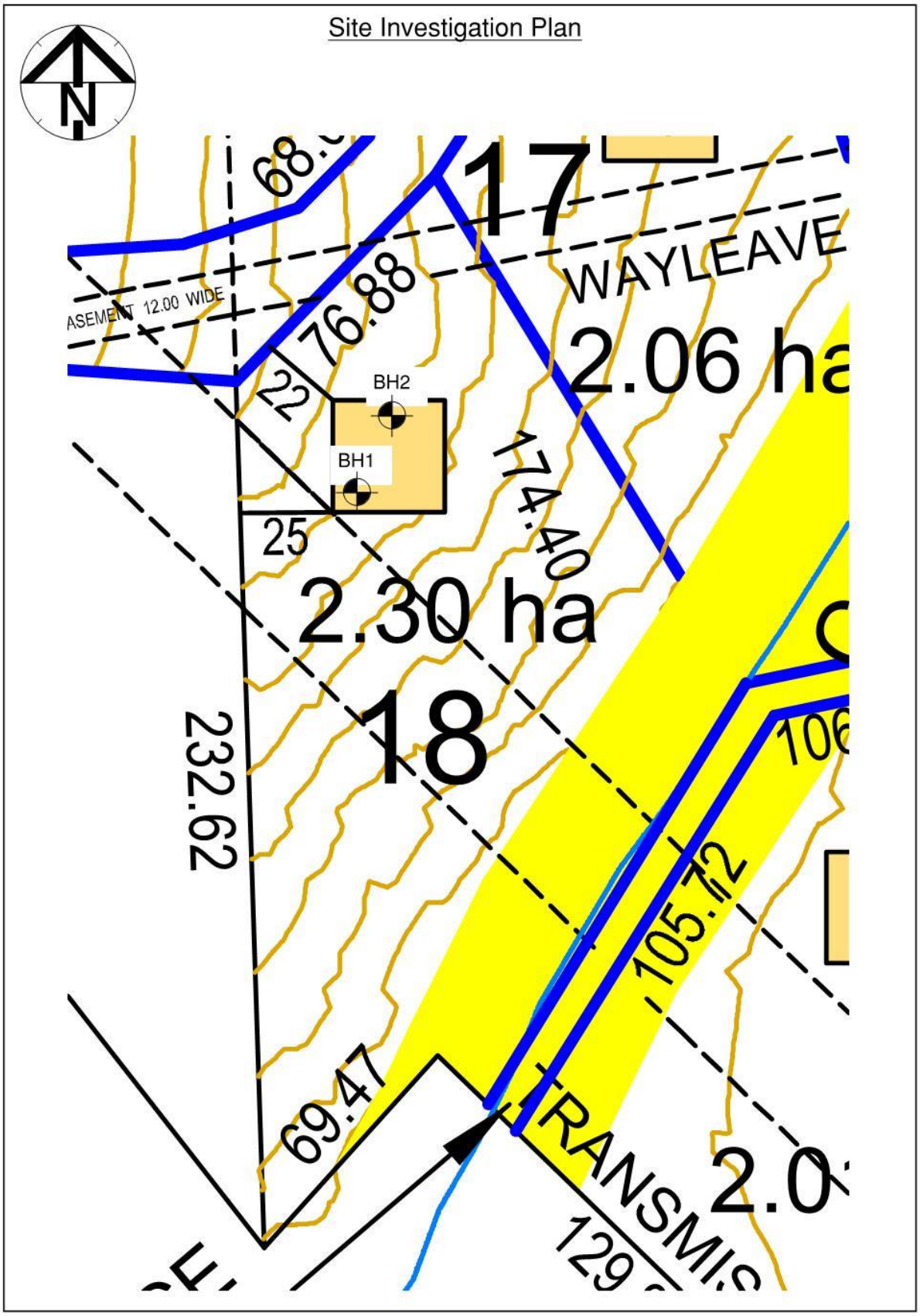
Disclaimer

This Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and the Client. To the best of GES's knowledge, the information presented herein represents the client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that discussed in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible geotechnical parameter or the soil conditions over the whole area of the site. Soil and rock samples collected from the investigation area are assumed to be representative of the areas from where they were collected and not indicative of the entire site. The conclusions discussed within this report are based on observations and/or testing at these investigation points.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third a party.



CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Grace Stearnes *Owner /Agent*
4 Dama Road *Address*
Cambridge 7170 *Suburb/postcode*

Form **55**

Qualified person details:

Qualified person: John-Paul Cumming
Address: 29 Kirksway Place
Battery Point 7004
Phone No: 03 6223 1839
Fax No:
Licence No: AO999
Email address: jcumming@geosolutions.net.au

Qualifications and Insurance details: Certified Professional Soil Scientist (CPSS stage 2)
(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: AS2870-2011 Foundation Classification
(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: 4 Dama Road
Cambridge 7170
Lot No:
Certificate of title No: 179423/18

The assessable item related to this certificate: Classification of foundation Conditions according to AS2870-2011
(description of the assessable item being certified)
Assessable item includes –
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate details:

Certificate type: Foundation Classification
(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work ☒
or
a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	The attached soil report for the address detailed above in 'details of Work'
Relevant calculations:	Reference the above report.
References:	AS2870:2011 residential slabs and footings AS1726:2017 Geotechnical site investigations CSIRO Building technology file – 18.

Substance of Certificate: (what it is that is being certified)

Site Classification consistent with AS2870-2011.

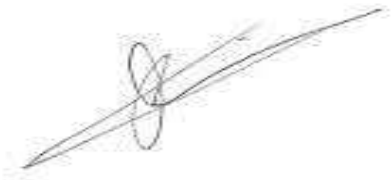
Scope and/or Limitations

The classification applies to the site as inspected and does not account for future alteration to foundation conditions as a result of earth works, drainage condition changes or variations in site maintenance.

I, John-Paul Cumming certify the matters described in this certificate.

Qualified person:

Signed:



Certificate No: J6066

Date: 25/01/2022

ONSITE WASTEWATER ASSESSMENT

4 Dama Road

Cambridge

February 2022

GES

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Grace Stearns
Site Address:	4 Dama Road, Cambridge
Date of Inspection:	16/12/2021
Proposed Works:	New house
Investigation Method:	AMS Power Probe – Direct Push
Inspected by:	A. Plummer

Site Details

Certificate of Title (CT):	179423/18
Title Area:	Approx. 2.3ha
Planning Overlays:	Airport Obstacle Limitation Area, Bushfire-prone Areas
	Landslip Hazard Band (Low - Medium)
	Priority Vegetation Area
	Electricity Transmission Corridor
Slope & Aspect:	Approx. 25% East facing slope
Vegetation:	Grass & weeds

Background Information

Geology Map:	MRT 1:25000
Geological Unit:	Triassic
Climate:	Annual rainfall approx. 400mm
Water Connection:	Tank
Sewer Connection:	Unserviced – on-site required
Testing and Classification:	*AS 1547-2012*

Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below.

Soil Profile Summary

BH 1 Depth (m)	BH 2 Depth (m)	USCS	Description
0.00-0.20		SW	TOPSOIL: **Silty SAND**: grey, dry, medium dense.
0.20-0.50	0.00-0.10	SC	**CLAYEY SAND**: grey-yellow, dry, very dense, refusal on weathered sandstone.

Site Notes

The profiles on site consist of fine silt/sandy topsoils overlying silty and sandy clay subsoils.

Wastewater Classification & Recommendations

According to AS1547-2012 (on-site waste-water management) the natural soil is classified as **LOAM (category 3)**. Due to the very shallow soil depths, the site is unsuited to the installation of a traditional septic based system and secondary treatment of wastewater will be required. It is proposed to install a package treatment system (e.g., AWTS such as Econocycle, Envirocycle, Ozzikleen etc) and apply the treated effluent via irrigation. The typical Design Irrigation Rate (DIR) of 4mm/day for category 3 soils has been reduced to 3.2mm/day due to the significant slope on site.

The proposed dwelling has a calculated maximum wastewater output of 600L/day. This is based on a tank water supply and a maximum occupancy of 5 people (120L/day/person).

Using the DIR of 3.2mm/day, an irrigation area of at least 200m^2 will be required to accommodate the expected flows. An additional 300mm of sandy loam will need to be incorporated into the irrigation area to achieve sufficient vertical separation from bedrock. Gypsum will need to be incorporated into the application area at a rate of 1kg/5m^2 to offset potential soil dispersion. A cut-off diversion drain will be required upslope of the absorption area and the area excluded from traffic or any future building works.

A 100% reserve area also needs to be set aside and kept free from development for any future wastewater requirements. There is sufficient space available onsite to accommodate the required reserve due to the large property size (approx. 2.3ha). Therefore, a formal reserve area has not been assigned.

The following setback distances are required to comply with the Building Act 2016:

Upslope or level buildings:	3m
Downslope buildings:	5.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	15.5m
Downslope surface water:	43m

Compliance with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table.

During construction GES will need to be notified of any variation to the soil conditions or wastewater loading as outlined in this report.

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for	Grace Stearnes	Assess. Date	21-Feb-22
		Ref. No.	
Assessed site(s)	4 Dama Road, Cambridge	Site(s) inspected	16-Dec-21
Local authority	Clarence City Council	Assessed by	John Paul Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and sustem sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 600 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 200

Sullage volume (L/day) = 400

Total nitrogen (kg/year) generated by wastewater = 2.2

Total phosphorus (kg/year) generated by wastewater = 1.1

Climatic assumptions for site (Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	41	36	36	45	36	29	46	47	40	48	44	56
Adopted rainfall (R, mm)	41	36	36	45	36	29	46	47	40	48	44	56
Retained rain (Rr, mm)	35	31	31	38	31	25	39	40	34	41	37	48
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	**95**	**79**	**60**	**25**	**11**	**5**	**-8**	**2**	**29**	**43**	**68**	**78**

Annual evapotranspiration less retained rain (mm) = 489

Soil characterisitics

Texture = Loam Category = 3 Thick. (m) = 0.5

Adopted permeability (m/day) = 1.5 Adopted LTAR (L/sq m/day) = 3.2 Min depth (m) to water = 5

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	All wastewater will be disposed of on the site
The preferred method of on-site primary treatment:	In a package treatment plant
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	None
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	25
Width (m) =	8
Depth (m) =	0.2
Total disposal area (sq m) required =	200
comprising a Primary Area (sq m) of:	200
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The wastewater loading is calculated for a three-bedroom equivalent house on tank water with a wastewater loading of 600L/day and a maximum occupancy of 5 people. This will be treated in an AWTS and subsurface irrigation system. Using the DIR of 3.2mm/day, a subsurface irrigation area of 200sq m will be required to accomodate the predicted climatic and loading events.

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Site assessment for on-site waste water disposal

Assessment for	Grace Stearnes	Assess. Date	21-Feb-22
		Ref. No.	
Assessed site(s)	4 Dama Road, Cambridge	Site(s) inspected	16-Dec-21
Local authority	Clarence City Council	Assessed by	John Paul Cumming

This report summarises data relating to the physical capability of the assessed site(s) to accept wastewater. Environmental sensitivity and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) site limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Expected design area	sq m	5,000	V. high	Very low		
	Density of disposal systems	/sq km	10	Mod.	Very low		
	Slope angle	degrees	6	High	Low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
	Aspect (Southern hemi.)	Faces E or W		V. high	Moderate		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	600	High	Moderate	No change	
	SAR of septic tank effluent		1.2	High	Low		
	SAR of sullage		2.1	High	Moderate		
	Soil thickness	m	0.5	V. high	Moderate		
AA	Depth to bedrock	m	0.5	Mod.	Very high		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		7.0	High	Very low		
	Soil bulk density	gm/cub. cm	1.5	High	Low		
	Soil dispersion	Emerson No.	2	V. high	Very low		
A	Adopted permeability	m/day	1.5	Mod.	High		
A	Long Term Accept. Rate	L/day/sq m	3.2	High	High		

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The site has the capability to accept secondary treated wastewater

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Site assessment for on-site waste water disposal

Assessment for	Grace Stearnes	Assess. Date	21-Feb-22
		Ref. No.	
Assessed site(s)	4 Dama Road, Cambridge	Site(s) inspected	16-Dec-21
Local authority	Clarence City Council	Assessed by	John Paul Cumming

This report summarises data relating to the environmental sensitivity of the assessed site(s) in relation to applied wastewater. Physical capability and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Cation exchange capacity	mmol/100g	100	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-489	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	3.3	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	2	High	Very low		
	Risk to adjacent bores		Very low	V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
A	Dist. to nearest surface water	m	100	V. high	High		
	Dist. to nearest other feature	m	110	V. high	Very low		
	Risk of slope instability		Low	V. high	Low		
AA	Distance to landslip	m	0	V. high	Very high		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Secondary treatment of effluent is required. The site is suited to subsurface irrigation which will minimise ground instability and vegetation disturbance.

Demonstration of wastewater system compliance to *Building Act 2016 Guidelines for On-site Wastewater Disposal*

Acceptable Solutions	**Performance Criteria**	**Compliance**
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a) be no less than 6m; or b) be no less than: (i) 3m from an upslope building or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building.	P1 a) The land application area is located so that (i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and (ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation	Complies with A1 (b) (i) Land application area will be located with a minimum separation distance of 3m from an upslope or level building. Complies with A1 (b) (iii) Land application area will be located with a minimum separation distance of 5.5m of downslope building
A2 Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b) (a) be no less than 100m; or (b) be no less than the following: (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water.	P2 Horizontal separation distance from downslope surface water to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A2 (b) (ii) Land application area will be located with a minimum separation distance of 43m of downslope surface water

A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1.5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary Complies with A3 (b) (iii) Land application area will be located with a minimum separation distance of 15.5m of downslope property boundary
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.	P4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable	No bore or well identified within 50m

A5 Vertical separation distance between groundwater and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.6m if secondary treated effluent	P5 Vertical separation distance between groundwater and a land application area must comply with the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable	No groundwater encountered
A6 Vertical separation distance between a limiting layer and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.5m if secondary treated effluent	P6 Vertical setback must be consistent with AS/NZS1547 Appendix R.	Complies with A6 (b)
A7 nil	P7 A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties	Complies

AS1547:2012 – Loading Certificate – AWTS Design

This loading certificate sets out the design criteria and the limitations associated with use of the system.

Site Address: 4 Dama Road, Cambridge

System Capacity: 5 persons @ 120L/person/day

Summary of Design Criteria

DIR: 3.2mm/day

Irrigation area: 200m^2

Reserve area location /use: Not assigned – more than 100% available

Water saving features fitted: Standard fixtures

Allowable variation from design flows: 1 event @ 200% daily loading per quarter

Typical loading change consequences: Expected to be minimal due to use of AWTS and large land area

Overloading consequences: Continued overloading may cause hydraulic failure of the irrigation area and require upgrading/extension of the area. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Underloading consequences: Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non occupation. Under such circumstances additional maintenance of the system may be required. Long term under loading of the system may also result in vegetation die off in the irrigation areas and additional watering may be required. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Lack of maintenance / monitoring consequences: Issues of underloading/overloading and condition of the irrigation area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Monitoring and regulation by the permit authority required to ensure compliance.

Other considerations: Owners/occupiers must be made aware of the operational requirements and limitations of the system by the installer/maintenance contractor.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Grace Stearnes *Owner name*
4 Dama Road *Address*
Cambridge 7170 *Suburb/postcode*

Designer details:

Name: John-Paul Cumming
Category: Bld. Srvcs. Dsgnr. - Hydraulic
Business name: Geo-Environmental Solutions
Phone No: 03 6223 1839
Business address: 29 Kirksway Place
Battery Point 7004
Fax No: N/A
Licence No: CC774A
Email address: office@geosolutions.net.au

Details of the proposed work:

Owner/Applicant Grace Stearnes
Designer's project reference No. J6066
Address: 4 Dama Road
Lot No: 179423/18
Cambridge 7170

Type of work: Building work ☐ Plumbing work ☒ *(X all applicable)*

Description of work:
On-site wastewater management system - design

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	☒ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

Deemed-to-Satisfy: ☒ Performance Solution: ☐ *(X the appropriate box)*

Other details:

AWTS to subsurface irrigation.

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Feb-22
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Feb-22
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Feb-22

Standards, codes or guidelines relied on in design process:

AS1547:2012 On-site domestic wastewater management.

AS3500 (Parts 0-5)-2013 Plumbing and drainage set.

Any other relevant documentation:

Onsite Wastewater Assessment - 4 Dama Road Cambridge TAS 7170 - Feb-22

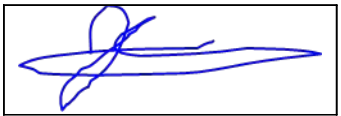
Onsite Wastewater Assessment - 4 Dama Road Cambridge TAS 7170 - Feb-22

Attribution as designer:

I John-Paul Cumming, am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		21/02/2022
Licence No:	CC774A		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [x] The works will not increase the demand for water supplied by TasWater
- [x] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [x] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [x] The works will not damage or interfere with TasWater's works
- [x] The works will not adversely affect TasWater's operations
- [x] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [x] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [x] If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I ..... John-Paul Cumming..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

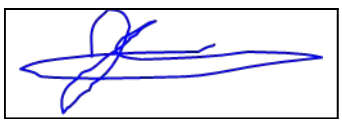
	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		21/02/2022

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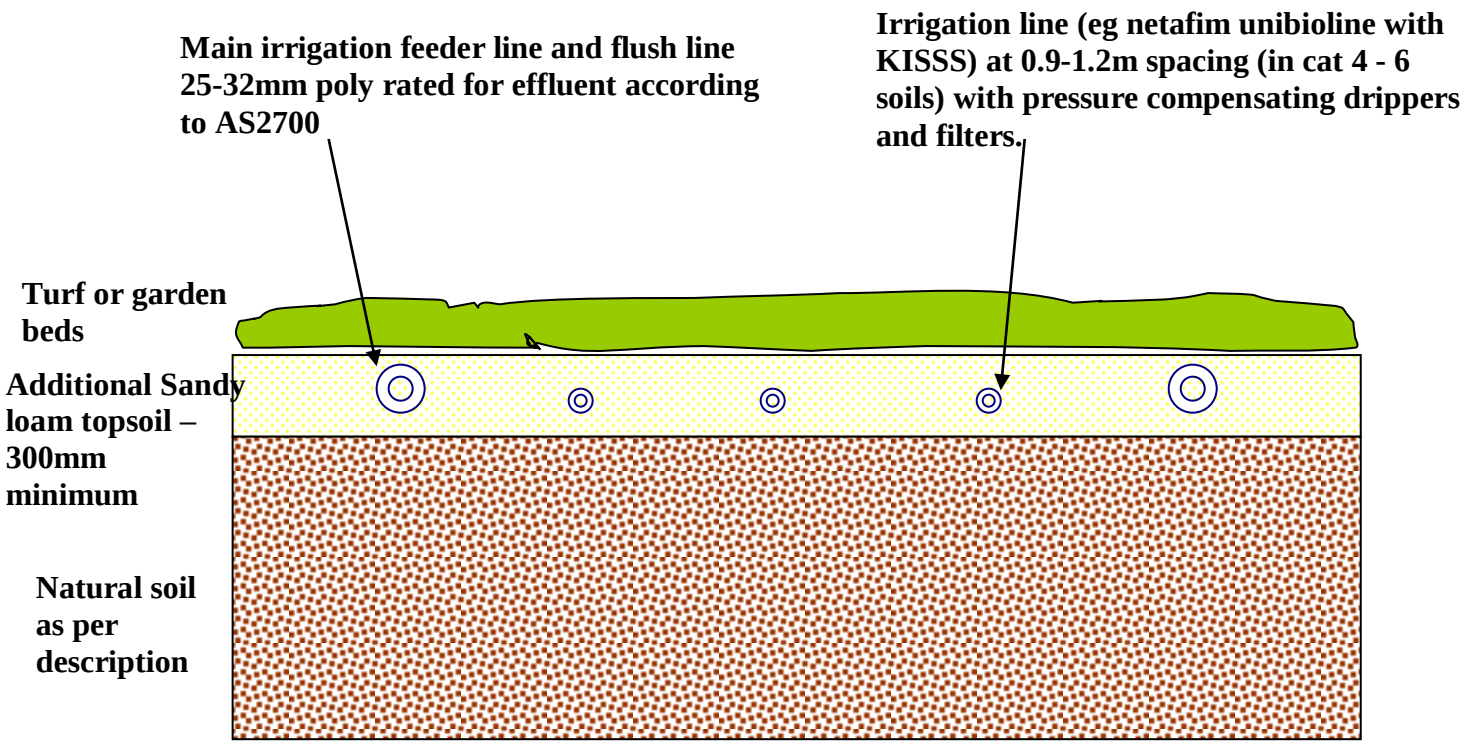
Figure 1

Subsurface irrigation design

To be used in conjunction with site evaluation report for construction of subsurface irrigation areas for use with aerated wastewater treatment systems (AWTS). On dispersive soils gypsum should be added to tilled natural soil at 1Kg/5m^2. The irrigation outlet line from the system or holding tank should utilize a 25-32mm main line out stepped down to a 11-16mm lateral drip irrigation lines in each irrigation row. If the final design is for shrubs/trees then a mounded row design is best employed with a nominal mound height of approximately 200mm.

