NOTICE OF PROPOSED DEVELOPMENT

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

SITE:
3 OCHRE COURT, DODGES FERRY

PROPOSED DEVELOPMENT:
DWELLING & OUTBUILDING

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 23rd June 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 Chief Executive Officer. Representations must be received no later than **Tuesday 23rd June 2026.**

APPLICATION NO: **5.2026.154.1**
DATE: **5 JUNE 2026**

3 Ochre Court, Dodges Ferry

4-Jun-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.

50 m

N

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

Full description of Proposal:	*Use:* *Development:* New dwelling and shed *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 188,000

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

Location of proposed works:	Street address: 3 Ochre Court Suburb: Dodges Ferry Postcode: 7173 Certificate of Title(s) Volume: 187805 Folio: 5

Current Use of Site	Bare site

Current Owner/s:	Name(s) Morgan Celeste Harding

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/		

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

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: 12 May 2026

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
187805	5
EDITION	DATE OF ISSUE
2	25-Feb-2025

SEARCH DATE : 12-May-2026
SEARCH TIME : 11.28 am

DESCRIPTION OF LAND

Town of DODGES FERRY
Lot 5 on Sealed Plan 187805
Derivation : Part of 547 Acres Gtd. to Thomas Macdowell.
Prior CT 185271/200

SCHEDULE 1

N241444 TRANSFER to MORGAN CELESTE HARDING Registered 25-Feb-2025 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP187805 FENCING PROVISION in Schedule of Easements
SP185271 FENCING PROVISION in Schedule of Easements
E406234 MORTGAGE to Norfina Limited Registered 25-Feb-2025 at 12.01 pm

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 187805

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
Lot 100 on the plan is SUBJECT TO a Service Easement over that part of Lot 100 shown on the plan as "SERVICE EASEMENT (SP185271)" appurtenant to Lot 6 on SP185271.

Lots 1, 7 and 8 on the plan are SUBJECT TO a Right of Drainage over those parts of Lots 1, 7 and 8 shown as "DRAINAGE EASEMENT A" in gross in favour of the Sorell Council.

Covenants
No covenants are created in this Schedule of Easements

Fencing Provision
In respect of each lot shown on the plan, the Vendor DDC Operations Pty Ltd will not be required to fence.

Interpretation
Service Easement means the full and free right of every person who is entitled to an estate or interest in possession in the land indicated as the dominant tenement or any part of that land. And those persons' employees, agents and contractors, with which such rights being capable of enjoyment in common with the owner of the servient tenement and the relevant Council the relevant Water Authority, Aurora Energy Pty Ltd or any other relevant electrical supply entity and Telstra Corporation or any other telecommunications supply entity (and their successors from time to time), to lay services and to have the right of free and uninterrupted passage and running of water, electricity, telephone or other services or supplies (including electronic or other information transfer services) through, under, over and along the easement by pipes, wires, cables, poles, and all other conducting media which are now or at any time laid under the natural surface of the land are safe and protected in accordance with all relevant Acts, Regulations or By-Laws, together with a right for them and their surveyors and workmen to enter on the easement with or without machinery, materials and specialist service providers for the purposes of inspecting, laying, installing, cleaning, repairing, maintaining, renewing, re-laying or removing any such pipes, wires, cables, poles or

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: DDC Operations Pty Ltd (ACN 655 059 724) FOLIO REF: 185271/200 SOLICITOR Dobson Mitchell and Allport and AB 23001454:	PLAN SEALED BY: SORELL COUNCIL DATE: 20.11.24 7.2022.32.1 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 PAGE/S	Registered Number SP 187805
SUBDIVIDER: DDC Operations Pty Ltd (ACN 655 059 724) FOLIO REFERENCE: 185271/200	

other conducting media with every person exercising such right causing as little damage and inconvenience as reasonably practicable in so doing and making good any damage caused to the service tenement.

Executed by DDC Operations Pty Ltd in Accordance with section 127(1) of the Corporations Act 2001 }

Sole Director/Secretary .....

Name of Sole Director/Secretary (print) DAVID MILLER

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.

OWNER DDC OPERATIONS PTY LTD

FOLIO REFERENCE 185271/200

GRANTEE PART OF 547 ACRES GTD TO THOMAS MACDOWELL

PLAN OF SURVEY

BY SURVEYOR DAVID BRUCE MILLER
BROOKS LARK AND CARRICK SURVEYORS
UNIT 1 – 2 KENNEDY DRIVE, CAMBRIDGE PARK
PH 6248-5898 MOB. 0400-114-824

TOWN OF DODGES FERRY

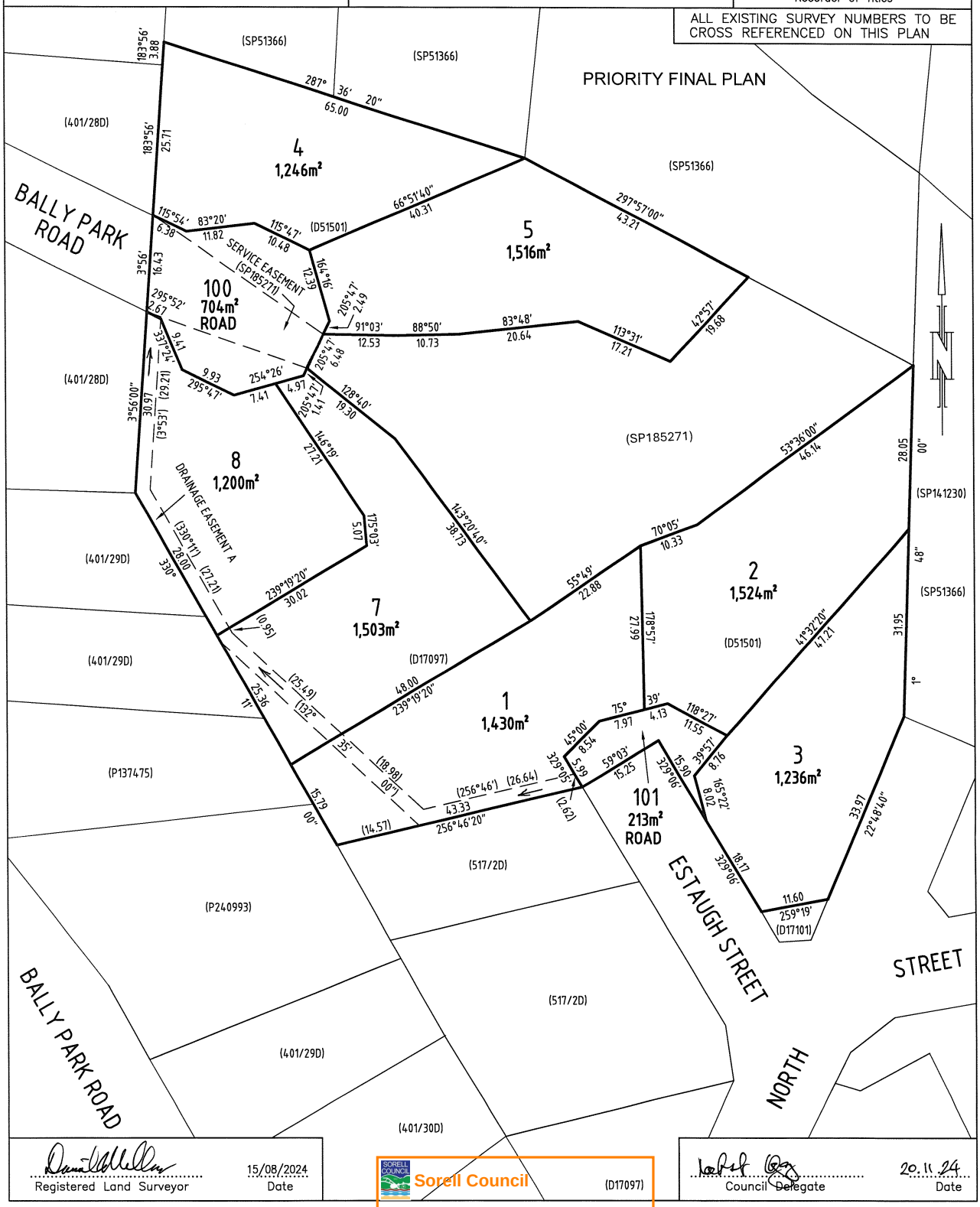
SCALE 1: 600 LENGTHS IN METRES

REGISTERED NUMBER
SP187805

APPROVED
EFFECTIVE FROM - 1 DEC 2024

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



Registered Land Surveyor 15/08/2024 Date

Council Delegate 20.11.24 Date

Sorell Council (D17097)

Development Application: 5.2026.154.1 - Development Application - 3 Ochre Court, Dodges Ferry - P1.pdf
Plans Reference:P1
Date Received:12/05/2026

Shane Geard

ArchInk Pty Ltd

M: 0435 044 895

E: shane@archink.au

Date 12 May 2026

Attention: Sorell Council – Planning

sorell.council@sorell.tas.gov.au

RE: DA APPLICATION FOR NEW DWELLING AND SHED AT 3 OCHRE COURT, DODGES FERRY

As applicant for the property owner Morgan Celeste Harding, I am submitting the following documents in support of a development application for a new dwelling and shed to be constructed at 3 Ochre Court, Dodges Ferry:
Signed Application form and Sorell Council

- Architectural:

250820_3 Ochre Court, Dodges Ferry_DA_R06.pdf

1 G-01	COVER	DA	R6	12/05/26
2 A-01a	SITE PLAN	DA	R6	12/05/26
2 A-01b	SITE SURVEY	DA	R6	12/05/26
2 A-02	FLOOR PLAN	DA	R6	12/05/26
2 A-03	ELEVATIONS	DA	R6	12/05/26

- Shed Plans:

102098 Harding (Morgan).10.pdf

- Soil & Wastewater:

Wastewater assessment report_ 3 Ochre Court.pdf

- Title documents:

FolioPlan-187805-5.pdf

FolioText-187805-5.pdf

ScheduleOfEasements-187805-5.pdf

I trust this letter and supporting documents adequately describe the proposed development, however please don't hesitate to contact me with any further concerns.

