Kentish Council

PUBLIC NOTICE

APPLICATION FOR DEVELOPMENT APPROVAL

An application for development approval has been made which may affect you.

Details about the application – K-DA006/2024

Address of the land	**18 Wattle Valley Road Acacia Hills**
What use or development is proposed in the application	**Residential – proposed Dwelling Extension**
Date of notice	**17 April 2024**

The application and supporting documents are open for public inspection on Council's website at www.kentish.tas.gov.au or at the Council Offices, 69 High Street, Sheffield during the following office hours:-

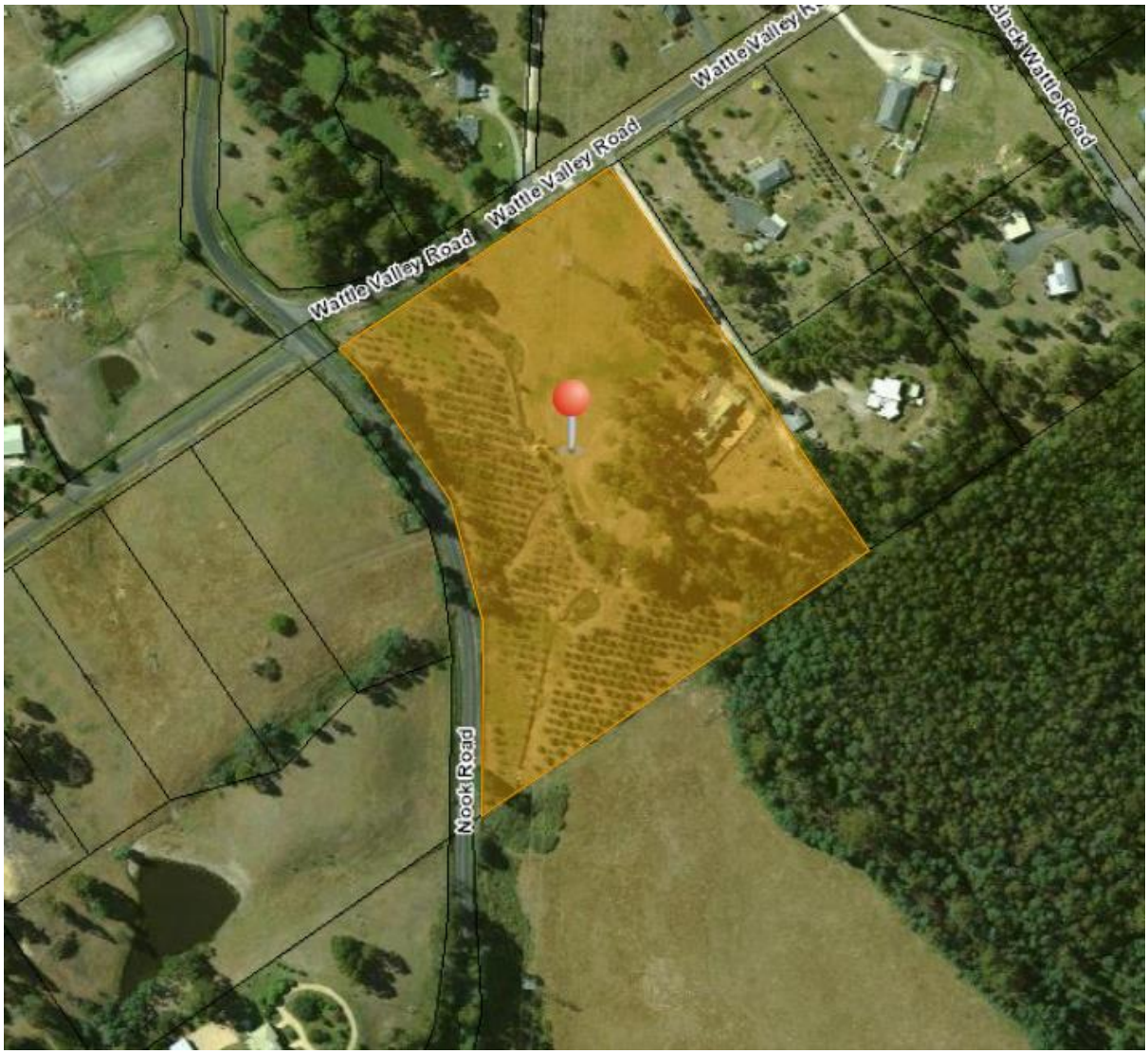
Monday to Friday, 8.00 a.m to 4.30 p.m.

Any person may lodge a representation on the proposed use or development.

Your representation must:

- be *received* within 14 days of the date of this notice;
- be in writing;
- be addressed to:
  The General Manager,
  Kentish Council,
  P.O. Box 63, Sheffield 7306; or email
  council@kentish.tas.gov.au
- and include:
  the reasons for your representation; and
  the address of the land.

Aerial View – K-DA006/2024 18 Wattle Valley Road, Acacia Hills



Office Use Only	
Application No	PID
K-DA006/2024	

KENTISH COUNCIL

DEVELOPMENT APPLICATION

Application for Development Permit under Section 58 or Section 57
of the *Land Use Planning and Approvals Act 1993*

1 Full Name of Applicant(s): Nicholas Brandsema

2 Postal Address of Applicant(s) 8 Brandsema Street, Turners Beach

Phone:

Mobile No.: Email:

3 Full Name of Owner(s): Benjamin & Deborah Murray

4 Postal Address of Owner(s): 18 Wattle Valley Road, Acacia Hills

Phone:

Mobile No. Email:

5 Present Use of the Land: Residential Dwelling.

6 Proposed Use and/or Development (subject of this application): Residential Extension

At (Location of property): 18 Wattle Valley Road, Acacia Hills

Certificate/s of Title reference: PID1795087, TITLE REF 127782/6

7 Estimate of works: $100,000

8 Supporting Details: **A CHECK LIST IS PROVIDED ON THE NEXT PAGE AND MUST BE ACKNOWLEDGED AND SIGNED BY THE APPLICANT.**

Signed Dated: 1/02/24

BENJAMIN JOSEPH & DEBORAH RUTH MURRAY

PROPOSED DWELLING EXTENSION

18 WATTLE VALLEY ROAD, ACACIA HILLS

Drawing Schedule

SHEET	DESCRIPTION	REV	ISSUE DATE
A100	COVER PAGE	A	04/07/23
A101	LOCATION PLAN	A	04/07/23
A102	SITE PLAN	A	04/07/23
A103	ELEVATIONS	A	04/07/23
A104	FLOOR PLAN	A	04/07/23
A106	SETOUT PLAN	A	04/07/23
A107	DRAINAGE PLAN	A	04/07/23
A108	WALL FRAMING PLAN	A	04/07/23
A109	ELECTRICAL PLAN	A	04/07/23
A110	REFLECTED CEILING PLAN	A	04/07/23
A111	ROOF FRAMING PLAN	A	04/07/23
A112	ROOF PLAN	A	04/07/23
A113	SECTION A-A	A	04/07/23
A114	DETAILS	A	04/07/23
A115	WALL TYPES	A	04/07/23
A116	WATERPROOFING 1 OF 2	A	04/07/23
A117	WATERPROOFING 2 OF 2	A	04/07/23
A118	WINDOW & DOOR SCHEDULE	A	04/07/23
A120	LIGHTING CALCULATOR	A	04/07/23
A121	CONSTRUCTION NOTES 1 OF 2	A	04/07/23
A122	CONSTRUCTION NOTES 2 OF 2	A	04/07/23
A123	BAL 12.5 CONSTRUCTION NOTES	A	04/07/23

GENERAL INFORMATION

ACCREDITED DESIGNER:	**NICHOLAS BRANDSEMA**
ACCREDITATION NUMBER:	**047538582**
LAND TITLE REFERENCE NUMBER:	**PID1795087, TITLE REF 127782/6**
ENERGY ASSESSMENT:	**TBA**
COUNCIL ZONE:	**RURAL LIVING**
COUNCIL:	**KENTISH**

FLOOR AREAS

EXISTING FLOOR AREA:	**268m2 (28 SQUARES)**
PROPOSED FLOOR AREA:	**151m2 (16 SQUARES)**

SITE INFORMATION

SITE AREA:	**43090m2**
DESIGN WIND SPEED:	**TBA**
SOIL CLASSIFICATION:	**TBA**
ALPINE AREA:	**N/A**
CORROSION ENVIRONMENT:	**N/A**
BUSHFIRE ATTACK LEVEL:	**TBA**
CLIMATE ZONE:	**7**

n+b
22 Fieldings Way
Ulverstone, Tasmania
Australia
7315
m 0417 134 369 **e** nick@nplusb.com.au
License No. 047538582 **ABN** 946 222 219 16

Issued As **Scale A2**
PRELIMINARY

Revision

No.	Date	Description
A	04/07/23	Issued as PRELIMINARY

do not scale off plans
all dimensions are in millimeters
confirm all dimensions on site
all work relevatnt NCC & AS

Project
PROPOSED DWELLING EXTENSION
Location
18 WATTLE VALLEY RD, ACACIA HILLS
Client
BENJAMIN & DEBORAH MURRAY

Sheet Title
COVER PAGE

Drawn	Issue Date	Project No.	Revision
NJB	**04/07/23**	**TBA**	**A**

Sheet Number
A100
/ A121

LOCATION PLAN
Scale 1 : 1000

n+b

22 Fieldings Way
Ulverstone, Tasmania
Australia
7315

m 0417 134 369 **e** nick@nplusb.com.au
License No. 047538582 **ABN** 946 222 219 16

Issued As: **PRELIMINARY**
Scale A2: **1 : 1000**

Revision

No.	Date	Description
A	04/07/23	Issued as PRELIMINARY

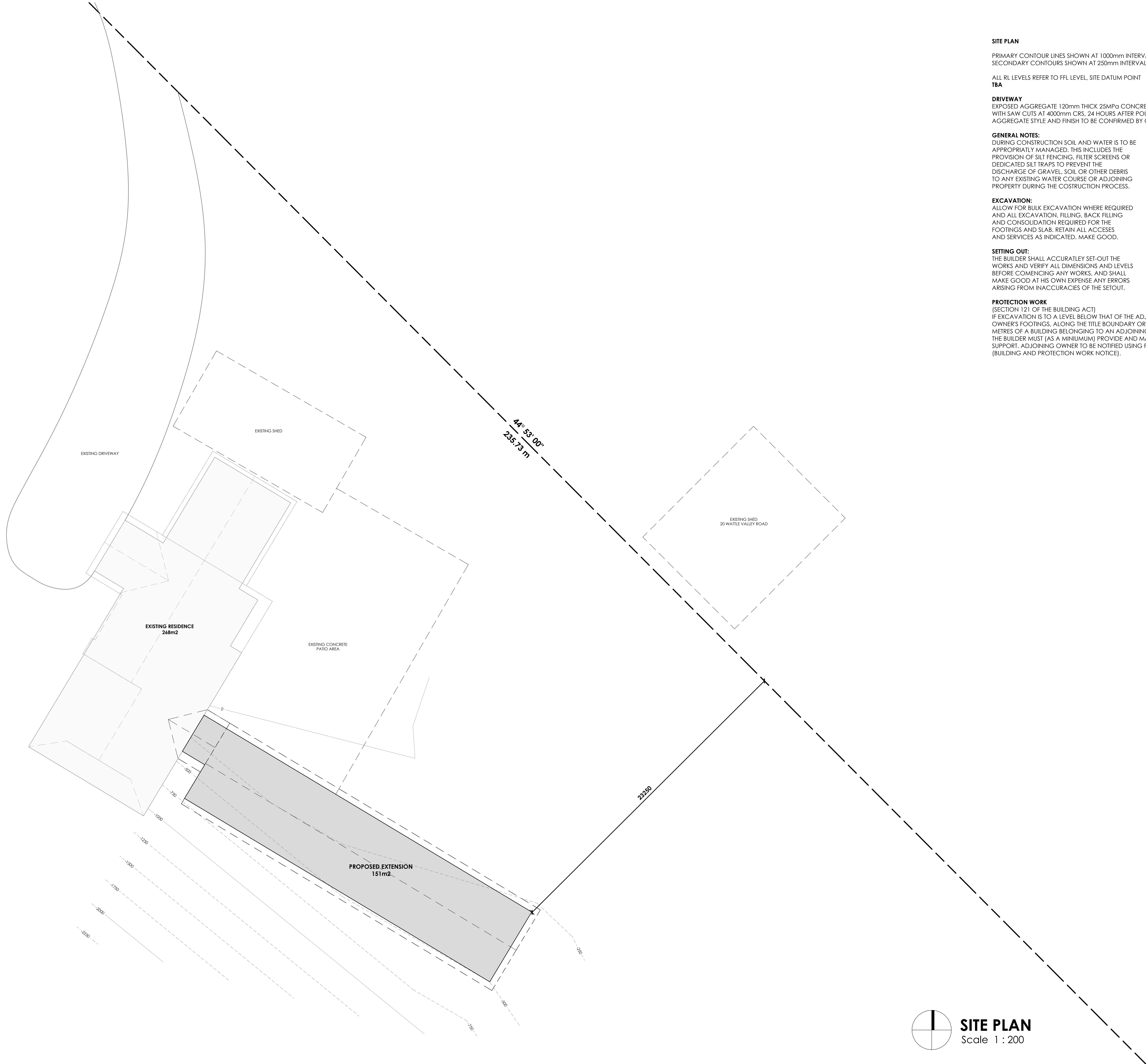
do not scale off plans
all dimensions are in millimeters
confirm all dimensions on site
all work relevatnt NCC & AS