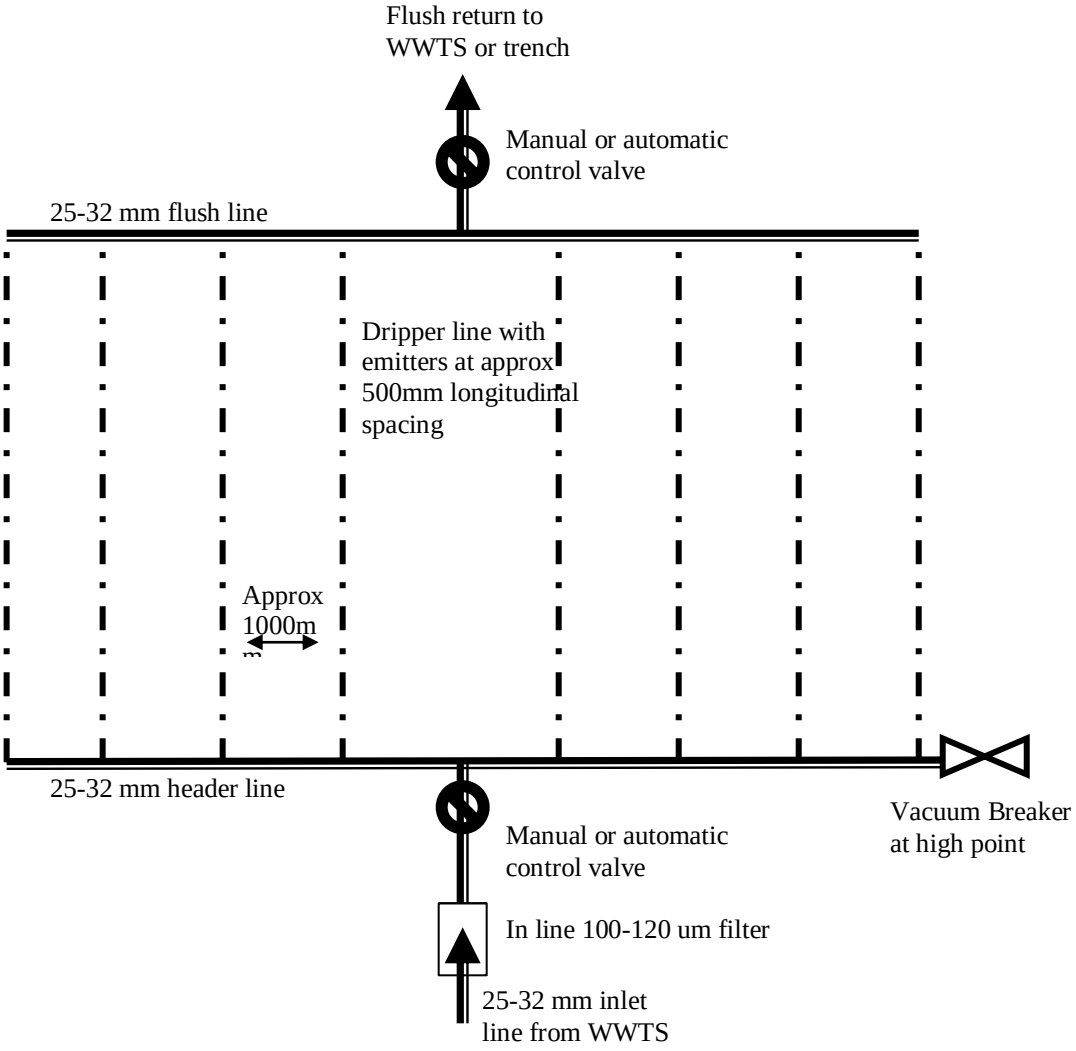
Irrigation Area Cross Section



Note – the bedding sandy loam & topsoil/turf depths are minimum, with a maximum recommended depth of irrigation lines below surface of 200mm (range 100-200mm).

- The existing surface of the site should be tilled to a depth of 200mm with a conventional plough, discs or spring tines to break down the turf matt and any large soil clods – all stones must be removed
- A minimum of 300mm of sandy loam should be added to the site to aid installation of the drip line into a suitable medium – the loam should be mixed into the exiting subsoil with another pass of the cultivating tines or similar
- Turf, seed or plants should be applied to the are as soon as practical after the laying of dripper line and commissioning of the system

Irrigation Area Plan View



Design specifications:

1. Manufacturer's recommendations for spacing of lateral irrigation lines should be followed (eg netafim unibioline with/without KISSS) with commonly used with spacing of 0.3m (0.6m KISSS) in highly permeable soils and 0.6m (1.0-1.2m KISSS) in less permeably loams and clays.
2. Dependant upon treatment system a 200µm filter may be installed at the pumping chamber outlet, but a 100-120 µm inline disc filter should be installed prior to discharge into the irrigation area.
3. A vacuum breaker valve must be installed at the highest point of each irrigation zone in a marked and protected valve control box.
4. A flush line must be installed at the lowest point/bottom of the irrigation area with a return valve for flushing back into the treatment chamber of the system (not into the primary chamber as it may affect the performance of the microbial community) or to a dedicated absorption trench.
5. The minimum irrigation pumping capacity should be equivalent to 120kpa (i.e. 12m of head) at the furthest point of the irrigation area (a gauge should be placed at the vacuum breaker) – therefore pump size can be matched on site to the irrigation pipe size and design.

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Wastewater system:

AWTS Unit with venting according to NCC Vol 3 Tas H101.2

Cut-off drain

Subsurface irrigation area 200m^2
e.g. 25m x 8m x 0.2m

Gypsum @ 1kg/5m^2

Additional loam 300mm

Min 3m from upslope buildings
Min 5.5m from downslope buildings
Min 1.5m from upslope or level boundaries
Min 15.5m from downslope boundary
Min 43m from downslope surface water

Refer to GES report

Dr. John Paul Cumming
Building Services Designer-Hydraulic
CCC774A

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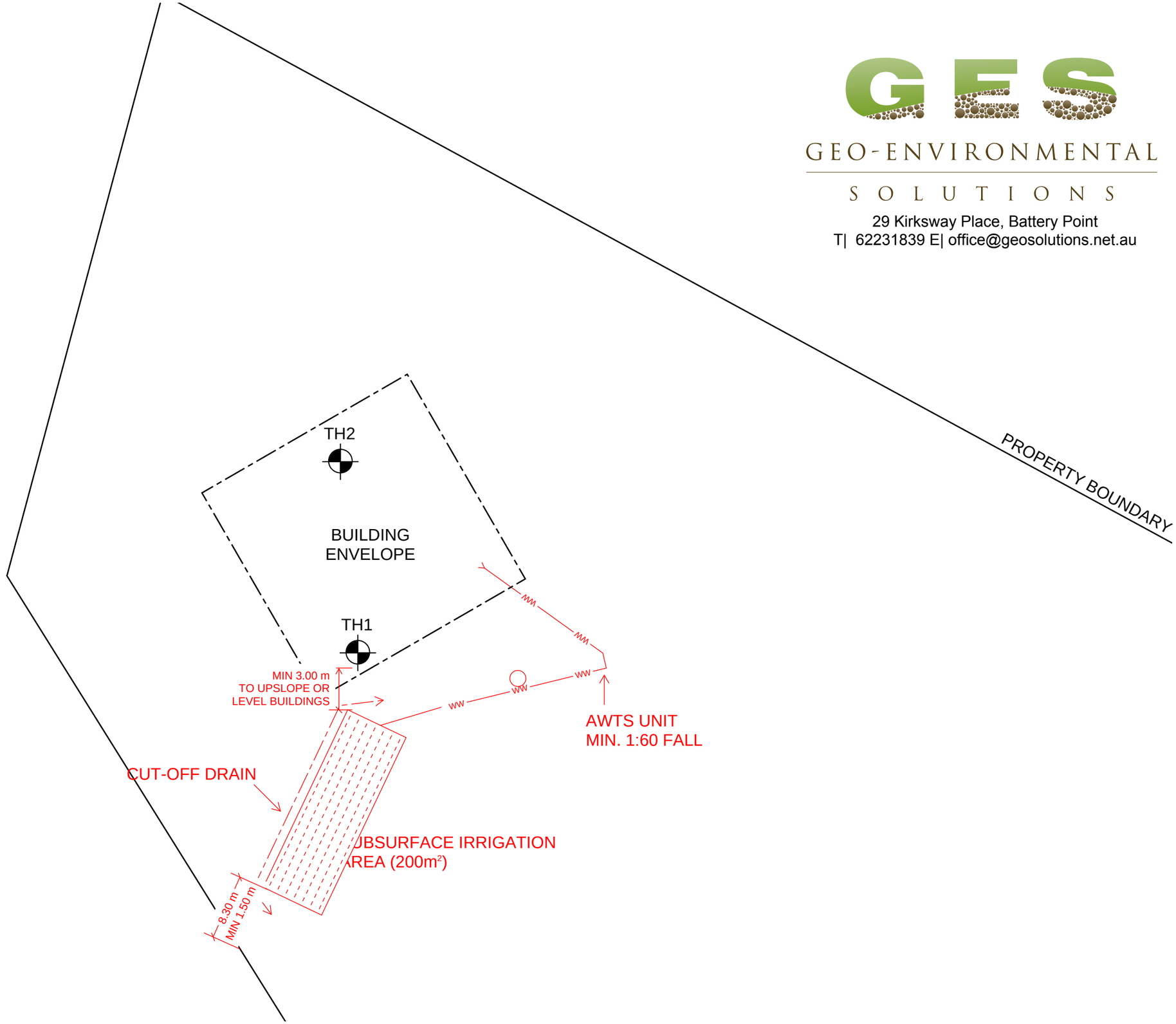
29 Kirksway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

21/02/2022

Approximate Test Hole Location



Do not scale from these drawings. Dimensions to take precedence over scale.	Client Name and Address: Grace Stearnes 4 Dama Road, Cambridge 7170	C.T.: 179423/18 PID: 9771253	Date: 21/02/2022	On-Site Wastewater Management Plan	1:500 @ A3	Sheet 1 of 1 Drawn by: EF

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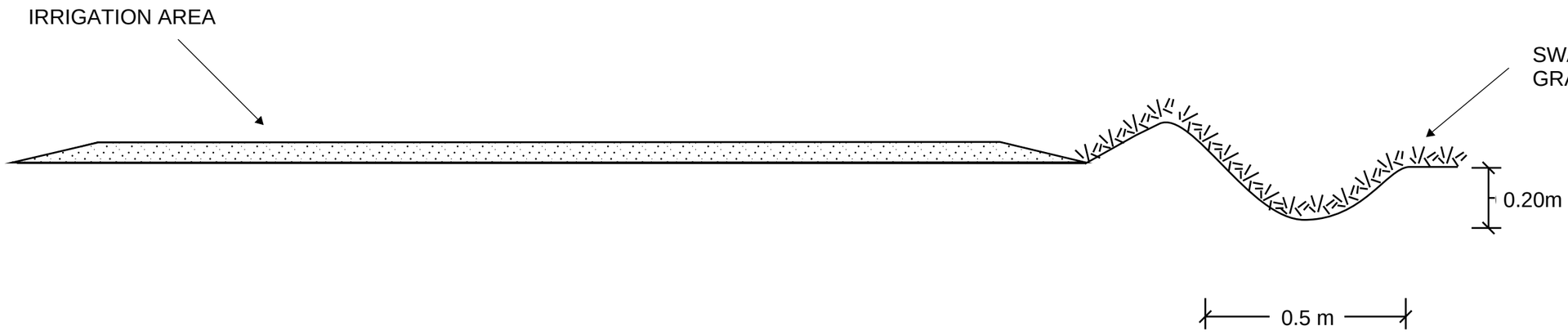
TYPICAL GRASSED SWALE DRAIN CROSS-SECTION

SWALE DRAIN TO BE MIN 0.5M WIDE BY MIN 0.20M DEEP

GRASS COVER TO BE MAINTAINED TO SLOW WATER FLOW AND MINIMSE EROSION



Do not scale from these drawings. Dimensions to take precedence over scale.	Geo-Environmental Solutions		Date: Nov 2021	Grassed swale drain typical cross-section	Sheet 1 of 1 Drawn by SR

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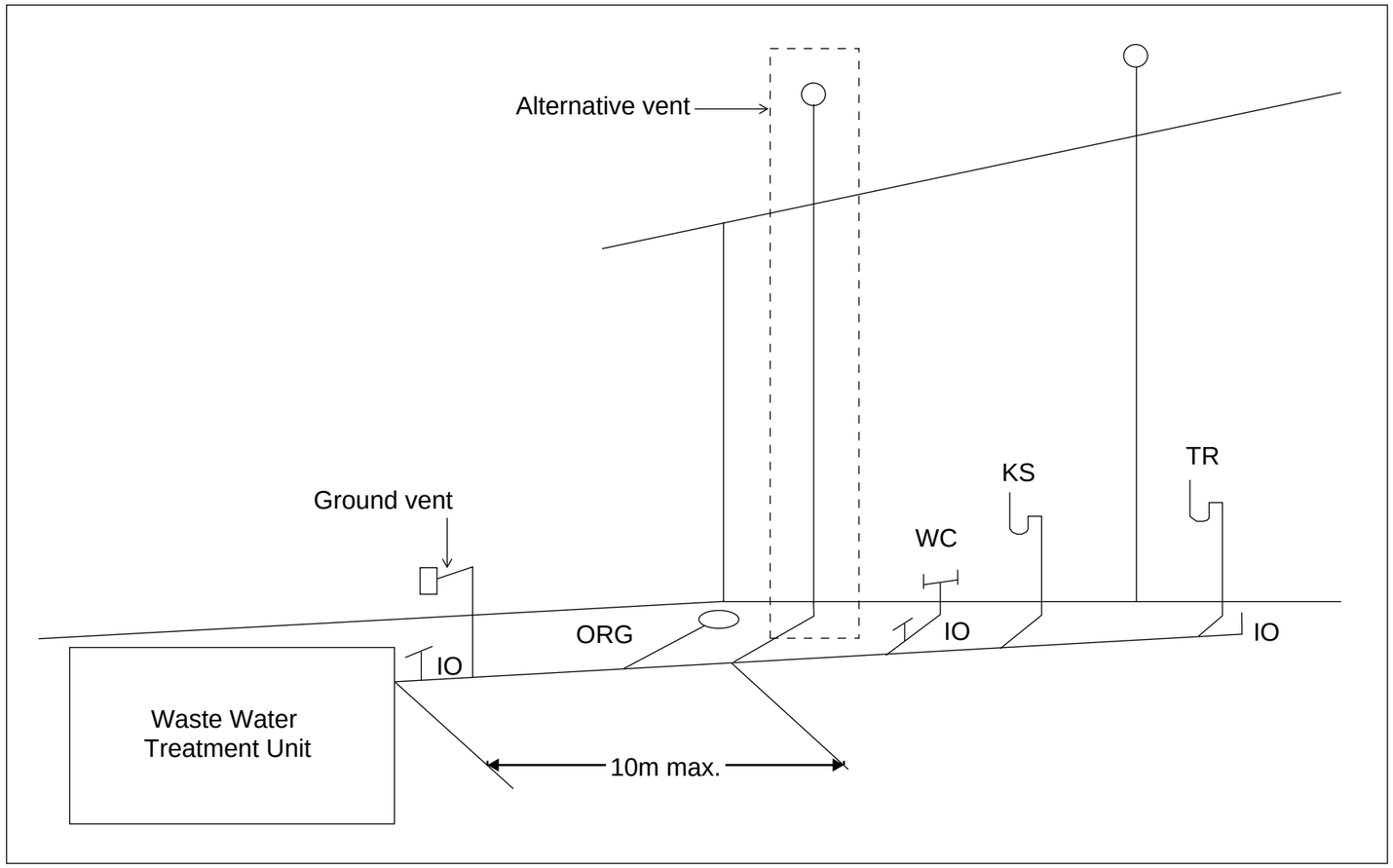


Tas Figure H101.2 Alternative Venting Arrangements

Vents must terminate in accordance with AS/NZS 3500.2

Alternative venting to be used by extending a vent to terminate as if an upstream vent, with the vent connection between the last sanitary fixture or sanitary appliance and the on-site wastewater management system. Use of a ground vent in not recommended

Inspection openings must be located at the inlet to an on-site wastewater management system treatment unit and the point of connection to the land application system and must terminate as close as practicable to the underside of an approved inspection opening cover installed at the finished surface level

Access openings providing access for desludging or maintenance of on-site wastewater management system treatment unites must terminate at or above finished surface level

Alternative vent is the preferred arrangement where possible.

Do not scale from these drawings. Dimensions to take precedence over scale.				Tas Figure H101.2 Alternative Venting Arrangements		Sheet 1 of 1

STEA-G-01B

BUSHFIRE HAZARD MANAGEMENT REPORT

NEW DWELLING
4 Dama Rd, Cambridge, TAS, 7170.

IDDS VERSION CONTROL			STAKEHOLDER ENDORSEMENT		
Revision	**Date**	**Prepared by**	**Date**	**Approved by**	**Signature**
INITIAL	21/01/22	Michael Kinsella			

Michael Kinsella
Building Designer Accreditation: CC5699V
Bushfire Assessor Acreditation: BFP-133

Integral Design & Drafting Services
ABN: 26 166 056 599
mk@idds.com.au,
West Hobart, TAS, 7000.
(0475) 512-016

MEASURES CONTAINED IN THIS BUSHFIRE HAZARD MANAGEMENT REPORT CANNOT GUARANTEE THAT A BUILDING WILL SURVIVE A BUSHFIRE EVENT DUE TO THE DEGREE OF VEGETATION MANAGEMENT, THE UNPREDICTABLE NATURE AND BEHAVIOUR OF FIRE, AND EXTREME WEATHER CONDITIONS.

01 SUMMARY

SUBJECT SITE:	4 DAMA RD, CAMBRIDGE, TAS, 7170.
TITLE REFERENCE:	179423/18
BAL ASSESSMENT:	Undertaken December 16, 2021.
BAL:	**12.5**

- The subject lot is a 2.3ha residential lot accessed from the north off Dama Rd.

- The lot is zoned 11.0 'Rural Living Zone B' under the Tasmanian Planning Scheme - Clarence (TPS-C).

- The site is subject to the following overlays: -
  - CLPS 04 – Electricity Transmission Infrastructure Protection Code
  - CLPS 07 – Natural Assets Code (Priority Vegetation Area)
  - CLPS 13 – Bushfire-prone Areas Code.
  - CLPS 15 – Landslip Hazard Code (Medium landslip hazard band)
  - CLPS 16 - Safeguarding of Airports Code (Airport obstacle limitation area)

- A new Class 1a dwelling is proposed to be built within the designated building envelope located in the north, upslope third of the lot.

- A dwelling built in the designated building envelope will meet the requirements of the Directors Determination: Bushfire Hazard Areas V1.1, 12 April 2021, **(*Bushfire Determination*)** as per Part 2.3: Deemed to Satisfy Provisions, with construction to a BAL 12.5 standard consistent with AS3959:2018, Sections 3 & 5, provision of recommended static water supply and access, and the on-going maintenance of the designated Hazard Management Area (HMA). Refer Bushfire Hazard Management Plan and Recommendations.

