NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development:

SITE:
28 GOODFORD LANE, ORIELTON

PROPOSED DEVELOPMENT:
ADDITIONS (VERANDAH TO SECONDARY RESIDENCE)

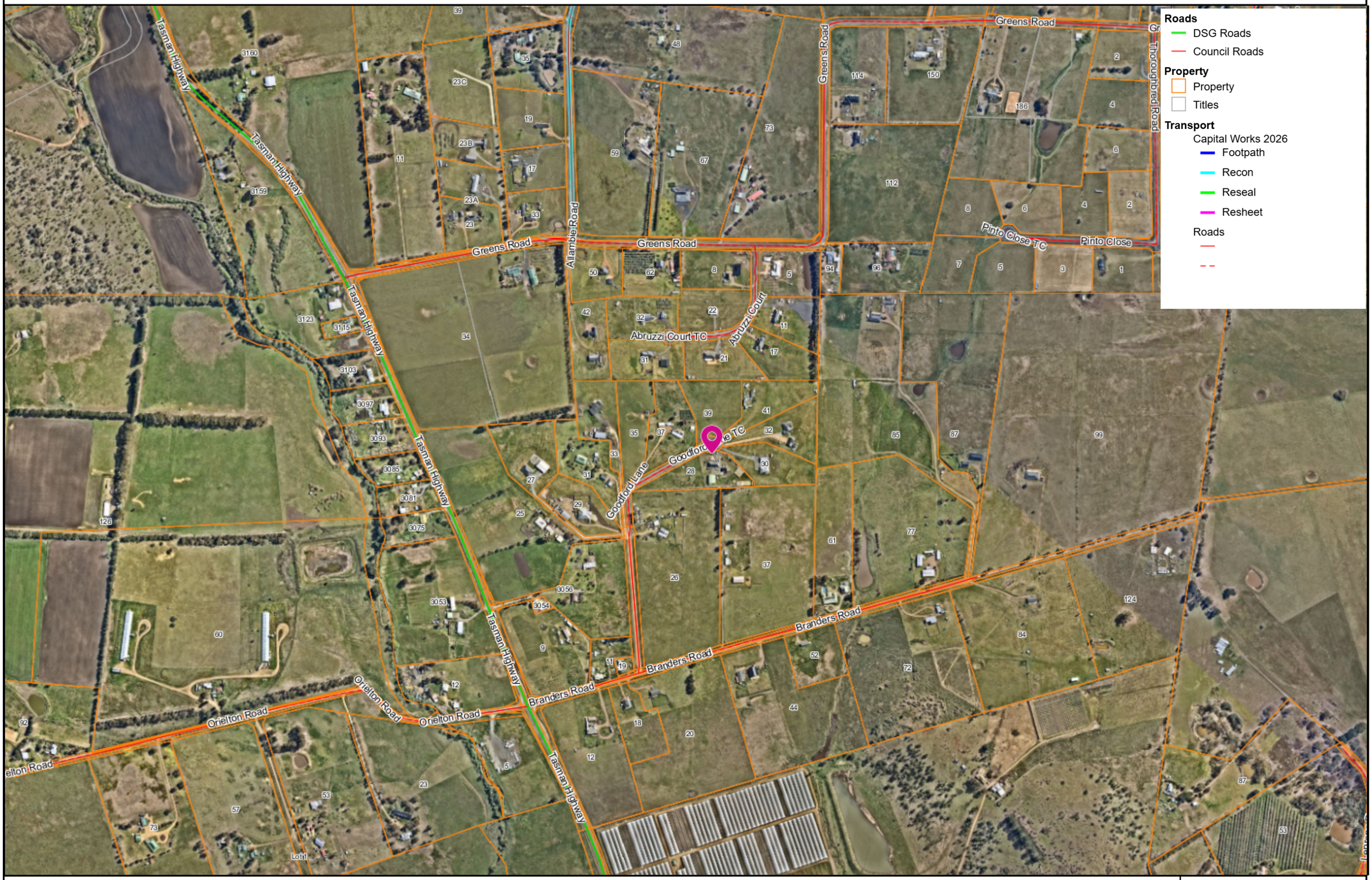
The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Tuesday 17th February 2026.**

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the General Manager. Representations must be received no later than **Tuesday 17th February 2026.**

APPLICATION NO: **5.2025-326.1**
DATE: **30 JANUARY 2026**

28 Goodford Lane, Orielton

30-Jan-2026



Disclaimer

Any information extracted from this document (from the face of the document or by scale) should be verified on site. Council takes no responsibility for the accuracy of any information contained or presented in the document. While every care has been taken to ensure the accuracy of this information, Council makes no representations or warranties about the accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and liability.

200 m

N

Part B: Please note that Part B of this form is publicly exhibited.

Full description of Proposal:	*Use:* Residential - class 10a *Development:* Proposed verandah to existing ancillary dwelling *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 15,000 (estimate)

Is all, or some the work already constructed:	No: ☑ Yes: ☐

Location of proposed works:	Street address: 28 Goodford Lane Suburb: Orielton Postcode: 7172 Certificate of Title(s) Volume: 182209 Folio: 7

Current Use of Site	Residential

Current Owner/s:	Name(s) Kylie Eastley

Is the Property on the Tasmanian Heritage Register?	No: ☑ Yes: ☐	*If yes, please provide written advice from Heritage Tasmania*
Is the proposal to be carried out in more than one stage?	No: ☑ Yes: ☐	*If yes, please clearly describe in plans*
Have any potentially contaminating uses been undertaken on the site?	No: ☑ Yes: ☐	*If yes, please complete the Additional Information for Non-Residential Use*
Is any vegetation proposed to be removed?	No: ☑ Yes: ☐	*If yes, please ensure plans clearly show area to be impacted*
Does the proposal involve land administered or owned by either the Crown or Council?	No: ☑ Yes: ☐	*If yes, please complete the Council or Crown land section on page 3*

If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form
https://www.sorell.tas.gov.au/services/engineering/

Declarations and acknowledgements
• I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land. • I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council's representatives to enter the land at any time during normal business hours. • I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies. • I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application. • I/we declare that the information in this application is true and correct. *Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council's Privacy Policy available on the Council website.*
• I/we 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 exhibition, 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.
• Where the General Manager's consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature: ..... Date: 24.11.25

Crown or General Manager Land Owner Consent
If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*). Please note: • If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au • If the application involves Crown land you will also need a letter of consent. • Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.
I _____ being responsible for the administration of land at _____ declare that I have given permission for the making of this application for _____

Signature of General Manager, Minister or Delegate:	Signature: ..... Date: .....