Project
PROPOSED DWELLING EXTENSION
Location
18 WATTLE VALLEY RD, ACACIA HILLS
Client
BENJAMIN & DEBORAH MURRAY

Sheet Title
LOCATION PLAN

Drawn	Issue Date	Project No.	Revision
NJB	04/07/23	TBA	A

Sheet Number
A101
/A121



SITE PLAN

PRIMARY CONTOUR LINES SHOWN AT 1000mm INTERVALS
SECONDARY CONTOURS SHOWN AT 250mm INTERVALS

ALL RL LEVELS REFER TO FFL LEVEL, SITE DATUM POINT
TBA

DRIVEWAY
EXPOSED AGGREGATE 120mm THICK 25MPa CONCRETE WITH SAW CUTS AT 4000mm CRS, 24 HOURS AFTER POURING. AGGREGATE STYLE AND FINISH TO BE CONFIRMED BY OWNER.

GENERAL NOTES:
DURING CONSTRUCTION SOIL AND WATER IS TO BE APPROPRIATLY MANAGED. THIS INCLUDES THE PROVISION OF SILT FENCING, FILTER SCREENS OR DEDICATED SILT TRAPS TO PREVENT THE DISCHARGE OF GRAVEL, SOIL OR OTHER DEBRIS TO ANY EXISTING WATER COURSE OR ADJOINING PROPERTY DURING THE COSTRUCTION PROCESS.

EXCAVATION:
ALLOW FOR BULK EXCAVATION WHERE REQUIRED AND ALL EXCAVATION, FILLING, BACK FILLING AND CONSOLIDATION REQUIRED FOR THE FOOTINGS AND SLAB. RETAIN ALL ACCESES AND SERVICES AS INDICATED. MAKE GOOD.

SETTING OUT:
THE BUILDER SHALL ACCURATLEY SET-OUT THE WORKS AND VERIFY ALL DIMENSIONS AND LEVELS BEFORE COMENCING ANY WORKS, AND SHALL MAKE GOOD AT HIS OWN EXPENSE ANY ERRORS ARISING FROM INACCURACIES OF THE SETOUT.

PROTECTION WORK
(SECTION 121 OF THE BUILDING ACT)
IF EXCAVATION IS TO A LEVEL BELOW THAT OF THE ADJOINING OWNER'S FOOTINGS, ALONG THE TITLE BOUNDARY OR WITHIN 3 METRES OF A BUILDING BELONGING TO AN ADJOINING OWNER, THE BUILDER MUST (AS A MINIUMUM) PROVIDE AND MAINTAIN A SUPPORT. ADJOINING OWNER TO BE NOTIFIED USING FORM 6 (BUILDING AND PROTECTION WORK NOTICE).

SITE PLAN
Scale 1 : 200

n+b

22 Fieldings Way
Ulverstone, Tasmania
Australia
7315

m 0417 134 369 **e** nick@nplusb.com.au
License No. 047538582 **ABN** 946 222 219 16

Issued As	Scale A2
PRELIMINARY	**1 : 200**

Revision

No.	Date	Description
A	04/07/23	Issued as PRELIMINARY

do not scale off plans
all dimensions are in millimeters
confirm all dimensions on site
all work relevatnt NCC & AS

Project
PROPOSED DWELLING EXTENSION
Location
18 WATTLE VALLEY RD, ACACIA HILLS
Client
BENJAMIN & DEBORAH MURRAY

Sheet Title
SITE PLAN

Drawn	Issue Date	Project No.	Revision
NJB	04/07/23	TBA	A

Sheet Number
A102
/A121

EAST ELEVATION
Scale 1 : 100

SOUTH ELEVATION
Scale 1 : 100

NORTH ELEVATION
Scale 1 : 100

WALL | FACADE MATERIALS & FINISHES

WT-1 BRICK VENEER, COLOUR & STYE TO MATCH EXISTING.

WT-2 JAMES HARDIE SCYON LINEA, PAINT TO FINISH
INSTALLED AS PER MANUFACTURERS SPECIFICATION

0 5 m

EAVE CONSTRUCTION NCC VOLUME 2 PART 3.5.3.5
EAVE WIDTH OVERHANG - 600mm

EAVES LINED WITH 'HARDIFLEX' CEMENT SHEET
TRIMMERS LOCATED WITHIN 1200mm of
EXTERNAL CORNERS TO BE SPACED @ 500mm
CENTERS. REMAINDER OF SHEET - 700mm CENTERS

FASTENER / FIXINGS WITHIN 1200mm OF
EXTERNAL CORNERS @ 200mm CENTERS,
REMAINDER OF SHEET - 300mm CENTERS

COLORBOND CUSTOM ORB ROOF CLADDING
INSTALLED AS PER MANUFACTURERS SPECIFICATIONS & AS1562
COLOUR BY OWNER, COLOUR TO BE CLASSED AS "DARK"

SELECTED ALUMINIUM FRAMED WINDOWS & DOORS
NCC VOLUME 2 PART 3.6 POWDER COATED ALUMINIUM WINDOW &
DOOR FRAMES, UNLESS OTHERWISE NOTED. REVEALS AS SELECTED.
ALL FLASHING & FIXINGS TO MANUFACTURERS SPECIFICATIONS

GLAZING & FRAME CONSTRUCTION TO AS2047 & AS1288
ALL FIXINGS & FLASHINGS TO MANUFACTURERS REQUIREMENTS

n+b
22 Fieldings Way
Ulverstone, Tasmania
Australia
7315
m 0417 134 369 **e** nick@nplusb.com.au
License No. 047538582 **ABN** 946 222 219 16

Issued As PRELIMINARY
Scale A2 1 : 100

Revision

No.	Date	Description
A	04/07/23	Issued as PRELIMINARY

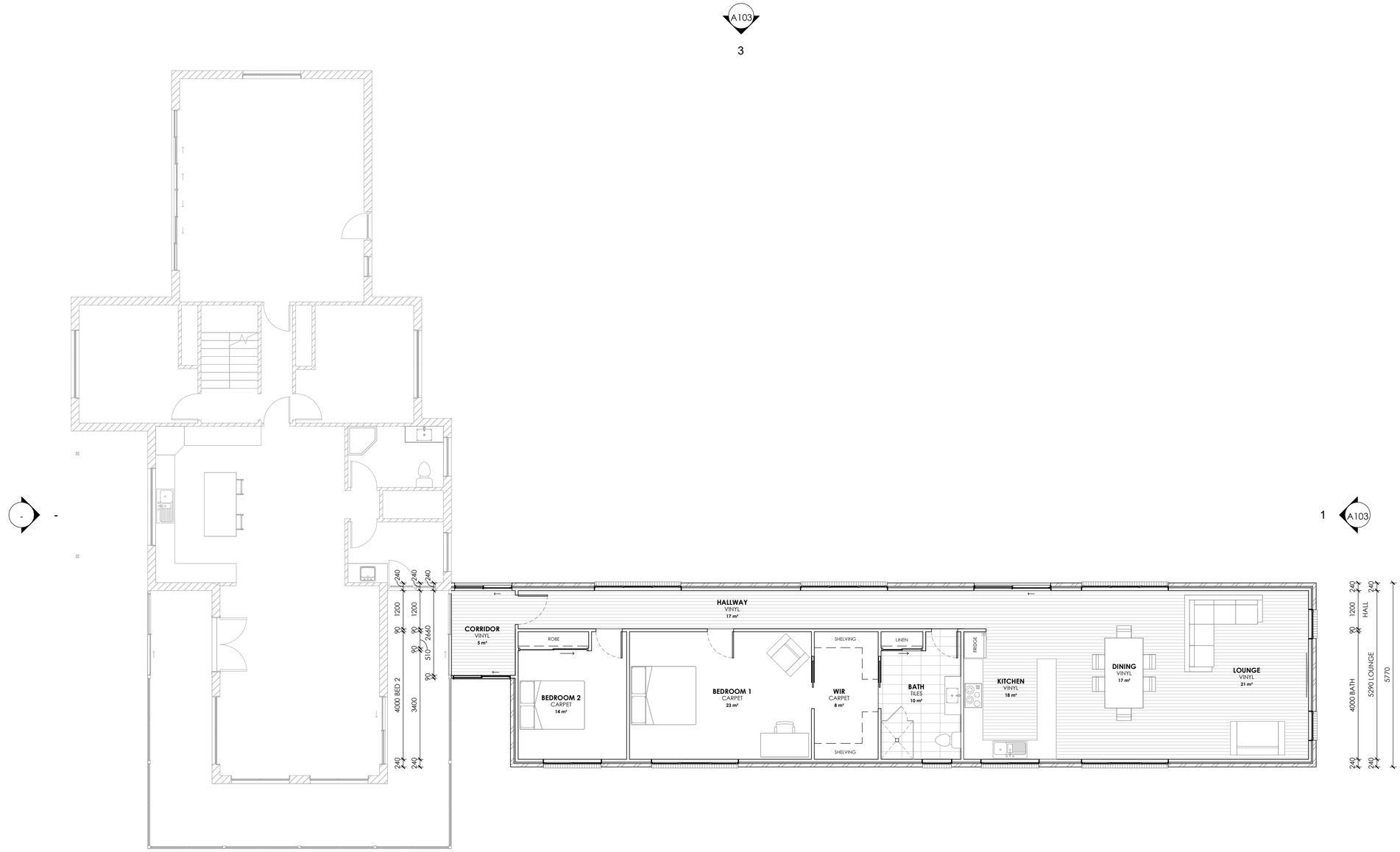
do not scale off plans
all dimensions are in millimeters
confirm all dimensions on site
all work relevatnt NCC & AS

Project
PROPOSED DWELLING EXTENSION
Location
18 WATTLE VALLEY RD, ACACIA HILLS
Client
BENJAMIN & DEBORAH MURRAY

Sheet Title
ELEVATIONS

Drawn	Issue Date	Project No.	Revision
NJB	04/07/23	TBA	A

Sheet Number
A103
/A121



FLOOR AREAS & FINISHES

EXTENSION FLOOR AREA - 151m2

VINYL
FLOOR AREA APPROX - 78m2
5mm SELECTED VINYL PLANK FLOORING

CARPET
FLOOR AREA APPROX - 45m2
SELECTED CARPET AND UNDERLAY

TILES
FLOOR AREA APPROX - 10m2
SELECTED TILES, GROUT, SEALANT, TRIMS
SEALED PRIOR WITH A WATERPROOF
MEMBRANE SYSTEM

SKIRTING 66x18 PRE PRIMED BEVELLED
SKIRTINGBOARD, PAINT TO FINISH.

NOTES
ALL WINDOW DIMENSIONS TO BE CONFIRMED WITH
CLIENT PRIOR TO CONSTRUCTION BEGINNING.