Yours Faithfully,

Shane Geard
Architect
M: 0435 044 895
E: shane@archink.au

GEOTECH 25-028a

ROCK SOLID GEOTECHNICS PTY LTD
Peter Hofto
163 Orielton Road
Orielton
TAS 7172

0417 960 769
peter@rocksolidgeotechnics.com.au

23/3/2026

Geotechnical Assessment / Classification for Proposed Residential Development

3 Ochre Court, Dodges Ferry.

CLIENT: Morgan Harding [redacted]

CONTENTS

SUMMARY

A residential development is proposed by Morgan Harding at 3 Ochre Court, Dodges Ferry (Figure 1). Sandy topsoils, sand and Triassic sandstone (variable depth) underly the site.

The site is classified as Class 'A' in accordance with AS2870-2011. It is recommended to found the entire dwelling directly onto the sandstone bedrock (due the variable depth to bedrock).

Suitable upslope site drainage should be installed prior to the commencement of construction.

The following Wind Load Classifications (AS4055-2012: Wind Loads for Housing) are appropriate.

• Terrain Category Classification	TC2.5	Terrain with a few obstructions
• Shielding Classification	PS	Partial Shielding
• Topographic Classification	T2	
• Wind Load Classification	N3	

INVESTIGATION

The Tasmanian Geological Survey 1:50000 Geological Atlas – 'Sorell' indicates that the site is underlain by Triassic sediments.

A site investigation was completed on Friday 7/2/2025. This included the augering of multiple test holes to assess the site for foundation conditions and onsite wastewater disposal (4WD mounted SAMPLA25 mechanical auger with 100mm solid flight augers). The locations of the holes are marked on Figure 1.

It is proposed to construct a new dwelling on the currently vacant, 1516m^2 vacant block. The proposed house site slopes at approximately 3-7 degrees to the north/northwest. The site is covered in grass, with a single, mature gum tree in the eastern corner of the block (to remain). Sandstone bedrock was observed at the surface adjacent to the northeastern property boundary.

The profile displayed in Test Hole #1 consisted of:

0.00 – 0.20m	SAND: fine grained, greyish brown, trace rootlets – TOPSOIL
0.20 – 0.80m	SAND: fine grained, light brown, dry
0.80m+	Mechanical auger refusal on presumed sandstone bedrock – 0.80m.

Test Holes #2 & #3 encountered sandstone bedrock at >0.4m depth.

Groundwater was not encountered in either hole.

Plate 1 – Test Hole #1 - Development site - looking to the east.

Plate 2 – Test Hole #2 - House site test hole - looking to the southeast.

Plate 3 – Test Hole #3 - House site test hole - looking to the northwest.

CONDITIONS OF INVESTIGATION

This report remains the property of Rock Solid Geotechnics Pty. Ltd. (RSG). It must not be reproduced in part or full, or used for any other purpose without written permission of this company. The investigations have been conducted, & the report prepared, for the sole use of the client or agent mentioned on the cover page. Where the report is to be used for any other purpose RSG accepts no responsibility for such other use. The Forms 55 and 35 are not transferable to another body without consultation (reissue) from RSG. The information in this report is current and suitable for use for a period of two years from the date of production of the report, after which time it cannot be used for Building or Development Application.

This report should not be used for submission for Building or Development Application until RSG has been paid in full for its production. RSG accepts no liability for the contents of this report until full payment has been received.

The results & interpretation of conditions presented in this report are current at the time of the investigation only. The investigation has been conducted in accordance with the specific client's requirements &/or with their servants or agent's instructions.

This report contains observations & interpretations based often on limited subsurface evaluation. Where interpretative information or evaluation has been reported, this information has been identified accordingly & is presented based on professional judgement. RSG does not accept responsibility for variations between interpreted conditions & those that may be subsequently revealed by whatever means.

Due to the possibility of variation in subsurface conditions & materials, the characteristics of materials can vary between sample & observation sites. RSG takes no responsibility for changed or unexpected variations in ground conditions that may affect any aspect of the project. The classifications in this report are based on samples taken from specific sites. The information is not transferable to different sites, no matter how close (ie. if the development site is moved from the original assessment site an additional assessment will be required).

It is recommended to notify the author should it be revealed that the sub-surface conditions differ from those presented in this report, so additional assessment & advice may be provided.

Investigations are conducted to standards outlined in Australian Standards:

- AS1726-1993: Geotechnical Site Investigations
- AS2870-2011: Residential Slabs and Footings
- AS4055-2012: Wind Loads for Housing
- AS1547-2012: Onsite Domestic Wastewater Management

& as specified in 'Guidelines for Geotechnical Assessment of Subdivisions and Recommended Code of Practise for Site Classification to AS2870 in Tasmania' - Institute of Engineers, Tasmanian Division.

All new developments should subject to strict site maintenance. Attention is drawn to the enclosed information reproduced with the permission from Standards Australia:

- CSIRO Information Sheet No. BTF18 – 'Guide to home-owners on foundation maintenance & footing performance'.

Any assessment that has included an onsite wastewater system design will require a further site visit / inspection once the system has been installed. After the inspection to verify that the system has been installed as per RSG's design a statement will be provided. An additional fee applies for the site visit & issuing the certificate.

RSG is not responsible for the correct installation of wastewater systems. Any wastewater installation is the sole responsibility of the owner/agent and certified plumber. Any variation to the wastewater design must be approved by RSG, and an amended Special Plumbing Permit obtained from the relevant council. The registered plumber must obtain a copy and carefully follow the details in the council issued Special Plumbing Permit. A "Certificate of Completion" will be based on surface visual inspection only, to verify the location of the system. All underground plumbing works are the responsibility of the certified plumber.

PETER HOFTO

ROCK SOLID GEOTECHNICS PTY LTD

OWNER DDC OPERATIONS PTY LTD

FOLIO REFERENCE 185271/200

GRANTEE PART OF 547 ACRES GTD TO THOMAS MACDOWELL

PLAN OF SURVEY

BY SURVEYOR DAVID BRUCE MILLER
BROOKS LARK AND CARRICK SURVEYORS
UNIT 1 – 2 KENNEDY DRIVE, CAMBRIDGE PARK
PH 6248-5898 MOB. 0400-114-824

TOWN OF DODGES FERRY

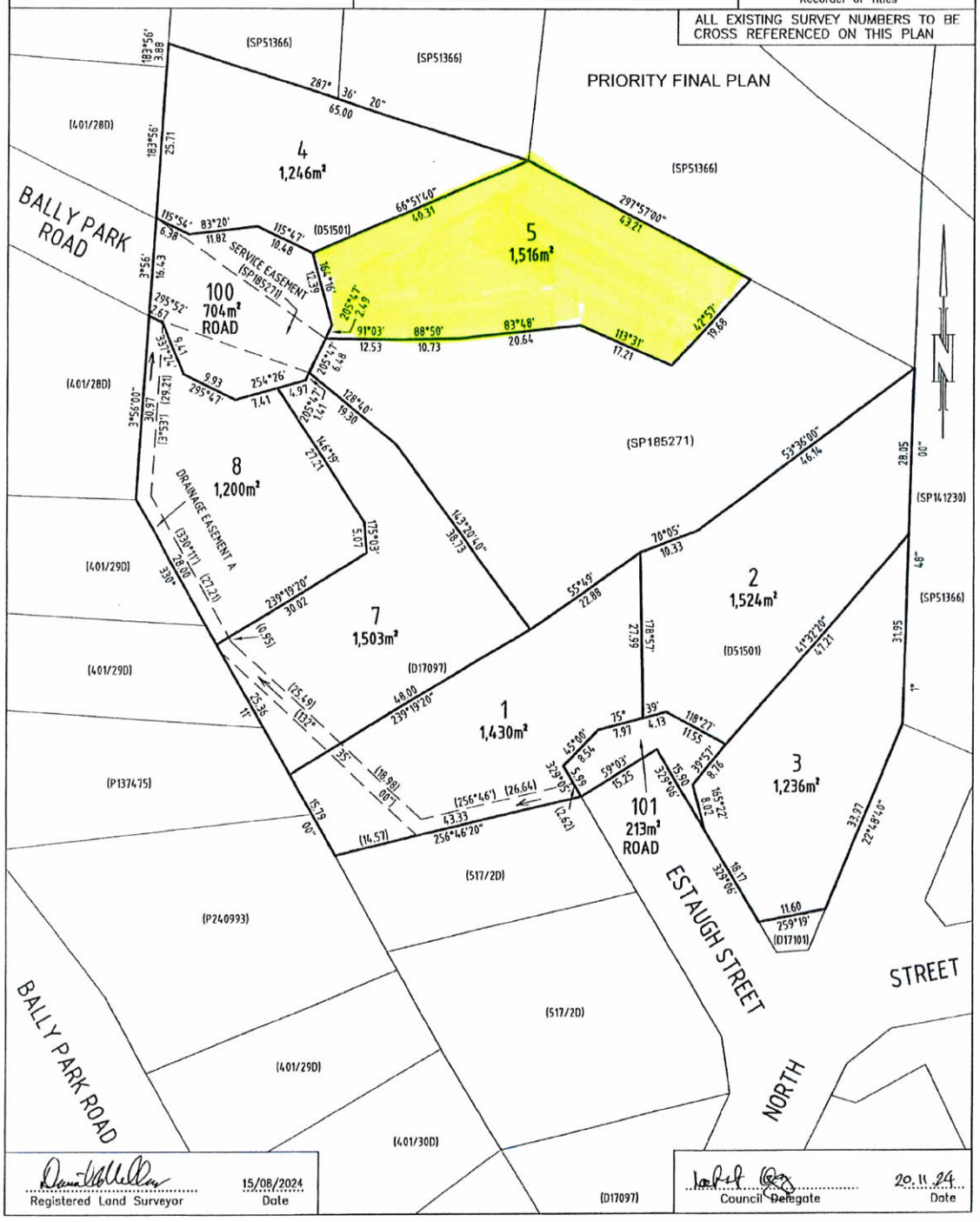
SCALE 1: 600 LENGTHS IN METRES

REGISTERED NUMBER
SP187805

APPROVED
EFFECTIVE FROM - 1 DEC 2024

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



Registered Land Surveyor — 15/08/2024 Date

Council Delegate — 20.11.24 Date

LEGEND

- Stormwater Manhole
- Stormwater House Conn.
- Electricity Power Box
- Communication Pit
- Site Datum
- Boundary Peg/Mark
- Tree
- Property Boundary
- Fence
- House
- Container
- Concrete
- Mail box
- Star picket
- Photo Location

Sorell Council
Development Application: 5.2026.154.1 - Development Application - 3 Ochre Court, Dodges Ferry - P1.pdf
Plans Reference:P1
Date Received:12/05/2026

Lot 5
1,516m²

43.21
40.31
19.68
17.21
20.64
10.73
12.53
2.49
12.29

Peg 40.91
Peg 41.43
Nail in kerb
41.27
Nail in fence
Spike
43.34
Tank

Site Datum
TBM nail in concrete
RL @ 43.83

PHOTO 1

0 4.0 8.0 12.0 16.0 20.0 metres
SCALE - 1 : 200

NOTES:

This plan and associated digital model is prepared for PodMatrix from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.