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
182209	7
EDITION	DATE OF ISSUE
2	12-May-2022

SEARCH DATE : 24-Nov-2025
SEARCH TIME : 12.36 PM

DESCRIPTION OF LAND

Parish of SORELL Land District of PEMBROKE
Lot 7 on Sealed Plan 182209
Derivation : Part of Lot 30912, 98A-1R-34P Gtd. to J T Medhurst
Prior CT 131186/2

SCHEDULE 1

M953160 TRANSFER to KYLIE MELLISSA EASTLEY Registered 12-May-2022 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP182209 FENCING COVENANT in Schedule of Easements
SP131186 FENCING COVENANT in Schedule of Easements
E302744 MORTGAGE to Commonwealth Bank of Australia Registered 12-May-2022 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

PRIORITY FINAL PLAN

19/1/22

OWNER: GOODFORD HILL PTY. LTD.

FOLIO REFERENCE: F.R.131186-2

GRANTEE: PART OF LOT 30912 (98A-1R-34P) GRANTED TO JOHN TRAYTON MEDHURST.

PLAN OF SURVEY

BY SURVEYOR: P.J.Boland of BOLAND SURVEYING

LOCATION:

LAND DISTRICT OF PEMBROKE

PARISH OF SORELL

SCALE 1: 2000 LENGTHS IN METRES

Registered Number

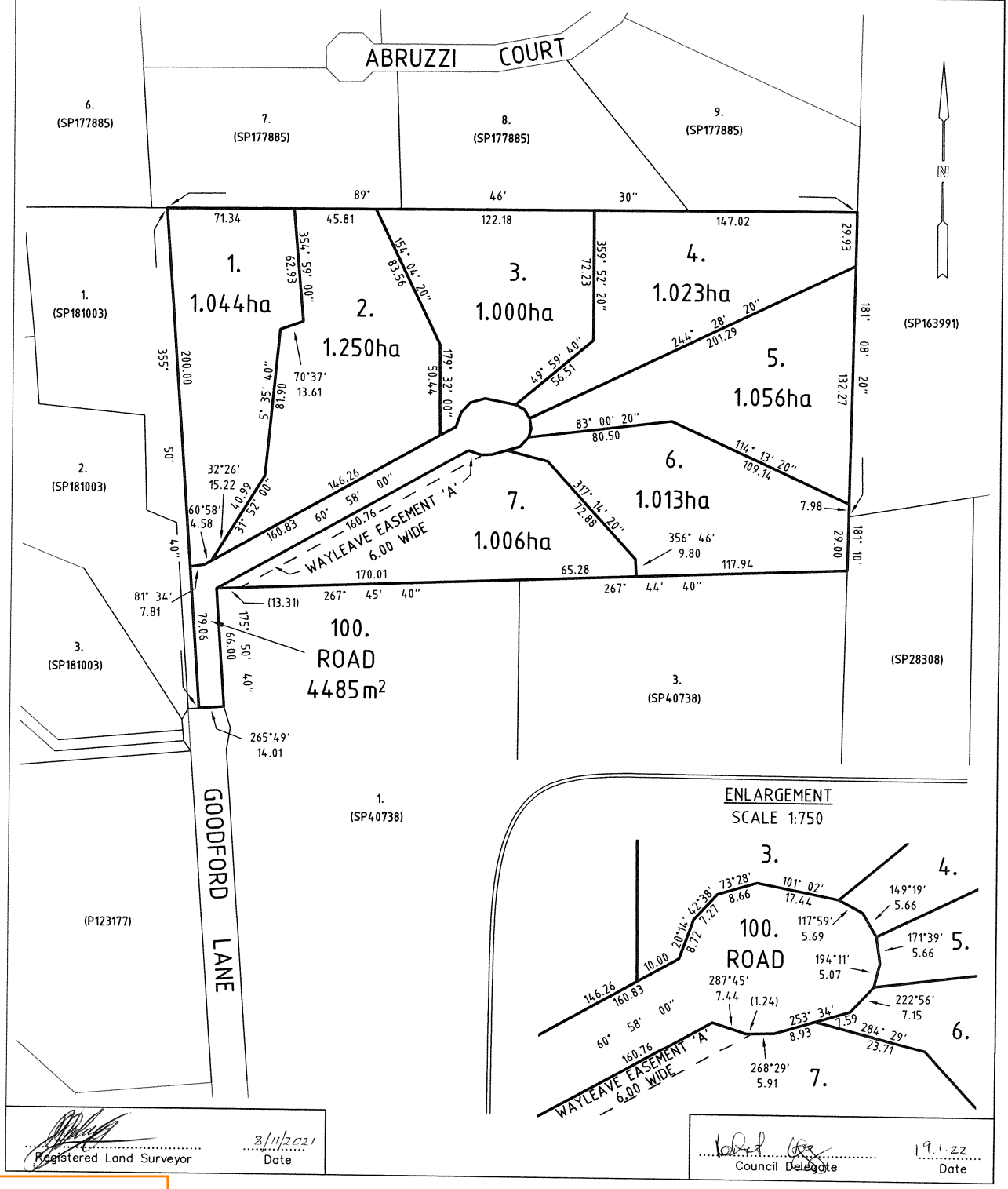
SP 182209

~~APPROVED~~

EFFECTIVE FROM 11 FEB 2022

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



Registered Land Surveyor — Date 8/11/2021

Council Delegate — Date 19.1.22

SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 182209

EASEMENTS AND PROFITS

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

Lot 7 on the Plan is subject to a Wayleave Easement and restricted as to user of land in favour of Tasmanian Networks Pty Ltd over the land marked "WAYLEAVE EASEMENT 'A' 6.00 WIDE" on the Plan.

INTERPRETATION

In this schedule of easements "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 ("Tasmanian Networks Pty Ltd") at all times:

(a) To clear lands within the area marked "WAYLEAVE EASEMENT 'A' 6.00 WIDE" on the Plan (described as the "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 Tasmanian Networks Pty Ltd 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).

.....

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: Goodford Hill Pty Ltd (ACN 648 194 405)	PLAN SEALED BY: Sorell Council
FOLIO REF: Volume 131186 Folio 2	DATE: 19.1.22
SOLICITOR & REFERENCE: Sproal & Associates – BD Sproal	7.2021.4.1 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 2 PAGES	Registered Number SP182209
SUBDIVIDER: Goodford Hill Pty Ltd FOLIO REFERENCE: Volume 131186 Folio 2	

SECONDLY the benefit of a covenant for Tasmanian Networks Pty Ltd 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 Tasmanian Networks Pty Ltd. Tasmanian Networks Pty Ltd may rescind their consent if in the opinion of Tasmanian Networks Pty Ltd there are safety, access or operational concerns.

FENCING COVENANT

The owner of each lot on the Plan covenants with the Vendor (Goodford Hill Pty Ltd) that the Vendor shall not be required to fence.

EXECUTED by GOODFORD HILL PTY LTD being the registered proprietor in folio of the Register Volume 131186 Folio 2 in accordance with Section 127 of the Corporations Act 2001:

.....
Sole Director & Sole Secretary

Bennetto Finance Pty Ltd as mortgagee pursuant to Mortgage Registered Number M887777 does hereby consent to the registration of the plan and this Schedule of Easements.