ALL GLAZING TO COMPLY WITH WITH NCC 3.6 & AS1288 & AS2047
ALL WET AREAS TO COMPLY WITH NCC 3.8.1 & AS3740
ALL TIMBER FRAMING TO COMPLY WITH NCC 3.4.3 & AS1684
ALL WORKS TO BE IN COMPLIANCE WITH NCC 3.12 & ENERGY EFFICIENCY

GROUND FLOOR PLAN
Scale 1 : 100

n+b
22 Fieldings Way
Ulverstone, Tasmania
Australia
7315
m 0417 134 369 **e** nick@nplusb.com.au
License No. 047538582 **ABN** 946 222 219 16

Issued As
PRELIMINARY
Scale A2
1 : 100

Revision

No.	Date	Description
A	04/07/23	Issued as PRELIMINARY

do not scale off plans
all dimensions are in millimeters
confirm all dimensions on site
all work relevatnt NCC & AS

Project
PROPOSED DWELLING EXTENSION
Location
18 WATTLE VALLEY RD, ACACIA HILLS
Client
BENJAMIN & DEBORAH MURRAY

Sheet Title
FLOOR PLAN

Drawn	Issue Date	Project No.	Revision
NJB	**04/07/23**	**TBA**	**A**

Sheet Number
A104
/A121

GEOTON Pty Ltd
Geotechnical Consultants

Geoton Pty Ltd ABN 81 129 764 629
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court
Invermay TAS 7248
Tel (+61) (3) 6326 5001
www.geoton.com.au

11 December 2023

Reference No. GL23717Ab

Mr Benjamin Murray
18 Wattle Valley Road
ACACIA HILLS TAS 7306

Dear Sir

RE: Site Classification & On-site Wastewater Assessment and Design
18 Wattle Valley Road, Acacia Hills

We have pleasure in submitting herein our report detailing the results of the geotechnical investigation conducted at the above site.

Should you require clarification of any aspect of this report, please contact Raj Sidhu on 03 6326 5001.

For and on behalf of

Geoton Pty Ltd

Tony Barriera

Director – Principal Geotechnical Engineer

1 INTRODUCTION

A limited scope investigation has been conducted for Mr Benjamin Murray at the site of a proposed residential development at 18 Wattle Valley Road, Acacia Hills.

The investigation has been conducted to assess the following:

- The general subsurface conditions at the site and consequently assign a Site Classification in accordance with AS 2870 – 2011 “Residential Slabs and Footings”;
- The surrounding topography and provide a Wind Classification in accordance with AS 4055 – 2021 “Wind Loads for Housing”; and
- The suitability of the site for disposal of domestic wastewater and the design of an on-site wastewater disposal system in accordance with AS/NZS 1547:2012 “On-site domestic wastewater management”.

A site plan for the proposed development was provided, prepared by n+b, Drawing Nos. A100-A104, dated 04.07.2023. We understand that the proposed development consists of an extension to the southeast side of the existing dwelling.

2 FIELD INVESTIGATION

The field investigation was conducted on 29 November 2023 and involved the drilling of 5 boreholes by 4WD mounted auger rig to the investigated or refusal depths of 0.6m to 2.0m.

Insitu vane shear strength tests and pocket penetrometer tests were conducted in the clay layers encountered in the investigation, with samples of these soils being obtained for subsequent laboratory testing.

In addition, the permeability of the site was tested using a Constant Head Permeameter.

The results of the field and laboratory tests are shown on the borehole logs.

The logs of the boreholes are included in Appendix A and their locations are shown on Figure 2 attached.

3 SITE CONDITIONS

The proposed site is approximately 4.32 hectares in size and is currently developed with a dwelling and outbuildings within the eastern portion of the site.

The wastewater disposal field is to be located to the northwest of the proposed dwelling and has a moderate fall of 7° to 9° towards the northwest with a low cover of grass.

Watercourse IDs. 825221 and 825153, cross through the site from the southeast to the northwest.

The site has an existing septic tank located southwest of the existing dwelling.

Photographs of the site are attached as Plates 1 & 2.

The MRT Digital Geological Atlas, 1: 25,000 Series, indicates that the majority of the site and proposed development area is mapped as Pennsylvanian - Permian period sedimentary rocks.

Examination of the LIST Landslide Planning Map indicates that proposed development area is not within a mapped landslide hazard band.

The investigation indicated that the soil profile slightly varies across the site. Boeholes BH1 to BH3 encountered sandy clay topsoil to depths of 0.2m, underlain sandy clay or/and clayey silt to the refusal or investigated depths of 0.6m to 2.0m. Boreholes BH4 & and BH5 encountered silty clay fill to depths of 0.3m, underlain by silty clay to the refusal or investigated depths of 0.7m to 2.0m.

Auger refusal within Boreholes BH2, BH3 & and BH5 was inferred to be on rock or boulder.

The boreholes did not encounter any signs of groundwater seepage over the investigated depths.

Full details of the soil conditions encountered are presented on the borehole logs.

An assessment of the plasticity characteristics of the materials encountered indicates that the clay soils at this site possess a **HIGH** shrink/swell potential

4 SITE CLASSIFICATION

After allowing due consideration of the site geology, drainage and soil conditions, the site has been classified as follows:

CLASS H1 (AS 2870)

Foundation designs in accordance with this classification are to be subject to the overriding conditions of the Foundations section below.

This classification is applicable only for ground conditions encountered at the time of this investigation. If cut or fill earthworks are carried out, then the site classification will need to be re-assessed, and possibly changed.

5 FOUNDATIONS

Particular attention should be paid to the design of footings as required by AS 2870 – 2011.

In addition to normal founding requirements arising from the above classification, particular conditions at this site dictate that the founding medium for all footings would be as follows:

Silty CLAY (CH) – high plasticity, orange/brown

encountered below 0.3m from the existing ground surface

An allowable bearing pressure of **100kPa** is available for edge beams, strips, piers and pads founded as above, provided the site is prepared as follows:

No structure should be founded across the fill without the footings extending through the fill to the natural soil.

If rock is encountered in site or footing excavations, then it is recommended that all footings are founded uniformly to rock.

The site classification presented assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.

Attention is drawn to Appendix B of AS 2870 and CSIRO Building Technical File BTF18 “Foundation Maintenance and Footing Performance: A Homeowner’s Guide” as a guide to maintenance requirements for the proposed structure.

Although the boreholes and borehole data provides an indication of subsurface conditions at the site, variations in soil conditions may occur in areas of the site not specifically covered by the field investigation. The base of all footing or beam excavations should therefore be inspected to ensure that the founding medium meets the requirements referenced herein with respect to type and strength of founding material.

The boreholes were backfilled shortly after being drilled, not allowing time for groundwater seepage flows to develop. Groundwater seepages or higher groundwater levels can occur during and/or after a prolonged period of wet weather or a heavy rainfall event.

6 WIND CLASSIFICATION

After allowing due consideration of the region, terrain, shielding and topography, the site has been classified as follows:

WIND CLASSIFICATION N3 (AS 4055-2021)

REGION	TERRAIN CATEGORY	SHIELDING	TOPOGRAPHY
A	TC2	NS	T1

7 EFFLUENT DISPOSAL

The AS/NZS 1547:2012 and the *Building Act 2016:* Director’s Guidelines for On-site Wastewater Management Systems provide guidelines for typical wastewater flow allowances under a range of circumstances. The documents recommend a typical wastewater flow of 120L/person/day for households on tank water. As the proposed development is to be a two-bedroom extension to the existing three-bedroom dwelling (equivalent to five bedrooms) with a population equivalent of 7 persons, a daily wastewater flow of **840L/day** has been adopted.

7.1 Permeability of Soil and Soil Category

The soil has been classified as follows:

- Texture – Light Clays (Table E1 from AS1547-2012);
- Structure – Moderately Structured (Table E4 from AS/NZS1547-2012); and
- Category - 5 (Table E1 from AS/NZS1547:2012).

The permeability (K_{sat}) at the site was measured at <0.01m/day. For Moderately structured Category 5 soils, the indicative permeability from AS/NZS1547 Table 5.1 is <0.06m/day. As the soils measured permeability was lower than the indicative permeability a conservative value of <0.01m/day has been adopted.

- Adopted Permeability - <0.01m/day.

7.2 Disposal and Treatment Method

The soils within the proposed effluent disposal area are assessed as having sufficient depth and clay content to provide an adequate attenuation period for the breakdown of pathogens within the treated effluent.

As the site has shallow Category 5 soils that have very low permeability the site is not suitable for traditional absorption trenches or beds.

As such, the site is considered suitable for the disposal of domestic wastewater by way of an Aerated Wastewater Treatment System/Secondary Treated System (AWTS/STS) and sub-surface (near surface) irrigation.

7.3 Tank Installation

As the site may be subject to high groundwater levels, care **must** be taken when installing the AWTS/STS unit. 'AS/NZS 1546:2008 3.2.2 Anchorage' and the specific AWTS/STS unit manufacturer's installation instructions should be adhered to.

7.4 Design Irrigation Rate

From Table M1 (AS1547-2012) the recommended design irrigation rate (DIR) for secondary treated effluent for Category 5 soils is 3mm/day. However, as the irrigation area is located on the sloping ground above 10% (Table M2), a 20% reduction in DIR is considered (2.4mm/day).

7.5 AWTS and Irrigation

The disposal area is calculated using the following equation:

$$A = Q/DIR,$$

where A is area in m^2;

Q is design daily flow in L/day; and

DIR is design irrigation rate in mm/day.

As the DIR has been set at 2.4mm/day and the Q at 840L/day, the area required for the effluent disposal field is **350m^2** as per the equation above.

There is adequate area for effluent disposal on site.

A reserve (back-up) area of 350m^2 is available if required.

The sub-surface irrigation is to be constructed as per the cross sections detailed in Figure WW-05 attached. The design details for the irrigation area are as follows:

- The irrigation lines are generally installed at a depth of 100mm into a minimum depth of 250mm of good quality topsoil. We consider the topsoil encountered as suitable for sub-surface irrigation. However, as an alternative, installing the irrigation lines on the surface and covering them with thick covers of mulch (at least 150mm thick) is considered acceptable;
- The irrigation lines are to have a typical line spacing of 1m;
- The irrigation area is not to be located through any poorly drained depressions. As such, minor filling/mounding of the irrigation area may be required to ensure there is no localised saturated area; and
- A cut-off drain is to be installed to divert surface flows away from the disposal field (see Figure 1 and Figure WW-01).

Guidelines for the design of sub-surface irrigation are outlined in AS/NZS 1547 Appendix M.

The area of the disposal field shall be vegetated with grasses or other suitable vegetation. A list of Tasmanian plants suitable for treated wastewater from AWTS units is attached as Appendix B.

The risk management process is an inherent part of the on-site wastewater disposal design. The on-site wastewater disposal system has been designed by considering the site characteristics and with risk identification in accordance with AS1547:2012. The risk reduction measures are detailed in the report and form the basis of the system selection and design.

As part of the Building Act, the client must specify the STS model and provide the Certificate of Accreditation for that particular model before the proposed development gets approval. A list of accredited STS models can be found on the Tasmanian Consumer, Building and Occupational Services website. An 8EP or 10EP (8 or 10 equivalent persons) STS is appropriate.

https://www.cbos.tas.gov.au/topics/technical-regulation/plumbing-standards/wastewater/aerated-wastewater-treatment-systems

7.6 Decommissioning of the Existing Wastewater System

The sewage contents from the “old” septic tanks are to be removed by a licensed waste transporter and taken to a waste disposal facility (receipt to be provided). The concrete septic tank base shall be punctured with holes so it can’t be re-used for holding liquid. Add hydrated lime to neutralise any sewage pathogens and the septic walls smashed in and crushed in-situ; cover with fill material.

7.7 Setbacks

The minimum separation distances between the disposal area and downslope features are based on Appendix R from AS/NZS 1547 “Recommended Setback Distances for Land Application Systems” and Section 3.1 from the *Building Act 2016:* Director’s Guidelines for On-site Wastewater Management Systems. The following minimum setbacks are required:

- 31.0m from downslope sensitive features such as watercourses;
- 3.0m from up-slope and cross-slope property boundaries;
- 9.5m from downslope property boundaries;
- 3.0m from up-slope and cross-slope buildings; and
- 4.0m from downslope buildings.

7.8 Wastewater Recommendations

It is recommended that the following actions are undertaken in looking after your system:

- Minimise domestic water use;
- Minimise the use of non-biodegradable detergents;
- Minimise the use of detergents containing phosphorous (e.g. Calgon or similar);
- Avoid discharging polluting chemicals into wastewater systems; and
- Monitor quality of groundwater.

References:

AS 1726 - 2017 Geotechnical Site Investigations

AS 2870 - 2011 Residential Slabs and Footings

AS 4055 - 2021 Wind Loads for Housing

AS/NZS 1547 - 2012 On-site domestic wastewater management

Building Act 2016: Director’s Guidelines for On-site Wastewater Management Systems

Attachments:

Limitations of report

Figure 1 - Locality Plan

Figure 2 – Site Plan

Figure WW-01 – Cut-off Drain

Figure WW-05 – Typical AWTS Section

Site Photographs

Site Classification & On-site Wastewater Assessment and Design

Appendix A: Borehole Logs & Explanation Sheets

Appendix B: List of AWTS Example Plants

Appendix C: Certificate Forms

GEOTON Pty Ltd

Geotechnical Consultants - Limitations of report

These notes have been prepared to assist in the interpretation and understanding of the limitations of this report.