02 TABLE OF CONTENTS

03 SITE DESCRIPTION

1 SITE DESCRIPTION

The subject lot is a 2.3ha rural residential lot zoned 11.0 'Rural Living Zone B' under the Tasmanian Planning Scheme - Clarence (TPS-C) and is subject to the CLPS 13 – Bushfire-prone Areas Code. A new Class 1a Dwelling is proposed to be built with a covenanted building envelope locate in the north, upslope third of the lot.

The lot is an elongated polygon shape oriented along a N-S longitudinal axis with the widest point mid-way between the north and south extremities. The lot is bordered to the north by Dama Rd road reserve, to the east by similar sized vacant lots of the same subdivision, and to the south by a larger vacant bush block. To the west, the lot is bordered by a lot of similar size with a single dwelling.

The site is accessed from the north off Dama Rd, a bitumen sealed public roadway, via a 6m bitumen sealed crossover. An existing 71m gravel/dirt vehicular track connects the crossover to the building envelope.

Currently there is no access to water on the site and the property will not be connected to TasWater mains reticulation in the foreseeable future.

The terrain slopes relative evenly at a grade of approximately 1:4.5 (Varying 11-14°) from the nor'west corner to the sou'east boundary.

Vegetation across the block is uniformly eucalypt woodland with an understorey & open areas of mixed native & exotic grasses and sedges, interspersed with pockets of emergent acacias. The exception to this is in the vicinity of the designated building envelope which has been partially cleared of trees, leaving only the understorey present. The predominant vegetation is classified as 'B-05: Woodland' under *AS3959:2018, Table 2.3* and DAS: 'Eucalyptus Amygdalina Forest and Woodland on Sandstone' under *TASVEG 4.0*.

Currently there are no permanent structures on the property.

At the time of subdivision, the subject lot was provided a BAL19 building envelope and HMA by environmental consultants NorthBarker Ecosystem Services. (*Barker, P., 2015, 18 Lot Subdivision – 129 Mt Rumney Rd, Bushfire Report and Hazard Management Plan, Northbarker Ecosystem Services*). A different building envelope without an associated HMA was then provided on the Plan of Subdivision (*Leary & Cox, 18/04/18, Plan of Subdivision*). The latter building envelope was subsequently approved by Clarence City Council (*Planning Permit SD-2017/45, 23 May, 2018*). However, the designated building envelope covenanted to the title is not consistent with either the building envelope provided in the report, nor with the Plan of Subdivision approved by Clarence City Council at the time of subdivision. As such, the building envelope covenanted to the title requires assessment and a new HMA provided to meet the requirements of the *Bushfire Determination*.

PIC 1: VIEW OF DAMA RD ACCESS TO EAST FROM CROSSOVER.

PIC 2: VIEW OF EXISTING ACCESS FROM DAMA RD CROSSOVER

PIC 3: TYPICAL VEGETATION TO THE SOUTH OF BUILDING ENVELOPE

PIC 4: TYPICAL VEGETATION TO THE NORTH OF BUILDING ENVELOPE

04 SURROUNDING AREA

1 CONTEXT PLAN

FIG 1: CONTEXT PLAN
(SOURCE: THE LIST)

NOTES:

- Subject lot shown red
- 100m radius shown shaded purple

2 LOCALITY PLAN

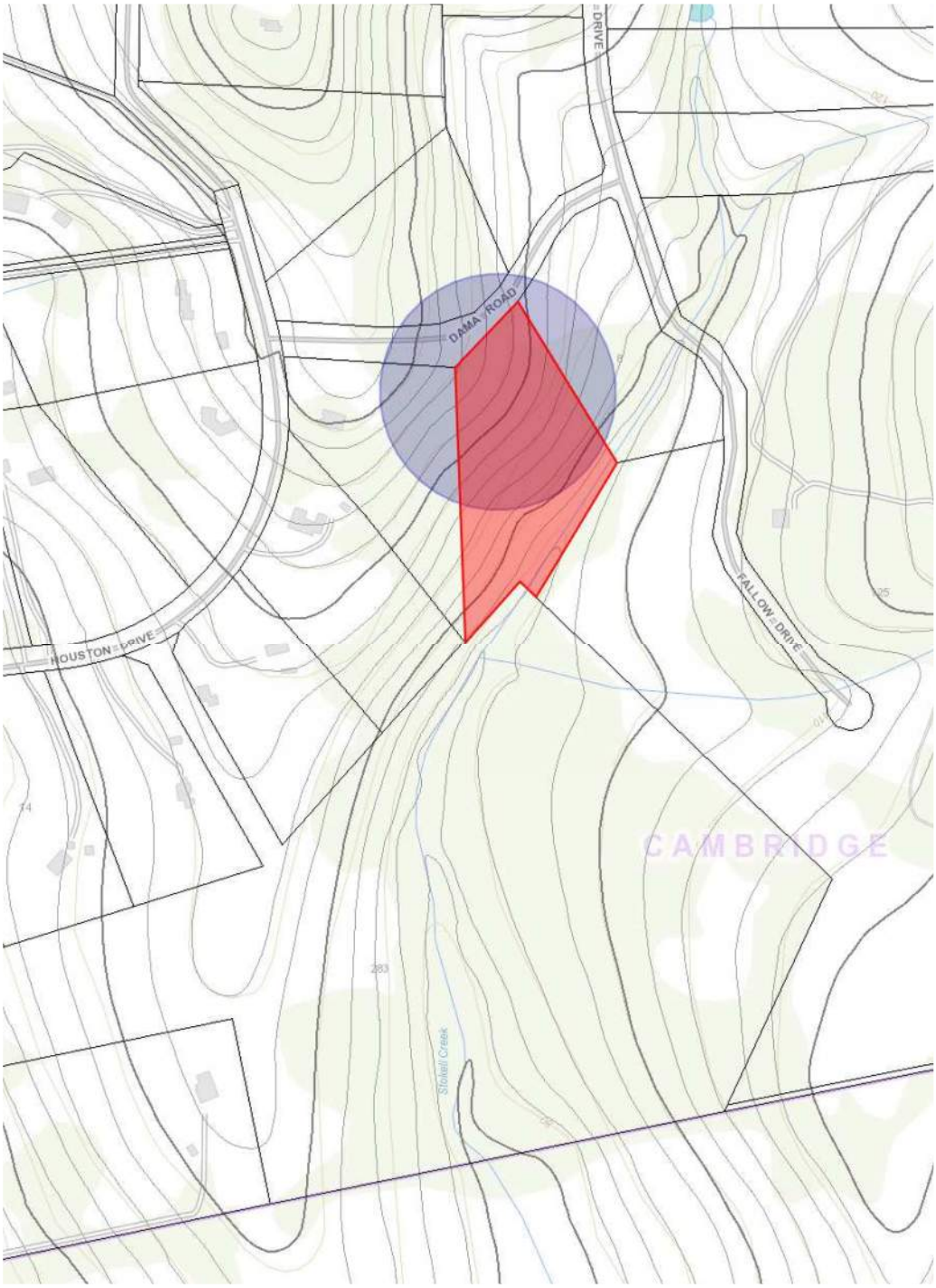


FIG 2: LOCALITY MAP
(SOURCE: THE LIST)

NOTES:

- Subject lot shown red
- 100m radius shown shaded purple

2 360 DEGREE BUSHFIRE ATTACK LEVEL ASSESSMENT

FIRE DANGER INDEX: 50 (1090K)

2.1 NORTH

Adjoining Site:	Dama Rd Road Reserve	
Vegetation:	G-22: Tussock Grassland	0-25m
	B-05: Woodland	25-63m
	Non-Vegetated Area	63-91m
	B-05: Woodland	91-100m+
Exclusions:	AS3959-2018 Table 2.2.3.2 Exclusion (f)	63-91m
Distance	25m	
Effective Slope:	Upslope +11.7°	
Resulting BAL:	**12.5**	

2.2 EAST

Adjoining Site:	Private Vacant Residential	
Vegetation:	G-22: Tussock Grassland	0-16m
	B-05: Woodland	16-100m+
Exclusions:	Nil	
Distance	16m	
Effective slope:	Downslope -9.4°	
Resulting BAL:	**29**	

2.3 SOUTH

Adjoining Site:	Private Vacant Residential Lot	
Vegetation:	G-22: Tussock Grassland	0-21m
	B-05: Woodland	21-100m+
Exclusions:	Nil	
Distance	21	
Effective slope:	Downslope -12°	
Resulting BAL:	**29**	

2.4 WEST

Adjoining Site:	Private Residential Lot with Single Dwelling	
Vegetation:	G-22: Tussock Grassland	0-14m
	B-05: Woodland	14-100m+
Exclusions:	Nil	
Distance	14m	
Effective slope:	Upslope +13.4°	
Resulting BAL:	**29**	

NB: All distance measured from the centre of the building envelope

06 ANALYSIS

The subject site attracts a raw BAL 29 rating, as per *AS3959:2018, Section 2, Table 2.6*, due to the proximity of woodland vegetation downslope of the designated building envelope. However, the building envelope covenanted on title is setback sufficiently from all boundaries to allow for a BAL12.5 HMA. As the required separation distances for BAL 12.5 HMA as per *AS3959:2018, Section 2, Table 2.6* can be met, and a BAL 12.5 rating is compliant with the *Bushfire Determination Division 2.3.4: Hazard Management Areas, Table 4 A&B,* the BAL rating can be reduced from 29 to 12.5*.* Refer Appendix 1: Bushfire Hazard Management Plan.

There is currently no water supply to or on the property and the lot will not be connected to TasWater mains reticulation in the foreseeable future. As such, a minimum 10,000 litres static water supply, reserved exclusively for firefighting purposes, will be required compliant with the *Bushfire Determination Part 2.3.3: Water Supply for Firefighting Part (1), Table 3B - Requirements for Static Water Supply for Firefighting, Parts B-D*.

The furthest extent of the building envelope is 87m from the property access. A watering point located within 30m of the property entrance would allow for a 90m hose lay to reach all points of the building envelope and obviate the need for firefighting vehicles to enter the property too deeply. This position is also greater than 6m from the building envelope. With the driveway acting as hardstand for firefighting equipment, a non-deformable, minimum 10,000l static water supply, in this position meets the requirements of the *Bushfire Determination Part 2.3.3: Water Supply for Firefighting Part (1), Table 3B - Requirements for Static Water Supply for Firefighting, Parts A&E*. Refer Appendix 1: Bushfire Hazard Management Plan.

The centre of the building envelope is accessed from Dama Rd via an existing 71m dirt & gravel vehicular track. The track in its current form is not compliant with the *Bushfire Determination, Part 2.3.2: Property Access, Part (1) and (4), Table 2: Requirements for Property Access, Part B,* in that the required vegetation clearances are not met & a compliant turning area at the track head is not provided.

However, as the waterpoint is to be located within 30m of the property entrance, the development need only meet the requirements of the *Bushfire Determination, Part 2.3.2: Property Access, Part (1) and (4), Table 2: Requirements for Property Access, Part A,* in that there are no specific design requirements.

With regard to the potential bushfire hazard, given the principal fire wind is from the nor'west, a fire entering the vegetation in that direction, could present as a direct flame attack with associated severe ember shower. However, such a fire would need to burn downhill, jump Dama Rd and continue downhill to the building envelope. Despite likely being driven by hot dry nor'westerly, the terrain would slow the progress of fire, enabling control before it reached the on-site HMA. As such, a BAL 12.5 HMA, along with compliant water & access provisions, is sufficient to mitigate the threat from an FDI 50 bushfire, to the degree necessary to achieve tolerable risk.

As the primary use of the site is a Class 1a dwelling, this development is not considered to contribute to, or intensify any potential bushfire.

07 CONCLUSION

The dwelling proposed for 4 Dama Rd, Cambridge, is subject to a bushfire threat from hazardous vegetation downslope to the east and south of the lot's covenanted building envelope. Should a fire enter this vegetation under typical bushfire conditions, it could potentially burn up to a dwelling built with the building envelope. A BAL 12.5 HMA provides sufficient separation from the hazard vegetation to mitigate this risk and meets the requirements of the *Bushfire Determination.*

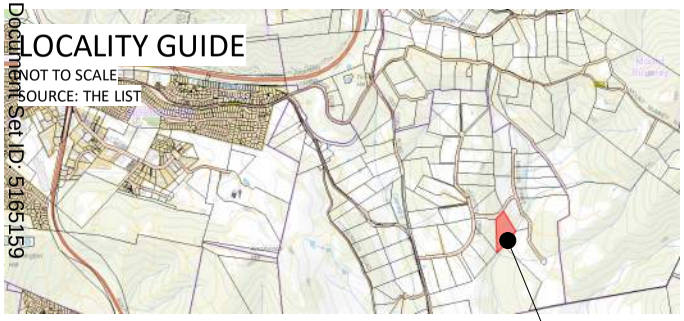
The risk is further mitigated with the provision of a minimum 10,000l static water supply compliant with the *Bushfire Determination* positioned within 30m of the property entrance. From this position all points of the building envelope can be reached by a 90m hose lay and any building within defended from an upslope of downslope fire emerging from beyond the HMA.

All factors considered, the objectives of the *Directors Determination: Bushfire Hazard Areas V1.1, 12 April 2021, Division 2.2,* are satisfied with the construction of a dwelling to a BAL 12.5 standard compliant with *AS3959:2018, Part 3 & 5*, provision of recommended water supply and property access, and the ongoing maintenance of the designated Hazard Management Area in a low fuel state. Refer Appendix 1: Bushfire Hazard Management Plan.

08 RECOMMENDATIONS

- The proposed dwelling be constructed to a BAL 12.5 standard consistent with the requirements of *AS3959:2018 Parts 3 & 5*.
- The implementation and on-going maintenance of the designated BAL 12.5 Hazard Management Area. Refer Appendix 1: Bushfire Hazard Management Plan.
- Upgrading of the vehicular access for firefighting equipment from Dama Rd to the watering point compliant with the *Bushfire Determination, Part 2.3.2: Property Access, Part (1) and (4), Table 2: Requirements for Property Access, Part B,* with the exception of *Part B(j)* regarding turning areas for firefighting equipment. Refer Appendix 1: Bushfire Hazard Management Plan.
- Provision of a minimum 10,000 litre static water supply reserved exclusively for fighting purposes compliant with *Bushfire Determination Part 2.3.3: Water Supply for Firefighting Part (1), Table 3B - Requirements for Static Water Supply for Firefighting, Parts A-E* and positioned within 30m of the property entrance. Refer Appendix 1: Bushfire Hazard Management Plan.

APPENDIX 1: BUSHFIRE HAZARD MANAGEMENT PLAN



4 DAMA RD, CAMBRIDGE.
TITLE REF: 179423/18
PID: 9771253

TITLE BOUNDARY DATA

Deed Data

	Distance	Bearing
1	18950.0	314° 03' 20"
2	69470.0	222° 09' 40"
3	232650.0	358° 09' 20"
4	76970.0	44° 03' 40"
5	159990.0	148° 34' 00"
6	132510.0	211° 29' 00"
7	24.0	252° 53' 08"

BUILDING ENVELOPE DATA

Deed Data

	Distance	Bearing
1	30550.0	123° 11' 40"
2	30000.0	178° 08' 00"
3	15000.0	88° 08' 00"
4	30000.0	358° 08' 00"
5	15000.0	268° 08' 00"

RECOMMENDED BUILDING CONSTRUCTION

BUILDINGS TO BE BUILT IN TO A **BAL 12.5** CONSTRUCTION STANDARD IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND AS3959:2018 PART 3 & 5.

ACCESS

EXISTING CROSSOVER AND PROPOSED DRIVEWAY AND ACCESS TO WATERING POINT COMPLIANT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.2: PROPERTY ACCESS, TABLE 2 - REQUIREMENTS FOR PROPERTY ACCESS, PART A. REFER BUSHFIRE HAZARD MANAGEMENT REPORT APPENDIX 4: BUSHFIRE DETERMINATION TABLES.

WATER SUPPLY

MIN 10KL WATER SUPPLY COMPLIANT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.3: WATER SUPPLY, TABLE 3B: REQUIREMENTS FOR STATIC WATER SUPPLY FOR FIREFIGHTING, PARTS A-E. REFER BUSHFIRE HAZARD MANAGEMENT PLAN FOR LOCATION & BUSHFIRE HAZARD MANAGEMENT REPORT APPENDIX 4: BUSHFIRE DETERMINATION TABLES.

HAZARD MANAGEMENT AREA

DESIGNATED **BAL 12.5** HAZARD MANAGEMENT AREA, AS SHOWN, COMPLAINT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.4: HAZARD MANAGEMENT AREAS, TABLE 4 - REQUIREMENTS FOR HAZARD MANAGEMENT AREAS, PARTS A&B

BAL 12.5 HAZARD MANAGEMENT AREA SHOWN HATCHED TO BE MANAGED AND MAINTAINED IN A MINIMUM FUEL STATE AT ALL TIMES. REFER MAINTENANCE SCHEDULE BELOW.

MAINTENANCE SCHEDULE

- REMOVAL OF FALLEN LIMBS, LEAF & BARK LITTER.
- CUT LAWNS SHORT (LESS THAN 100MM) AND MAINTAIN.
- REMOVE PINE BARK AND OTHER FLAMMABLE GARDEN MULCH.
- COMPLETE UNDER-BRUSHING AND THIN OUT THE UNDERSTOREY.
- PRUNE LOW HANGING TREES TO ENSURE SEPARATION FROM GROUND LITTER.
- PRUNE LARGER TREES TO ESTABLISH AND MAINTAIN HORIZONTAL AND VERTICAL CANOPY SEPARATION.
- MINIMISE STORAGE OF PETROLEUM FUELS.
- REMOVE FALLEN LIMBS, LEAF & BARK LITTER FROM ROOFS, GUTTERS AND AROUND THE BUILDING.

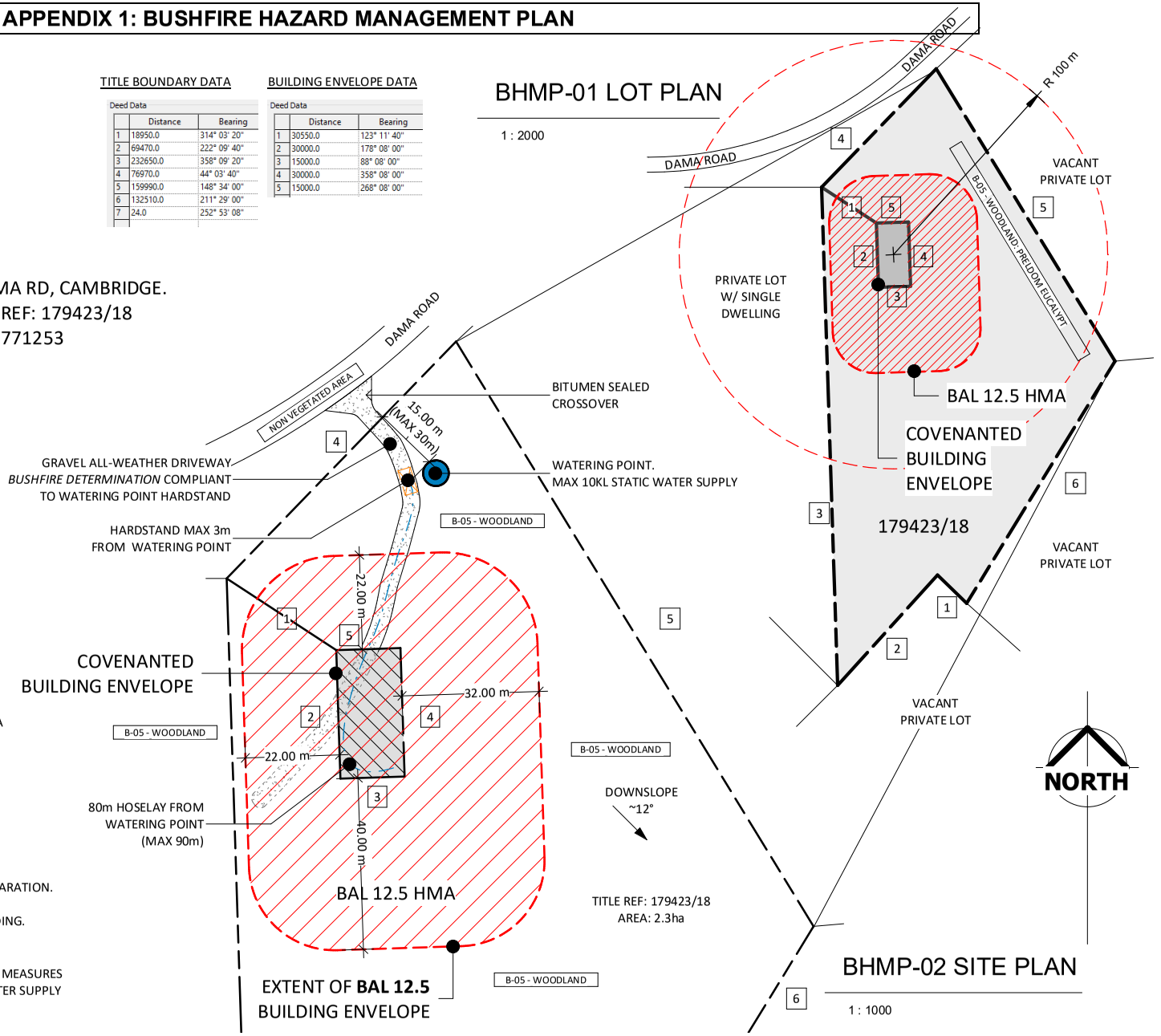
BUSHFIRE PROTECTION MEASURES

TO REDUCE THE RISK OF BUSHFIRE ATTACK, CONTINUAL MAINTENANCE OF BUSHFIRE PROTECTION MEASURES INCLUDING BUILDING MAINTENANCE, DESIGNATED BUSHFIRE HAZARD MANAGEMENT AREAS, WATER SUPPLY AND ACCESS MAINTENANCE, ARE TO BE UNDERTAKEN BY SUCCESSIVE OWNERS IN PERPETUITY.