SIGNED for and on behalf of BENNETTO FINANCE PTY LTD
by Danny Michael Allford

.....
Director & SECRETARY

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

DOYLE SOIL CONSULTING

SITE AND SOIL EVALUATION REPORT

FOUNDATION AND WINDLOADING ASSESSMENT

Lot 7 - 28 Goodford Lane

Orielton

September 2021

Doyle Soil Consulting: 150 Nelson Rd Mt Nelson 7007 – 0488 080 455 – robyn@doylesoilconsulting.com.au

SITE INFORMATION

Client: Creative Homes Hobart

Address: Lot 7, 28 Goodford Lane, Orielton (Part of CT 131186/2)

Site Area: Approximately 1.02 ha

Date of inspection: 10/09/2021

Building type: New house

Services: Tank

Planning Overlays: Bushfire Prone Areas

Mapped Geology - Mineral Resources Tasmania 1:50 000 Buckland sheet:
Tb = Tertiary Basalt (tholeiitic to alkalic) and related pyroclastic rocks

Soil Depth: Refusal at 0.4 – 0.7 m

Subsoil Drainage: Moderate Well subsoil drainage

Drainage lines / water courses: Minor tributary watercourse to the East and Orielton Rivulet to the West, several waterbodies

Vegetation: Grass

Rainfall in previous 7 days: Approximately 2 mm

Site Assessment and Sample Testing

Site investigation and soil classification in accordance with AS2870-2011 *Residential slabs and footings.*

AS 4055-2021 *Wind load for Housing*

Three drill cores with refusal @ 0.7 m at TH1, refusal @ 0.4 at TH2, and refusal @ 0.65 m at TH3

Dynamic Cone Penetrometer (DCP) test between TH1 and TH3 with refusal @ 0.7 m

Emerson Dispersion test on subsoils and linear shrinkage tests on all likely founding layers

Test holes were dug using a Christie Post Driver Soil Sampling Kit, comprising CHPD78 Christie Post Driver with Soil Sampling Tube (50 mm OD x 1600 mm)

SOIL PROFILES – Test Hole 1, 2 & 3

TH1 Depth (m)	TH2 Depth (m)	TH3 Depth (m)	Horizon	Description and field texture grade	Soil Classifn.
0.0 – 0.2	0.0 – 0.1	0.0 – 0.15	A1	Very dark grey 10YR 3/1, **Light Clay**, strong medium to fine polyhedral structure, dry friable consistency, common fine roots.	**CH**
0.2 – 0.7	0.1 – 0.4	0.15 – 0.65	B2	Black 10YR 2/1, **Light Medium Clay**, massive to moderate coarse angular blocky structure, slightly moist soft to firm consistency. Refusal on basalt.	**CH**

SITE AND SOIL COMMENTS

The soil profiles are formed from clayey colluvium derived from Tertiary basalt. The profiles are shallow with refusal occurring at approximately 0.4 – 0.7 m. The field textures of the soil profile are dominated by clay, which is highly reactive, weakly to strongly structured with low bearing capacity to at least 0.5 m. We recommend founding on the underlying tertiary basalt bedrock.

LINEAR SHRINKAGE AND SOIL REACTIVITY

Samples of the clayey subsoils were tested for reactivity using the linear shrinkage test. Linear shrinkage provides an approximate guide to aid soil classification of reactivity of clays for foundations. The tests suggest the clays are highly reactive.

Sample	Depth (m)	Length of mould (L)	Longitudinal Shrinkage (LS) in mm	LS (%)	Soil Class
TH 1	0.3 - 1.3	125	19.0	15.2	H – 1
TH 1	1.3 - 1.7	125	20.0	16.0	H – 1

DCP TESTS AND ESTIMATED BEARING CAPACITY

Dynamic Cone Penetrometer (DCP) testing is a method of estimating likely soil bearing capacity. However, surface layers (~ upper 0.7 m) are subject to significant soil moisture variations with season which affect DCP values, especially in clays, e.g. in summer or drought then dry clays may be very stiff – hard but in winter only soft – firm. Thus, DCP values below ~ 0.7 m are likely to be more typical of year – to – year soil bearing conditions in clayey and silty soils. We provide estimated soil bearing strengths along with a variance range (+/-) based on a review of published literature relating field DCP readings to triaxial soil strength tests.

A minimum bearing capacity of 100 kPa is required for strip and pad footings and under the edge footings and associated slab foundations. The Dynamic Cone Penetrometer (DCP) test was carried out between TH1 and TH3. The subsoils were slightly moist to dry when tested and so

the field DCP values are likely to be higher than in very moist to saturated soil conditions (winter/spring).

The field DCP data indicates that the bearing capacity of the soil is at a suitable strength below approx. 0.5 m. However, the competent bedrock at ~0.7 m would be the recommended foundation material.

The clay horizons are highly reactive/plastic and thus require foundation design suitable for high shrinking and swelling induced movement (refer to tables below and AS2870-2011 clause 2.4.5).

Depth (mm)	DCP n-number	DCP Penetration Index	Estimated bearing capabity (kPa)	Likely Variance
DCP 1	(Blows/100 mm)	(mm/Blow)	(kPa = n x 30)	+/-
0 - 100	4	25.0	120	40
100 - 200	4	25.0	120	40
200 - 300	1	100.0	30	10
300 - 400	2	50.0	60	20
400 - 500	4	25.0	120	40
500 - 600	16	6.3	480	160
600 - 700	30	3.3	900	300

EMERSON AGGREGATE DISPERSION TEST

Soils with an excess of exchangeable sodium ions on the cation exchange complex (clays), can cause clay dispersion. Under some circumstances the presence of dispersive soils can also lead to significant erosion, and in particular tunnels leading to eventual gully erosion. Based upon field survey of the property and the surrounding area, no erosion was identified at the site.

The subsoil was tested for dispersion using the Emerson Aggregate Test (EAT). Photos are available on request. The class 2(2) indicates a mild dispersive characteristic and class 8 is no dispersion. The subsoils are therefore non/mildly spontaneously dispersive and so exposure to rainfall may lead to minor clay dispersion and potentially rill and tunnel erosion, although this is more common in sandy lighter clays, sandy clay loams and silt loams. Dispersive clay subsoil materials can also cause sealing of the soil surface – if left out in wet weather, they then dry and set very hard in dry weather. To minimise this, we recommend coverage of exposed subsoil with topsoil or regular treatment with gypsum at 0.5 Kg/m^2 along with minimising subsoil disturbance whenever possible. Photo available on request.

Sample	Depth (m)	Visual sign	Class
TH 1	0.3 - 1.3	No slaking and no dispersion	8
TH 1	1.3 - 1.7	Some dispersion (obvious milkiness < 50% of aggregate affected)	2(2)

WIND CLASSIFICATION

The AS 4055-2021 *Wind load for Housing* classification of the site is:

Region:	**A**
Terrain category:	**TC2.5**
Shielding Classification:	**NS**
Topographic Classification:	**T2**
Wind Classification:	**N3**
Design Wind Gust Speed ($V_{h,u}$)	**50 m/sec**

SITE CLASSIFICATION AND RECOMMENDATIONS

According to AS2870-2011 (construction) the site is classified as **Class M** moderately reactive, with 20 – 40 mm the dominant reactivity of expected surface movement under normal soil moisture ranges for the location and requiring adequate drainage of the foundations – refer to CSIRO foundation management BTF 18 sheet attached.