Services shown have been located where visible by field survey. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

HORIZONTAL DATUM is GDA2020, Coordinates are Plane Coordinate Origin: TBM Nail in concrete E 550410.523 N 5254231.498 from RTK GPS per SPM9939

REV	AMENDMENTS	DRAWN	DATE	APPR
E				
D				
C				
B				
A				

ROGERSON & BIRCH SURVEYORS
UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@rbsurveyors.com
WEB: www.rbsurveyors.com

Contour & Detail Plan

FOR: PodMatrix

LOCATION: 3 Ochre Court, **Dodges Ferry.**

Date:	Contour interval:	Reference:
02/03/2026	0.250m	**Podma05** 16734
Drawn:	**Scale:**	**Bearing Datum: MGA2020 per**
SM	1:200 (A3)	ST76RT
Approved:	**Title Reference:**	**Vertical Datum:**
SM	187605-5	AHD83 per SPM9939

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: Morgan Harding [redacted] *Owner /Agent*

Address

[redacted] *Suburb/postcode*

Qualified person details:

Qualified person: Peter Hofto - Rock Solid Geotechnics P/L

Address: 163 Orielton Road

Orielton 7172

Phone No: 0417960769

Fax No:

Licence No:

Email address: peter@rocksolidgeotechnics.com.au

Qualifications and Insurance details: BSc (Hons) – Geology / Geophysics; PI Insurance – Lloyds Underwriting; PL Insurance – CGU Insurance Lt

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

Speciality area of expertise: Geotechnical Assessments

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

Details of work:

Address: 3 Ochre Court, Dodges Ferry

Lot No: 5

Certificate of title No:

The assessable item related to this certificate: Geotechnical Assessment – Foundations

(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: Geotechnical Assessment

(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 items, 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:	
Relevant calculations:	AS2870

References:

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

Scope and/or Limitations

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		GEOTECH 25-028a	23/3/2026

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18 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, 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
1	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites with only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes
H	Highly reactive clay sites, which can experience high ground movement from moisture changes
E	Extremely reactive sites, which can experience extreme ground movement from moisture changes
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise

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).

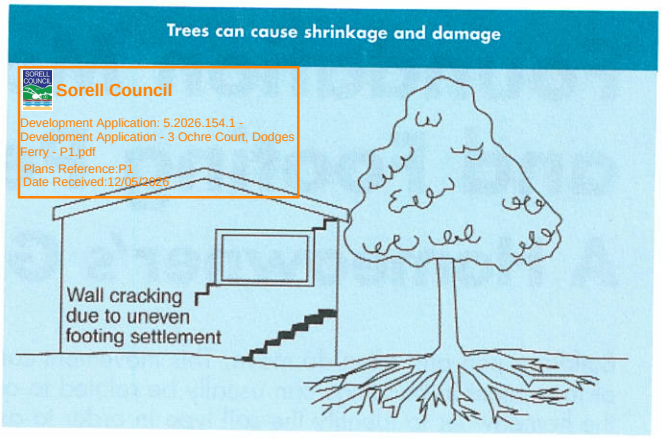
Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

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.

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 cause 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.

AS 2870 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.

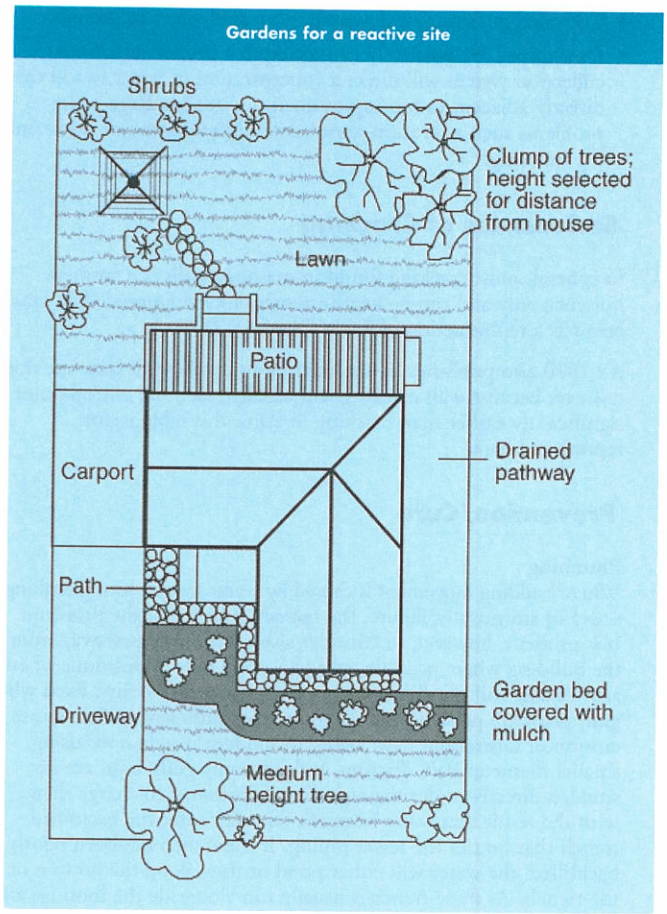
Protection of the building perimeter

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

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 depend on number of cracks	4



should 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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APPENDIX 3

Onsite Wastewater System Design – 3 Ochre Court, Dodges Ferry

Below find an Onsite Wastewater System design, and the allocation of a Land Application Area (LAA) for the proposed dwelling at 3 Ochre Court, Dodges Ferry.

This assessment should be read in conjunction with the attached Site & Soil Evaluation Report (GEOTECH 25-028a).

It is proposed to construct a dwelling on the upper, eastern portion of the block. Future plans include the potential construction of an extension to the proposed residence so that it may have a total of 4-bedrooms. The central and western portions of the property generally slope shallowly at 2-3 degrees to the northwest.

The profile displayed in Test Hole #4 consisted of:

0.00 – 0.20m	SAND: fine grained, greyish brown, trace rootlets – TOPSOIL
0.20 – 0.80m	SAND: fine grained, light brown, dry
0.80m+	Mechanical auger refusal on presumed sandstone bedrock – 0.80m.

Test Hole #5 encountered sandstone bedrock at 1.20m depth.

Test Hole #6 encountered sandstone bedrock at 0.85m depth.

Test Hole #7 encountered sandstone bedrock at 0.85m depth.

Groundwater was not encountered in any of the holes.

The site is classified as Class 1 (SAND) over BEDROCK with an indicative permeability of 0.8m/day, and a Design Irrigation Rate (DIR) of 5mm/day (secondary treated effluent).

Plate 4 – Test Hole #5 - looking to the east.

COMPLIANCE WITH THE 2016 DIRECTOR'S GUIDELINES FOR ONSITE WASTEWATER

Compliance Table Directors Guidelines for OSWM		
Acceptable Solutions	Performance Criteria	Compliance achieved by
7. Standards for Wastewater Land Application Areas		
A1 Horizontal separation distance from a building to a LAA must comply with one of the following: a) be no less than 6m; b) be no less than: (i) 3m from an upslope boundary 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 The LAA is located so that the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.	Complies with A1 LAAs 3m from level building. LAAs >6m from upslope building.

A2 Horizontal separation distance from downslope surface water to a LAA 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 LAA 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 LAA >100m from downslope surface water.
A3 Horizontal separation distance from a property boundary to a LAA 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; & (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 LAA 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 LAA > 1.5m from upslope and side-slope property boundaries. Secondary treated effluent. LAA 3.5m from down-slope property boundary.
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a LAA 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 LAA 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.	Complies with A4 No known potable bores in the immediate vicinity of this site.

A5 Vertical separation distance between groundwater & a LAA 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 LAA 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.	Complies with A5 Groundwater not encountered.
A6 Vertical separation distance between a limiting layer & a LAA 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 Limiting layer > 0.50m depth.
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 with P7

WASTEWATER SYSTEM DESIGN:

It is proposed to secondary treat all the wastewater from the dwelling in an Aerated Wastewater Treatment System (AWTS), and to apply the effluent onto the LAA via subsurface dripline irrigation.

The size of the required Land Application Area (LAA) for the AWTS is conditional on the wastewater load entering the system and the permeability of the site.

The wastewater system has been designed for a 4-bedroom residence to cater for potential future expansion.

4-bedroom dwelling	6-person occupancy	
Tank water	120 litres/person/day	
Wastewater Load	6 x 120 litres/person/day	720 litres/day
Design Irrigation Rate (DIR)	5mm/day	Secondary treated effluent
Irrigation Area	720 / 5 = 144m^2	

Total size of calculated Land Application Area (LAA) is 150m^2.

LAND APPLICATION AREA

The Land Application Area will be constructed as per the following specifications:

- Establishment and maintenance of a minimum of 150m^2 of irrigation area.
- The areas are to consist of sub-surface irrigation under designated lawns.
- Landscaping of the irrigation area is to be maintained in good order at all times. Such maintenance includes the mowing of the lawns.
- The irrigation areas are not to be used for growing vegetables.
- The current topsoil should be scoured / ripped to a minimum depth of 200mm, and any rocks removed.
- The drip lines must be rated for use with wastewater (pressure compensated), and organized to cover the entire 150m^2 LAA (@ 0.7m spacings).
- A Vacuum Breaker Valve should be provided at the high points of the LAA, and placed in a valve box to enable inspection.
- A Flush Valve should be provided for the LAA, with piping returning the flush water to the treatment plant. The Flush Valve is to be installed in valve boxes to allow inspection and servicing.

- An inline strainer (150-200 mesh) is to be installed to prevent solids from entering the irrigation system.
- Cutoff drains will not be required.
- The area should not be driven on, as compaction of the subsurface driplines will render the system unserviceable.