NOTE:
MEASURES CONTAINED IN THIS BUSHFIRE HAZARD MANAGEMENT PLAN CANNOT GUARANTEE THAT A BUILDING WILL SURVIVE A BUSHFIRE EVENT DUE TO THE DEGREE OF VEGETATION MANAGEMENT, THE UNPREDICTABLE NATURE AND BEHAVIOUR OF FIRE, AND EXTREME WEATHER CONDITIONS.

BHMP-01 LOT PLAN

1 : 2000



BHMP-02 SITE PLAN

1 : 1000

DRAWINGS TO BE PRINTED & READ IN FULL COLOUR

No.	Description	Date
	BHMP V1.0	24/01/22

MICHAEL KINSELLA
INTEGRAL DESIGN & DRAFTING SERVICES
ACCREDITED BUILDING PRACTITIONER
ACCREDITATION: CC5699V
ACCREDITED BUSHFIRE PRACTITIONER
ACCREDITATION: BFP-133

GRACE STEARNES

PROPOSED NEW HOUSE

4 DAMA RD, CAMBRIDGE, TAS, 7170

BUSHFIRE HAZARD MANAGEMENT PLAN

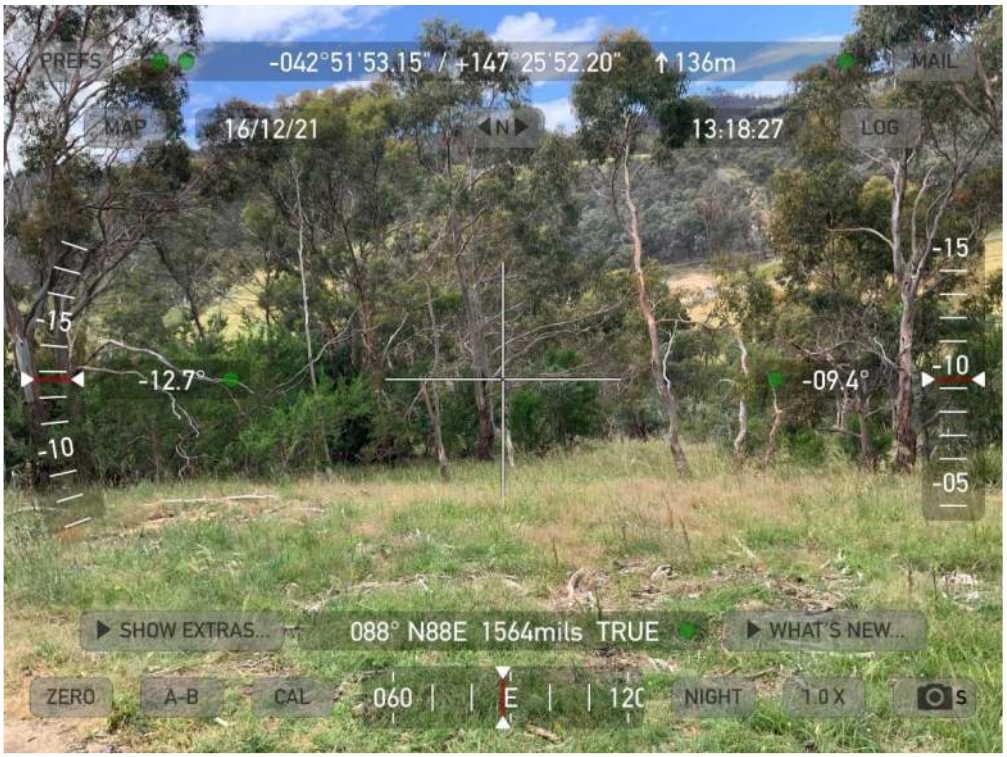
Project number	STEA-G-01B
Date	24/01/22
Designed by	Michael Kinsella
Drawn by	MK
Scale	As indicated @ A3

BHMP-01

INTEGRAL DESIGN & DRAFTING SERVICES * (0403)390-602 * mk@idds.com.au * WEST HOBART, TAS 7000 * ABN: 26 166 056 599

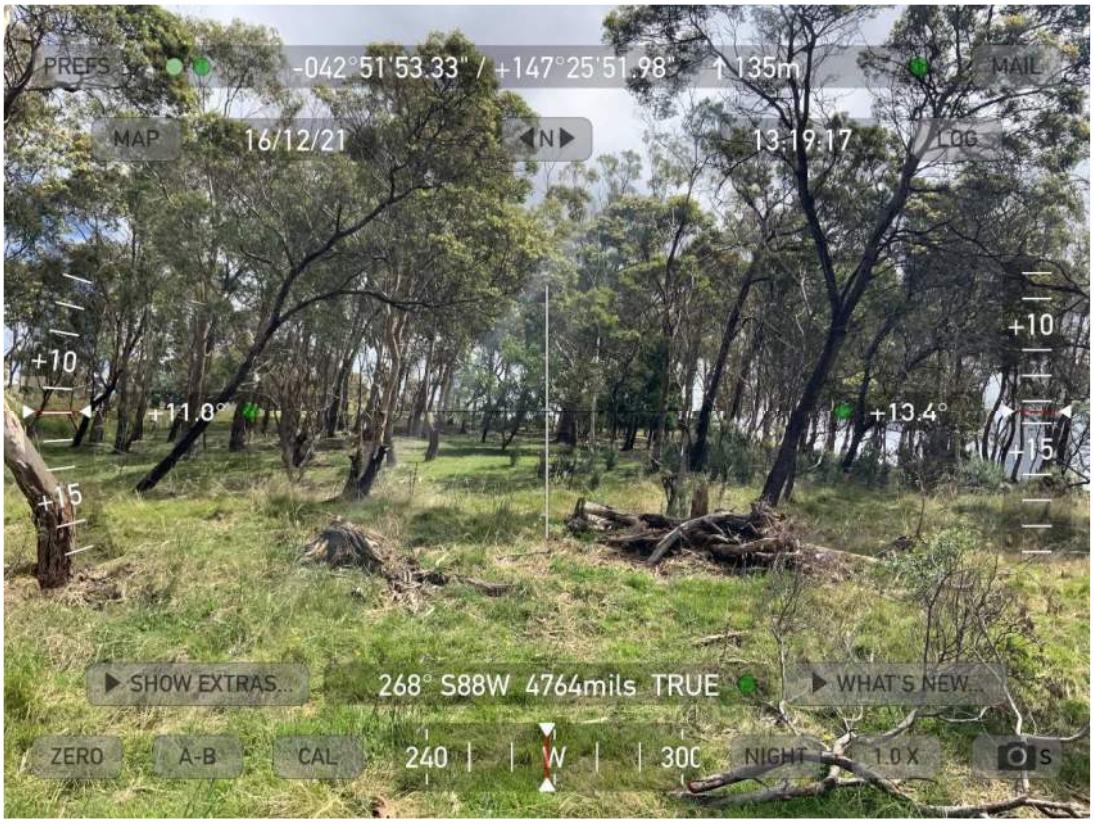
APPENDIX 2: SITE & SURROUNDS PHOTOGRAPHS

PIC 5: VIEW NORTH FROM THE BUILDING ENVELOPE



PIC 6: VIEW'EAST FROM THE BUILDING ENVELOPE

PIC 7: VIEW SOUTH FROM THE BUILDING ENVELOPE



PIC 8: VIEW WEST FROM THE BUILDING ENVELOPE

APPENDIX 3: CERTIFICATION

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Grace Stearns *Owner /Agent*

325 Tinderbox Rd. *Address*

Tinderbox 7054 *Suburb/postcode*

Qualified person details:

Qualified person: MICHAEL KINSELLA

Address: PO BOX 3175 Phone No: (0475) 512-016

WEST HOBART 7000 Fax No:

Licence No: CC5699V / BFP-133 Email address: mk@idds.com.au

Qualifications and Insurance details: Accredited to report on Bushfire Hazards under Part 4a of the Fire Services Act.

Woodina 2021-CO38337-60936

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Analysis of Hazards in Bushfire Prone Areas

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: 4 Dama Rd Lot No: 18

Cambridge, TAS, 7170 Certificate of title No: 179423/18

The assessable item related to this certificate: BAL 12.5 RATING & RESULTING BUILDING ENVELOPE

(description of the assessable item being certified)

Assessable item includes –

- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Director of Building Control – Date Approved 1 July 2017 *Building Act 2016* - Approved Form No. 55

Certificate details:	

Certificate type: BUSHFIRE HAZARD

(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: ✓

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents: STEA-G-01B BUSHFIRE HAZARD MANAGEMENT REPORT
STEA-G-01B BUSHFIRE HAZARD MANAGEMENT PLAN

Relevant calculations: BUSHFIRE ATTACK LEVEL AS PER AS3959:2018

References:

- BUILDING ACT 2014, 2016 & BUILDING REGULATIONS 2014, 2016.
- DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL 2021,
- AS3959:2018 – CONSTRUCTION IN BUSHFIRE PRONE AREAS

Substance of Certificate: (what it is that is being certified)

THAT A CLASS 1A DWELLING BUILT IN THE BUIDLING ENVELOPE OF 4 DAMA RD, CAMBRIDGE, COMPLIES WITH THE REQUIREMENTS OF THE 'DIRECTOR'S DETERMINATION – BUSHFIRE HAZARD AREAS, V1.1, APRIL 12, 2021, PART 2.3: DEEMED TO SATISFY PROVISIONS', WITH CONSTRUCTION TO A BAL 12.5 STANDARD

COMPLIANT WITH AS3959:2018, PARTS 3 & 5, AND THE IMPLEMENTATION AND ON-GOING MAINTENANCE OF THE DESIGNATED HAZARD MANAGEMNT AREA, ACCESS & WATER ASSETS.

REFER BUSHFIRE HAZARD MANAGEMENT REPORT STEA-G-01B.

Scope and/or Limitations

ASSESSMENT TO AS 3959:2018 & RELEVANT GUIDANCE FROM TASMANIAN FIRE SERVICE & CHIEF OFFICER.

EXCLUSIONS: ALL WORKS NOT DOCUMENTED UNDER THE UNDER BUSHFIRE HAZARD MANAGEMENT REPORT STEA-G-01B.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:	Michael Kinsella Michael Kinsella – BFP-133	STEA-G-01B	21/01/22

Director of Building Control – Date Approved 1 July 2017Building Act 2016 - Approved Form No. 55

APPENDIX 4: DIRECTOR DETERMINATION – BUSHFIRE HAZARD AREAS, TABLE 2-4.

Table 2 - Requirements for Property Access

Column 1		Column 2
Element		Requirement
A.	Property access length is less than 30 metres, or access is not required for a fire appliance to access a firefighting water point.	There are no specified design and construction requirements.
B.	Property access length is 30 metres or greater, or access is required for a fire appliance to access a firefighting water point.	The following design and construction requirements apply to property access: (a) all-weather construction; (b) load capacity of at least 20 tonnes, including for bridges and culverts; (c) minimum carriageway width of 4 metres; (d) minimum vertical clearance of 4 metres; (e) minimum horizontal clearance of 0.5 metres 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 10 metres; (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 10 metres; (ii) a property access encircling the building; or (iii) a hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 metres or greater.	The following design and construction requirements apply to property access: (a) complies with requirements for B above; and (b) passing bays of 2 metres additional carriageway width and 20 metres length provided every 200 metres.

Table 3B - Requirements for Static Water Supply for Firefighting

Column 1		Column 2
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: (a) the building area to be protected must be located within 90 metres of the firefighting water point of a static water supply; and (b) the distance must be measured as a hose lay between the firefighting water point and the furthest part of the building area.
B.	Static water supplies	A static water supply: (a) may have a remotely located offtake connected to the static water supply; (b) maybe a supply for combined use (firefighting and other uses), but the specified minimum quantity of firefighting water must be available at all times; (c) must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose, including firefighting sprinkler or spray systems; (d) must be metal, concrete or lagged by non-combustible materials if above ground; and (e) if a tank can be located, so it is shielded in all directions in compliance with Section 3.5 of AS 3959, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a firefighting water point for a static water supply must: (a) have a minimum nominal internal diameter of 50mm; (b) be fitted with a valve with a minimum nominal internal diameter of 50mm; (c) be metal or lagged by non-combustible materials if above ground; (d) if buried, have a minimum depth of 300mm;

Column 1		Column 2
Element		**Requirement**
		(e) provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment; (f) ensure the coupling is accessible and available for connection at all times; (g) ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length); and (h) ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and (i) where a remote offtake is installed, ensure the offtake is in a position that is: (i) visible; (ii) accessible to allow connection by firefighting equipment; (iii) at a working height of 450mm – 600mm above ground level; and (iv) protected from possible damage, including damage by vehicles.
D.	Signage for static water connections	The firefighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must: (a) comply with water tank signage requirements within AS 2304; or (b) comply with the TFS Water Supply Signage Guideline.
E.	Hardstand	A hardstand area for fire appliances must be provided: (a) no more than three metres from the firefighting water point measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) no closer than six metres from the building area to be protected; (c) a minimum width of three metres 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.

APPENDIX 5: SITE NOTES.

BUSHFIRE ATTACK LEVEL ASSESSMENT REPORT

Property Details

Applicant's Name: GRACE STEARNES

Contact Phone Number (H): ..... (M): (0408) 517-408

Municipality: CLARENCE

Lot: 179423/18

Address: 4 DAMA RD

CAMBRIDGE, TAS, 7170.

Type of building work

New Class 1 building ☑

New Class 10a building ☐

New Class 2 building ☐

New Class 3 building ☐

Alteration/Additions to an existing building

Description of building work: *e.g. single dwelling with attached garage*

NEW DWELLING.

Note:

Class 1a — a single dwelling being—

a detached house; or

one of a group of two or more attached dwellings, each being a building, separated by a *fire-resisting* wall, including a row house, terrace house, town house or villa unit; or

Class 1b — a boarding house, guest house, hostel or the like—

with a total area of all floors not exceeding 300 m^2 measured over the enclosing walls of the Class 1b building; and

in which not more than 12 persons would ordinarily be resident,

which is not located above or below another dwelling or another Class of building other than a *private garage*

Class 10a — a non-habitable building being a *private garage*, carport, shed, or the like.

Class 2:

a building containing 2 or more *sole-occupancy units* each being a separate dwelling.

Class 3:

a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons, including—

a boarding-house, guest house, hostel, lodging-house or backpackers accommodation; or

a residential part of a hotel or motel; or

a residential part of a *school*; or

accommodation for the aged, children or people with disabilities; or

a residential part of a *health-care building* which accommodates members of staff; or

a residential part of a *detention centre*.

Bush Fire Attack Level (BAL)

Step 1: Relevant fire danger index: (see clause 2.2.2) FDI 50 ☑

Step 2: Assess the vegetation within 100m in all directions (tick relevant group)

Note 1: Refer to Table 2.3 and Figures 2.3 & 2.4 for description and classification of vegetation.

Note 2: If there is no classified vegetation within 100 m of the site then the BAL is LOW for that part of the site.

Vegetation classification (see Table 2.3)	North ☑ North-East ☐	South ☑ South-West ☐	East ☑ South-East ☐	West ☑ North-West ☐
Group A Forest	G 22 0-25	G22 0-21	G-22 0-16	G-22 0-14
Group B Woodland	B-05	B-05	B-05	B-05
Group C Shrub-land	25-63	0-100+	16-100+	14-100+
Group D Scrub	N/A			
Group E Mallee/Mulga	63-91			
Group F Rainforest	B-05			
Group G (FDI 50) Grassland	91-100+			
Exclusions (where applicable)	Circle relevant paragraph descriptor from clause 2.2.3.2.			
	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)

Step 3: Distance of the site from classified vegetation (see clause 2.2.4)

Distance to classified vegetation	Show distances in metres			
	25	21	16	14

Step 4: Determine the effective slope of land under the classified vegetation

Effective slope	Upslope			
Slope under the classified vegetation	Upslope/0° ☑	Upslope/0° ☐	Upslope/0° ☐	Upslope/0° ☑
	+11.7°	-12° Downslope	-9.4°	+13.4°
	>0 to 5 ☐	>0 to 5 ☐	>0 to 5 ☐	>0 to 5 ☐
	>5 to 10 ☐	>5 to 10 ☐	>5 to 10 ☑	>5 to 10 ☐
	>10 to 15 ☐	>10 to 15 ☑	>10 to 15 ☐	>10 to 15 ☐
	>15 to 20 ☐	>15 to 20 ☐	>15 to 20 ☐	>15 to 20 ☐
BAL value for each side of the site	12.5	29	29	29

ALL DISTANCES MEASURED FROM CENTRE OF BUILDING ENVELOPE

Step 5—Determination of Bushfire Attack Level (BAL)

Refer to Table 2.4.4 for FDI 50 (applicable to Tasmania)

Using the relevant table determine the Bushfire Attack Level (BAL) for each of the vegetation classifications determined at Step 2, the distance from the site determined at Step 3 and the effective slope determined at Step 4.

Select the highest Bushfire Attack Level (BAL) obtained above.

The BAL for this site is: BAL 29

Date of assessment: 16/12/21

Assessors name: MICHAEL KINSELLA

Assessors contact number:

Work: ..... **Mob:** (0475) 512-016

Statement:
I have taken all reasonable steps to ensure that the information provided in this assessment is accurate and reflects the conditions on and around the site and allotment on the date of this assessment.

Signed: .....