Note: If founded entirely on underlying competent Tertiary basalt bedrock at approx. 0.7 m, which is recommended, and no part of the foundations, be it a slab, pier or footing, is in contact with/or is supported, i.e., relies for bearing on or by the reactive clayey subsoils, then **Class S** would become an appropriate site classification.

General Notes – Important points pertinent to maintenance of foundation soil conditions

This report relates to the soil and site conditions on the property at the time of the site assessment. The satisfactory long-term performance of footings is dependent upon the on-going site maintenance by the owner.

Examples of abnormal moisture conditions developing after construction include the following:

A) The effect of trees too close to the footings
B) Excessive or irregular watering of gardens adjacent to the footings
C) Failure to maintain site drainage affecting footings
D) Failure to repair plumbing leaks affecting footings
E) Loss of vegetation from near the building.

All earthworks on site must comply with AS3798-2007 Guidelines on Earthworks for commercial and residential developments.

REPORT LIMITATIONS

Whilst every attempt is made to describe sub-surface conditions, natural variation will occur that cannot be determined by limited investigative soil testing. Therefore, discrepancies are possible between test results and observations during construction. It is our intention to accurately indicate the most probable soil type(s) and conditions for the area assessed. However due to the nature of sampling an area, variations in soil type, soil depth and site conditions may occur.

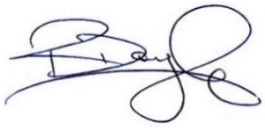
We accept no responsibility for any differences between what we have reported and actual site and soil conditions for the particular regions we could not directly assess at the time of inspection.

It is recommended that during construction, Doyle Soil Consulting and/or the design engineer be notified of any major variation to the foundation conditions as predicted in this report. Any changes to the site through excavations may alter the site classification.

In these cases, it is expected the owner consult the author for a reclassification. This report requires certification via a form 55 certificate from Doyle Soil Consulting to validate its contents.

Because site discrepancies may occur between this report and actual site conditions, it is a condition of certification of this report that the builder be provided with a copy of this report.

Evan Langridge
B.Agr.Sc.(Hons).
Soil Scientist

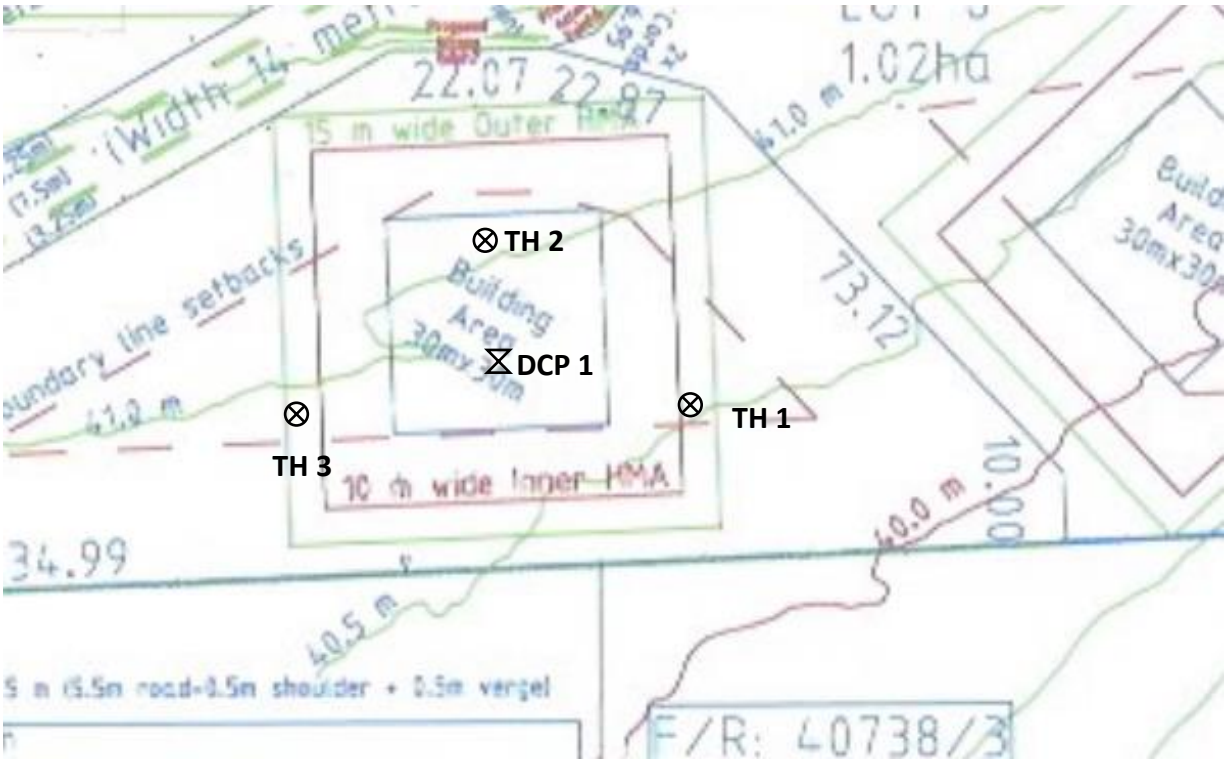


Dr Richard Doyle
B.Sc.(Hons), M.Sc.(Geol),
Ph.D. (Soil Sci.), CPSS (Certified Prof Soil Scientist)
Geologist and Soil Scientist

APPENDIX 1 – Approximate test hole locations

N

Location of test holes - TH1, TH2, TH3



APPENDIX 2 – Definitions of Soil Horizons

Horizon name	Meaning
A1	Dark topsoils, zone of maximum organic activity
A2 or E	Leached, light/pale washed-out sandy layer
A3 or AB	Transition from A to B, more like A
B1 or BA	Transition from A to B, more like B
B2	Main subsoils layer with brown coluration, accumulations of clay, humus, iorn oxide, etc
B3	Transitional from B2 to C
C	Weakly weathered soil parent materials

Subscript	Meaning
r	Reducing conditions (anaerobic)
t	Enriched in translocated clay
s	Iron/aluminium oxide accumulations
g	Mottled, suggesting periodic/seasonal wetness
m	Cemmented layer (oxides, cabonates, humus, silica etc)
k	Calcium carbonate (lime) accumulation
h	Humus accumulation a subsoil

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Creative Homes Hobart *Owner /Agent*

PO BOX 4 *Address*

New Town TAS 7008 *Suburb/postcode*

Qualified person details:

Qualified person: Richard Doyle

Address: 150 Nelson Road

Mount Nelson 7172

Phone No: 0488 080 455

Fax No:

Licence No: N/A

Email address: robyn@doylesoilconsulting.com.au

Qualifications and Insurance details: Geologist and Soil Scientist PhD
Certified Professional Soil Scientist (CPSS)
Professional Indemnity cover –

Lloyd's of London
ENG 19 000305

(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: Lot 7 28 Goodford Lane

Orielton 7172

Lot No: 7

Certificate of title No: Part of 131186/2

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: X

or

a building, temporary structure or plumbing installation:

In issuing this certificate the following matters are relevant –

Documents:	The attached Geotechnical Assessment Report for the address detailed above in, 'Details of Work'.
Relevant calculations:	Refer to 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 earthworks, drainage condition changes or variations in site maintenance.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		777	13/09/2021

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

PUBLISHING

BTF 18-2011
replaces
Information
Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870-2011, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction

There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion

All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation

This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume, particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil

All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure

This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.