Project specific criteria

The report has been developed on the basis of unique project specific requirements as understood by Geoton and applies only to the site investigated. Project criteria are typically identified in the Client brief and the associated proposal prepared by Geoton and may include risk factors arising from limitations on scope imposed by the Client. The report should not be used without further consultation if significant changes to the project occur. No responsibility for problems that might occur due to changed factors will be accepted without consultation.

Subsurface variations with time

Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. In the event of significant delays in the commencement of a project, further advice should be sought.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and at the time they are taken. All available data is interpreted by professionals to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, as it is virtually impossible to provide a definitive subsurface profile which includes all the possible variabilities inherent in soil and rock masses.

Report Recommendations

The report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete and therefore the report recommendations can only be regarded as preliminary. Where variations in conditions are encountered, further advice should be sought.

Specific purposes

This report should not be applied to any project other than that originally specified at the time the report was issued.

Interpretation by others

Geoton will not be responsible for interpretations of site data or the report findings by others involved in the design and construction process. Where any confusion exists, clarification should be sought from Geoton.

Report integrity

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way.

Geoenvironmental issues

This report does not cover issues of site contamination unless specifically required to do so by the client. In the absence of such a request, Geoton take no responsibility for such issues.

18 WATTLE VALLEY ROAD
ACACIA HILLS, TAS
AREA ≈ 4.32HA

WATTLE VALLEY ROAD
NOOK ROAD
BROOKLAND AVENUE
COAL CREEK
WATERCOURSE ID: 825153
WATERCOURSE ID: 825221
TITLE BOUNDARY
TITLE BOUNDARY
TITLE BOUNDARY
AREA OF WORKS
REFER TO FIGURE 2 - SITE PLAN
140
150
160
170
160
170
N

Legend

- Cadastral Parcels
- Hydrographic Lines
- 10m Contours (LIST)

Approximate Scale (m)

0 50 100 150 200

GEOTON Pty Ltd

Date	11/12/2023	Drawn	RS
Scale	As Shown	Approved	TB
Original size	A3	Rev	

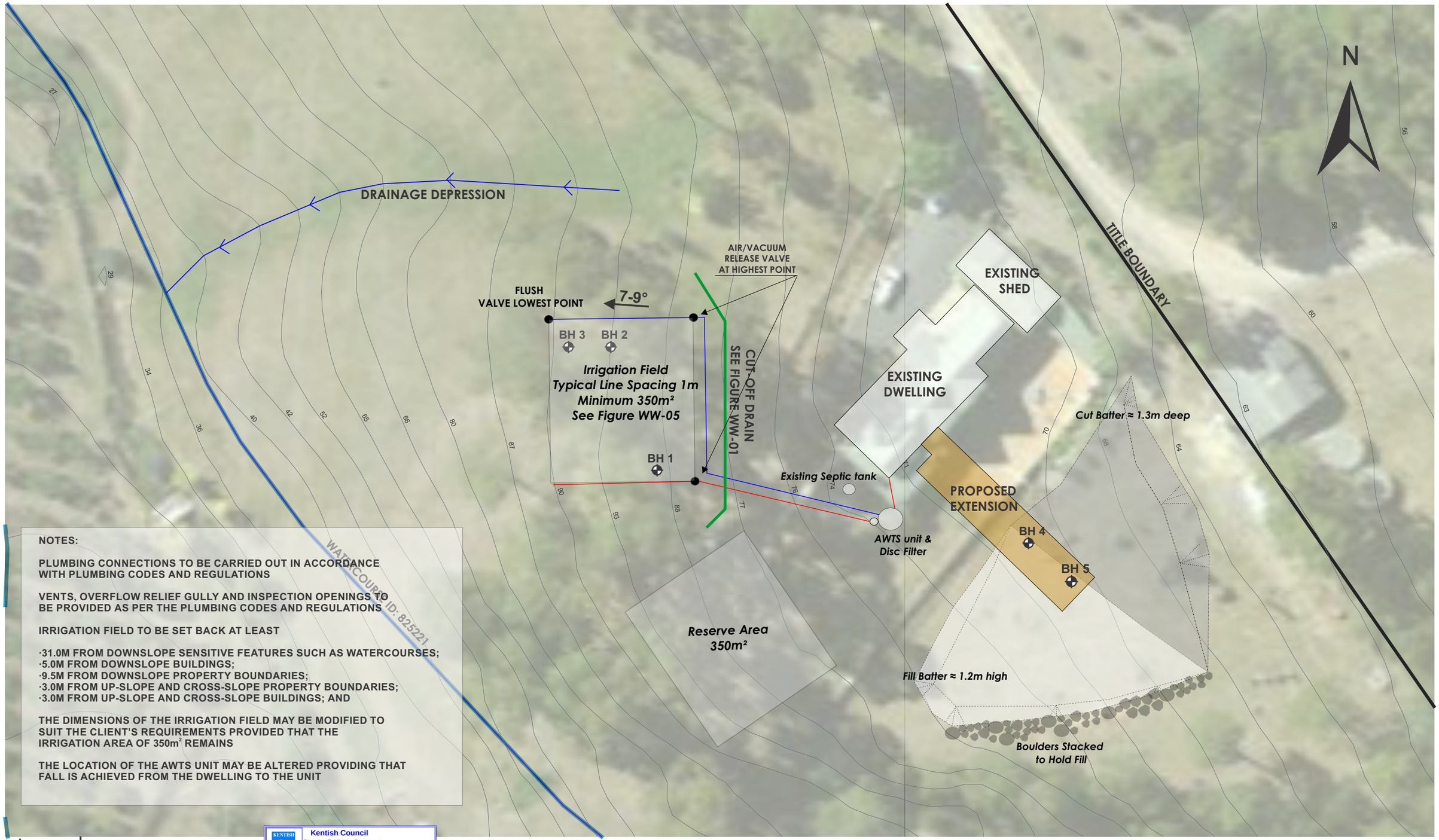
Client: MR BENJAMIN MURRAY

Project: 18 WATTLE VALLEY ROAD ACACIA HILLS

Title: LOCALITY PLAN

Project no: GL23717A

Figure no. 1



NOTES:

PLUMBING CONNECTIONS TO BE CARRIED OUT IN ACCORDANCE WITH PLUMBING CODES AND REGULATIONS

VENTS, OVERFLOW RELIEF GULLY AND INSPECTION OPENINGS TO BE PROVIDED AS PER THE PLUMBING CODES AND REGULATIONS

IRRIGATION FIELD TO BE SET BACK AT LEAST

·31.0M FROM DOWNSLOPE SENSITIVE FEATURES SUCH AS WATERCOURSES;
·5.0M FROM DOWNSLOPE BUILDINGS;
·9.5M FROM DOWNSLOPE PROPERTY BOUNDARIES;
·3.0M FROM UP-SLOPE AND CROSS-SLOPE PROPERTY BOUNDARIES;
·3.0M FROM UP-SLOPE AND CROSS-SLOPE BUILDINGS; AND

THE DIMENSIONS OF THE IRRIGATION FIELD MAY BE MODIFIED TO SUIT THE CLIENT'S REQUIREMENTS PROVIDED THAT THE IRRIGATION AREA OF 350m² REMAINS

THE LOCATION OF THE AWTS UNIT MAY BE ALTERED PROVIDING THAT FALL IS ACHIEVED FROM THE DWELLING TO THE UNIT

Kentish Council
Planning Exhibition Documents
Planning Administration
Date Advertised: 17-04-2024 Ref. Number: K-DA006/2024
This document is subject to copyright and is protected by law. In displaying this document on its website, the Council grants website users, a non-exclusive licence to reproduce the document in their web browser for the sole purpose of viewing the content. The Council reserves all other rights. Documents displayed on the Council's website are intended for public perusal only and should not be reproduced without the consent of the copyright owner.

Legend

BH 1 Approximate Borehole Location

5° Approximate Slope angle in Degrees

Contour in Metres (LiDAR Derived)

Hydrographic Lines

Approximate Scale (m)

0 10 20 30 40

GEOTON Pty Ltd

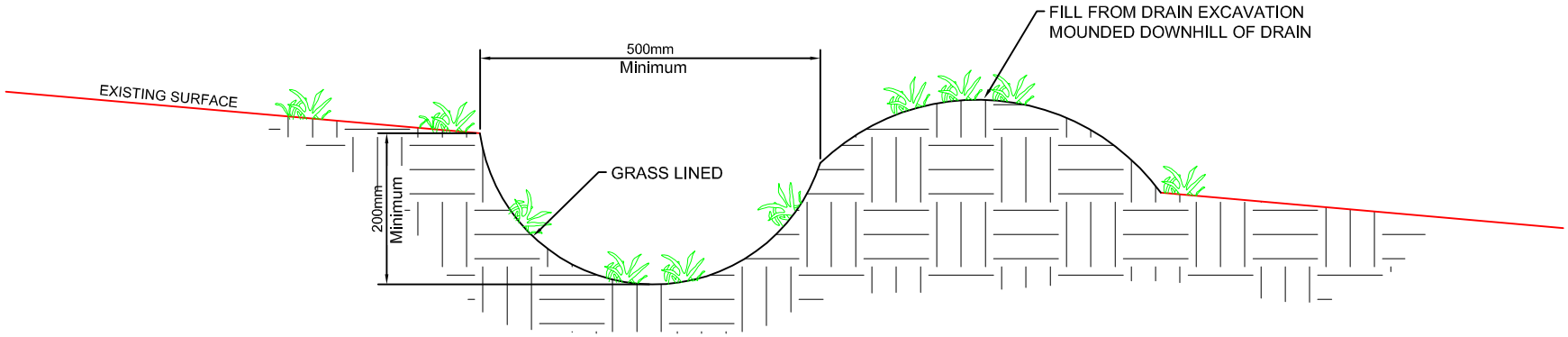
Date	11/12/2023	Drawn	RS
Scale	As Shown	Approved	TB
Original size	A3	Rev	

Client: MR BENJAMIN MURRAY

Project: 18 WATTLE VALLEY ROAD ACACIA HILLS

Title: SITE PLAN

Project no: GL23717A Figure no. 2



TYPICAL CUT-OFF DRAIN SECTION

SCALE 1:10

SCALE

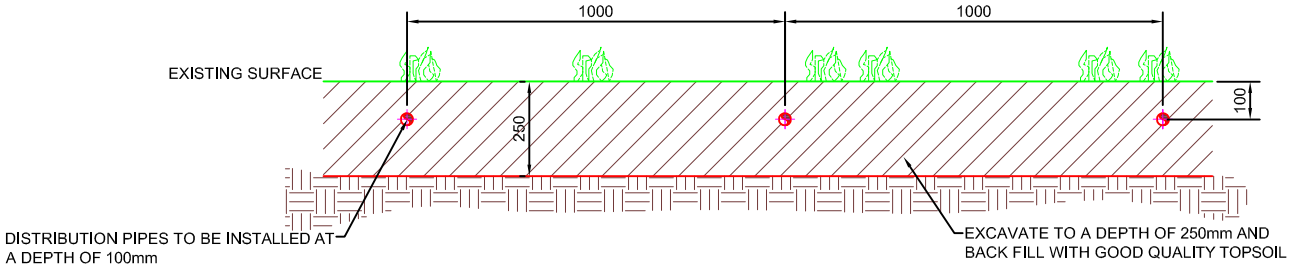
0mm 250mm 500mm

GEOTON Pty Ltd

date	**20/09/2021**	drawn	**BS**
scale	**As Shown**	approved	**TB**
original size	**A4**	rev	