Peter Hofto

Rock Solid Geotechnics Pty Ltd

SITE AND SOIL EVALUATION REPORT

Soil Category: (as stated in AS/NZS 1547-2000) 1,…2,…3,…4,…5,…6	Modified Emerson Test Required If Yes, Emerson Class No.	No
Measured or Estimated Soil Permeability (m/d):	0.8m/d	
Design Irrigation Rate (DIR)	5mm/day	(Secondary Treated Effluent)
Geology:	Triassic sediments.	

Slope:	3 degrees to the northwest
Drainage lines / water courses:	Nil
Vegetation:	Grass
Site History: (land use)	Large residential block
Aspect:	NW
Pre-dominant wind direction:	Northwest to southwest
Site Stability: Will on-site wastewater disposal affect site stability?	No
Is geological advice required?	No
Drainage/Groundwater:	Not encountered
Depth to seasonal groundwater (m):	Not Encountered
Are surface or sub-surface drains required upslope of the land application area	No
Water Supply:	
☑ TANK	
Date of Site Evaluation:	7/2/2025
Weather Conditions:	Fine

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peter@rocksolidgeotechnics.com.au

Morgan Harding
[redacted]

23/3/2026

Loading Certificate for Onsite Wastewater System - 3 Ochre Court, Dodges Ferry

1 System Capacity: (medium/long term)

- 4-bedroom residence, 6 persons total — 720 litres/day

2 Design Criteria Summary:

- Secondary Treated Effluent — Aerated Wastewater Treatment System (AWTS)
- Soil Category — Class 1 SAND over bedrock
- Land Application System — 150m^2 of subsurface dripline irrigation

3 Reserve Area:

- Suitable reserve area if required in the future.

4 Variation from design flows etc:

- The system should successfully assimilate additional peak loadings which may result from occasional social gatherings if this does not exceed use by more than 10 persons in a 24-hour period, or more than 2 temporary resident visitors (ie. up to 8 persons total) for a period not exceeding 4 days. Visitors should be advised of the requirement to minimise time spent in showers, not unduly running taps, and other common-sense water conservation measures.

5 Consequences of overloading the system:

- Long term use by more than 6 residents or equivalent may result in overloading of the system, surfacing of effluent, public and environmental health nuisances, pollution of surface water etc.

6 Consequences of under-loading the system:

- The system will work effectively with as few as 1-person in the residence, however long periods of zero occupancy may result in poor functioning of the system when normal use recommences. If the building is left unoccupied for more than one month, it is advised to inform the maintenance contractor.

7 Consequences of lack of operation, maintenance and monitoring attention:

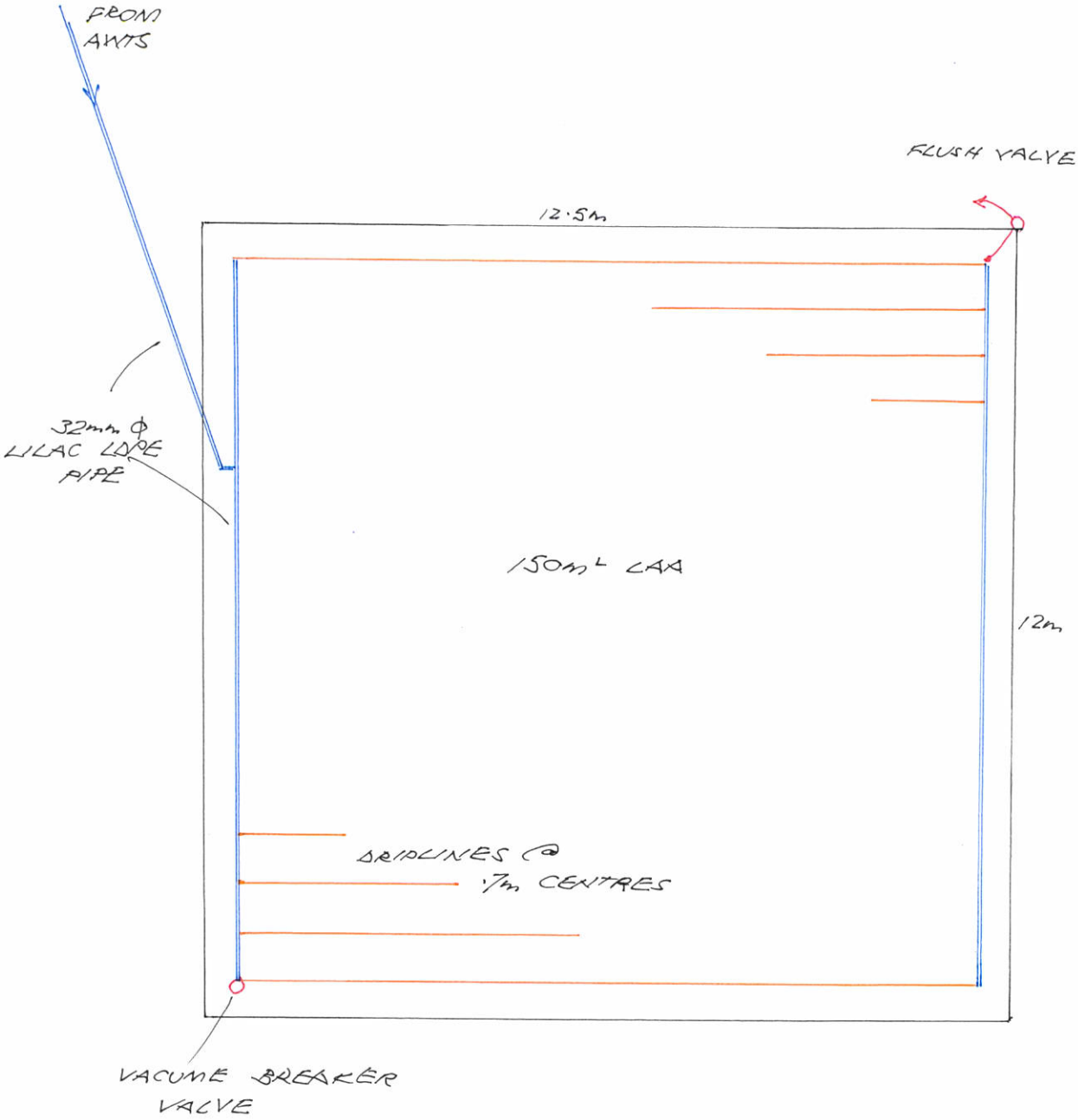
- The AWTS must be maintained by a contracted maintenance provider.

Peter Hofto
Rock Solid Geotechnics Pty Ltd

PROPOSED
ONSITE WASTEWATER
SYSTEM

Block layout:

IRRIGATION AREA
1:100



CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form 35

To: Morgan Harding *Owner name*

[redacted] *Address*

Suburb/postcode

Designer details:

Name: Peter Hofto

Category: Building Services Designer Hydraulic - Restricted

Business name: Rock Solid Geotechnics P/L

Phone No: 0417960769

Business address: 163 Orielton Road

Orielton 7172

Fax No:

Licence No: CC6159I

Email address: peter@rocksolidgeotechnics.com.au

Details of the proposed work:

Owner/Applicant Morgan Harding

Designer's project reference No. GEOTECH 25-028a

Address: 3 Ochre Court, Dodges Ferry

Lot No:

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

Description of work:

ONSITE WASTEWATER MANAGEMENT SYSTEM

Sorell Council
Development Application: 5.2026.154.1 - Development Application - 3 Ochre Court, Dodges Ferry - P1.pdf
Plans Reference:P1
Date Received:12/05/2026

(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
	X 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: X

Performance Solution: *(X the appropriate box)*

Other details:

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: ROCK SOLID GEOTECHNICS	Date: 23/3/2026
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: ROCK SOLID GEOTECHNICS	Date: 23/3/2026
Computations:	Prepared by: ROCK SOLID GEOTECHNICS	Date: 23/3/2026
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

AS 1547:2021 On-site domestic wastewater management

Director's Guidelines for Onsite Wastewater Management

Any other relevant documentation:

Attribution as designer:

I Peter Hofto – ROCK SOLID GEOTECHNICS P/L ..... 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:	Peter Hofto	PHO	23/3/2026
Licence No:	CC6159I		

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 works 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 .....Peter Hofto – ROCK SOLID GEOTECHNICS P/L.....
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:	Peter Hofto		23/3/2026

Shane Geard

ArchInk Pty Ltd

M: 0435 044 895

E: shane@archink.au

Date 26 May 2026

Attention: Sorell Council – Planning

sorell.council@sorell.tas.gov.au

RE: 5.2026-154.1 AT 3 OCHRE COURT, DODGES FERRY

Please find attached amended elevation drawings in response to your request for information letter dated 20 May 2026:

Planning:
Amended elevation plans for the proposed dwelling showing the maximum height of the dwelling in relation to existing and modified ground level including details of any cut and fill.

- Architectural:

1 G-01	COVER	DA	R7	26/05/26
2 A-01a	SITE PLAN	DA	R7	26/05/26
2 A-01b	SITE SURVEY	DA	R7	26/05/26
2 A-02	FLOOR PLAN	DA	R7	26/05/26
2 A-03	ELEVATIONS	DA	R7	26/05/26

The proposed dwelling is to be constructed as transportable pods that are to be installed on piers with suspended floor. Therefore, any cut will be minimal to achieve a level path and entry deck.

I trust this letter and supporting drawings adequately describe the proposed development, however please don't hesitate to contact me with any further concerns.