In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes
H1	Highly reactive clay sites, which may experience high ground movement from moisture changes
H2	Highly reactive clay sites, which may experience very high ground movement from moisture changes
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes

Notes

1. Where controlled fill has been used, the site may be classified A to E according to the type of fill used.
2. Filled sites. Class P is used for sites which include soft fills, such as clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soil subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise.
3. Where deep-seated moisture changes exist on sites at depths of 3 m or greater, further classification is needed for Classes M to E (M-D, H1-D, H2-D and E-D).

Tree root growth
Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation
Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

Seasonal swelling/shrinkage in clay
Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

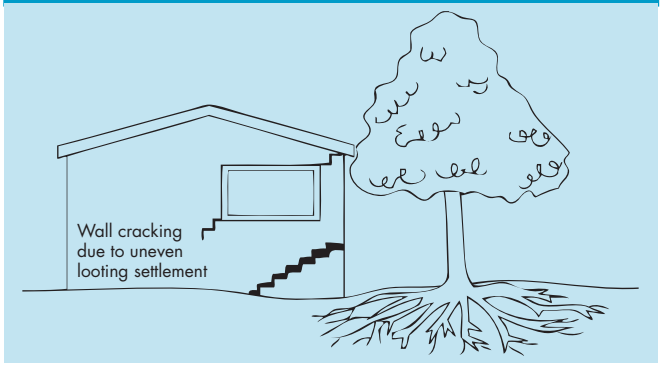
The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Trees can cause shrinkage and damage



Movement caused by tree roots
In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself
Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures
Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation causes a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem. Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870-2011.

AS 2870-2011 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

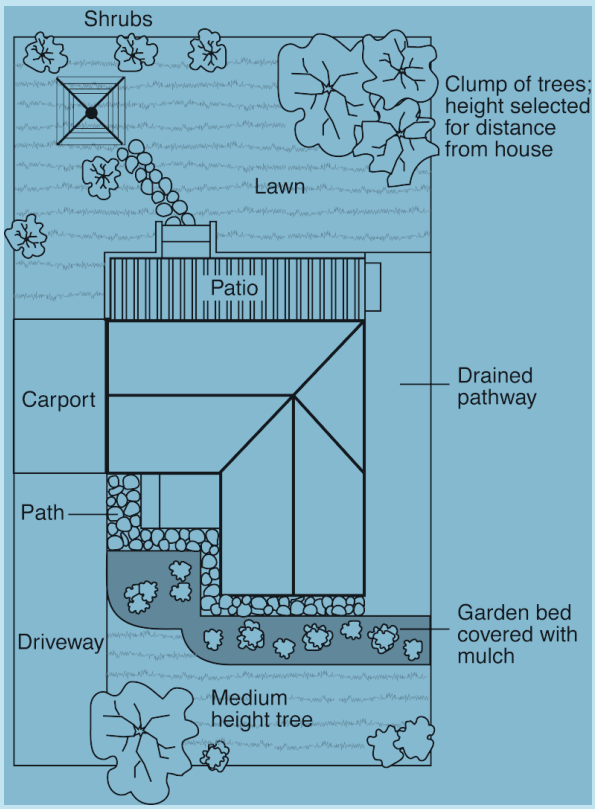
Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving should

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly.	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired.	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted.	15–25 mm but also depends on number of cracks	4

Gardens for a reactive site



extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation

In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden

The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees

Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs

State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation

Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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PROPOSED VERANDAH TO ANCILLARY DWELLING for
K EASTLEY, 28 GOODFORD LANE, ORIELTON
PLANNING APPLICATION DRAWINGS

Originally prepared - 17th NOVEMBER 2025; Last Amended 28th JANUARY 2026

Drawing #	Drawing Title	Amended
01a	Contents Page	28/01/26
02	Site Plan	
03	Floor Plan	
04a	Elevations	28/01/26

Note: The proposal documents (inclusive of plans & supporting documentation) have been prepared for the purpose of obtaining planning approval from Sorell Council & are therefore, subject to any conditions noted on that approval. Subsequently, prior to the preparation of working drawings, the plans are to be used as a guide only.

IC21 Design - BUILDING DESIGN & Drafting Services; Mob: 0416 251 504; Accreditation # CC 609V; Address: 61 Esplanade, Rose Bay, TAS 7015; E: anthony.sullivan.ic21@outlook.com

SITE INFORMATION

Land Title Reference:	PID: 9336861; Volume/Folio: 182209/7
Wind Classification:	N3 - AS 4055-2021 - Doyle Soil Consulting
Soil Classification:	M - AS 2870-2011 - Doyle Soil Consulting
Climate Zone:	7
BAL Level:	BAL 12.5 - AS 3959:2018 - Southern Planning
Corrosion Environment:	Low
Other Hazards:	n/a

Proposal Details:
Class 1a:
Ancillary Dwelling (existing): 59.89 m²
Class 10a:
Ancillary Verandah (proposed): 21.48 m²

Refer Site Plan for Site Coverage details

Site Area: 10,060 m²

DIMENSION NOTE: Site & Reduced Levels in metres; All other dimensions in millimetres unless otherwise indicated by unit notation.