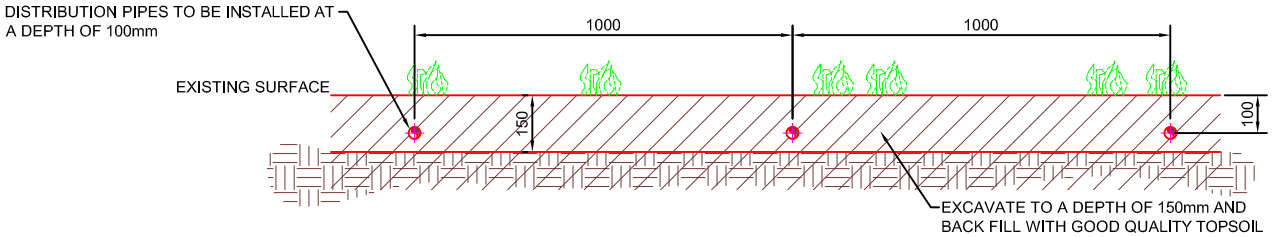
title: **TYPICAL CUT-OFF DRAIN SECTION**

figure no. **WW-01**

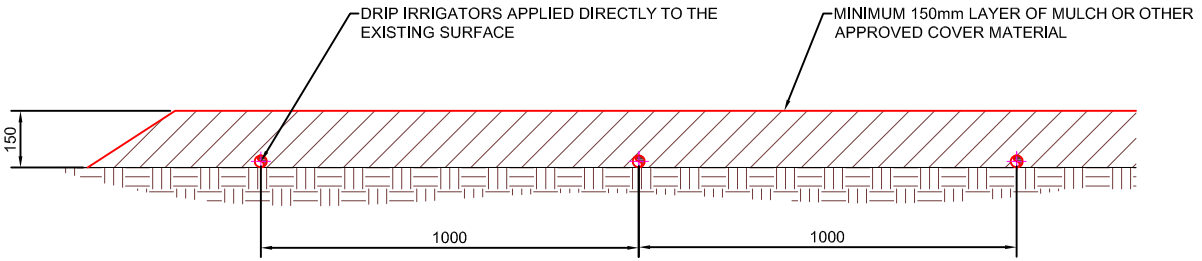


SHALLOW SUB-SURFACE DRIP IRRIGATION CATEGORY 1,2 & 6 SOILS

SCALE 1:20



SHALLOW SUB-SURFACE DRIP IRRIGATION CATEGORY 3,4 & 5 SOILS



COVERED SURFACE DRIP IRRIGATION

SCALE 1:20

SCALE

0mm 250mm 500mm 750mm 1000mm

GEOTON Pty Ltd

date	**20/09/2021**	drawn	**BS**
scale	**As Shown**	approved	**TB**
original size	**A4**	rev	

title: **TYPICAL AWTS SECTION**

figure no. **WW-05**

PLATE 1 - View of the site looking to the northeast

PLATE 2 - View of the site looking to the northwest

GEOTON Pty Ltd				Client:	MR BENJAMIN MURRAY
Title:	PHOTOGRAPH			Project:	18 WATTLE VALLEY ROAD ACACIA HILLS
Date:	29/11/2023	Original Size	A4	Project no: GL23717A	Figure no. PLATES 1 & 2

Appendix A

Borehole Logs

ENGINEERING BOREHOLE LOG

Pty Ltd
ltants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

Borehole no. BH1
Sheet no. 1 of 1
Job no. GL23717A

Client : Mr Benjamin Murray
Project : Site Classification and On-site Wastewater Assessment & Design
Location : 18 Wattle Valley Road, Acacia Hills
Date : 29/11/2023
Logged By : RS

Drill model : GDK-MK1
Hole diameter : 95mm
Easting:
Northing:
Slope: 90°
Bearing: -
RL Surface :
Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							TOPSOIL - Sandy CLAY, medium plasticity, orange/brown, fine grained sand	D/ M	St	
					0.25		CI	Sandy CLAY - medium plasticity, orange/brown, fine grained sand	M	VSt	W ≈ PL
					0.50						
					0.75						
					1.00						
					1.25						
					1.50						
							MH	Clayey SILT - high plasticity, grey/ white	M	VSt	
					1.75						
					2.00						
								Borehole BH1 terminated @ 2.0m			
					2.25						

Pty Ltd
ltants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH2
Sheet no. 1 of 1
Job no. GL23717A

Client : Mr Benjamin Murray
Project : Site Classification and On-site Wastewater Assessment & Design
Location : 18 Wattle Valley Road, Acacia Hills
Date : 29/11/2023
Logged By : RS

Drill model : GDK-MK1 Easting: Slope: 90° RL Surface :
Hole diameter : 95mm Northing: Bearing: - Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
								TOPSOIL - Sandy CLAY, medium plasticity, orange/brown, fine grained sand	D/ M	St	
ADV	N				0.25		CI	Sandy CLAY - medium plasticity, orange/brown, fine grained sand	M	VSt	W ≈ PL
					0.50						
					0.75			Borehole BH2 refusal @ 0.7m on inferred rock or boulder			
					1.00						
					1.25						
					1.50						
					1.75						
					2.00						
					2.25						

Pty Ltd
ltants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH3
Sheet no. 1 of 1
Job no. GL23717A

Client : Mr Benjamin Murray
Date : 29/11/2023
Project : Site Classification and On-site Wastewater Assessment & Design
Logged By : RS
Location : 18 Wattle Valley Road, Acacia Hills

Drill model : GDK-MK1
Easting:
Slope: 90°
RL Surface :
Hole diameter : 95mm
Northing:
Bearing: -
Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N				0.25			TOPSOIL - Sandy CLAY, medium plasticity, orange/brown, fine grained sand	D/ M	St	
					0.50		CI	Sandy CLAY - medium plasticity, orange/brown, fine grained sand	M	VSt	W ≈ PL
					0.75			Borehole BH3 refusal @ 0.6m on inferred rock or boulder			
					1.00						
					1.25						
					1.50						
					1.75						
					2.00						
					2.25						

Pty Ltd
ltants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH4
Sheet no. 1 of 1
Job no. GL23717A

Client : Mr Benjamin Murray
Project : Site Classification and On-site Wastewater Assessment & Design
Location : 18 Wattle Valley Road, Acacia Hills
Date : 29/11/2023
Logged By : RS

Drill model : GDK-MK1 Easting: Slope: 90° RL Surface :
Hole diameter : 95mm Northing: Bearing: - Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N				0.25			FILL - Silty CLAY, high plasticity, orange/brown, trace fine grained sand, trace cobbles	M	St	**FILL**
					0.50		CH	Silty CLAY - high plasticity, orange/ brown, trace cobbles/boulder	M	VSt	**NATURAL** V = 70kPa W ≈ PL
				D LL=54% PL=28% PI=26% LS=11%	0.75						
					1.00						V = Refusal (cobbles)
					1.25						
					1.50						
					1.75						
					2.00						
					2.25			Borehole BH4 terminated @ 2.0m			V = Refusal (cobbles)

ENGINEERING BOREHOLE LOG

Pty Ltd
ltants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

Borehole no. BH5
Sheet no. 1 of 1
Job no. GL23717A

Client :	Mr Benjamin Murray		Date : 29/11/2023
Project :	Site Classification and On-site Wastewater Assessment & Design		Logged By : RS
Location :	18 Wattle Valley Road, Acacia Hills		
Drill model :	GDK-MK1	Easting: Slope: 90°	RL Surface :
Hole diameter :	95mm	Northing: Bearing: -	Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N				0.25			FILL - Silty CLAY, high plasticity, orange/brown, trace fine grained sand, trace cobbles	M	St	**FILL**
					0.50		CH	Silty CLAY - high plasticity, orange/ brown, trace cobbles/boulder	M	VSt	**NATURAL** W ≈ PL V = Refusal (cobbles)
					0.75 1.00 1.25 1.50 1.75 2.00 2.25			Borehole BH5 refusal @ 0.7m on inferred rock or boulder			

ON Pty Ltd

Investigation Log Explanation Sheet

METHOD – BOREHOLE

TERM	Description
AS	Auger Screwing*
AD	Auger Drilling*
RR	Roller / Tricone
W	Washbore
CT	Cable Tool
HA	Hand Auger
DT	Diatube
B	Blank Bit
V	V Bit
T	TC Bit

* Bit shown by suffix e.g. ADT

METHOD – EXCAVATION

TERM	Description
N	Natural exposure
X	Existing excavation
H	Backhoe bucket
B	Bulldozer blade
R	Ripper
E	Excavator

SUPPORT

TERM	Description
M	Mud
N	Nil
C	Casing
S	Shoring

PENETRATION

1	2	3	4	
				No resistance ranging to Refusal

WATER

Symbol	Description
	Water inflow
	Water outflow
	17/3/08 water on date shown

NOTES, SAMPLES, TESTS

TERM	Description
U_{50}	Undisturbed sample 50 mm diameter
U_{63}	Undisturbed sample 63 mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT – sample recovered
N_C	SPT with solid cone
V	Vane Shear
PP	Pocket Penetrometer
P	Pressumeter
B_S	Bulk sample
E	Environmental Sample
R	Refusal
DCP	Dynamic Cone Penetrometer (blows/100mm)
PL	Plastic Limit
LL	Liquid Limit
LS	Linear Shrinkage

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION

Based on AS 1726:2017

MOISTURE

TERM	Description
D	Dry
M	Moist
W	Wet

CONSISTENCY/DENSITY INDEX

TERM	Description
VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fr	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	Very dense

ON Pty Ltd

Soil Description Explanation Sheet (1of 2)

DEFINITION

In engineering terms, soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL AND SOIL NAME

Soils are described in accordance with the AS 1726: 2017 as shown in the table on Sheet 2.

PARTICLE SIZE DEFINITIONS

NAME	SUBDIVISION	SIZE (mm)
BOULDERS		>200
COBBLES		63 to 200
GRAVEL	Coarse	19 to 63
	Medium	6.7 to 19
	Fine	2.36 to 6.7
SAND	Coarse	0.6 to 2.36
	Medium	0.21 to 0.6
	Fine	0.075 to 0.21
SILT		0.002 to 0.075
CLAY		<0.002

MOISTURE CONDITION

Coarse Grained Soils

Dry Non-cohesive and free running.

Moist Soil feels cool, darkened in colour. Soil tends to stick together.

Wet As for moist but with free water forming when handling.

Fine Grained Soils

Moist, dry of Plastic Limited – w < PL
Hard and friable or powdery.

Moist, near Plastic Limit – w ≈ PL
Soils can be moulded at a moisture content approximately equal to the plastic limit.

Moist, wet of Plastic Limit – w > PL
Soils usually weakened and free water forms on hands when handling.

Wet, near Liquid Limit - w ≈ LL

Wet, wet of Liquid Limit - w > LL

CONSISTENCY TERMS FOR COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	≤12	Exudes between the fingers when squeezed in hand
Soft	12 to 25	Can be moulded by light finger pressure
Firm	25 to 50	Can be moulded by strong finger pressure
Stiff	50 to 100	Cannot be moulded by fingers
Very Stiff	100 to 200	Can be indented by thumb nail
Hard	>200	Can be indented with difficulty by thumb nail
Friable	–	Can be easily crumbled or broken into small pieces by hand

RELATIVE DENSITY OF NON-COHESIVE SOILS

TERM	DENSITY INDEX (%)
Very Loose	≤15
Loose	15 to 35
Medium Dense	35 to 65
Dense	65 to 85
Very Dense	> 85

DESCRIPTIVE TERMS FOR ACCESSORY SOIL COMPONENTS

DESIGNATION OF COMPONENT	IN COARSE GRAINED SOILS		IN FINE GRAINED SOILS	TERM
	% Fines	% Accessory coarse fraction	% Sand/ gravel	
Minor	≤5	≤15	≤15	Trace
	>5, ≤12	>15, ≤30	>15, ≤30	With
Secondary	>12	>30	>30	Prefix

SOIL STRUCTURE

ZONING		CEMENTING	
Layer	Continuous across the exposure or sample.	Weakly cemented	Easily disaggregated by hand in air or water.
Lens	Discontinuous layer of different material, with lenticular shape.	Moderately cemented	Effort is required to disaggregate the soil by hand in air or water.
Pocket	An irregular inclusion of different material.		

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material	Structure and/or fabric of parent rock material retained and visible.
Residual soil	Structure and/or fabric of parent rock material not retained and visible.

TRANSPORTED SOILS

Aeolian soil	Carried and deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Soil and rock debris transported downslope by gravity.
Estuarine soil	Deposited in coastal estuaries, and including sediments carried by inflowing rivers and streams, and tidal currents.
Fill	Man-made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited in freshwater lakes.
Marine soil	Deposited in a marine environment.