Date: 16/12/21

ATTACHMENTS:

Site plan: (Attachment 1)

Photographs: (Attachment 2)

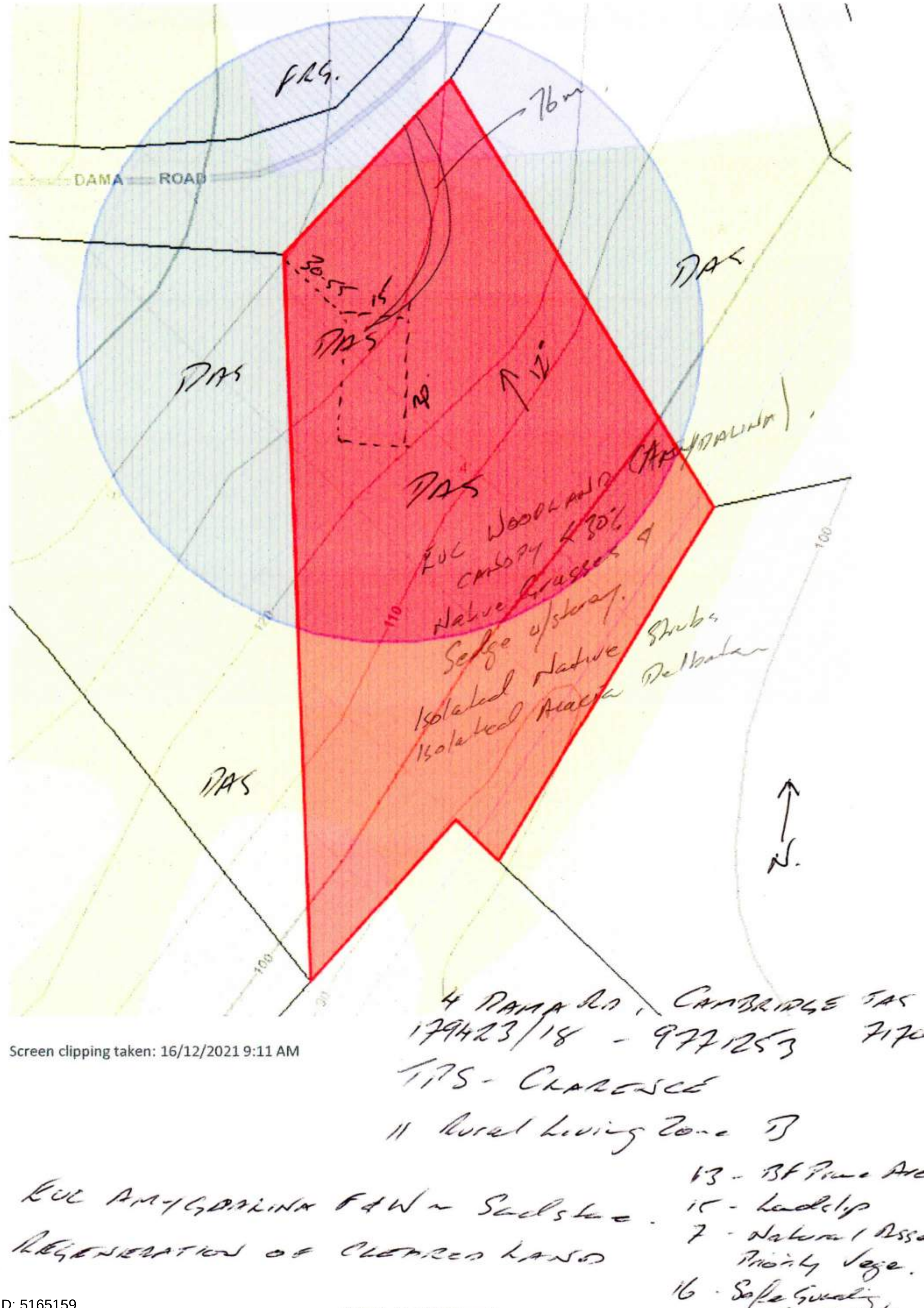
Notes

TITLE : 179423/18 - 9771253.
4 DAMA RD, CAMBRIDGE.
SCHEME : TPS - CLARENCE
ZONE : 11 RURAL LIVING ZONE B
OVERLAYS : 7 - NATURAL ASSETTS PRIORITY VEG
13 - BUSHFIRE PRONE AREA.
15 - LANDSLIP
16 - SAFE GUARDING AIRPORTS.

ACCESS : OFF DAMA RD TO NORTH. DRIVEWAY
76m GRAVEL/DIRT TO BUILDING ENVELOPE
WATER : NIL WATER.
TERRAIN : EVEN 11-13° SLOPE DOWN TO SOUTH EAST.
VEGETATION : EUCALYPT WOODLAND - B-05
FREDOM EUC. AMYGDALINA W/ GRASSY
UNDERSTORY - SEDGES & ISOLATED SHRUBS.
& 30% CANOPY
TASVEG 4.0 : DAS - EUC AMYGDALINA
FOREST & WOODLAND
ON SANDSTONE.

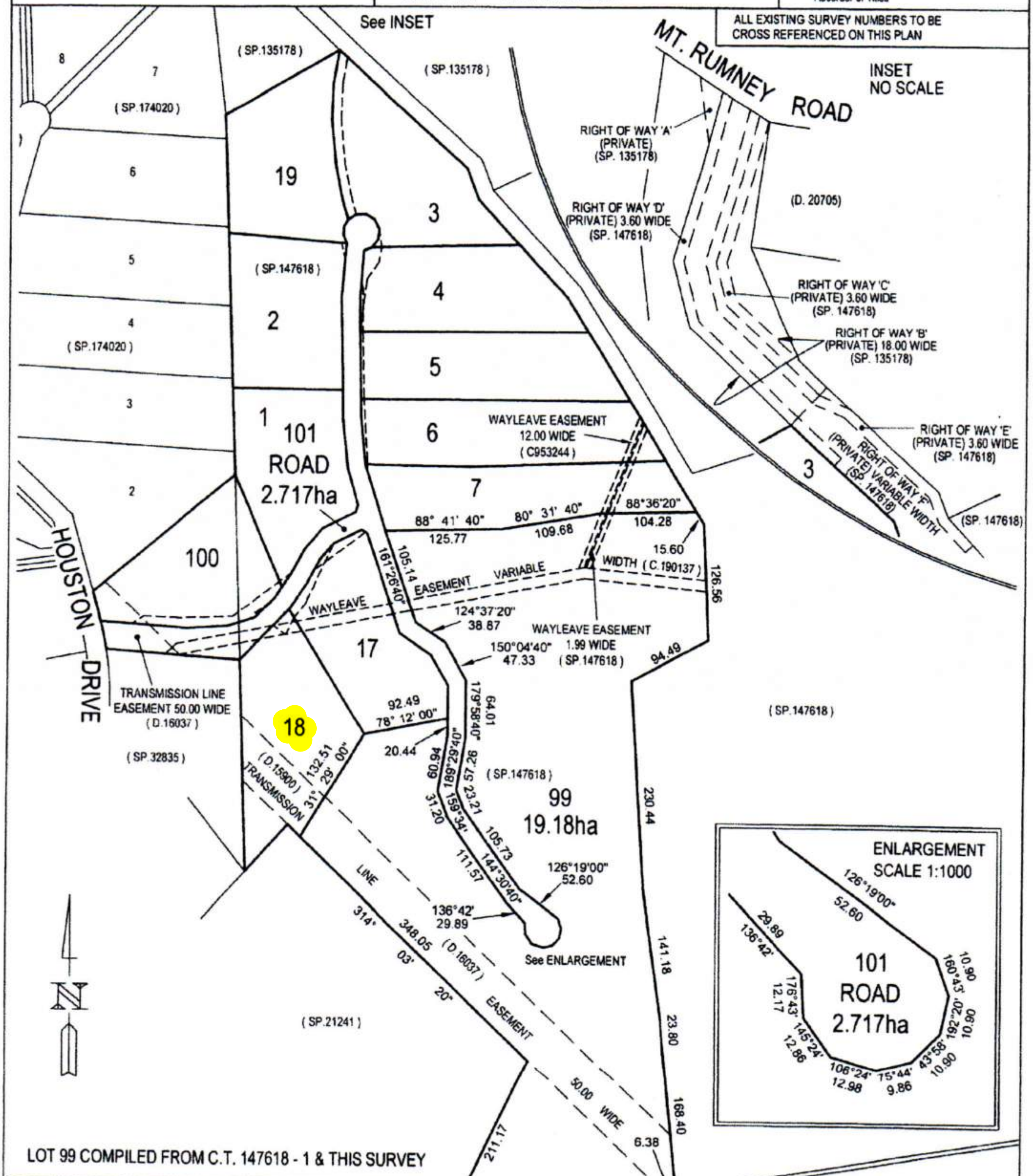
CONTEXT PLAN

Thursday, 16 December 2021 9:09 AM

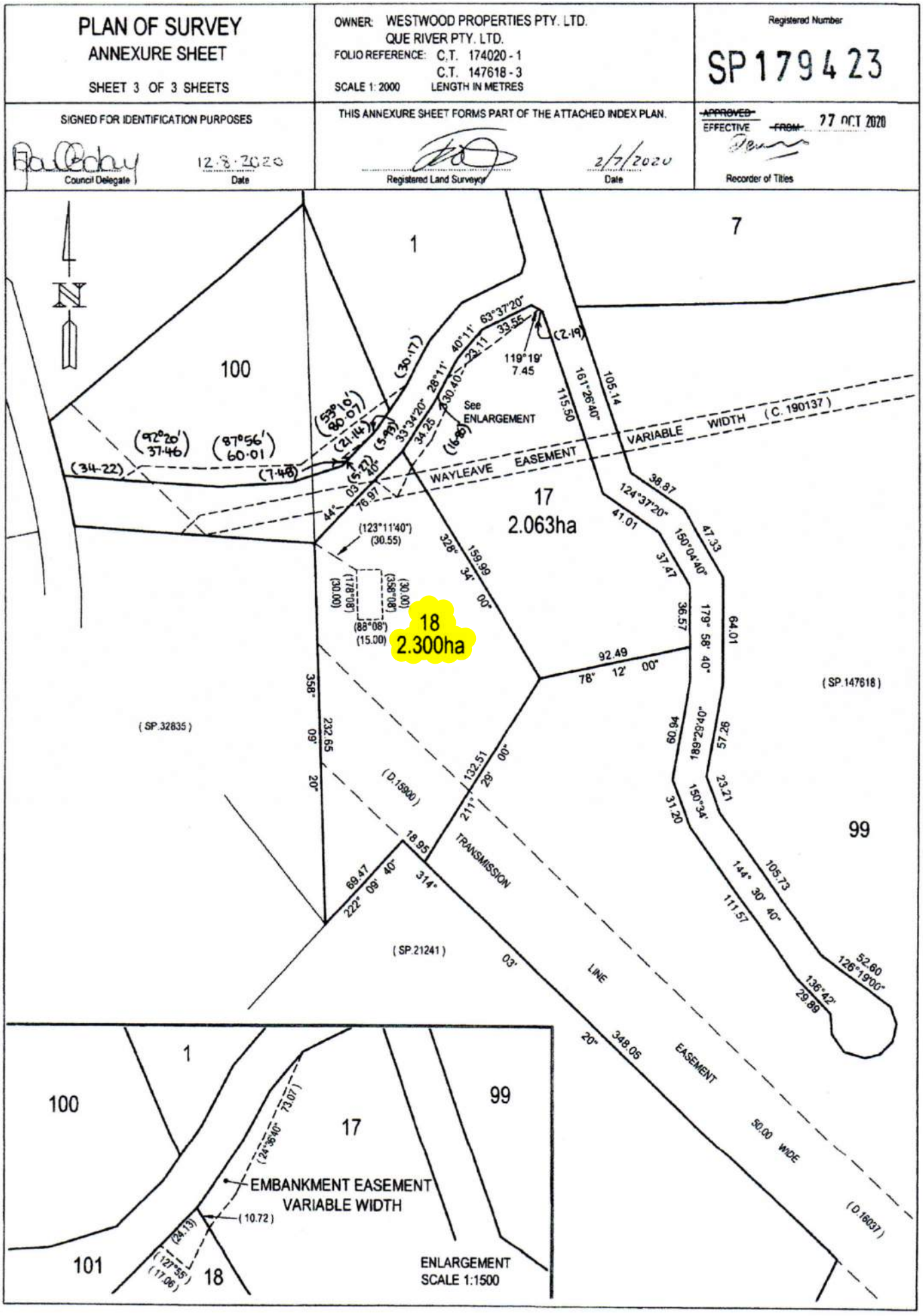


Screen clipping taken: 16/12/2021 9:11 AM

OWNER: WESTWOOD PROPERTIES PTY. LTD. QUE RIVER PTY. LTD. FOLIO REFERENCE: C.T. 174020 - 1 C.T. 147618 - 3 GRANTEE: PART OF 1956 ACRES GRANTED TO GEORGE STOKELL PART OF LOT 36879, 104.3ha GRANTED TO THE DIRECTOR-GENERAL OF HOUSING & CONSTRUCTION	**PLAN OF SURVEY** BY SURVEYOR: T. W. COX of LEARY COX & CRIPPS SURVEYORS Unit G04 40 Molle Street, HOBART TAS 7000 P 03 6118 2030 E admin@learyandcox.com LOCATION: CITY OF CLARENCE SCALE 1: 4000 LENGTHS IN METRES	REGISTERED NUMBER **SP179423** ~~APPROVED~~ EFFECTIVE ~~FROM~~ 27 OCT 2020 Recorder of Titles

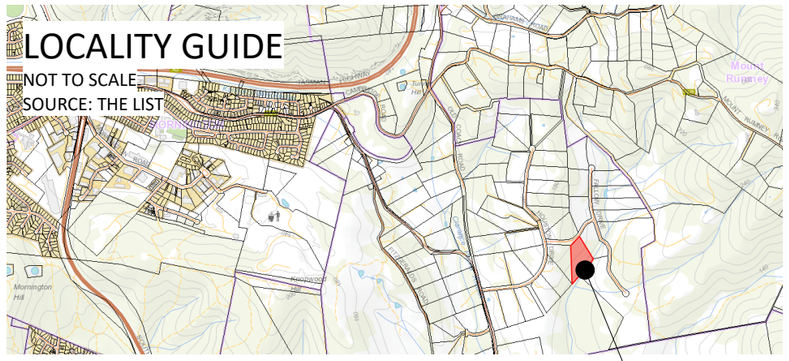


Registered Land Surveyor 2/7/2020 Date	Council Delegate 12.8.2020 Date



LOCALITY GUIDE

NOT TO SCALE
SOURCE: THE LIST



4 DAMA RD, CAMBRIDGE.
TITLE REF: 179423/18
PID: 9771253

RECOMMENDED BUILDING CONSTRUCTION

BUILDINGS TO BE BUILT IN TO A **BAL 12.5** CONSTRUCTION STANDARD IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND AS3959:2018 PART 3 & 5.

ACCESS

EXISTING CROSSOVER AND PROPOSED DRIVEWAY AND ACCESS TO WATERING POINT COMPLIANT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.2: PROPERTY ACCESS, TABLE 2 - REQUIREMENTS FOR PROPERTY ACCESS, PART A. REFER BUSHFIRE HAZARD MANAGEMENT REPORT APPENDIX 4: BUSHFIRE DETERMINATION TABLES.

WATER SUPPLY

MIN 10KL WATER SUPPLY COMPLIANT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.3: WATER SUPPLY, TABLE 3B: REQUIREMENTS FOR STATIC WATER SUPPLY FOR FIREFIGHTING, PARTS A-E. REFER BUSHFIRE HAZARD MANAGEMENT PLAN FOR LOCATION & BUSHFIRE HAZARD MANAGEMENT REPORT APPENDIX 4: BUSHFIRE DETERMINATION TABLES.

HAZARD MANAGEMENT AREA

DESIGNATED **BAL 12.5** HAZARD MANAGEMENT AREA, AS SHOWN, COMPLAINT W/ DIRECTORS DETERMINATION: BUSHFIRE HAZARD AREAS V1.1, 12 APRIL, 2021, PART 2.3.4: HAZARD MANAGEMENT AREAS, TABLE 4 - REQUIREMENTS FOR HAZARD MANAGEMENT AREAS, PARTS A&B

BAL 12.5 HAZARD MANAGEMENT AREA SHOWN HATCHED TO BE MANAGED AND MAINTAINED IN A MINIMUM FUEL STATE AT ALL TIMES. REFER MAINTENANCE SCHEDULE BELOW.

MAINTENANCE SCHEDULE

- REMOVAL OF FALLEN LIMBS, LEAF & BARK LITTER.
- CUT LAWNS SHORT (LESS THAN 100MM) AND MAINTAIN.
- REMOVE PINE BARK AND OTHER FLAMMABLE GARDEN MULCH.
- COMPLETE UNDER-BRUSHING AND THIN OUT THE UNDERSTOREY.
- PRUNE LOW HANGING TREES TO ENSURE SEPARATION FROM GROUND LITTER.
- PRUNE LARGER TREES TO ESTABLISH AND MAINTAIN HORIZONTAL AND VERTICAL CANOPY SEPARATION.
- MINIMISE STORAGE OF PETROLEUM FUELS.
- REMOVE FALLEN LIMBS, LEAF & BARK LITTER FROM ROOFS, GUTTERS AND AROUND THE BUILDING.

BUSHFIRE PROTECTION MEASURES

TO REDUCE THE RISK OF BUSHFIRE ATTACK, CONTINUAL MAINTENANCE OF BUSHFIRE PROTECTION MEASURES INCLUDING BUILDING MAINTENANCE, DESIGNATED BUSHFIRE HAZARD MANAGEMENT AREAS, WATER SUPPLY AND ACCESS MAINTENANCE, ARE TO BE UNDERTAKEN BY SUCCESSIVE OWNERS IN PERPETUITY.

NOTE:
MEASURES CONTAINED IN THIS BUSHFIRE HAZARD MANAGEMENT PLAN CANNOT GUARANTEE THAT A BUILDING WILL SURVIVE A BUSHFIRE EVENT DUE TO THE DEGREE OF VEGETATION MANAGEMENT, THE UNPREDICTABLE NATURE AND BEHAVIOUR OF FIRE, AND EXTREME WEATHER CONDITIONS.