Date:	Rev:	Amendment:
28/01/26	a	amendment to drawing #04; notation update

CONTENTS

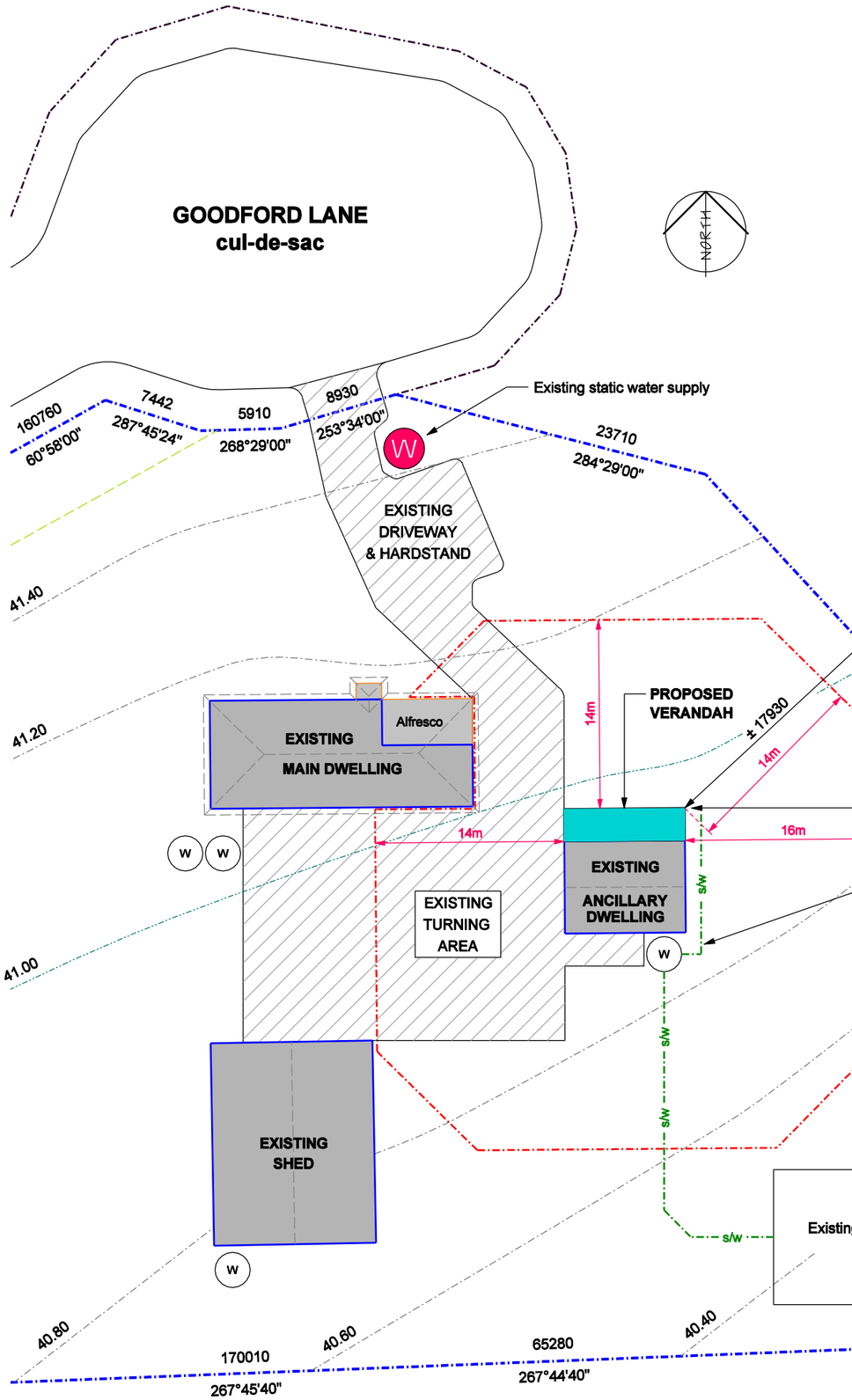
Scale: n/a (A3)

STATUS: PLANNING APPLICATION 28 JANUARY 2026

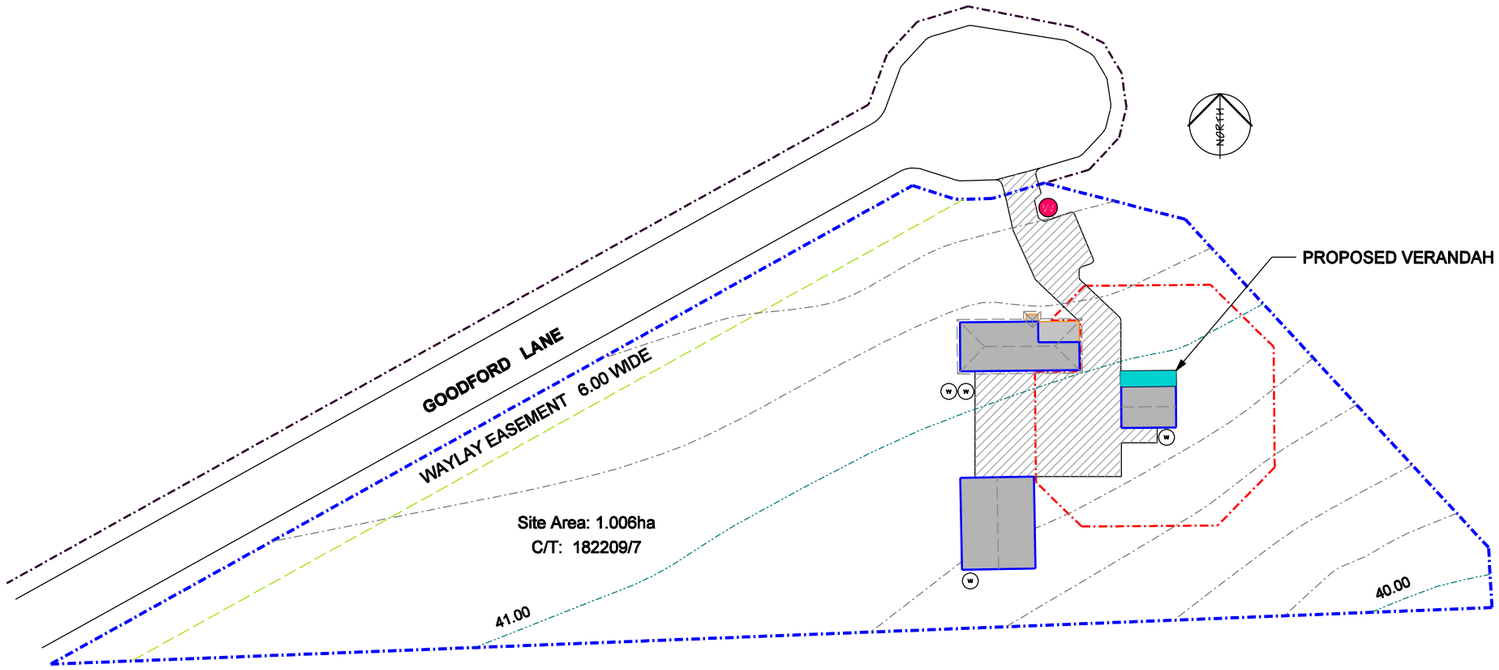
PROPOSED VERANDAH TO ANCILLARY DWELLING
AT: 28 GOODFORD LANE, ORIELTON
FOR: K Eastley

Phase: DA | Drawing #: 01 | Rev: a
(01 of 04 pgs)

IC21 design



SITE PLAN (PART) Scale 1 : 400



SITE PLAN (FULL) Scale 1 : 1000

Sorell Council

Development Application: 5.2025.326.1 - Response to Request For Information - 28 Good Ford Lane, Orielton P2.pdf