Yours Faithfully,

Shane Geard
Architect
M: 0435 044 895
E: shane@archink.au

Sheet List				
Sheet Number	Sheet Name	Project Status	Current Revision	Current Revision Date
1 G-01	COVER	DA	R7	26/05/26
2 A-01a	SITE PLAN	DA	R7	26/05/26
2 A-01b	SITE SURVEY	DA	R7	26/05/26
2 A-02	FLOOR PLAN	DA	R7	26/05/26
2 A-03	ELEVATIONS	DA	R7	26/05/26

General Information

Architect: Shane Geard

Reg:	1301 (Tas)
BSP Licence No:	740796453
Classification:	Architect
Address:	3 Ochre Ct Dodges Ferry
Lot:	5
Title Reference:	187805/5
Site Area:	1516m²
Site Coverage:	145m² (10%)
Climate Zone:	7
Soil:	Class A
Terrain:	TC2.5
Shielding:	PS
Topographical :	T2
Wind Load:	N3
BAL:	N/A
Corrosion Environment:	High
Floor Area:	Refer to Floor Plan

DA ISSUE

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Harding Residence

3 Ochre Ct. Dodges Ferry

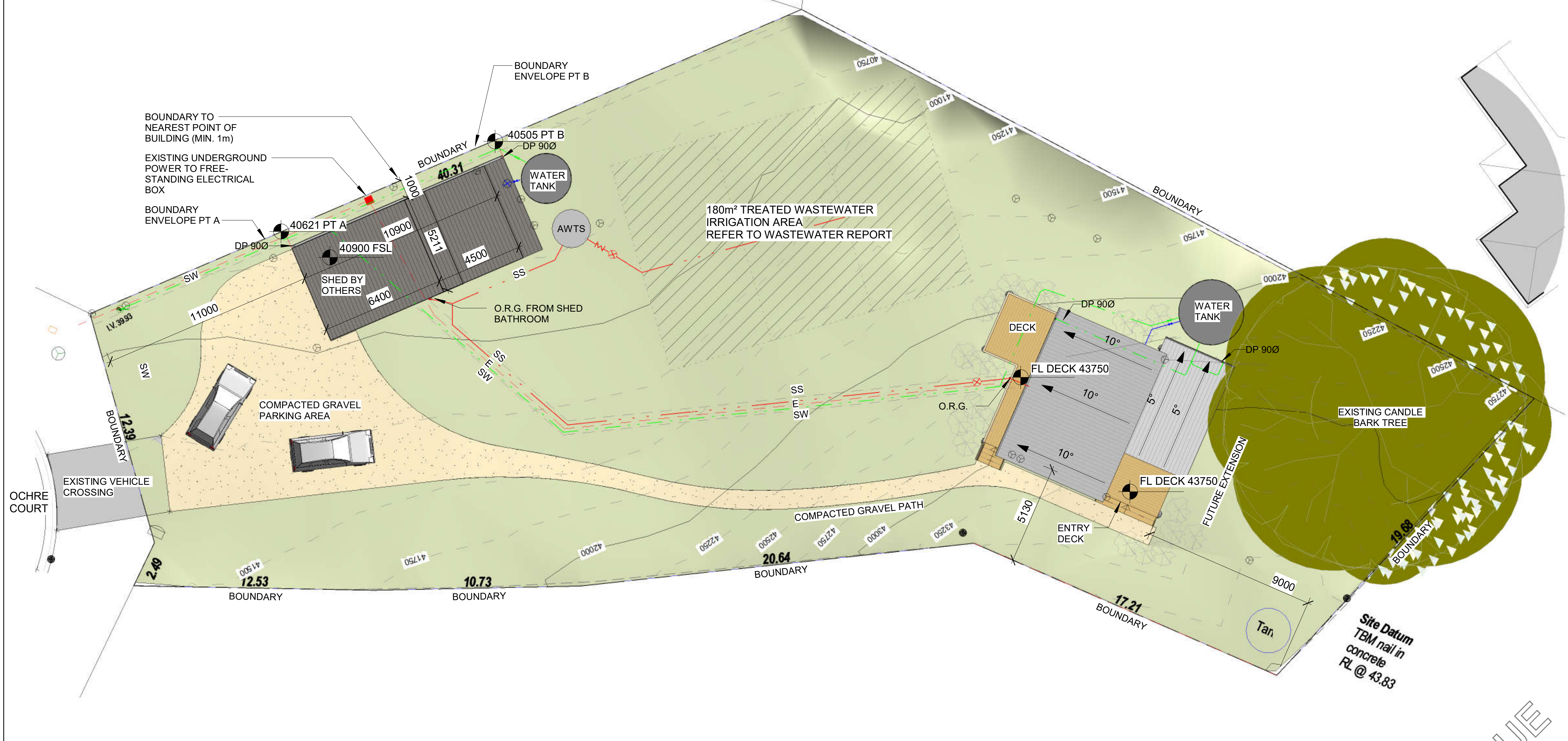
For Morgan Harding

COVER			
Project number	Project Number		1 G-01
Drawing Status		DA	
Current Revision	26/05/26	R7	Scale on A3

26/05/2026 6:30:49 PM

Construction and materials in accordance with current NCC requirements and all relevant Australian Standards
BAL construction in accordance with AS3959 = N/A

Cladding materials and fixings to be in accordance with the ABCB Housing Provisions for Corrosion Environment = High



WARNING:
IT IS THE RESPONSIBILITY OF THE BUILDER TO COMPLETE BYD AND WORK WITH AUTHORITIES TO LOCATE ALL UNDERGROUND SERVICES.

General Notes
Do not scale plans, use written dimensions only. The owner/builder subcontractor shall verify all dimensions, levels, setbacks and specifications prior to commencing works or ordering materials and shall be responsible for ensuring that all building works conform to the current NCC and Australian standards, building regulations and town planning requirements.
Report any discrepancies to this office.

Email: shane@archink.com.au

Archink
PODMATRIX

Harding Residence
3 Ochre Ct. Dodges Ferry
For Morgan Harding

SITE PLAN

Project number	Project Number
Drawing Status	DA
Current Revision	26/05/26 R7

2 A-01a
Scale on A3 1 : 200

26/05/2026 6:30:51 PM

LEGEND

- Stormwater Manhole
- Stormwater House Conn.
- Electricity Power Box.
- Communication Pit
- Site Datum
- Boundary Peg/Mark
- Tree
- Property Boundary
- Fence
- House
- Container
- Concrete
- Mail box
- Star picket
- Photo Location

Lot 5
1,516m²

43.21
40.31
19.68
17.21
20.64
10.73
12.53
12.39
2.49

Site Datum
TBM nail in concrete
RL @ 43.83

Tank

Spike
43.34

Peg 40.91
I.V. 39.93

Peg 41.43

Nail in kerb
41.27

Nail in fence

Ridge 45.98
Gutter 45.06

41.0
42.0
43.0
44.0

41.02
41.22
41.19
41.26
41.19
41.25
41.31

0 4.0 8.0 12.0 16.0 20.0 metres
SCALE - 1 : 200

PHOTO 1

NOTES:

This plan and associated digital model is prepared for PodMatrix from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.

Services shown have been located where visible by field survey. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

HORIZONTAL DATUM is GDA2020, Coordinates are Plane
Coordinate Origin: TBM Nail in concrete
E 550410.523 N 5254231.498 from RTK GPS per SPM9939

REV	AMENDMENTS	DRAWN	DATE	APPR.
E				
D				
C				
B				
A				

ROGERSON & BIRCH SURVEYORS
UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@rbsurveyors.com
WEB: www.rbsurveyors.com

Contour & Detail Plan

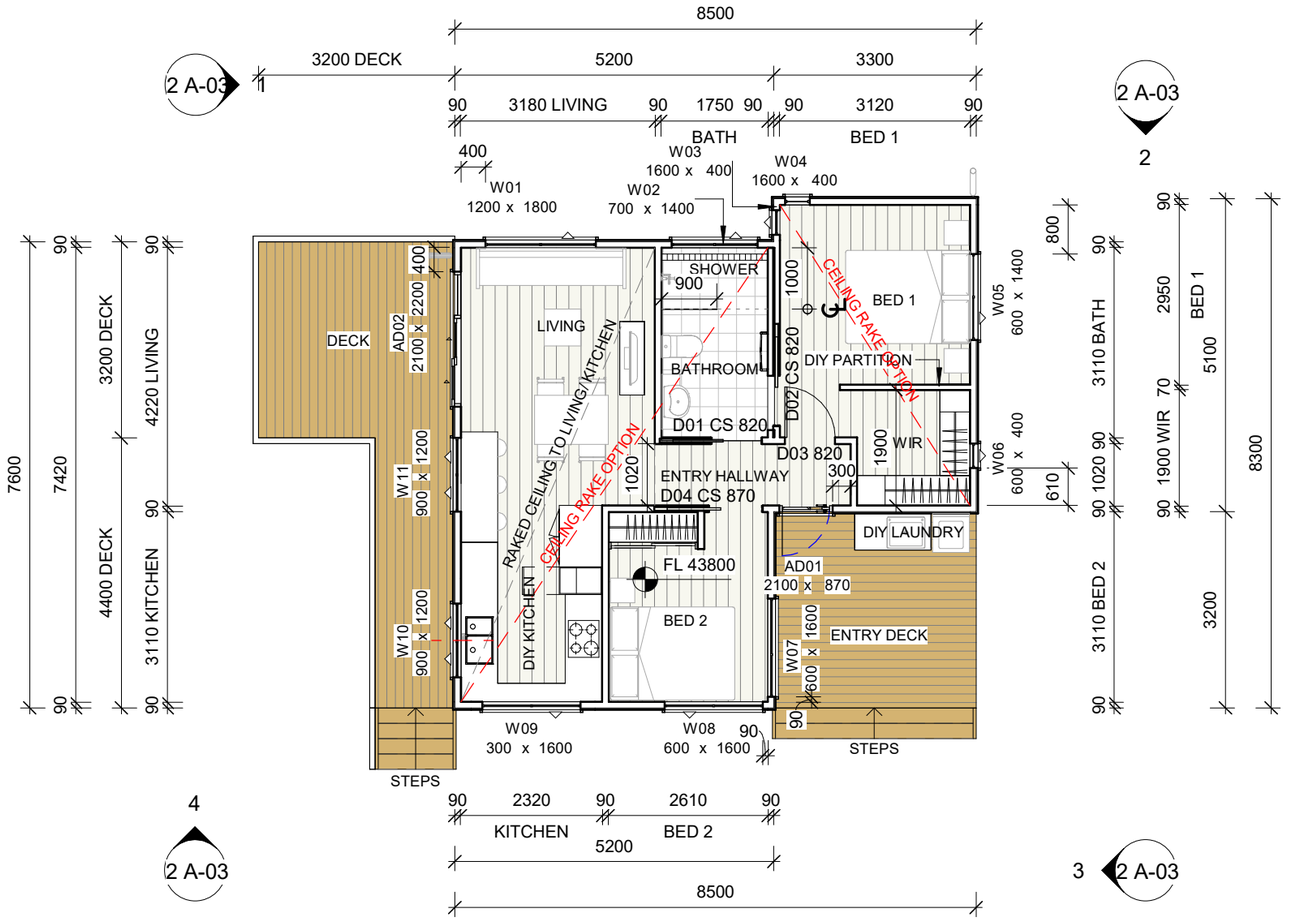
FOR: PodMatrix

LOCATION: 3 Ochre Court, Dodges Ferry.