ON Pty Ltd

Soil Description Explanation Sheet (2 of 2)

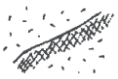
SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 63 mm and basing fractions on estimated mass)					GROUP SYMBOL	PRIMARY NAME
COARSE GRAINED SOIL More than 65% of soil excluding oversize fraction is larger than 0.075 mm	(A 0.075 mm particle is about the smallest particle visible to naked eyes)	GRAVEL More than half of coarse fraction is larger than 2.36 mm	CLEAN GRAVEL (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GW	GRAVEL
				Predominantly one size or a range of sizes with some intermediate sizes missing	GP	GRAVEL
			GRAVEL WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)	GM	Silty GRAVEL
				Plastic fines (for identification procedures see CL, CI and CH below)	GC	Clayey GRAVEL
		SAND More than half of coarse fraction is smaller than 2.36 mm	CLEAN SAND (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate sizes	SW	SAND
				Predominantly one size or a range of sizes with some intermediate sizes missing	SP	SAND
			SAND WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)	SM	Silty SAND
				Plastic fines (for identification procedures see CL, CI and CH below)	SC	Clayey SAND
FINE GRAINED SOIL More than 35% of soil excluding oversize fraction is smaller than 0.075 mm		IDENTIFICATION PROCEDURES ON FRACTIONS <0.075 mm				
			DRY STRENGTH	**DILATANCY**	**TOUGHNESS**	
		SILT & CLAY (low to medium plasticity, LL ≤ 50)	None to Low	Slow to Rapid	Low	ML SILT
			Medium to High	None to Slow	Medium	CL, CI CLAY
			Low to Medium	Slow	Low	OL ORGANIC SILT
		SILT & CLAY (high plasticity, LL > 50)	Low to Medium	None to Slow	Low to Medium	MH SILT
			High to Very High	None	High	CH CLAY
			Medium to High	None to Very Slow	Low to Medium	OH ORGANIC CLAY
		Highly Organic Soil	Readily identified by colour, odour, spongy feel and frequently by fibrous texture.			Pt PEAT

● LL – Liquid Limit.

COMMON DEFECTS IN SOILS

TERM	DEFINITION	DIAGRAM
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (e.g. bedding). May be open or closed.	
FISSURE	A surface or crack across which the soil has little or no tensile strength, but which is not parallel or sub parallel to layering. May be open or closed. May include desiccation cracks.	
SHEARED SEAM	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting fissures which divide the mass into lenticular or wedge-shaped blocks.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.	

TERM	DEFINITION	DIAGRAM
SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter.	
TUBE CAST	An infilled tube. The infill may be uncemented or weakly cemented soil or have rock properties.	
INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open defects.	

Appendix B

Example Plants

Taz Wild Plants

Phone: (03) 6384 2165
Fax: (03) 6384 2165
Web site: www.tazwild.com

Wastewater Treatment Units

Tasmanian Plants suitable for Water from Wastewater Treatment Units

Water from septic tanks and aerated wastewater treatment units such as Biocycle, Envirocycle or other may contain salts, boron and disease bearing microbes. The major ingredients of most cleaning fluids are various salts, of which common kitchen salt (sodium chloride) is the least common. These salts may have large concentrations in wastewater, which can have a detrimental effect on plants. The survival of plants will depend on the concentrations of salts. Long-term build up of chemicals and salts in the soil will adversely affect any plantings.

We can't guarantee these plants will survive but they are tolerant to reasonable amounts of the main offenders and will tolerate wet conditions.

Below is a list of plants to help make an attractive garden bed for your wastewater treatment area.

PLANTS 1 – 6m

Acacia mucronata
Variable sallow wattle, Narrow leaf wattle
An upright or spreading, medium to tall shrub 3-4m X 2-3m. Quick growing. Profuse cream to yellow flowers in spring, showy. Attracts seed eating birds. Drought tolerant.

Acacia verticillata
Prickly Moses
Prickly shrub to 2m. Useful habitat plant and very attractive in flower.

Banksia marginata
Honeysuckle, Silver banksia
Evergreen shrub or small tree with attractive narrow, smooth edged leaves which are square or notched at the end and silvery beneath. Greenish yellow cones of flowers that last as cut flowers. Grows well in sandy soil. Strong upright growth.

Bauera rubioides
Dog Rose
Hardy small to medium dense shrub. 1-2m X 1-2m wide with masses of dainty pink flowers, flowering most of year, attracting butterflies. Grows well in wet or moist soils, prefers acid soils. Likes full or filtered sun. Good coastal pant. Frost tolerant. Prune regularly. Good erosion control.

Callistemon pallidus
Lemon Bottlebrush
Evergreen medium shrub, very upright with silky leaves that become smooth with age. Lovely lemon yellow bottlebrushes in spring and summer. Likes a dry or moist position. Tolerates full or filtered sunlight. Attracts nectar eating birds.

Callitris oblonga
Cypress pine, South esk pine
This is one of Australia's native conifers. It has an attractive shrubby shape and is suitable for use in the garden as a fast growing hedge, since it can be pruned to shape. It is also useful for gardens where the soil is rocky and sandy but will tolerate a range of soils, providing the drainage is good.

Correa backhousiana
Velvet correa
A dense, bushy, spreading shrub to 1.5m high by 2m wide. Leaves are glossy green on top, rusty coloured underneath. Greenish cream bell flowers in winter. Spring bird attracting. Tolerates lime and coastal plantings. Usually frost resistant.

Leptospermum lanigerum
Woolley tea-tree
Hardy medium to large shrub 2.5 to 5m high x 1.2-3m wide, massed with white flowers during spring. Soft grey foliage. Prefers moist to wet soils with good drainage and will grow well in full or filtered sun. Attracts butterflies and seed eating birds. Tolerates light snow, smog and frost.

Melaleuca ericifolia
A very hard, fast growing small evergreen tree suited to most soils and aspects. Suitable for poorly drained or saline soils and withstands coastal exposure. Needle-like leaves and 2-3cm long cream flower spikes, in spring and early summer. Ideal for planting as a screen.

Melaleuca gibbosa
Fine leafed paperbark, Slender honey-myrtle
Evergreen small shrub with mauve/purple ball shaped flowers in late spring and summer. Suitable for most soils, tolerating lime and salt soil. Frost resistant.

Melaleuca squarrosa
Tall, bushy shrub, good foliage. Scented, yellow brush flowers, in spring-summer. Suitable for most soils, tolerating very wet conditions, lime, saline and frost.

Micrantheum hexandrum
River box
Attractive foliage plant with new growth showing red stems. Cream flowers in spring. Grows up to 2m high. Prune to form a dense screen plant.

Notelaea ligustrina
Native Olive, Mock olive, Privet mock olive
Tall shrub with smooth, dark green leaves. Small yellow flowers and purple fruit. Prefers a moist, semi-shaded position but grows well in a wide range of conditions.

Pomaderris apetala
Dogwood
Medium to tall shrub 3 to 15 m. This shrub grows in a wide variety of sites from very dry to very wet but will grow larger with moisture. Looks good planted in copses.

SHRUBS TO 1m

Amperea xiphoclada
Upright or arching stems. Attractive foliage sculpturesque in appearance to 60cm. Useful for basket weaving. Dry to moist sites.

Blechnum penna-marina
Alpine Water Fern
Attractive, low growing, matted ground cover. Leathery dark green fronds to 15cm long, tinged pink when young. Ideal hanging baskets. Rockeries and moist positions in the open ground.

Blechnum wattsii
Hard Water Fern
Hardy and vigorous fern with dark green leathery fronds to 1m tall. Very easily grown in large pot or a moist, shady position in the ground.

Callistemon viridiflorus
Green Bottlebrush
Erect shrub with pale green bottlebrushes. Good in damp conditions. 1-2m X 1m. Frost resistant.

Carex appressa
Tall sedge, Tussock sedge
A tall perennial to 1.8m high. Stems acutely 3 angled and leaves 3-6mm broard. Occurs in winter wet depressions that can dry out completely in summer. Flowers in spring.

Carex inyx
Tassell Sedge
Evergreen clump forming sedge with green foliage and gorgeous golden brown pendulous tassels 1m x 1m.

Carex tasmanica
Curley Sedge
An upright sedge to 30cm. Attractive tight curls on tips of leaves. Wet sites but will tolerate long dry spells.

Dianella tasmanica
Flax Lily
An evergreen perennial plant with arching, strap-like leaves which can be up to 1.2m long. During spring and summer this plant bears clusters of nodding, star shaped, bright blue to purple flowers which are followed by glossy deep blue berries. Thrives in a sunny to partly shaded position in humus rich, well drained soil. Ideal for rockeries, poolside planting and containers.

Ficinea nodosa (syn isolepis nodosa)
Knobby club rush
Dense tufted native rush with stiff stems. Rounded brown flower knobs in summer. Suit damp or moist sandy soil. 60cm X 1m wide.

Ficinea nodosa (syn isolepis nodosa)
Knobby club rush (syn. Isolepis nododa)
Ideal for planting around pond margins, this fast growing perennial plant forms clumps of upright, often arching, dark green stems. Brownish, globular flower heads are produced throughout the year. A tough hardy plant which thrives in full sun in a range of soils. Tolerates salt spray, waterlogged and saline soils. Adds texture and colour to seaside gardens and water features, useful for general garden planting.

Goodenia elongata
Lanky Goodenia
Suckering ground cover 10cm tall X 50cm. Glossy green leaves, rich yellow flowers on tall stems spring-summer, prefers moist soils in full sun or part shade.

Isolepis inundata
Knobby club rush, Swamp club rush
Handy aquatic for waters edge or general planting (eg. shrub beds, dry creek beds).

Lomandra longifolia
Long leaf mat bush, Sagg
A popular plant for use as accent in gardens, where the rush like foliage contrasts well with broad leafed plants. Use it next to ponds or as a boarder plant. Flowers in spring, bearing clusters of cream, strongly perfumed flowers - great for use in flora arrangements. A very adaptable plant that will grow well in a range of soils but does best in a moist position.

Mazus pumilio
Mauve carpet
Low growing creeping plant. Ideal ground cover, with mauve flowers, spring and summer. Semi shade or sun.

Melaleuca squamea
A bushy shrub to 1m with stunning mauve flowers in spring-summer. Grows well in a damp spot. Frost hardy.

Poa labillardieri
A popular native grass grown for its soft blue foliage. In the warmer months this clumping plant produces an attractive flower head with a purple tint. Thrives in a sunny to partly shaded position and grows in a range of soils. Suitable for planting under trees, embankments and mass plantings. Cut to just above ground level in late winter for fresh new spring growth.

Polystichum proliferum
Mother Shield Fern
An easy to grow fern with attractive green fronds. New fronds are covered with eye catching brownish scales. An ideal plant for ferneries and shaded garden positions but will perform equally well when planted in a container. Plant in humus rich, moist, well drained soil in part shade. Fertilise with a good organic fertilizer. When planting in containers use a premium potting mix.

Polystichum proliferum
Mother Shield Fern
Attractive native fern with arching fronds to 1m long forming plantlets near the tip. Very easily grown in a moist position in morning or filtered sun. Suitable for tubs.

Pratia pedunculata
Blue pratia, Common pratia, White pratia
This dainty, spreading plant forms a carpet of tiny green leaves which from spring to early summer is smothered in a mass of tiny, white flowers. This carpeting plant is ideal for filling in spaces near rocks and sleepers and makes an attractive groundcover. Thrives in a sunny to semi-shaded position in moist soil. Keep moist at all times.

Pratia pedunculata
Blue pratia, Common pratia, White pratia
This dainty, spreading plant forms a carpet of tiny, green leaves, which from spring to early summer is smothered in a mass of tiny blue flowers. This carpeting plant is ideal for filling in spaces near rocks and sleepers, and makes an attractive groundcover, thrives in a sunny to semi-shaded position in moist soil. Keep moist at all times.

Scaevola hookeri
Creeping fan flower, Mat fan flower
A very densely matting, evergreen groundcover with glossy, dark green leaves and small, white fan-shaped flowers in flushes, during spring, summer and autumn. An excellent soil binding plant for average to moist positions. Frost hardy.

Velleia paradoxa
Spur valleia
Wild flower 20cm X 20cm with large yellow flowers spring and summer. Prefers moist soils which are well drained and part shade to full sun.

Viola fuscoviolacea
A spreading, matting violet with attractive dense foliage and tiny deep purple-blue flowers in spring and summer. Prefers a moist position. Withstands frosts and snow.

Viola hederacea
Native violet
An attractive creeping evergreen perennial with fan shaped leaves. This plant produces beautiful mauve flowers over a long flowering period. An ideal ground cover for full sun to part shade in well drained soils.

TREES

Acacia dealbata
Silver Wattle
A tall tree with a smooth trunk, often decorated with silvery, mottled patches contrasting with the greyish-green leaves. In spring, clusters of golden-yellow, fluffy ball like flowers almost cover the whole tree.

Acacia melanoxylon
Blackwood
A beautiful formal tree that produces one of Australia's most sought after woods for cabinet making. Light yellow flowers occur in winter and early spring. A useful tree for a windbreak or screen as it grows densely. It is also tolerant of a wine range of positions, however its height and width will be greatest if the soil is moist and fertile.

Eucalyptus ovata
Black gum, Swamp gum
Evergreen medium to tall moisture loving tree, good for poorly drained soils. Smooth white trunk. Masses of white flowers in autumn which attract birds. Frost hardy. Good tree for cool districts. Water absorber. Drought tolerant. Excellent shade and windbreak tree.