Plans Reference: P2

Date Received: 28/01/2026

PROPOSAL DETAILS					
EXISTING FOOTPRINT:		PROPOSED FOOTPRINT:		SITE COVERAGE:	
Main Dwelling:	138.83 m²	Main Dwelling (unchanged):	138.83 m²	Site Area:	10,060 m²
Alfresco/Porch (roofed): (class 10a)	25.65 m²	Alfresco/Porch (roofed) (unchanged): (class 10a)	25.65 m²		
Shed (class 10a):	180.00 m²	Shed (class 10a - unchanged):	180.00 m²		
Ancillary dwelling:	59.89 m²	Ancillary dwelling (unchanged):	59.89 m²	Existing:	4.02 %
		Ancillary dwelling verandah (new): (class 10a)	21.48 m²	Proposed:	4.23 %
TOTAL:	404.37 m²	TOTAL:	425.85 m²		

Notes:
- Contour intervals & RLs have been arbitarily set & are not to be referenced to AHD;
- All boundaries & adjacent offsets are subject to on site confirmation by a registered surveyor;

iC21 design

PROPOSED SITE PLAN

Scale: as shown (A3)

STATUS: PLANNING APPLICATION 17 November 2025

PROPOSED VERANDAH TO ANCILLARY DWELLING

AT: 28 GOODFORD LANE, ORIELTON

FOR: K Eastley

Phase: DA | Drawing #: 02 | Rev: - (02 of 04 pgs)

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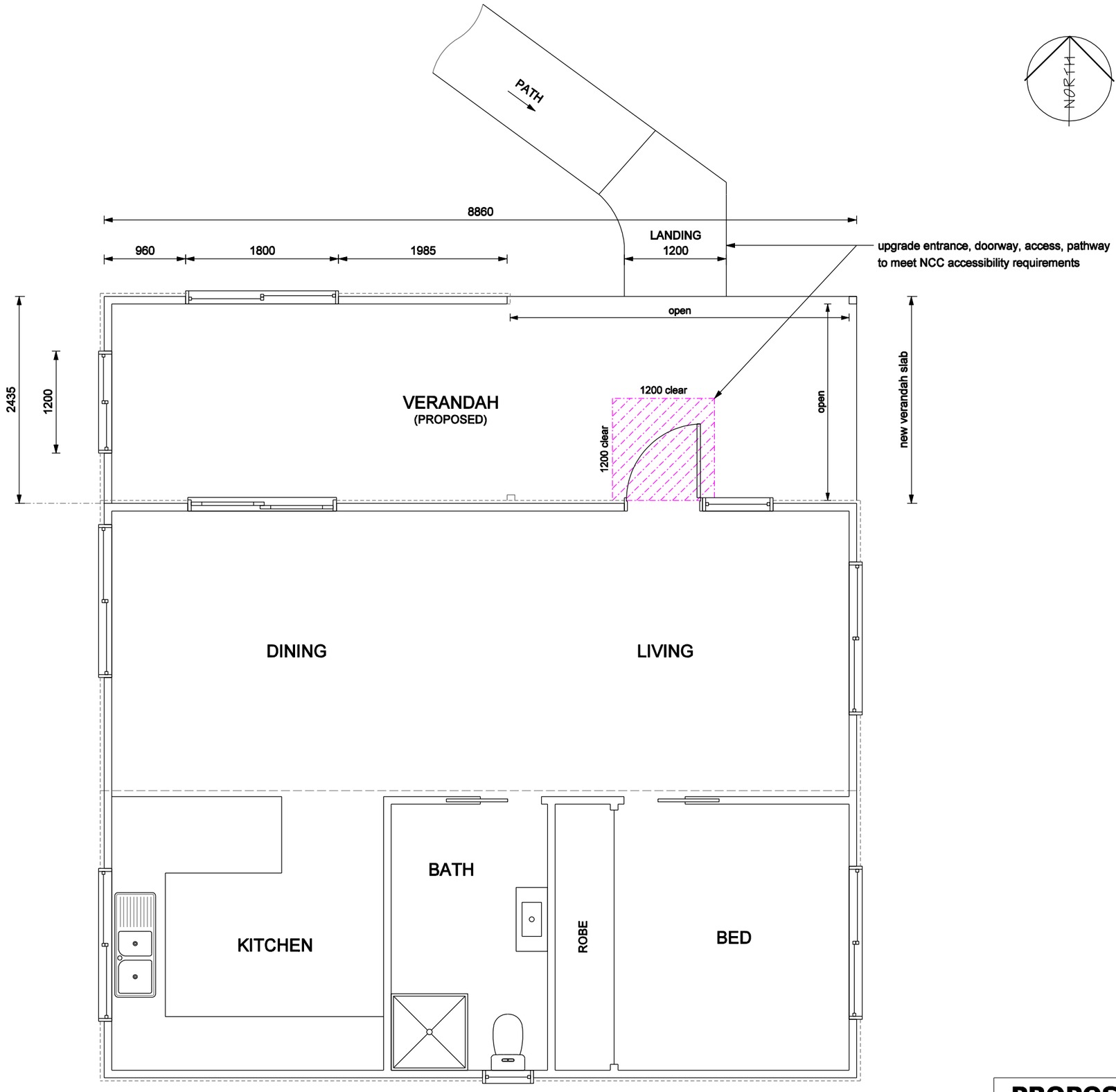
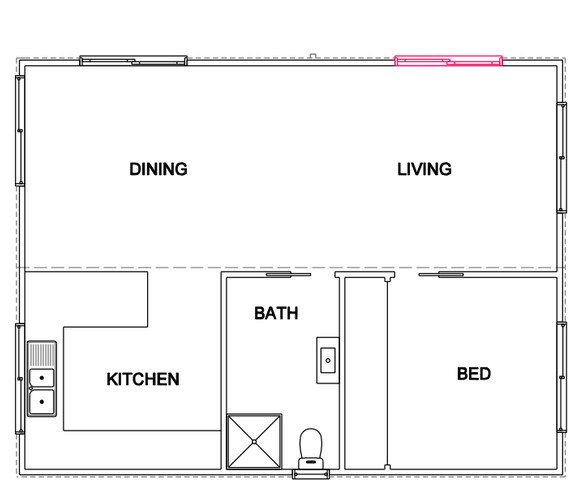