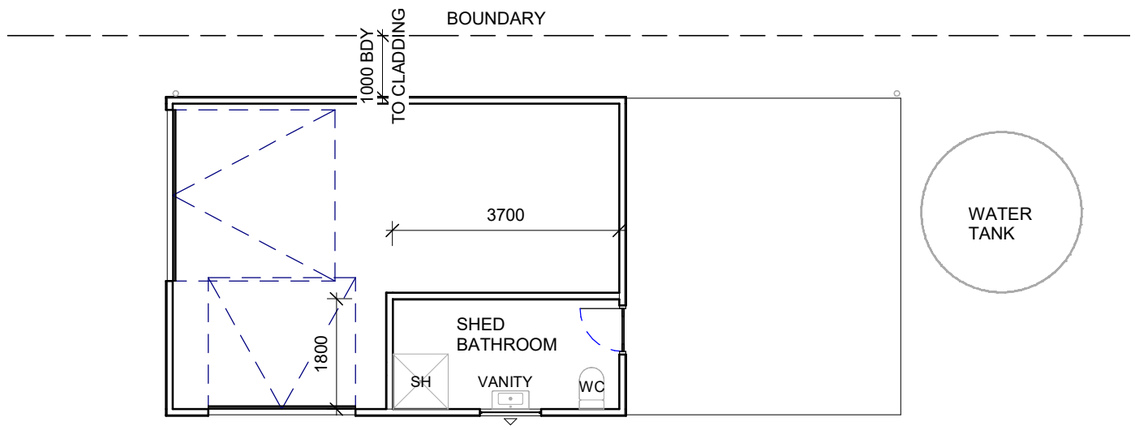
Date:	Contour interval:	Reference:
02/03/2026	0.250m	**Podma05** 16734
Drawn:	**Scale:**	**Bearing Datum: MGA2020 per**
SM	1:200 (A3)	ST76RT
Approved:	**Title Reference:**	**Vertical Datum:**
SM	187805-5	AHD83 per SPM9939

Construction and materials in accordance with current NCC requirements and all relevant Australian Standards
BAL construction in accordance with AS3959 = N/A

Cladding materials and fixings to be in accordance with the ABCB Housing Provisions for Corrosion Environment = High



1 Ground Floor
1 : 100



2 Shed Bathroom
1 : 100

NOTE: REFER TO SEPARATE SHED MANUFACTURER'S DRAWINGS

FLOOR FINISHES LEGEND

- Timber flooring overlay
- Tiles with slip resistance to AS 4586 (2013)
- Decking to AS 2796.1 (1999) Section 4

Area Schedule (Gross Building)	
Name	Area
HOUSE	56 m²
DECK	16 m²
ENTRY DECK	11 m²
SHED	62 m²
Grand total	145 m²

NOTE: REFER TO EAST ELEVATION FOR HIGH WINDOW W12

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Harding Residence

3 Ochre Ct. Dodges Ferry

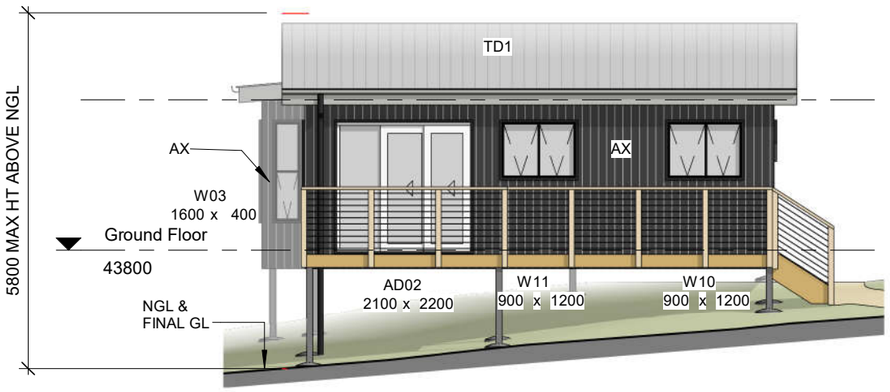
For Morgan Harding

FLOOR PLAN			
Project number	Project Number		2 A-02
Drawing Status	DA		
Current Revision	26/05/26	R7	Scale on A3 1 : 100

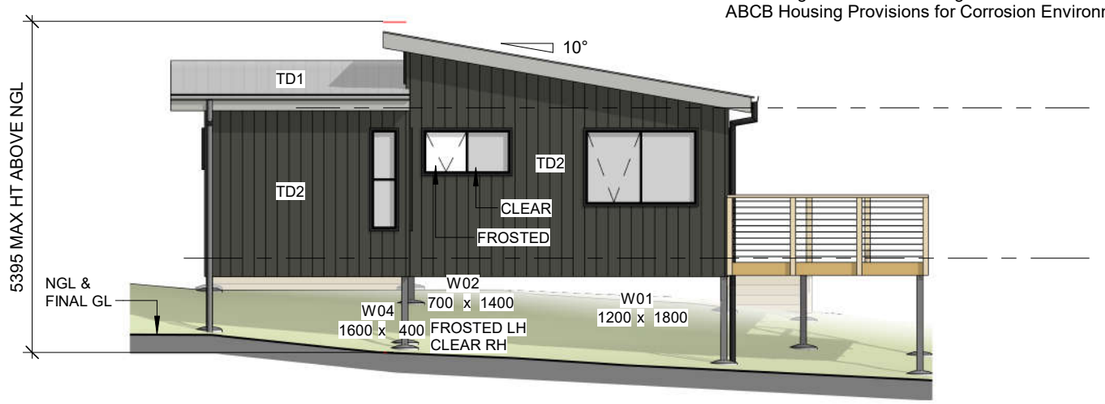
26/05/2026 6:31:00 PM

Construction and materials in accordance with current
NCC requirements and all relevant Australian Standards
BAL construction in accordance with AS3959 = N/A

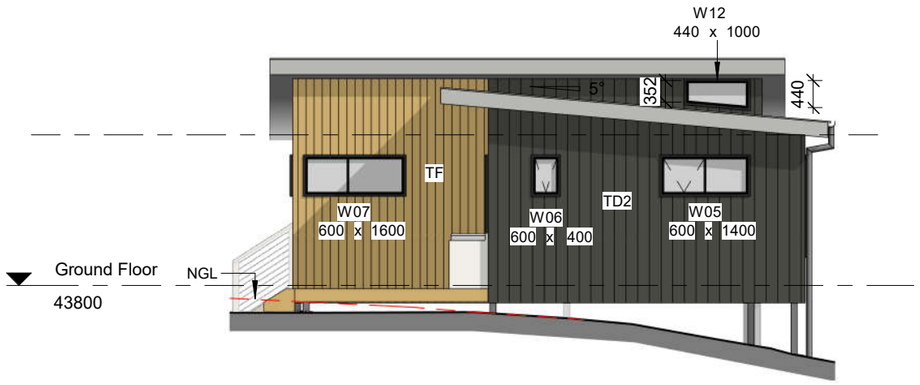
Cladding materials and fixings to be in accordance with the
ABCB Housing Provisions for Corrosion Environment = High



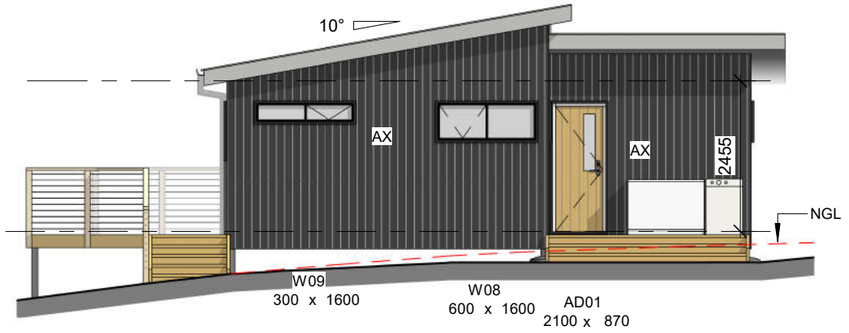
1 West Elevation
1 : 100



2 North Elevation
1 : 100



3 East Elevation
1 : 100



4 South Elevation
1 : 100

EXTERNAL FINISHES
'AX' WALL CLADDING: JAMES HARDIE AXON 133 PANEL CLADDING IN MONUMENT COLOUR
'TD2' WALL CLADDING: TRIMDEK COLORBOND ULTRA IN WOODLAND GREY COLOUR
'TF' WALL CLADDING TO EAST FACING WALL AT ENTRY DECK: SHIPLAP TIMBER, SPOTTED GUM OR SIMILAR

'TD1' ROOF CLADDING: COLORBOND ULTRA TRIMDEK IN SHALE GREY COLOUR
INDICATIVE ROOF COLOUR: SHALE GREY

WINDOW FRAMES: PC ALUMINIUM, COLOUR MONUMENT

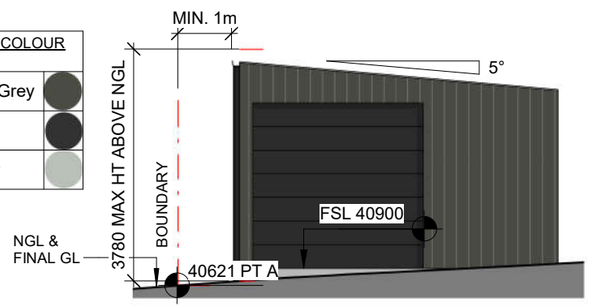
WINDOW & EXTERIOR DOOR FRAME TRIMS: JAMES HARDIE AXENT 45x38, COLOUR MONUMENT

OPENINGS/ GLAZING: DOUBLE GLAZED, ARGON FILLED. STAINLESS STEEL FLYSCREEN MESH TO ALL EXTERIOR OPENINGS EXCEPT MAIN ENTRY DOOR.