Eucalyptus rodwayi
Swamp Peppermint
This tree is suitable for a wide range of conditions, from very dry sandy soils to river banks. Grows 15 to 20m.

Eucalyptus viminalis
White Gum
A magnificent tree with a lovely white trunk. This tree is suitable for very dry to very wet sites. Its height is 20 to 40m depending on availability of moisture.

Pomaderris apetala
Dogwood
Medium to tall shrub 3 to 15 m. This shrub grows in a wide variety of sites from very dry to very wet but will grow larger with moisture. Looks good planted in copses.

Prostanthera lasianthos
Christmas bush, Tasmanian Christmas bush
The Tasmanian Christmas bush comes into flower around Christmas with masses of mint scented foliage. A rapid growth in a range of soils but for best results grow in a well drained soil and mulch to retain moisture in the drier months. An attractive plant that will grow in a range of positions in the garden.

Tasmannia lanceolata
Mountain pepper, Native pepper
Small leafed mountain form. Handsome foliage shrub with bright green leaves and red stems. Creamy-yellow flowers in spring. Slow growing to 1.5m, hardy in a cool moist well drained position in sun or shade.

Appendix C

Certificate Forms

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Mr Benjamin Murray *Owner /Agent*
18 Wattle Valley Road *Address*
Acacia Hills Tas *Suburb/postcode*

Qualified person details:

Qualified person: Tony Barriera - Geoton Pty. Ltd.
Address: PO Box 522 Phone No: 03 6326 5001
Prospect Tas 7250 Fax No:
Licence No: CC6220 P Email address: tbarriera@geoton.com.au

Qualifications and Insurance details: Tony Barriera – BEng, MSc CPEng, NER – IEAust 471929 Civil, Geotechnical Certain Underwriters at Lloyd's- ENG 22 000330
(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

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

Details of work:

Address: 18 Wattle Valley Road Lot No: 3
Acacia Hills Tas 7306 Certificate of title No: 123703/3

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 Site Classification – AS2870
(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

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

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

or

a building, temporary structure or plumbing installation: X

In issuing this certificate the following matters are relevant –

Documents:	Geoton Pty Ltd, Report Reference No. GL23717Ab, dated 11/12/2023
Relevant calculations:	Refer to report
References:	AS 2870 – 2011 Residential Slabs and Footings Construction AS 4055 – 2021 Wind Loads for Housing CSIRO Building Technical File 18

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

Site Classification in accordance with AS2870 - 2011
Wind Loading in accordance with AS 4055 - 2021
Findings and recommendations of report

Scope and/or Limitations

The classification applies to the site as investigated at the time and does not account for any future alteration to foundation conditions resulting from earthworks, drainage condition changes or site maintenance variations.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		GL23717Ab	11/12/2023

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Mr Benjamin Murray *Owner name*
18 Wattle Valley Road *Address*
Acacia Hills Tas 7306 *Suburb/postcode*

Form **35**

Designer details:

Name: Tony Barriera
Category: Civil Engineer – Hydraulic - Domestic
Business name: Geoton Pty Ltd
Phone No: 03 6326 5001
Business address: P O Box 522
Prospect TAS 7250
Fax No:
Licence No: IEAust 471929, CC6220 P
Email address: tbarriera@geoton.com.au

Details of the proposed work:

Owner/Applicant Mr Benjamin Murray
Designer's project reference No. GL23717Ab
Address: 18 Wattle Valley Road
Lot No: 3
Acacia Hills Tas 7306

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

Description of work:

New building
on-site wastewater management system

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

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

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

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

Other details:
All design documents provided in Report GL23717Ab, dated 11/12/2023

uments provided:

ocuments are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
Schedules:	Prepared by:	Date:
Specifications:	Prepared by:	Date:
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

All design documents are contained within report

AS/NZS1547:2012 On-site domestic-wastewater management

Any other relevant documentation:

Attribution as designer:

I Tony Barriera of Geoton Pty Ltd 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:	Tony Barriera		11/12/2023
Licence No:	CC6220P		

t 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:

- ☐ The works will not increase the demand for water supplied by TasWater
- ☐ 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
- ☐ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☐ The works will not damage or interfere with TasWater's works
- ☐ The works will not adversely affect TasWater's operations
- ☐ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☐ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☐ 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 Tony Barriera of Geoton Pty Ltd 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:	Tony Barriera		11/12/2023

TON Pty Ltd
Geotechnical Consultants

LOADING CERTIFICATE

To:	Mr Benjamin Murray	*Owner /Agent*	Certificate Ref: AS/NZS 1547:2012 Section 7.4.2
	18 Wattle Valley Road	*Address*	
	Acacia Hills, Tas 7306	*Suburb/postcode*	

Details of work:

Address:	18 Wattle Valley Road	Lot No:	3
	Acacia Hills, Tas 7306	Certificate of title No:	123703/3
The work related to this certificate:	On-site domestic-wastewater management	*(description of the work or part work being certified)*	

Certificate details:

In issuing this certificate the following matters are relevant –

Documents:	Report GL23717Ab dated 11/12/2023 Figure 1 – Locality Plan Figure 2 – Site Plan Figure WW-01 – Typical Cut-off Drain Section Figure WW-05 – Typical AWTS Section
Relevant calculations:	Contained in the above
References:	AS/NZS1547:2012 On-site domestic-wastewater management

Substance of Certificate:

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

Wastewater Characteristics

Population equivalent used for this assessment = 7 (five bedroom dwelling)
Wastewater volume (L/day) used for this assessment = 840 (120 Litres per person)
Approximate blackwater volume (L/day) = 336
Approximate greywater volume (L/day) = 504

Soil Characteristics/Design Criteria

Texture (Table E1 from AS/NZS 1547) = Light Clays
Soil category (Table E1 from AS/NZS 1547) = 5
Soil structure (Table E4 from AS/NZS 1547) = Moderately Structured
Indicative permeability (Table 5.1 from AS/NZS 1547) = <0.06m/day
Adopted permeability = <0.01m/day
Adopted Design Irrigation Rate = 2.4mm/day
Soil thickness for disposal = >1.0m
Minimum depth (m) to water = >2.0m

Dimensions for On-Site Treatment System

Disposal and treatment methods = Aerated Wastewater Treatment System (AWTS) and sub-surface irrigation
Site modification and specific design = None
Primary disposal area required = 350m^2
Reserve disposal area required = 350m^2
Location and use of Reserve area = Reserve area is located within south of the Irrigation field & have a low cover of grass.

Is there sufficient area available on site for disposal (including reserve) = Yes

Notes

The purpose of the reserve area is to allow for future extention of the land application system to allow a factor of safety against unforseen malfunction or failure, perhaps following increased household occupancy or inadvertent misuse of the system.

The land application area may be reduced to account for flow reductions by water-saving devices, provided the organic loading rate is not higher than it would have been without the flow reduction.

Allowable Variation from Design Flow

Based on an approved AWTS 8EP system (8 equivalent persons) rated at 1200 litres per day and a wastewater design volume of 840L/day the allowable variation from design flow (peak loading events) would be an additional 360L/day.

System Limitations

Consequences of overloading the system:

(A) Adverse effects on soil properties and plant growth through excess salt accumulation in the root zone during extended dry periods;
(B) Harmful long-term environmental effects to the soil of land application system or the adjacent surface water and groundwater; or
(C) Increased risk to public heath from surface ponding in the land application area or channelling or seepage beyond the land application area.

Consequences of underloading the system:

Not applicaple to this type of system.

Operation Requirements

Refer to operation manual of preferred aerated waterwater treatment system.
Adverse effects of not operating the system correctly may include:

(A) Odour; and
(B) Disease.

Maintenance Requirements

Refer to operation manual of preferred aerated waterwater treatment system.
Adverse effects of not maintaining and monitoring the system correctly may include:

(A) Odour;
(B) Pump failure;
(C) Air blower failure or filter blockage;
(D) Alarm failure;
(E) Irrigation field failure; and
(F) Poor water quality, lack of disinfection.

I certify the matters described in this certificate.

	Signed:	*Date:*	*Certificate No.*
Certifier:		11/12/2023	GL23717Ab

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

OWNER G. L. Parsons

FOLIO REFERENCE C.T. 51520-1

GRANTEE Part of 536 Ac., Alexander McNaughton, Pur

PLAN OF SURVEY

BY SURVEYOR MR. R.W. RANSON
LESTER FRANKS & CO PTY LTD
LOCATION
LAND DISTRICT OF DEVON
PARISH OF SPREYTON

SCALE 1: 2000 LENGTHS IN METRES

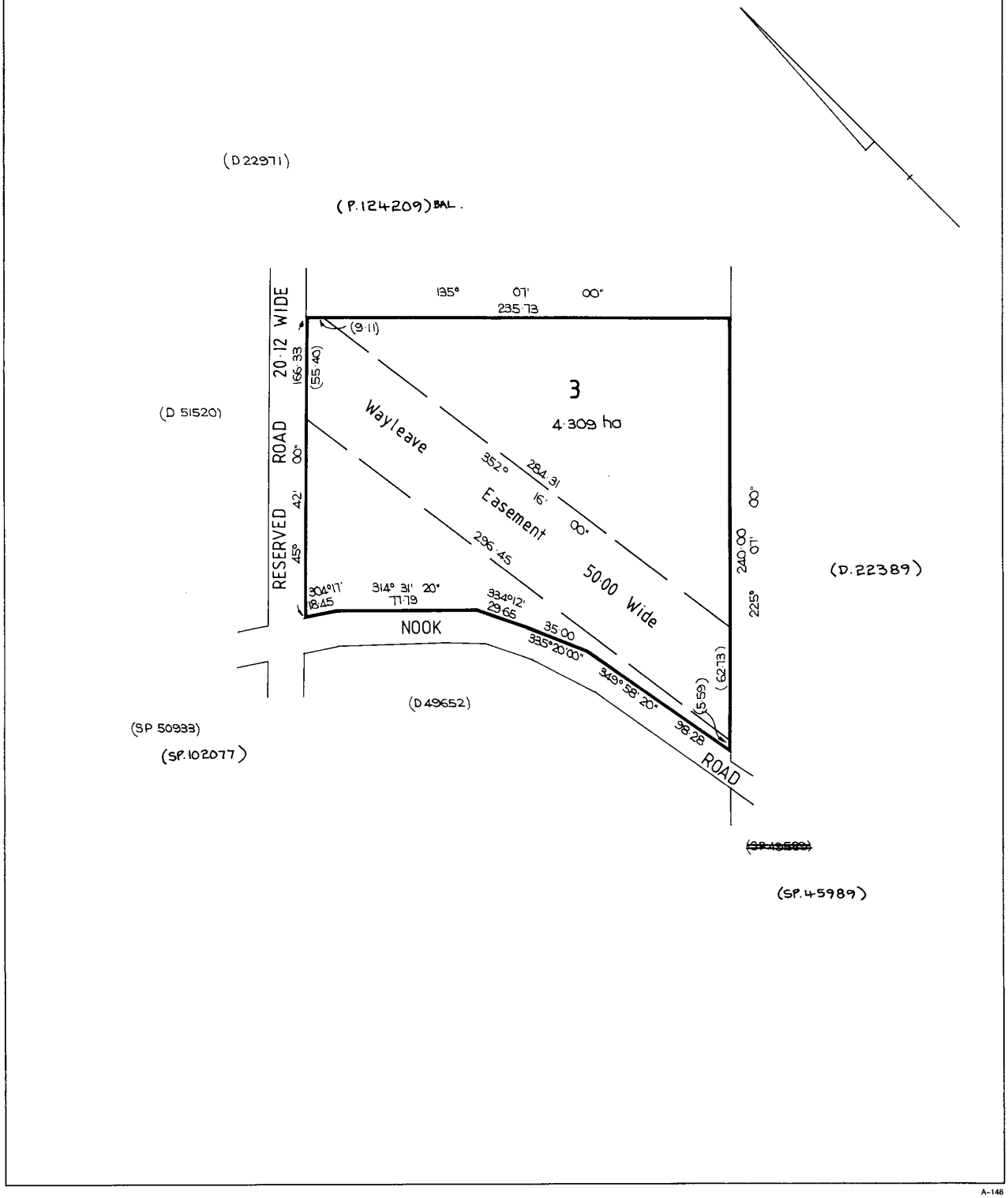
REGISTERED NUMBER

SP 123703

APPROVED
EFFECTIVE FROM 14 AUG 1996

Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 116	LAST UPI No. 5100352	LAST PLAN No. D 51520	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



A-148

SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

REGISTERED NUMBER

SCHEDULE OF EASEMENTS SP123703

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn 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 à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn 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 à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

EASEMENTS

LOT 3 on the Plan is subject to a Wayleave Easement as defined by Section 2 of the Hydro Electric Commission Act of 1944 in favour of the Hydro Electric Commission over the strip of land marked "WAYLEAVE EASEMENT 50.00 WIDE" on the Plan.