TITLE BOUNDARY DATA

Deed Data

	Distance	Bearing
1	18950.0	314° 03' 20"
2	69470.0	222° 09' 40"
3	232650.0	358° 09' 20"
4	76970.0	44° 03' 40"
5	159990.0	148° 34' 00"
6	132510.0	211° 29' 00"
7	24.0	252° 53' 08"

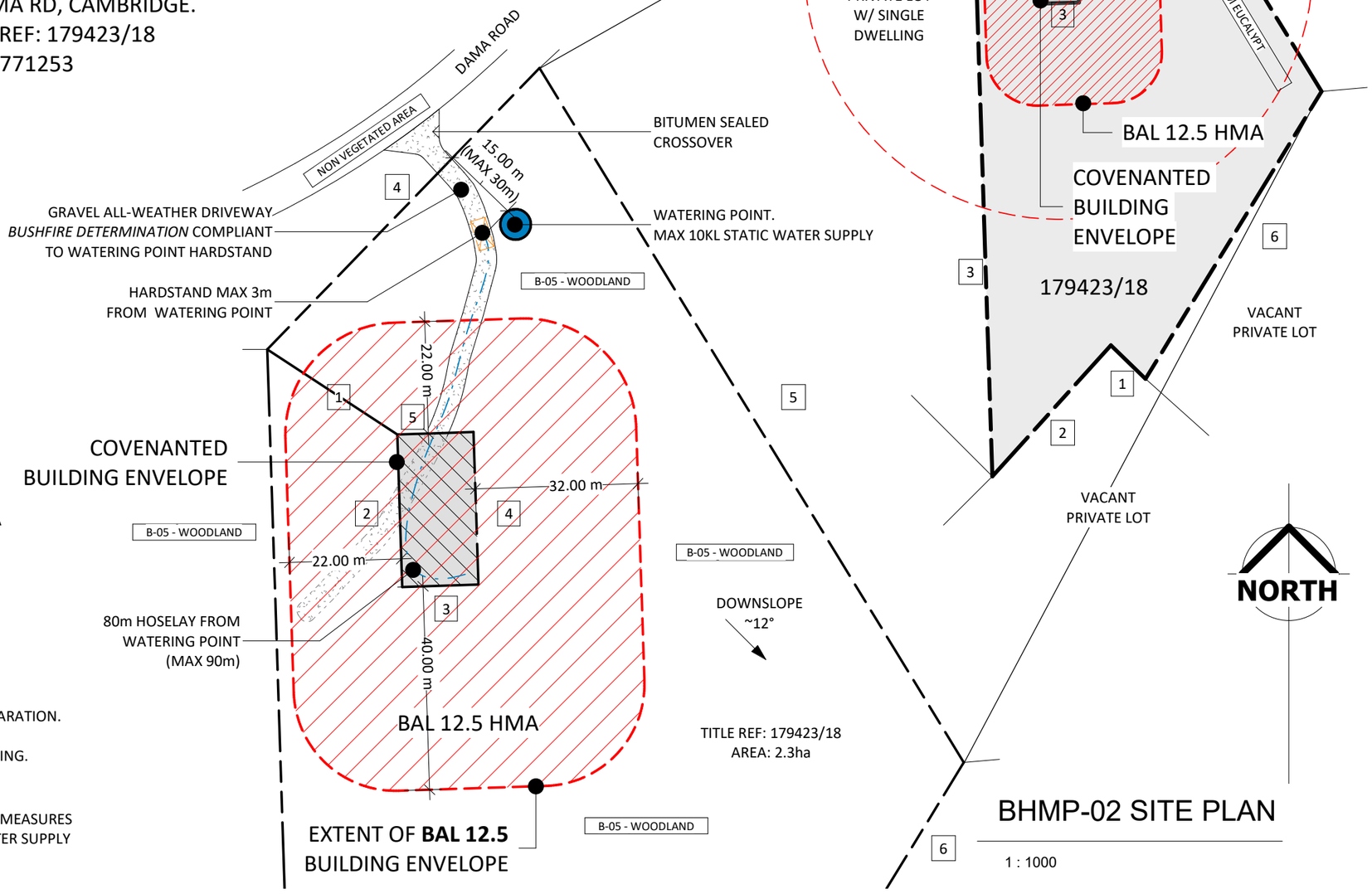
BUILDING ENVELOPE DATA

Deed Data

	Distance	Bearing
1	30550.0	123° 11' 40"
2	30000.0	178° 08' 00"
3	15000.0	88° 08' 00"
4	30000.0	358° 08' 00"
5	15000.0	268° 08' 00"

BHMP-01 LOT PLAN

1 : 2000



BHMP-02 SITE PLAN

1 : 1000

DRAWINGS TO BE PRINTED & READ IN FULL COLOUR

No.	Description	Date
	BHMP V1.0	24/01/22

MICHAEL KINSELLA
INTEGRAL DESIGN & DRAFTING SERVICES
ACCREDITED BUILDING PRACTITIONER
ACCREDITATION: CC5699V
ACCREDITED BUSHFIRE PRACTITIONER
ACCREDITATION: BFP-133
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

GRACE STEARNES

PROPOSED NEW HOUSE

4 DAMA RD, CAMBRIDGE, TAS, 7170

BUSHFIRE HAZARD MANAGEMENT PLAN

Project number	STEA-G-01B
Date	24/01/22
Designed by	Michael Kinsella
Drawn by	MK
Scale	As indicated @ A3

BHMP-01

INTEGRAL DESIGN & DRAFTING SERVICES * (0403)390-602 * mk@idds.com.au * WEST HOBART, TAS 7000 * ABN: 26 166 056 599

OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.

FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3

GRANTEE:
PART OF 1956 ACRES GRANTED TO GEORGE STOKELL
PART OF LOT 36879, 104.3ha GRANTED TO THE
DIRECTOR-GENERAL OF HOUSING & CONSTRUCTION

PLAN OF SURVEY

BY SURVEYOR: T. W. COX of
LEARY, COX & CRIPPS SURVEYORS
Unit G04 40 Molle Street, HOBART TAS 7000
P 03 6118 2030
E admin@learyandcox.com

LOCATION: CITY OF CLARENCE

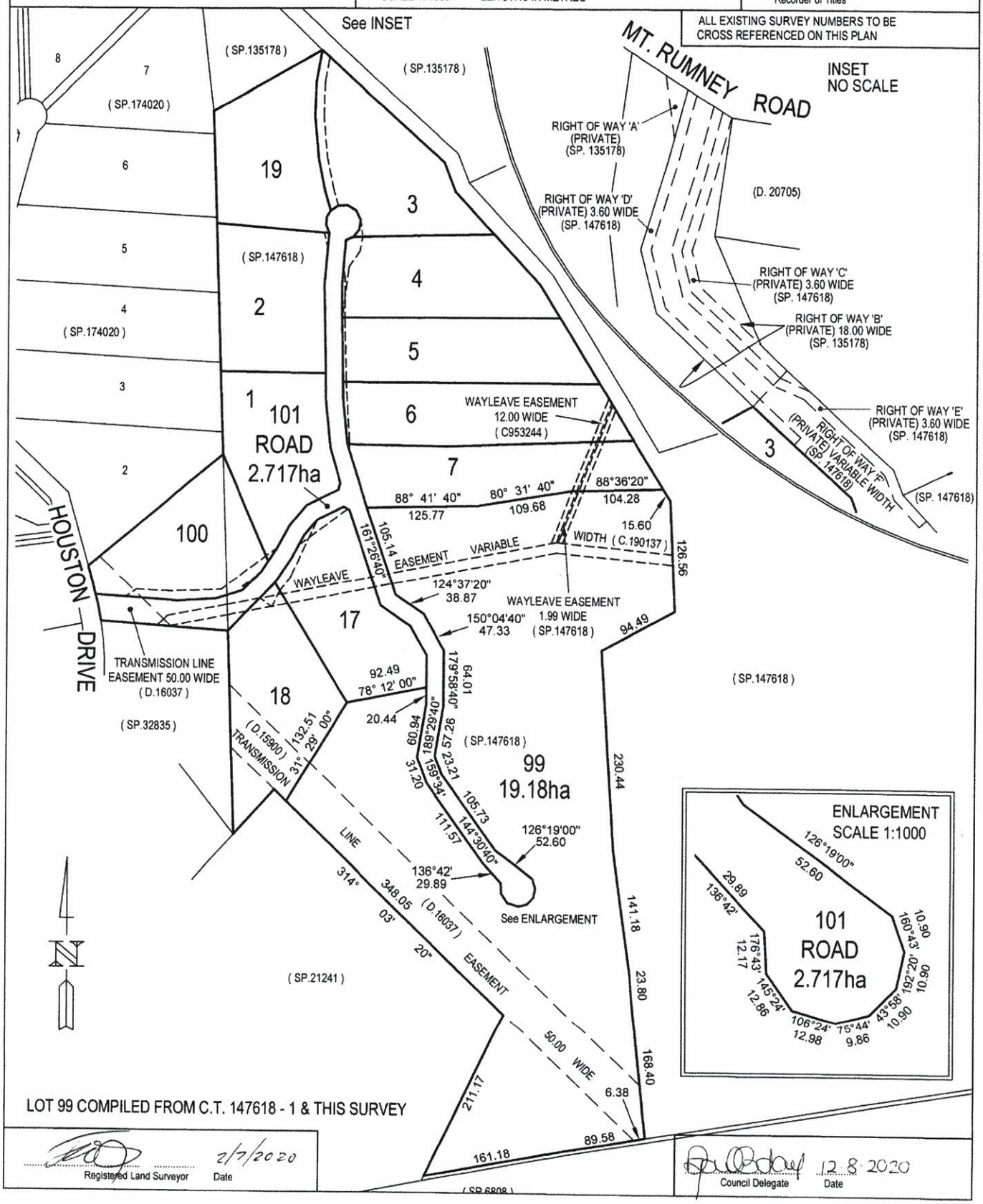
SCALE 1: 4000 LENGTHS IN METRES

REGISTERED NUMBER
SP179423

~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



LOT 99 COMPILED FROM C.T. 147618 - 1 & THIS SURVEY

Registered Land Surveyor 2/7/2020 Date

Council Delegate 12.8.2020 Date

PLAN OF SURVEY
ANNEXURE SHEET

SHEET 1 OF 3 SHEETS

OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.
FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3
SCALE 1: 2000 LENGTH IN METRES

Registered Number

SP179423

SIGNED FOR IDENTIFICATION PURPOSES

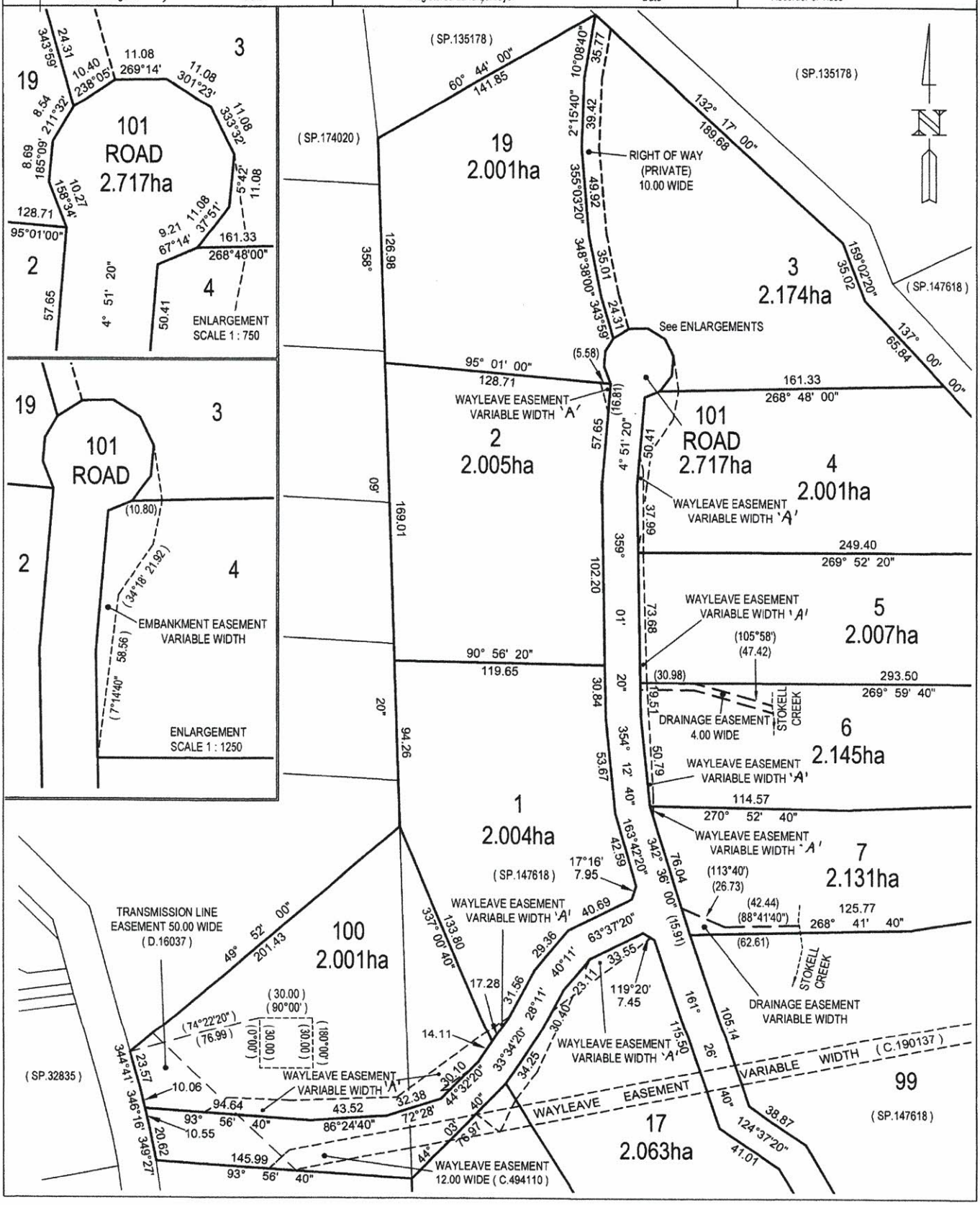
Council Delegate 12.8.2020 Date

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN.

Registered Land Surveyor 2/7/2020 Date

~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020

Recorder of Titles



OWNER: QUE RIVER PTY. LTD.

FOLIO REFERENCE: C.T. 147618 - 3

GRANTEE:

PLAN OF SURVEY

BY SURVEYOR: N.D. LEARY of
LEARY,COX & CRIPPS SURVEYORS
Unit G04 40 Molle Street, HOBART TAS 7000
P 03 6118 2030
E admin@learyandcox.com

LOCATION: CITY OF CLARENCE

SCALE 1: 2500 LENGTHS IN METRES

Registered Number
DRAFT
STAGE 2

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

1
100
17
18
7
8
2.040ha
125.76
109.68
104.28
15.60
58.71
51.19
332.76
WAYLEAVE EASEMENT
12.00 WIDE
168.53
164.23
VARIABLE WIDTH
53.95
EASEMENT
WAYLEAVE
WAYLEAVE EASEMENT
1.99 WIDE
10
2.021ha
67.85
38.87
47.33
9
2.022ha
157.44
94.49
19
ROADWAY
3669m²
44.01
44.14
101.64
81.13
10.22
92.49
86.09
10.22
20.01
184.03
20.04
55.55
60.94
11
2.006ha
99.83
BUILDING ENVELOPE - 30m x 30m
132.51
130.42
10.23
16
2.031ha
61.15
68.44
166.74
66.44
TRANSMISSION
LINE
110.96
15.42
123.96
65.57
61.31
52.60
29.89
12
2.006ha
See
ENLARGEMENT
20
PUBLIC OPEN SPACE
(FOOTWAY)
2272m²
DRAINAGE EASEMENT
3.00 WIDE
15
6.458ha
141.19
226.84
158.16
61.31
144°30'40"
52.60
306° 19' 00"
12
136°42'00"
29.89
340°43'
10.90
176°43'
12.17
12°20'
10.90
145°24'
12.86
106°24'
12.98
75°44'
9.86
43°58'
10.90
314°44'40"
158.16
EMBANKMENT EASEMENT
VARIABLE WIDTH
15
ENLARGEMENT
SCALE 1:1000
EASEMENT
(D.16037)
23.80
50.00 WIDE
168.41
211.18
6.38
89.58
161.18

Registered Land Surveyor Date

Council Delegate Date

PLAN OF SURVEY
ANNEXURE SHEET

SHEET 2 OF 3 SHEETS

OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.
FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3
SCALE 1: 2000 LENGTH IN METRES

Registered Number
SP 179423

SIGNED FOR IDENTIFICATION PURPOSES

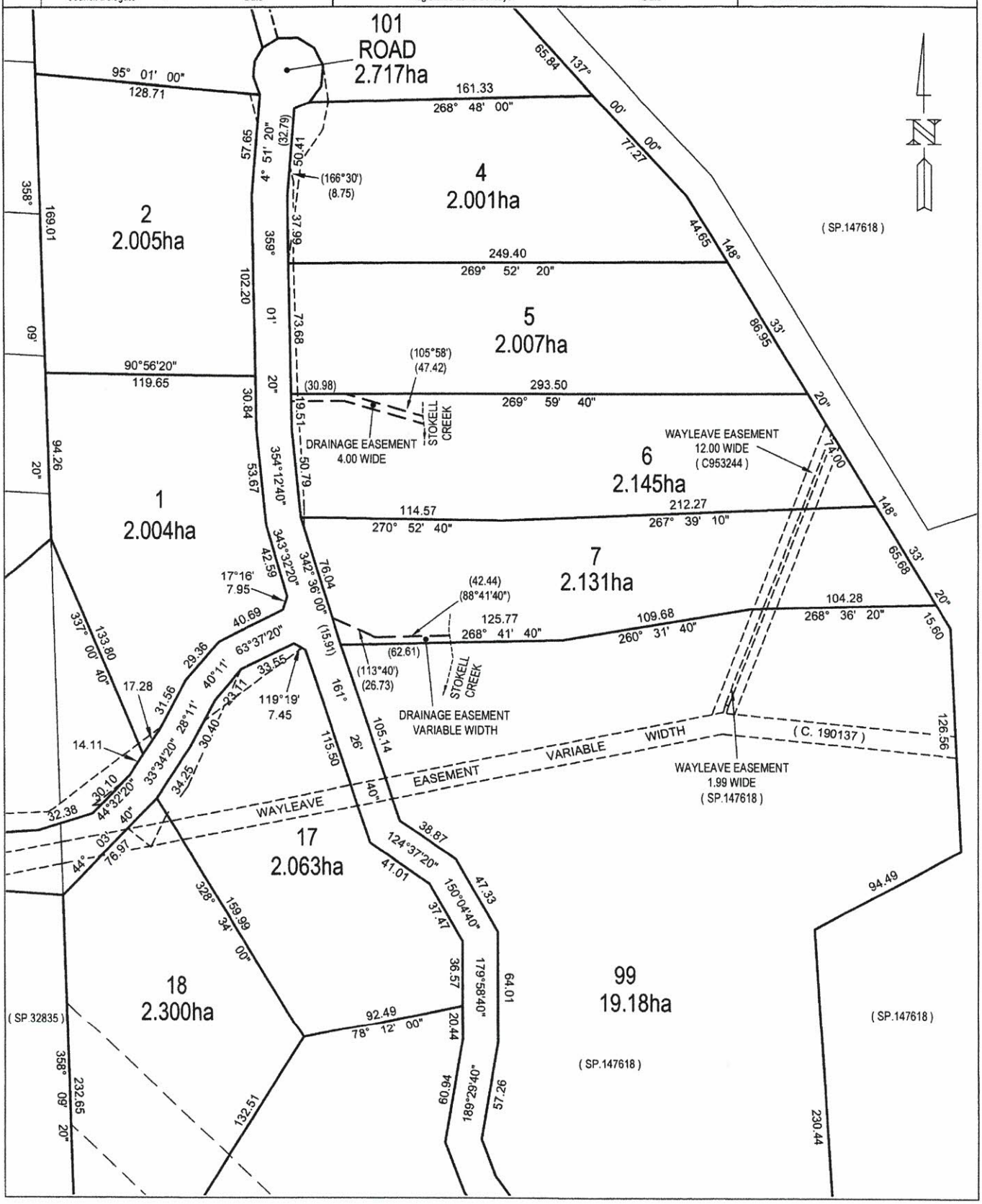
Council Delegate 12.8.2020 Date

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN.

Registered Land Surveyor 2/7/2020 Date

~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020

Recorder of Titles



PLAN OF SURVEY
ANNEXURE SHEET

SHEET 3 OF 3 SHEETS

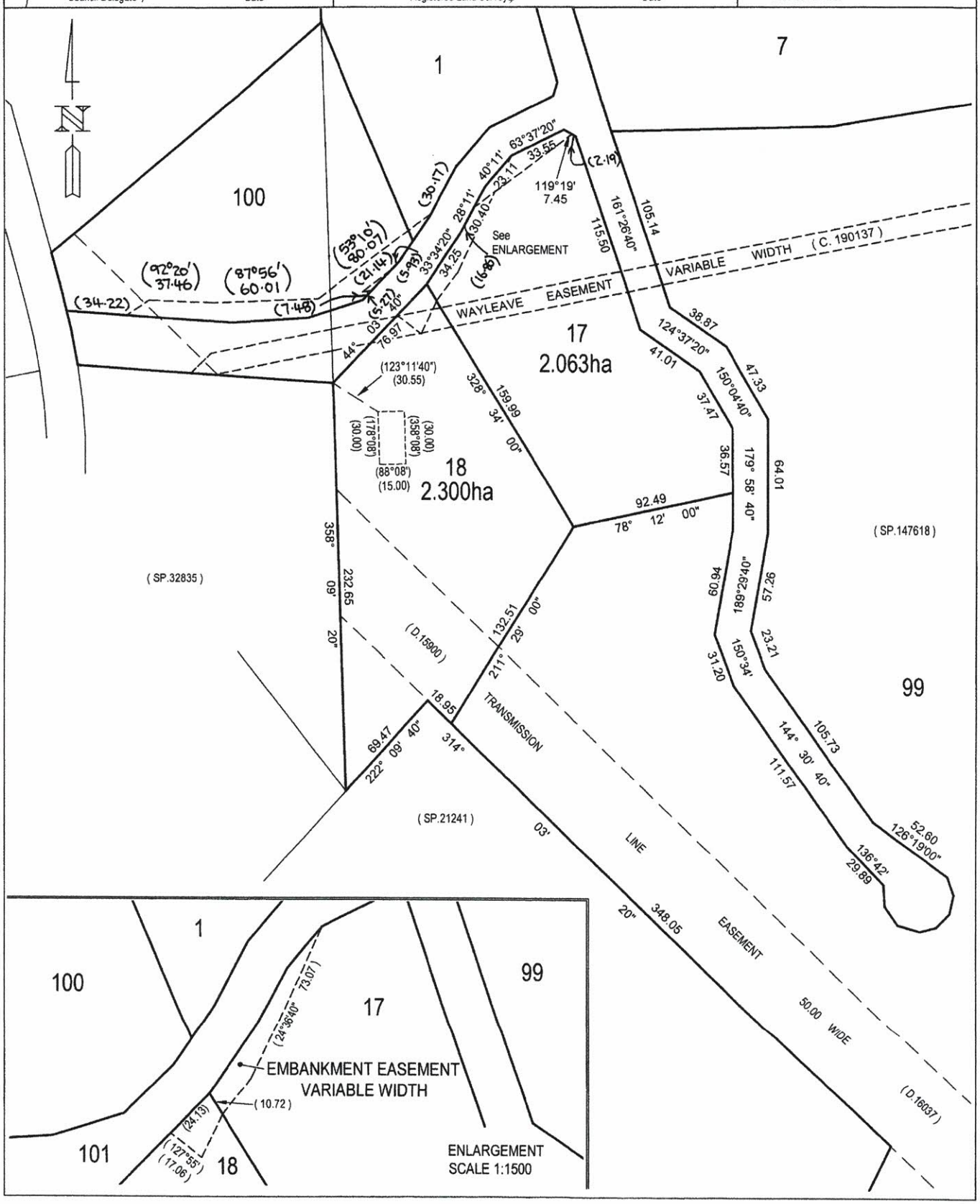
OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.
FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3
SCALE 1: 2000 LENGTH IN METRES

Registered Number
SP 179423

SIGNED FOR IDENTIFICATION PURPOSES
Council Delegate 12.8.2020 Date

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN.
Registered Land Surveyor 2/7/2020 Date

~~APPROVED~~
EFFECTIVE ~~FROM~~ 27 OCT 2020
Recorder of Titles



SURVEY NOTES

SHEET 1 OF 6 SHEETS

Registered Number

SP 179423

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

LENGTHS IN METRES

Owner: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.