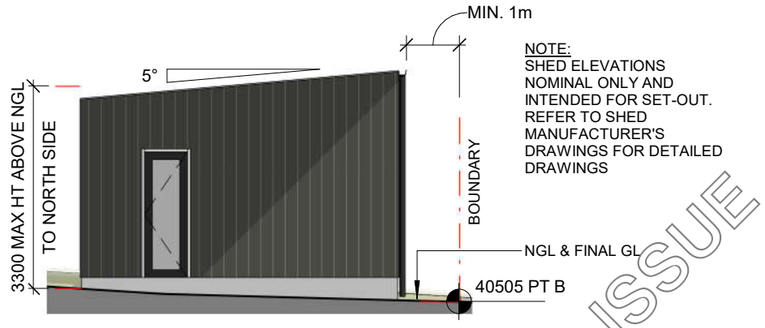
ROOF FLASHINGS, GUTTERS, FLASHINGS TO MATCH ROOF COLOUR
ROOF FASCIA, BARGE BOARDS: H3 PAINTED TIMBER TO MATCH ROOF COLOUR
DOWNPIPES: COLORBOND TO MATCH WALL COLOUR
SOFFIT LININGS: SMOOTH FC WITH OFF-WHITE PAINT FINISH

DECK: SELECTED TIMBER WITH STAINLESS STEEL WIRE BALUSTRADES TO COMPLY WITH NCC 11.3.6

INDICATIVE COLOUR PALETTE	
Woodland Grey	
Monument	
Shale Grey	



5 Shed - West Elevation
1 : 100



6 Shed - East Elevation
1 : 100

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Harding Residence

3 Ochre Ct. Dodges Ferry

For Morgan Harding

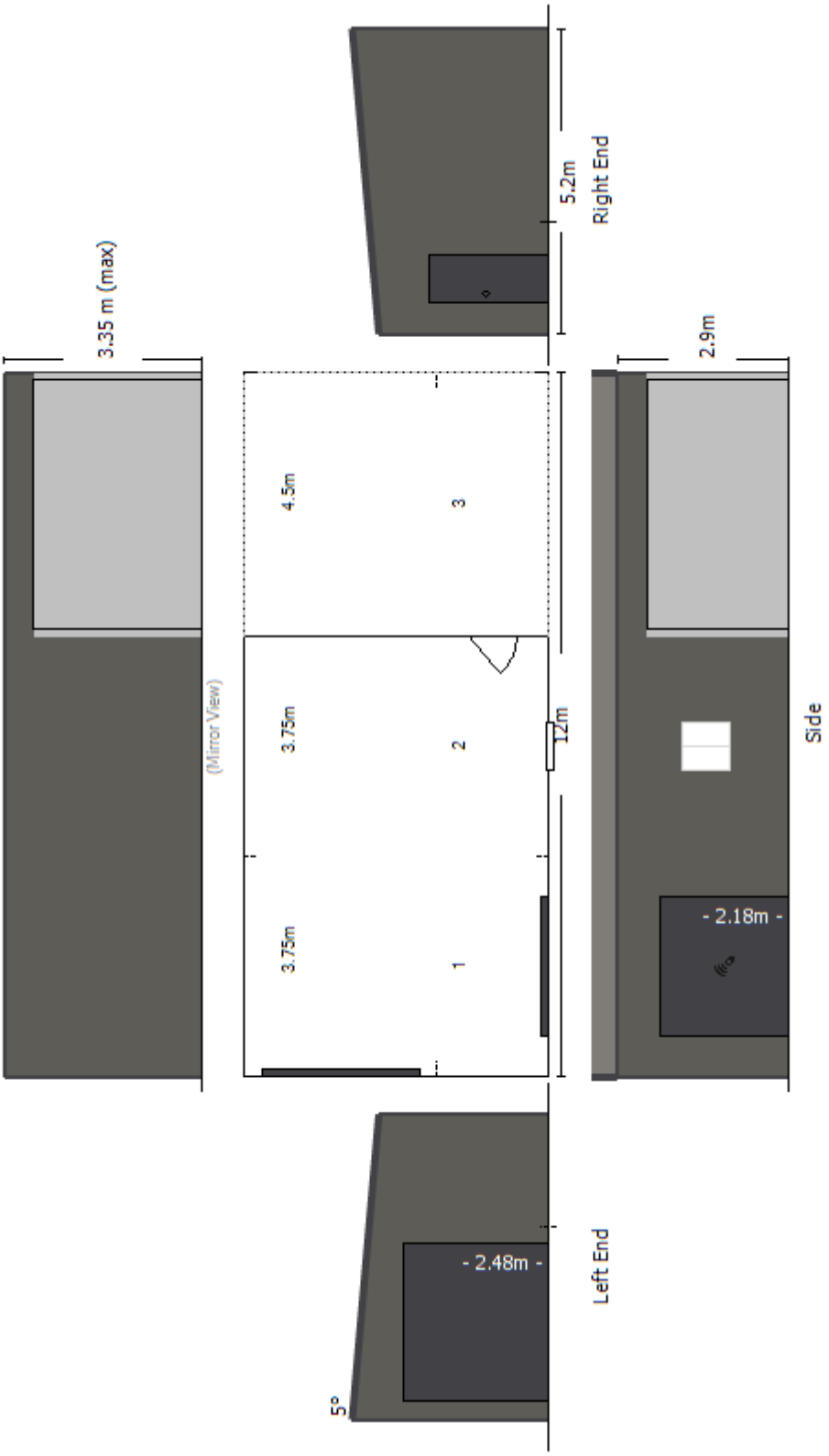
ELEVATIONS

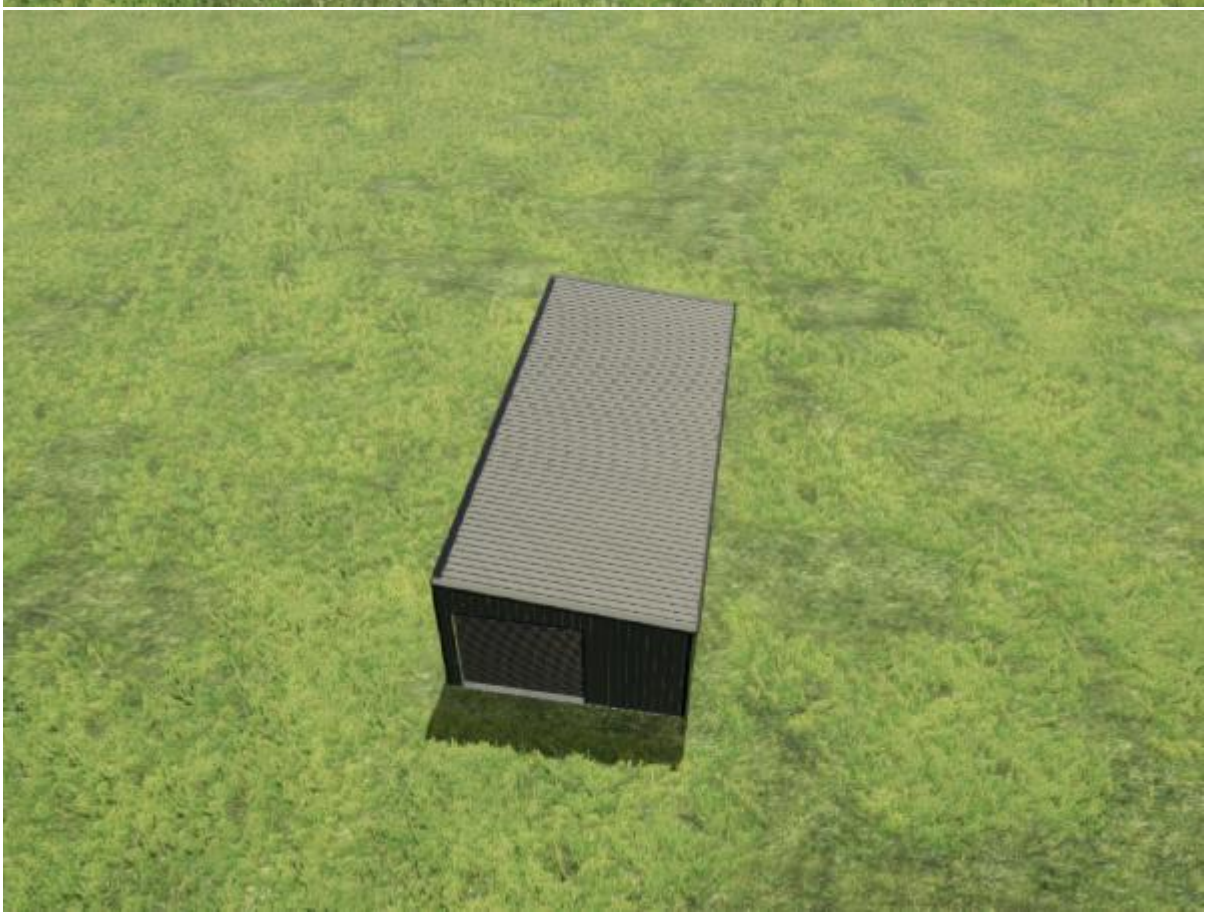
Project number	Project Number	
Drawing Status	DA	
Current Revision	26/05/26	R7