COVENANTS

The owner of Lot 3 on the Plan covenants with GRAHAM LEONARD PARSONS ("the Vendor") to the intent that the burden of this covenant may run with and bind the Covenantors lot and every part thereof and that the benefit thereof shall be annexed to and devolve with the Vendor's balance land to observe the following stipulations namely:-

1 Not to further subdivide such lot;

2 Not to access or permit to be accessed the said lot from the roadway shown as "NOOK ROAD" on the Plan;

3 Not to construct on such lot any building other than a private dwelling house and outbuildings usually appurtenant thereto.

4 Not to use any dwelling house erected on such lot for any purpose other than for a private dwelling house or residence or for the provision of professional services.

5 Not to erect, maintain or permit to be erected or maintained on such lot any multiple class one dwelling (including home units in attached pairs).

6 Not to erect, maintain or permit to be erected or maintained on such lot any dwelling house or outbuilding with external walls which are constructed of any material other than conventional clay or concrete brick, stone or other good quality contemporary building materials including adobe mud brick or pise, and that fibre cement, treated pine logs or other lower quality building materials whether new or second hand shall not be permitted and neither shall kit homes or other portable or easily removable residential or other buildings nor shall any roof cladding be other than of tiles or similar good quality roofing material whether of metallic type or otherwise.

7 Not to store, heap, or permit to be excavated, carried away or removed from such lot any trees, logs, earth, clay, stone, gravel or sand except as may be necessary for the purpose of road or driveway construction and levelling or filling or for the formation of any building, swimming pool or barbecue to be constructed on such lot.

8 Not to keep or allow to be kept on such lot any animals or poultry for commercial purposes.

9 Not to install or amend any drainage pipes or drainage dissipaters on such lot which causes or may cause any storm water to enter or cause damage to any adjoining lot or to any road on the Plan or any area adjacent to such road.

10 Not to erect or place on such lot any hoarding or structure for use as a bill, posting or advertising station.

11 Not to erect, construct, place or use on such lot any shop, building or erection whatsoever for the purpose or offering or exposing for sale therein or therefrom any articles, wares or merchandise whatsoever.

12 Not to carry on or permit to be carried on any trades noisome, noxious, offensive or otherwise on such lot.

NOTWITHSTANDING anything contained or implied herein the Vendor reserves the right to sell, lease or otherwise deal with Lot 3

SP. 123703

on the plan either subject to the conditions and restrictive covenants set out above or not and subject to any waiver, modification, alteration, amendment or full release thereof as the Vendor thinks fit

FENCING COVENANT

The owner of Lot 3 on the plan covenants with the Vendor that the Vendor shall not be required to fence.

No other easements, covenants or profits a prendre are created to benefit or burden any of the lots on the Plan.

DEFINITION

"Balance land" means the land remaining in folio of the Register Volume 51520 Folio 1 after the excision of Lot 3 on the Plan.

SIGNED by GRAHAM LEONARD PARSONS)
the registered proprietor of the)
land comprised in folio of the)
registered Volume 51520 Folio 1)
in the presence of:)

SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SP 123703

This is the schedule of easements attached to the plan of .....
(Insert Subdivider's Full Name)

GRAHAM LEONARD PARSONS .....affecting land in

CERTIFICATE OF TITLE VOLUME 51520 FOLIO 1
(Insert Title Reference)

Sealed by .....KENTISH COUNCIL..... on .....JULY 9.....199.6...

Solicitor's Reference .....

.....
Council Clerk/Town Clerk

OS-K 3134

SURVEY NOTES

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SURVEY NOTES

SHEET 1 OF 1 SHEETS

Registered Number

SP123703

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

SURVEY CERTIFICATE

I, Robert William Ranson of Ulverstone

in Tasmania a registered surveyor HEREBY CERTIFY that:

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

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

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

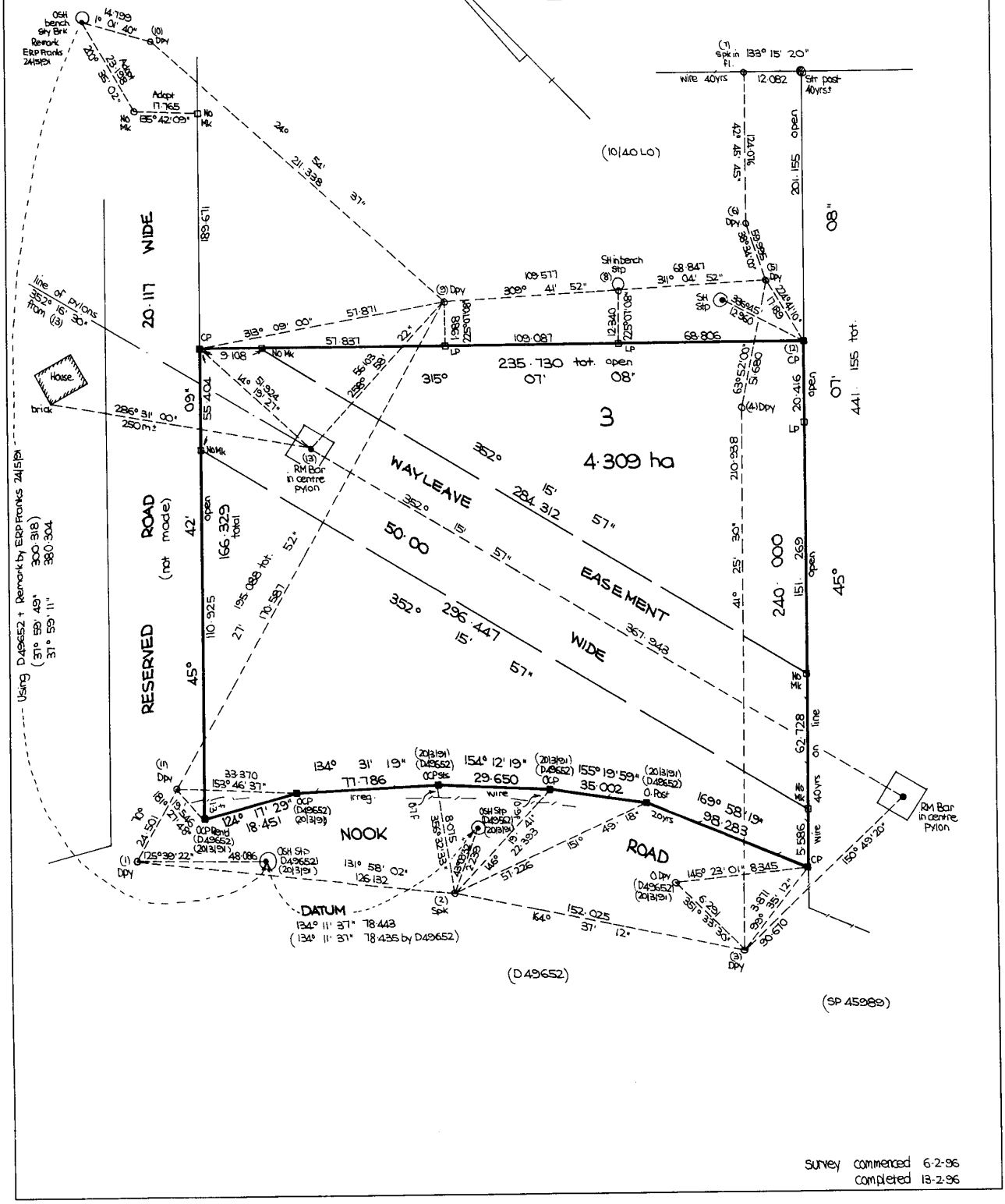
Signature

Date 26/2/96

LESTER FRANKS & CO PTY LTD

Surveyors Reference: 9626-7280

LAND DISTRICT OF DEVON
PARISH OF SPREYTON
Part of 536 Ac, Alexander McNaughton, pur.
Owner :- G.L. Parsons C.T. 51520-1

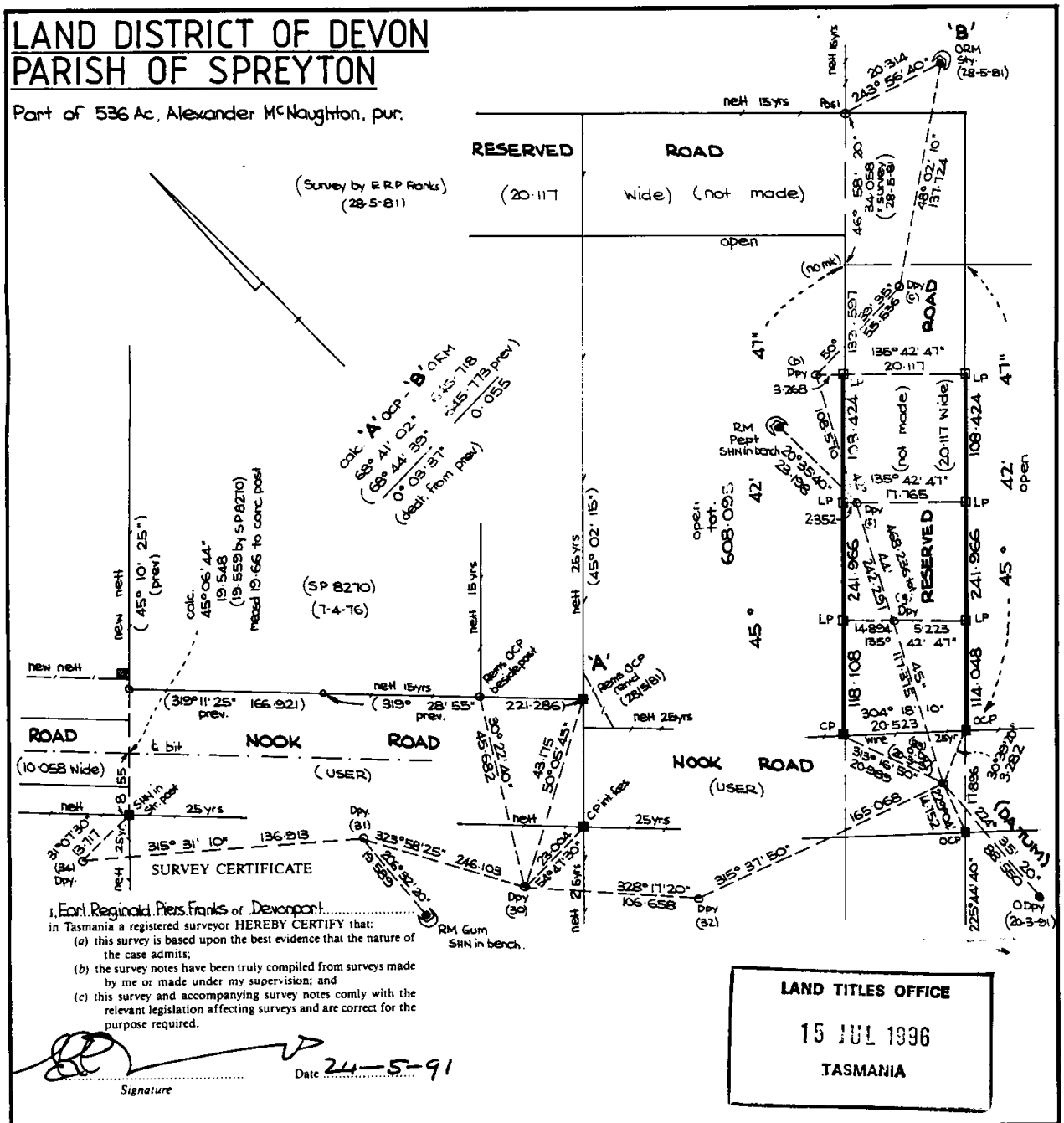


SURVEY NOTES

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government



RE-MARK OF RESERVED ROAD FOR G. L. PARSONS

SCALE	DATE	JOB No.
not to scale	surveyed 3-5-'91	8068 - 7280

LESTER, FRANKS & CO. PTY. LTD. AUTHORISED SURVEYORS

63 BEST STREET, DEVONPORT P.O. BOX 358, DEVONPORT 7310 TELEPHONE (004) 24 6444 FACSIMILE (004) 24 5825