Folio Reference: C.T. 174020 - 1
C.T. 147618 - 3

SURVEY CERTIFICATE

I, Timothy W. Cox of Hobart

in Tasmania a Registered Land Surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits.

(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and

(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature

Date 2,7,2020

Purpose of Survey: SUBDIVISION

Survey Commenced: 24 - 09 - 2019	Survey Completed: 09 - 06 - 2020	Surveyors Ref: 9579
Horizontal Datum: GDA94	Bearing Datum: MGA94	Combined Scale Factor: 0.99959

MGA94 COORDINATE ORIGIN

SURCOM	Mark ID: SPM 9559	E 535023.908	N 5254147.228	EPU 0.04	
AUSPOS	Local coordinated mark:	E	N	EPU	Measurement Duration:
NRTK	Local coordinated mark:	E	N	EPU	CORS provider:

Single base station CORS
CORS provider:

Local comparison information
SURCOM Check Mark ID:

SURCOM: E		N	EPU
Measured: E		N	EPU
ΔE		ΔN	
Local coordinated mark: o.spike(3)	E 535216.295	N 5255145.995	EPU 0.046

MGA94 BEARING ORIGIN

[If bearing origin is determined from SURCOM marks or GNSS observations, state the line adopted (station identifiers and bearing between) and ground distance comparison (where appropriate)].

SPM 9559 (1) - o.spike(3)
10°54'11" 1017.545 calc via GNSS observations

BOUNDARY REINSTATEMENT REPORT

(Where not documented in the body of these survey notes, describe all evidence, (including statements by interested parties), comparisons and other information relevant to the reinstatement of boundaries)

METHOD OF SURVEY: TOTAL STATION TRAVERSE & GNSS OBSERVATIONS
ALL CORNERS ARE YBARs & BOUNDARIES ARE OPEN UNLESS STATED OTHERWISE

- BOUNDARIES (235) - (106) - (200) - (115) HAVE BEEN ADOPTED FROM SP.174020. COMPARISON 1. HAS BEEN USED TO ADJUST BEARINGS & DISTANCES PER SURVEY DIRECTIONS 3.2.3 (140918)
- CORNERS (300) & (301) HAVE BEEN RE-ESTABLISHED USING COMPARISON 2. WITH BEARINGS ADJUSTED AND DISTANCES PROPORTION BETWEEN o.spike(206) & OCP(6)
- BOUNDARIES (301) - (302) - (303) - (304) HAVE BEEN ADOPTED FROM SP.147618. COMPARISON 3. HAS BEEN USED TO ADJUST BEARINGS & DISTANCES PER SURVEY DIRECTIONS 3.2.3 (140918)
- CORNER(316) HAS BEEN RE-ESTABLISHED FROM o.spike(19) USING COMPARISON 4. BOUNDARY (316) - (106) HAS BEEN MAINTAINED AS A STRAIGHT LINE AS SHOWN ON SP.5414. THE BEND CREATED BY SP.32835 HAS BEEN IGNORED.
- CORNER (315) HAS BEEN RE-ESTABLISHED USING COMPARISON 5. WITH BEARINGS ADJUSTED AND DISTANCES PROPORTIONED BETWEEN OCP(314) & YBAR(316)
- BOUNDARIES (235) - (105) - (234) - (261) RE-ESTABLISHED PER SP.174020. NO MARK PLACED AT (105) AS IT FALLS IN ROAD RESERVE.

SURVEY NOTES
ANNEXURE SHEET

SHEET 2 OF 6 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: WESTWOOD PROPERTIES PTY. LTD. C.T. 174020 - 1
QUE RIVER PTY. LTD. C.T. 147618 - 3

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED SURVEY NOTES.

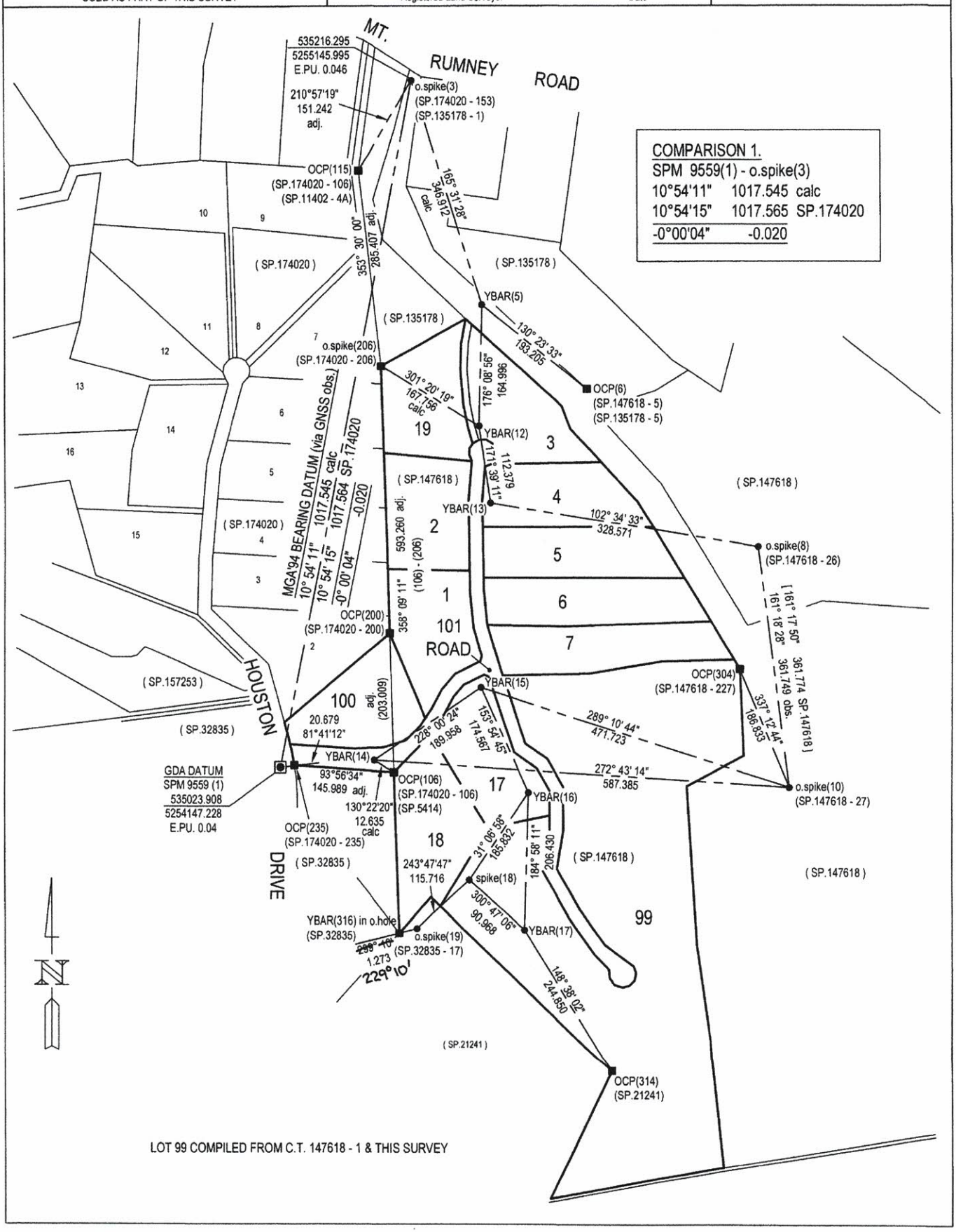
Registered Land Surveyor

2/7/2020
Date

Registered Number

SP 179423

LENGTHS IN METRES



SURVEY NOTES
ANNEXURE SHEET

SHEET 3 OF 6 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: WESTWOOD PROPERTIES PTY. LTD. C.T. 174020 - 1
QUE RIVER PTY. LTD. C.T. 147618 - 3

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED SURVEY NOTES.

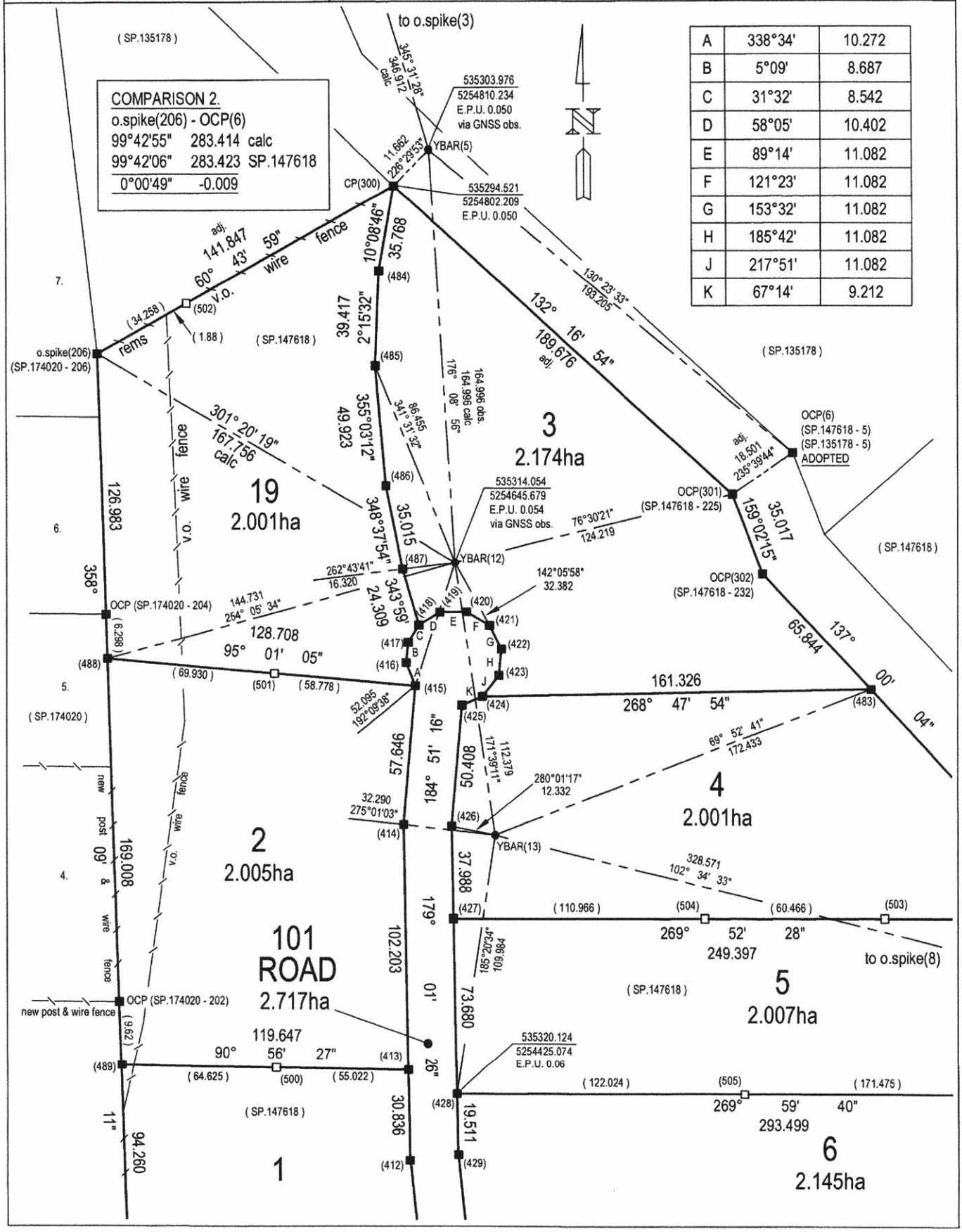
Registered Land Surveyor

2/7/2020
Date

Registered Number

SP 179423

LENGTHS IN METRES



A	338°34'	10.272
B	5°09'	8.687
C	31°32'	8.542
D	58°05'	10.402
E	89°14'	11.082
F	121°23'	11.082
G	153°32'	11.082
H	185°42'	11.082
J	217°51'	11.082
K	67°14'	9.212

SURVEY NOTES
ANNEXURE SHEET

SHEET 4 OF 6 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: WESTWOOD PROPERTIES PTY. LTD. C.T. 174020 - 1
QUE RIVER PTY. LTD. C.T. 147618 - 3

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED SURVEY NOTES.

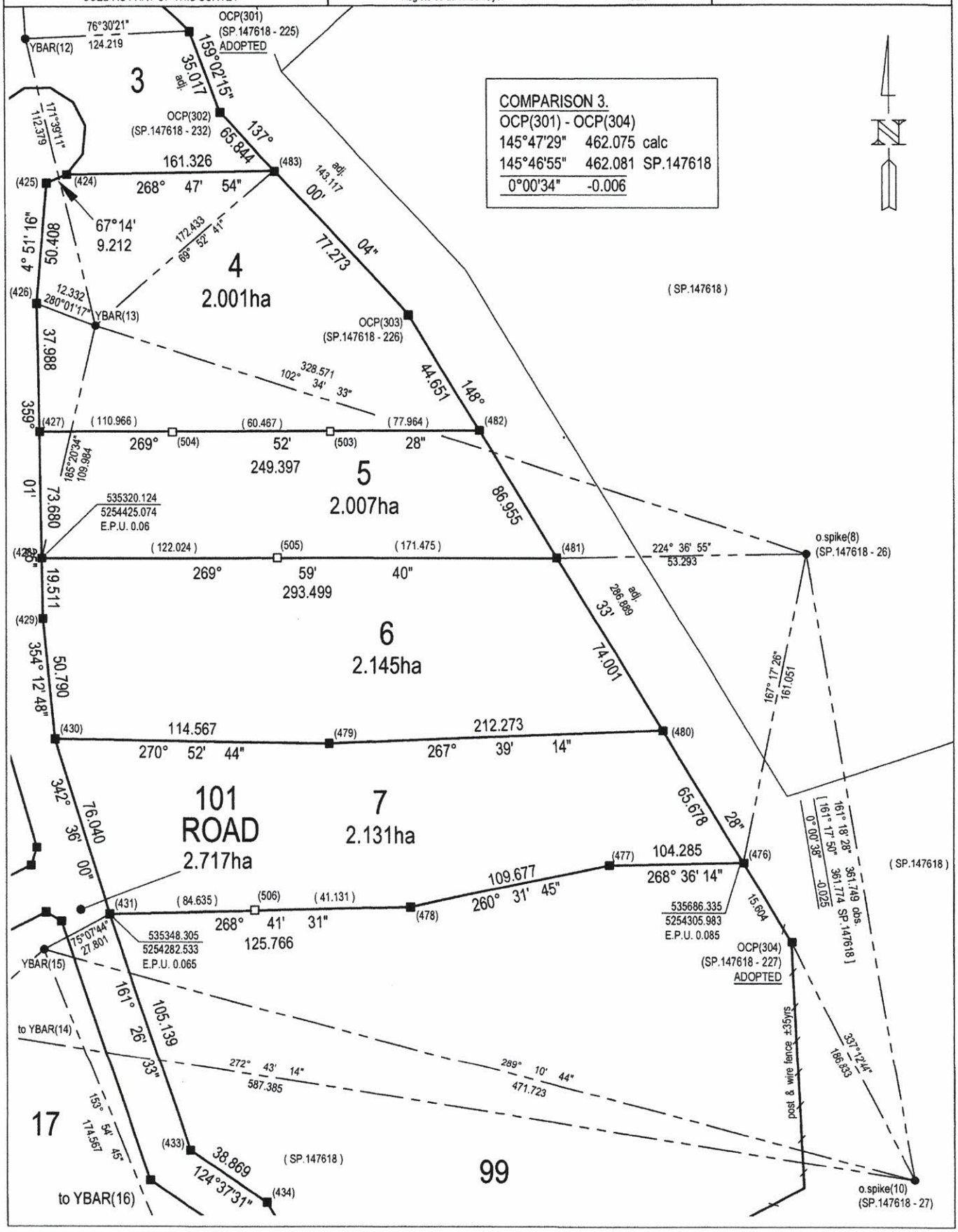
Registered Land Surveyor

2/7/2020
Date

Registered Number

SP 179423

LENGTHS IN METRES



SURVEY NOTES
ANNEXURE SHEET

SHEET 5 OF 6 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: WESTWOOD PROPERTIES PTY. LTD. C.T. 174020 - 1
QUE RIVER PTY. LTD. C.T. 147618 - 3

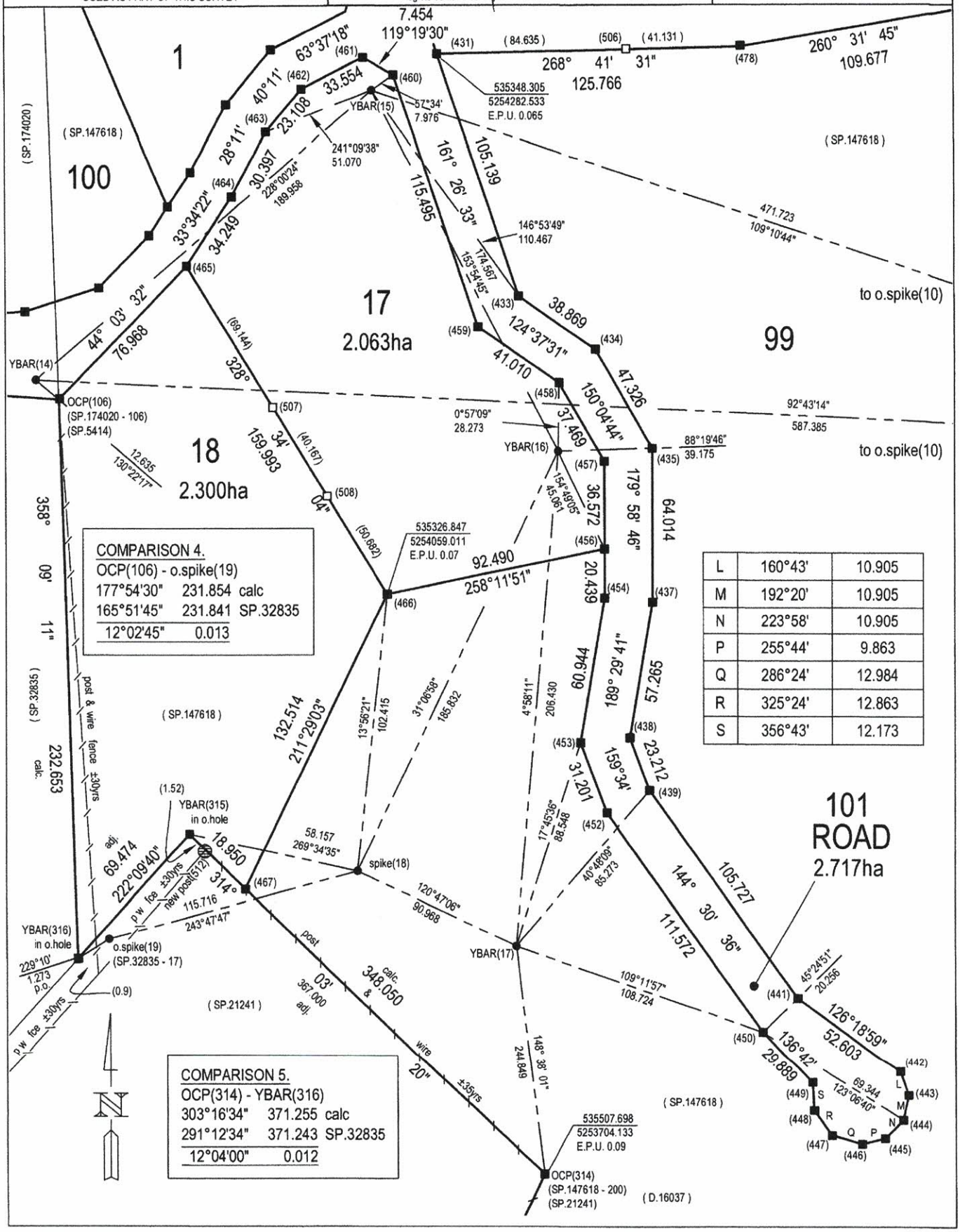
THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED SURVEY NOTES.