PROPOSED FLOOR PLAN Scale 1 : 50



EXISTING FLOOR PLAN Scale 1 : 100

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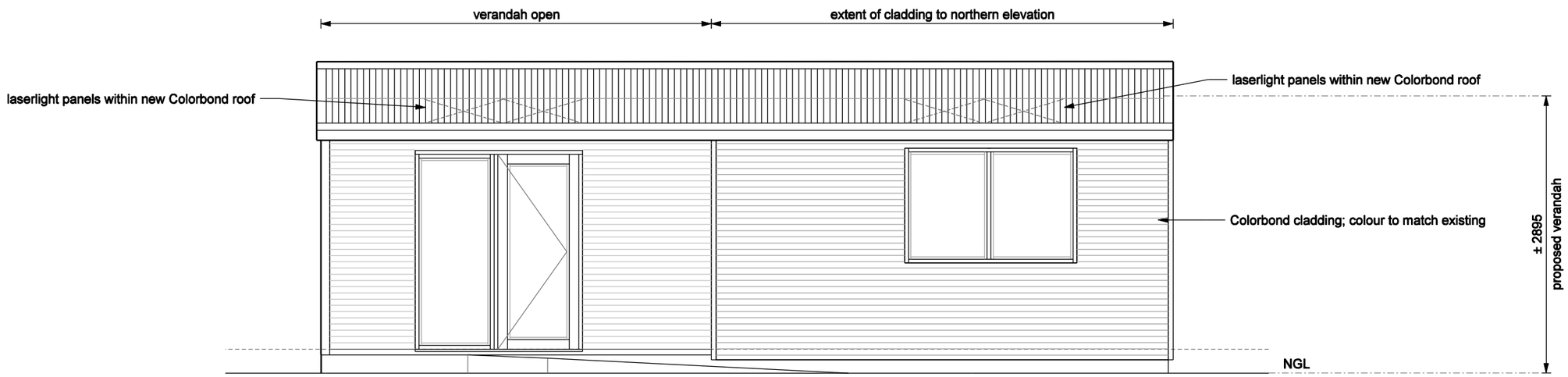
PROPOSED FLOOR PLAN

Scale: as shown (A3)

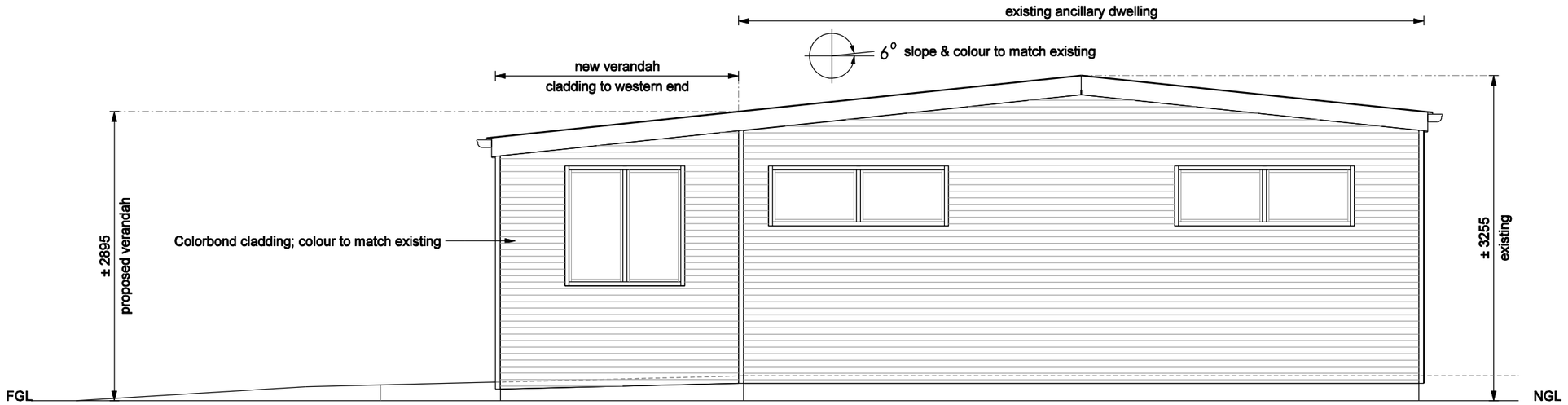
STATUS: PLANNING APPLICATION 17 November 2025

PROPOSED VERANDAH TO ANCILLARY DWELLING
AT: 28 GOODFORD LANE, ORIELTON
FOR: K Eastley

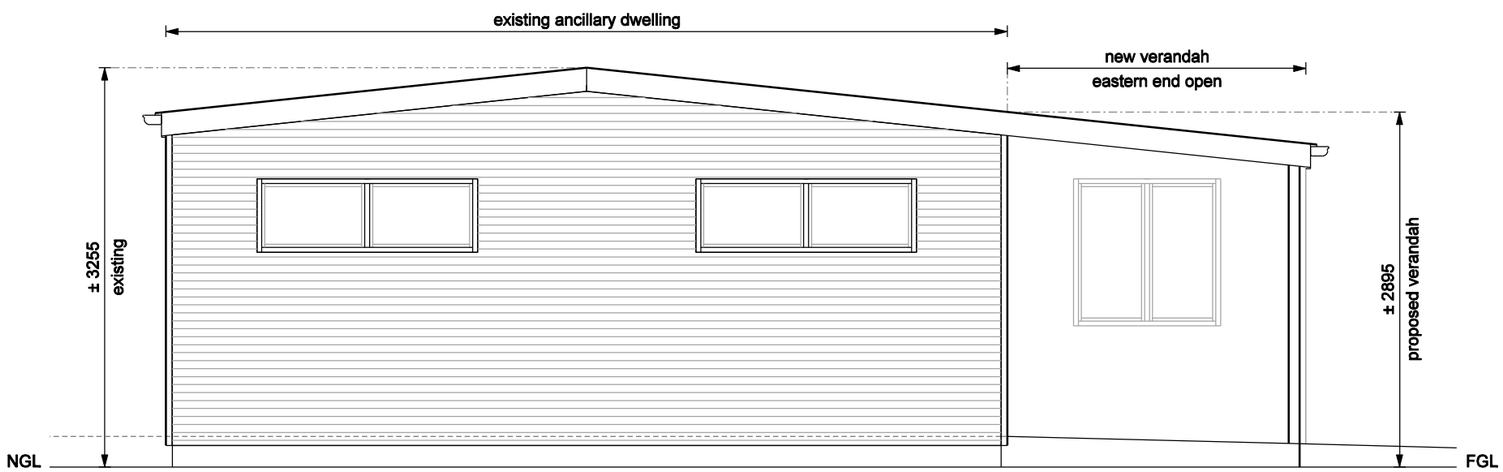
Phase: DA | Drawing #: 03 | Rev: - (03 of 04 pgs)



NORTH ELEVATION



WEST ELEVATION



EAST ELEVATION

Sorell Council

Development Application: 5.2025.326.1 - Response to Request For Information - 28 Good Ford Lane, Orielton P2.pdf
Plans Reference: P2
Date Received: 28/01/2026

Date:	Rev:	Amendment:
28/01/26	a	provide height of proposal (& existing dwelling) above NGL/FGL

PROPOSED ELEVATIONS

Scale: Scale 1 : 50 (A3)

STATUS: PLANNING 28 JANUARY 2026

PROPOSED VERANDAH TO ANCILLARY DWELLING

AT: 28 GOODFORD LANE, ORIELTON

FOR: K Eastley

Phase: DA Drawing #: 04 Rev: a (04 of 04 pgs)

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