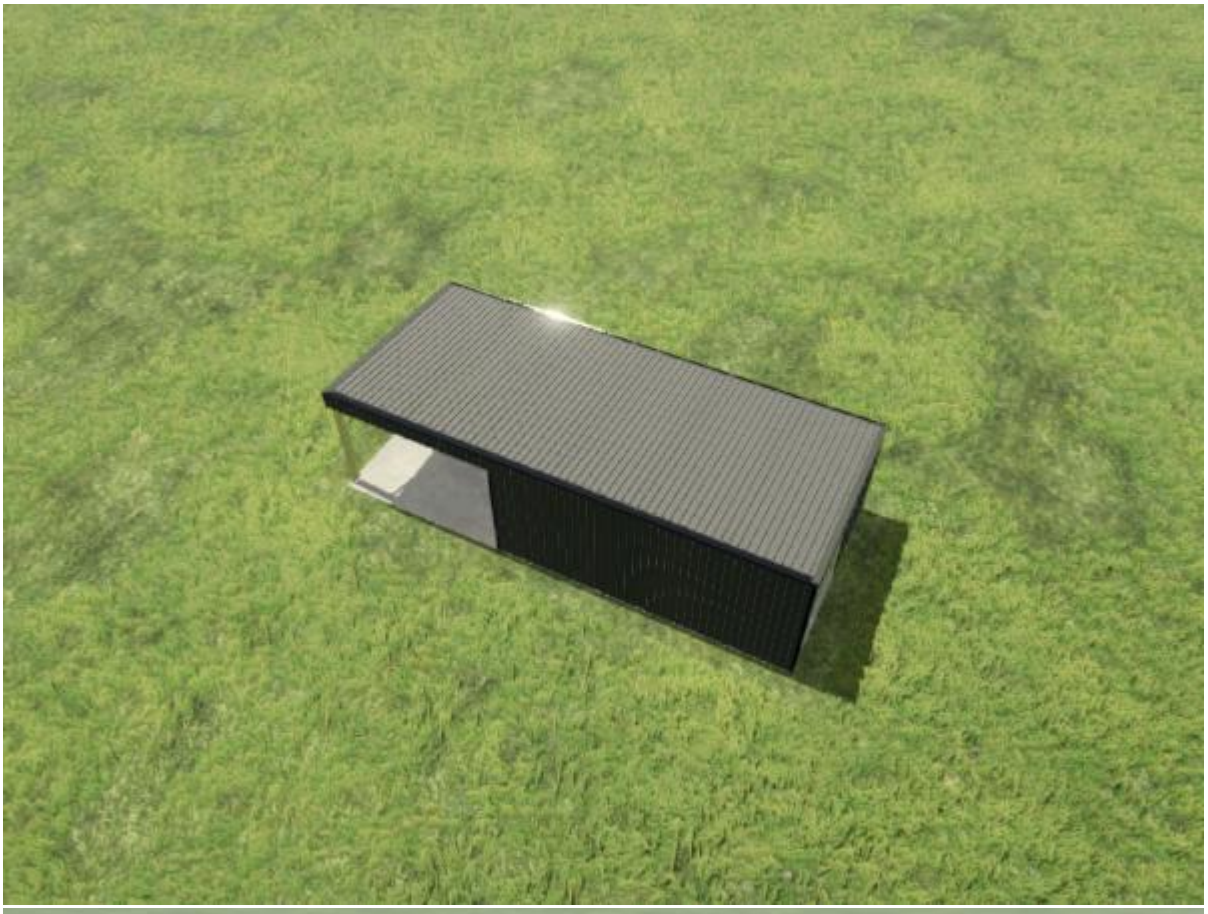
2 A-03

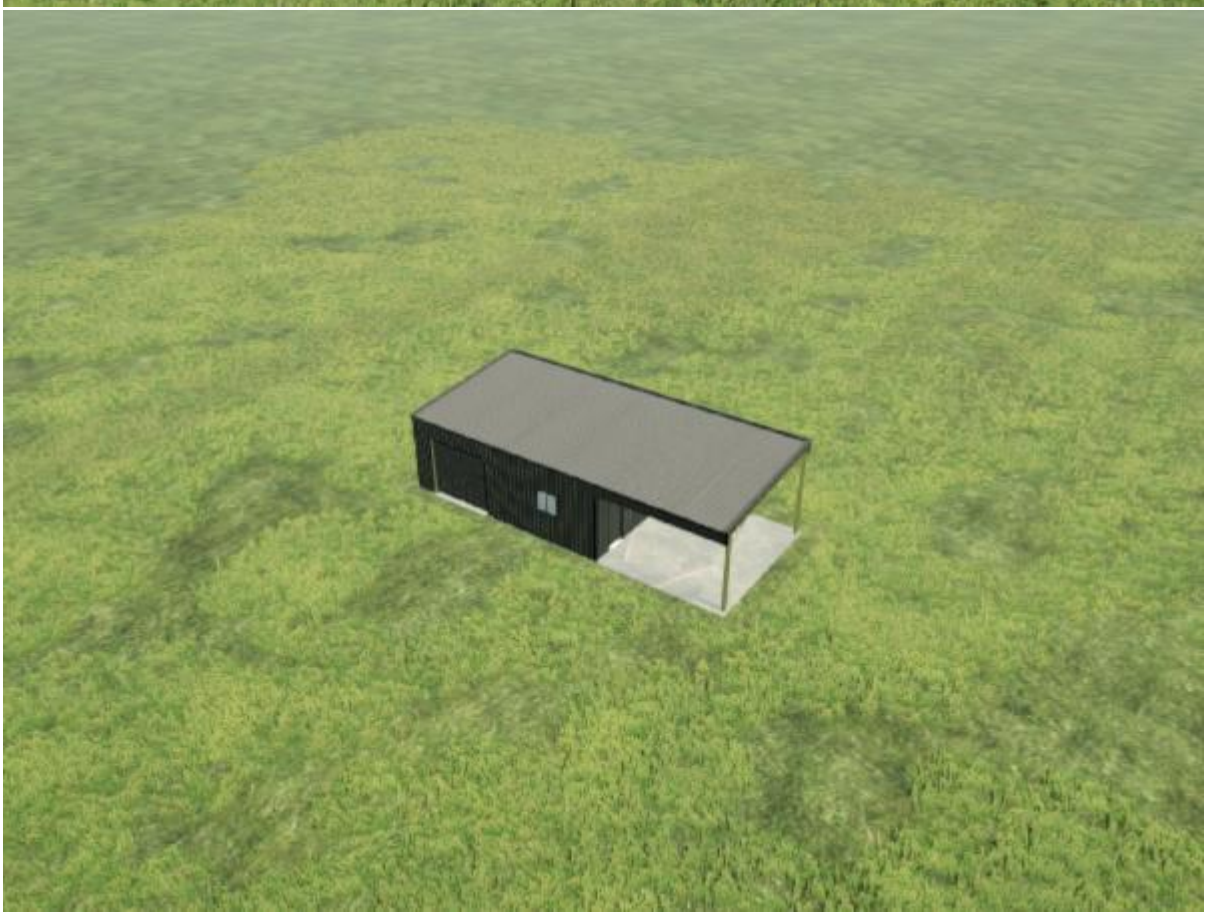
Scale on A3 1 : 100

26/05/2026 6:31:02 PM









TERMS AND CONDITIONS:

SITE VISIT:

Your initial quotation is based on your site being unseen. We suggest a site visit which can help us determine the provisional sums associated with your concrete and installation costs. Your site visit can also assist with the location and design that is best suited for you and your property. Our site visit fee of $150.00 is payable on your booking and will be deducted from your balance when you proceed. *Please note this payment is non-refundable if you do not proceed.

DRAFTING AND DOCUMENTATION:

We have our own in-house designer who can provide the complete council service for you.

- Council and Surveyor fees are payable by the customer and are not included in P&J Sheds Drafting and Documentation Service fee.
- Please refer to the attached schedule of fees Provided.

25% DEPOSIT:

This allows us to create your Job Folder and provide Engineering. Changes to the design, may result in an amendment of price to reflect changes made.

75% KIT BALANCE

Once you have gained council approval you will receive an email asking to confirm all details including colours and approved drawings to proceed. (Ensure all are correct as once your order is placed no changes can be made). The balance of your kit as at today, will be invoiced and payment is required within 7 days. Once payment is received, notification will be given to our suppliers to commence manufacture. Please refer to our delivery slip in regard to delivery terms. From here your details are given to our Project Manager if applicable, who will make contact with you regarding concrete and installation timelines.

- Please note if you choose to authorise manufacture prior to council approval, P&J Sheds take no responsibility for any liabilities arising from Council decisions.

CONCRETING

We encourage you to use our concreting team, thus ensuring a high level of quality and backup support. We do ask you to keep in mind that the provisional sums given on your quotation can have some movement based on the concreter's final inspection as at times the amount of fill, soil type or weather conditions can all impact the concreters requirements to complete your job safely.

Defects to slab surface: Concrete is a natural product, and some degree of cracking is normal and unavoidable. As concrete cures, shrinks and reacts to temperature and ground movement, small cracks can occur even when all recommended installation and curing practices are followed. These cracks are generally cosmetic and do not affect the structural performance of the concrete. We take all reasonable steps to minimise cracking through correct preparation, reinforcement, joint placement, and curing methods. However, no contractor can guarantee crack-free concrete, as this is a natural characteristic of the product.

If it is determined that underground utility mapping is required to be completed before excavation works can commence, you will be notified and invoiced for this service.

When setting out for a new building we measure off existing boundary fences to determine building locations. We take no responsibility if the boundary fence is in the wrong location. You can choose to have your boundary lines surveyed to guarantee accuracy at an additional charge.

Please note your concrete is payable within seven days of invoice and if not paid within this time frame, may result in your installation being rescheduled.

INSTALLATION

Working with the delivery date of your shed we will arrive as scheduled previously with our Project Manager. Your installer will check your materials and components for damages or shortages. From time to time there can be delays in replacement materials and you will be notified if this will impact your schedule by our Project Manager. Please note the provisional sums given on your quotation can have some movement based on the equipment required for the safety of our installers and the time it is required on site. Keys are held at our Mornington office until your installation invoice has been paid.

KIT ONLY

We encourage you to check all your materials against the supplied bill of materials upon delivery to ensure there are no damages or shortages. You only have (7) seven days to notify us to allow P&J Sheds to claim replacement on your behalf.

- Storage: If you require your kit to be held at our yard, storage fees may be charged as space is very limited at our Mornington yard.
- Sub-Contractors: Please note P&J Sheds can take no responsibility for work undertaken by Subcontractors outside our Business.

PRICE INCREASES/VARIATION

As mentioned above P&J Sheds provisional sums given on your quotation can have some movement based on the concreter's final inspection. From time-to-time BlueScope Steel and contractor prices increase, where this is the case, you will need to have commenced manufacture to ensure any increases are not incurred. Any variation to construction works, will include a 20% Builders Margin.

CANCELLATION

If your job is cancelled after your 25% deposit has been paid and manufacturing has not yet commenced a $550 administration fee will be retained by P&J Sheds.

- Payments made for Drafting and Documentation Services are non-refundable unless the draftsman is yet to commence work, where a $550 administration fee will be retained by P&J Sheds.
- Site Visit fee is also non-refundable and will be retained by P&J Sheds
- If your job has required additional Engineering, these costs will be retained by P&J Sheds

PAYMENT OPTIONS

Preferred payment method is Bank Transfer. Other options available below

- Personal Cheque or Bank Cheque
- Credit Card payment – will incur 1.5% surcharge
- Cash

P&J SHEDS SITE SIGN/MARKETING

By signing this agreement, you give permission to P&J Sheds to display a site sign on the property whilst under construction and also licence P&J Sheds to use photos of your steel building in all forms of media and their photo library indefinitely.

- You will need to note here if you do not consent to the above**. Please circle YES / NO**

ORDER ACCEPTANCE

I have read the terms and conditions and agree to accept the order as detailed above:

Customer Signature _____ **Name** _____ **Date : / /2026**

30/03/2026