Registered Land Surveyor

2/7/2020
Date

Registered Number
SP 179423

LENGTHS IN METRES



L	160°43'	10.905
M	192°20'	10.905
N	223°58'	10.905
P	255°44'	9.863
Q	286°24'	12.984
R	325°24'	12.863
S	356°43'	12.173

COMPARISON 4.
OCP(106) - o.spike(19)

177°54'30"	231.854	calc
165°51'45"	231.841	SP.32835
12°02'45"	0.013	

COMPARISON 5.
OCP(314) - YBAR(316)

303°16'34"	371.255	calc
291°12'34"	371.243	SP.32835
12°04'00"	0.012	

SURVEY NOTES
ANNEXURE SHEET

SHEET 6 OF 6 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: WESTWOOD PROPERTIES PTY. LTD. C.T. 174020 - 1
QUE RIVER PTY. LTD. C.T. 147618 - 3

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED SURVEY NOTES.

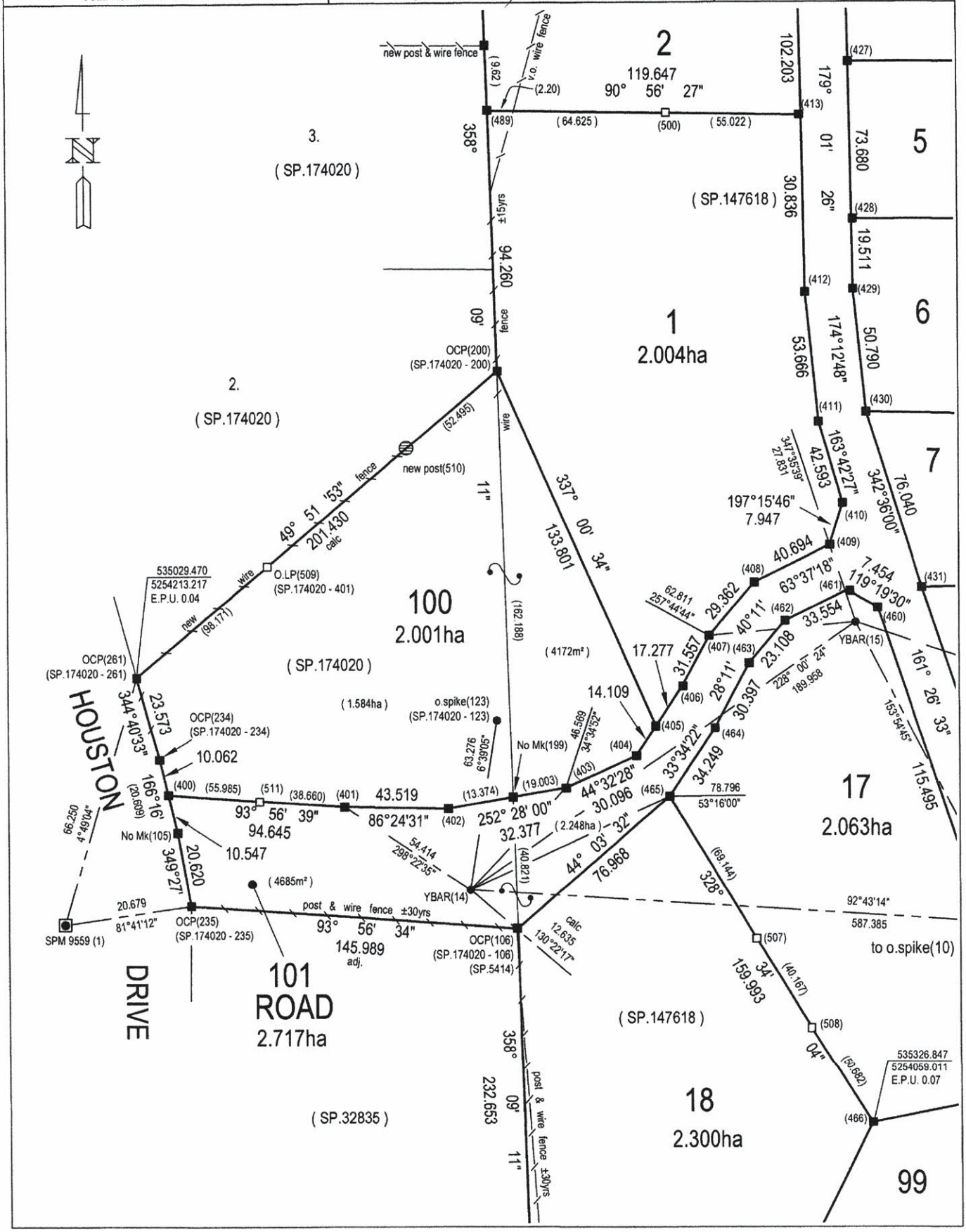
Registered Land Surveyor

2/7/2020
Date

Registered Number

SP 179423

LENGTHS IN METRES



SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 179423

EASEMENTS AND PROFITS

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

EASEMENTS

Drainage

Lot 6 is SUBJECT TO a Right of Drainage over the area marked "DRAINAGE EASEMENT 4.00 WIDE" in favour of the Clarence City Council as shown on the plan.

Lot 7 is SUBJECT TO a Right of Drainage over the area marked "DRAINAGE EASEMENT VARIABLE WIDTH" in favour of the Clarence City Council as shown on the plan.

Embankment

Lots ~~1~~, 3, 4, 17 & 18 on the Plan are each subject to an Embankment Easement (as defined herein) over the area marked "EMBANKMENT EASEMENT VARIABLE WIDTH" on the Plan in favour of the Clarence City Council.

~~**Wayleave**~~

~~Lots 17, 18, 99 & 101 are SUBJECT TO a Wayleave Easement in favour of Tasmanian Networks Pty Ltd~~ (formerly Aurora Energy Pty Ltd) over the area marked "WAYLEAVE EASEMENT VARIABLE WIDTH" as created by and more fully set forth in C190137.

Lots 6, 7 & 99 are SUBJECT TO a Wayleave Easement in favour of Tasmanian Networks Pty Ltd (formerly Aurora Energy Pty Ltd) over the area marked "WAYLEAVE EASEMENT 1.99 WIDE" created by SP 147618.

Lots 6, 7 & 99 are SUBJECT TO a Wayleave Easement in favour of Tasmanian Networks Pty Ltd (formerly Aurora Energy Pty Ltd)over the area marked "WAYLEAVE EASEMENT 12.00 WIDE". (C953244)

Lots 2, 4, 5, 6 & 7 are SUBJECT TO a Wayleave Easement in favour of Tasmanian Networks Pty Ltd (formerly Aurora Energy Pty Ltd) over the area marked "WAYLEAVE EASEMENT VARIABLE WIDTH" as shown on the plan.

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: Westwood Properties Pty Ltd & Que River Pty Ltd FOLIO REF: CTs 174020/1 & 147616/3 SOLICITOR & REFERENCE: Butler McIntyre & Butler (JS:201426)	PLAN SEALED BY: Clarence City Council DATE: 12.8.2020 SD-2017/45 REF NO. Council Delegate

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 2 OF ~~6~~ 6 PAGES	Registered Number SP 179423
SUBDIVIDER: Westwood Properties Pty Ltd & Que River Pty Ltd FOLIO REFERENCE: CTs 174020/1 & 147616/3	

~~**Transmission**~~

~~Lots 18, 99, 100 & 101 are SUBJECT TO a Transmission Line Easement over the area marked "TRANSMISSION LINE EASEMENT 50.00 WIDE" as shown on the plan and as created by and more fully set forth in A751454.~~

Rights of way

Lot 3 is SUBJECT TO a Right of Carriageway over the area marked "RIGHT OF WAY (PRIVATE) 10.00 WIDE" in favour of all lots on the plan for emergency use only and not general day to day use.

~~Lots 1 – 7, 17 – 19 & 99 and that part of Lot 100 formerly being part of Lot 1 on SP 147618 on the plan are~~ TOGETHER WITH a Right of Carriageway over the areas marked "RIGHT OF WAY 'A' (PRIVATE)", "RIGHT OF WAY 'B' (PRIVATE) 18.00 WIDE"~~(SP 135178)~~, "RIGHT OF WAY 'C' (PRIVATE) 3.60 WIDE", "RIGHT OF WAY 'D' (PRIVATE) ~~3.60~~ WIDE", "RIGHT OF WAY 'E' (PRIVATE) 3.60 WIDE" and "RIGHT OF WAY 'F' (PRIVATE) VARIABLE WIDTH" ~~(SP 147618)~~ over lot 1 on ~~SP 147618~~.

Easements continued Page 6

DEFINITIONS:

"Embankment Easement " means all the full and free right and liberty for the Clarence City Council and its successors and its and their servants, agents and contractors ("the Council") at all times hereafter:-

(a) to have the stability and support of the area shown on the Plan as "Road 101" ("Road") upheld and maintained by the Embankment Easement.

(b) to enter into and upon the servient land with or without all necessary plant, machinery and equipment and the means of transporting the same and if necessary to cross the remainder of the said land in consultation with the registered proprietors for the purpose of examining, maintaining, repairing or modifying the land area marked "Embankment Easement" without doing unnecessary damage to the said servient land and making good all damage occasioned by such make good.

(c) Nothing within this definition shall prevent the registered proprietors for themselves and their successors in title from using the servient land provided that such use does not derogate from this grant or, in the opinion of the Council, compromise support provided to the Road.

"Right of Carriageway" means a right of carriageway as defined within Schedule 8 of the *Conveyancing and Law of Property Act 1884 (Tas).*

"Right of Drainage" means a right of drainage as defined within Schedule 8 of the *Conveyancing and Law of Property Act 1884 (Tas).*

~~**"Transmission Line Easement" means the full and free right and liberty for the Hydro-Electric** Commission and its successors and its and their servants agents and workmen at all time hereafter:-~~

~~(a) To clear the lands marked "Transmission Line Easement 50.00 wide" on the plan (the said lands being portion of the said land within described and being hereinafter called "the servient land") and to erect place inspect alter and repair renew maintain and use in upon and over and along and remove from the servient land towers poles wires cables apparatus appliances and other ancillary works (all of which are hereinafter collectively referred to as "the said lines" for the transmission and distribution of electrical energy and purposes incidental thereto;~~

~~(b) To cause or permit energy to flow or be transmitted through and along the said lines;~~

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

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 3 OF ~~5~~ 6 PAGES	Registered Number SP 179423
SUBDIVIDER: Westwood Properties Pty Ltd & Que River Pty Ltd FOLIO REFERENCE: CTs 174020/1 & 147616/3	

~~(c) To cut away remove and keep clear of the said lines all trees and all other obstructions or erections~~ of any nature whatsoever which may at any time overhang encroach or be in or ~~on the~~ servient land and which may in any way endanger or interfere with ~~the proper~~ operation of the said lines ; and

(d) To enter into and upon the servient ~~land for all~~ or any of the above purposes with or without all neccessary ~~plant equipment~~ machinery and vehicles of every kind.

~~(first created in A751454 for D16037)~~

"**Wayleave Easement**" means **FIRSTLY** the full and free right and liberty for Tasmanian Networks Pty Ltd and its successors and its and their servants, agents, invitees and contractors ("TasNetworks") at all times:

(a) **TO** clear the lands marked ~~"WAYLEAVE EASEMENT12.0 WIDE", "WAYLEAVE EASEMENT1.00 WIDE"~~, "WAYLEAVE EASEMENTVARIABLE WIDTH" ~~on the Wayleave Easement Identification~~ on the Plan ~~annexed~~ (described as "the servient land") and to lay, erect, construct, inspect, install, maintain, repair, modify, add to, replace, remove and operate in, upon, through, over, along and under the servient land the following:

(i) Towers, poles, wires, cables, apparatus, appliances, and all other ancillary and associated equipment which includes telecommunication equipment (described collectively as "electricity infrastructure") for, or principally for, the transmission and distribution of electrical energy and for any incidental purposes.

(b) **TO** operate and maintain electricity infrastructure on the servient land.

(c) **TO** cut away remove and keep clear of the electricity infrastructure all trees and other obstructions or erections of any nature whatsoever which may at any time:

(i) overhang, encroach upon or be in or on the servient land; or

(ii) which may in the opinion of TasNetworks endanger or interfere with the proper operation of the electricity infrastructure.

(d) **TO** enter the servient land for all or any of the above purposes and to cross the remainder of the land with any and all necessary plant, equipment, machinery and vehicles for the purpose of access and egress to and from the servient land, and where reasonably practicable, in consultation with the registered proprietor/s (except when urgent or emergency repair work is needed).

SECONDLY the benefit of a covenant for TasNetworks and with the registered proprietor/s for themselves and their successors not to:

(i) erect any buildings; or

(ii) place any structures, objects or vegetation;

within the servient land without the prior written consent of TasNetworks. TasNetworks may rescind their consent if in the opinion of TasNetworks there are safety, access or operational concerns.

Right of Carriageway – definition of "Emergency"

"Emergency" means any of the following, a situation that poses an immediate risk to health, life, property, or the environment.

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

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 4 OF 5 6 PAGES	Registered Number SP 179423
SUBDIVIDER: Westwood Properties Pty Ltd & Que River Pty Ltd FOLIO REFERENCE: CTs 174020/1 & 147616/3	

COVENANTS:

FENCING COVENANT:

The owner of each Lot on the plan covenants with Westwood Properties Pty Ltd & Que River Pty Ltd (the Vendor) that the Vendor shall not be required to fence

BUILDING COVENANT WITH COUNCIL

The owners of lots 18 and 100 on the Plan covenants with the Clarence Council to the intent that the burden of this covenant shall run with and bind the covenantors lot and every part and the benefits shall be in the favour of the Clarence Council to observe the following stipulations;

1. must describe a building area as shown in Figure 2 of the Flora and Fauna Habitat Assessment prepared by North Barker Ecosystem Services reissue date 24 August 2018 outside of which no building requiring the clearance of native vegetation is to be constructed.

a) Buildings must not be constructed outside of the building areas identified on the sealed plan unless otherwise approved by Council on receipt of a Natural Values Assessment prepared by a suitably qualified person to the satisfaction of the Council demonstrating that the impacts to native vegetation (including priority vegetation) are less than or equal to the impacts of the building area shown on the sealed plan; and

b) No trees are to be removed outside of the building areas other than:

   i. As necessary for the construction of vehicle access, servicing infrastructure, and fencing; and
   ii. As required by a certified Bushfire Hazard Management Plan.

   - unless otherwise approved by Council on receipt of a Natural Values Assessment prepared by a suitably qualified person to the satisfaction of the Council demonstrating that the impacts to native vegetation (including priority vegetation) are less than or equal to the impacts of the building area shown on the sealed plan.

Lots 1-7, 17-19 & 99 and Lots 100 & 101 on the plan which formerly comprised Lot 3 on Sealed Plan 147618) are burdened by the restrictive covenants created by and more fully set forth in Sealed Plan 21241.

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

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 5 OF ~~5~~ 6 PAGES	Registered Number SP 179423
SUBDIVIDER: Westwood Properties Pty Ltd & Que River Pty Ltd FOLIO REFERENCE: CTs 174020/1 & 147616/3	

Signed for and on behalf of
Westwood Properties Pty Ltd
by authority of its director in accordance
with s.127 of the Corporations Act 2001 .....

Timothy Allen Wark
Sole Director/ Sole Secretary

Signed for and on behalf of
Que River Pty Ltd
by authority of its director in accordance
with s.127 of the Corporations Act 2001 .....

Timothy Allen Wark
Sole Director/ Sole Secretary

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

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 6 OF 6 PAGES	SP179423

SUBDIVIDER: - QUE RIVER PTY LTD AND WESTWOOD PROPERTIES PTY LTD
FOLIO REFERENCE: - 147618/3 & 174020/1

EASEMENTS

Lots 100 & 101 on the plan are each subject to a Wayleave Easement in favour of the Hydro-Electric Commission over the Transmission Line Easement 50.00 wide on the plan and as created by and more fully set forth in A751454.

Lots 18 & 99 on the plan are each subject to the full and free right and liberty for the Hydro-Electric Commission and its successors created by and more fully set forth in Sealed Plan 21241 over the Transmission Line Easement 50.00 wide shown on the plan.

Lots 17, 18, 99 & 101 on the plan are each subject to the full and free right and liberty for Aurora Energy Pty Ltd and its successors created by and more fully set forth in C190137 over the Wayleave Easement variable width shown on the plan.

Lot 101 on the plan is subject to a Wayleave Easement in favour of Aurora Energy Pty Ltd over the Wayleave Easement 12.00 wide shown on the plan and as created by and more fully set forth in C494110.

Lots 6, 7 & 99 on the plan are each subject to a Burdening Wayleave Easement with the benefit of a restriction as to user of land in favour of Aurora Energy Pty Ltd over the Wayleave Easement 12.00 wide on the plan and as created by and more fully set forth in C953244.

Lots 6, 7 & 99 on the plan are each subject to a Wayleave Easement in favour of Aurora Energy Pty Ltd over the Wayleave Easement 1.99 wide (SP147618) on the plan.

Lots 2, 4, 5, 6, 7, 17 & 18 on the plan are each subject to a Wayleave Easement (as defined herein) in favour of Tasmanian Networks Pty Ltd over the Wayleave Easement variable width 'A' on the plan.

Lots 1, 2, 3, 4, 5, 6, 7, 17, 18, 19 & 99 and that part of Lots 100 & 101 formerly comprised in Lot 3 on Sealed Plan 147618 are each together with a Right of Carriageway over the Right of Way 'A' (private) (SP135178), Right of Way 'C' (private) 3.60 wide (SP147618), Right of Way 'D' (private) 3.60 wide (SP147618), Right of Way 'E' (private) 3.60 wide (SP147618) and Right of Way 'F' (private) variable width (SP147618) on the plan.

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PLAN OF SURVEY
ANNEXURE SHEET

SHEET 3 OF 3 SHEETS

OWNER: WESTWOOD PROPERTIES PTY. LTD.
QUE RIVER PTY. LTD.
FOLIO REFERENCE: C.T. 174020 - 1
C.T. 147618 - 3
SCALE 1: 2000 LENGTH IN METRES

Registered Number
SP 179423

SIGNED FOR IDENTIFICATION PURPOSES

Council Delegate ..... Date .....

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN.

Registered Land Surveyor ..... Date .....

APPROVED
EFFECTIVE FROM .....

Recorder of Titles