# *GEO-ENVIRONMENTAL ASSESSMENT*

## *Lot 2 Longmans Road*

## *Snug*

## *July 2025*

*Revised August 2025*

GES

GEO-ENVIRONMENTAL

SOLUTIONS

## Investigation Details

| | |
|---|---|
| **Client:** | JOSCON Tasmania Pty Ltd |
| **Site Address:** | Lot 2 Longmans Road, Snug |
| **Date of Inspection:** | 16/06/2025 |
| **Proposed Works:** | Proposed dwelling |
| **Investigation Method:** | Geoprobe 540UD – Direct Push |
| **Inspected by:** | C. Cooper |

## Site Details

| | |
|---|---|
| **Certificate of Title (CT):** | 143579/2 |
| **Title Area:** | Approx. 3.73 ha |
| **Applicable Planning Overlays:** | Bushfire-prone Areas |
| | Scenic Landscape Area |
| | Biodiversity Protection Area |
| | Low Landslide Hazard Area |
| | Medium Landslide Hazard Area |
| **Slope & Aspect:** | Approx. 15-20% with variable aspect |
| **Vegetation:** | Mixed pasture species |

## Background Information

| | |
|---|---|
| **Geology Map:** | MRT 1:250 000 |
| **Geological Unit:** | Jurassic dolerite |
| **Climate:** | Annual rainfall approx. 750mm |
| **Water Connection:** | Tank |
| **Sewer Connection:** | Unserviced-on-site required |
| **Testing and Classification:** | *AS2870:2011, AS1726:2017, AS1547:2012 & AS4055:2021* |

## Investigation

A number of test holes were completed to identify the distribution of, and variation in soil materials on the site. Representative test holes drilled at the approximate location indicated on the site plan were chosen for testing and classification according to AS2870-2011 & AS1547-2012 (see profile summary).

### *Engineering Profile Summary*

| Hole 1 Depth (m) | Hole 2 Depth (m) | USCS | Description |
|---|---|---|---|
| 0.00 – 0.10 | 0.00 – 0.10 | SM | **Silty SAND**: dark brown, slightly moist, medium dense |
| 0.10 – 0.80 | 0.10 – 1.30 | SC | **Clayey SAND**: red brown, slightly moist, dense, with GRAVELS, auger refusal on gravels. |

### *Wastewater Profile Summary*

| Hole 3 Depth (m) | Horizon | Description |
|---|---|---|
| 0.00 – 0.10 | A1 | Dark Brown **Silty SAND (SM)**: slightly moist medium dense consistency, gradual boundary to |
| 0.10 – 2.00 | B2 | Red Brown **Clayey SAND (SC)**: slightly moist dense consistency, with GRAVELS, lower boundary undefined. |

## Site Notes

The soils found on the site have developed over Jurassic dolerite and consist of predominantly sandy profiles that are likely to exhibit slight ground surface movement with moisture fluctuations. These soils have relatively good capacity for onsite wastewater disposal, with high permeability and limited nutrient adsorption capacity.

## Site Classification

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

The site has been classified as:

**Class S**

*Y's* range: **0-20mm**

Notes: that is a slightly reactive site.

## Wind Loading Classification

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

**Wind Classification: N3**

| | |
|---|---|
| Region: | A |
| Terrain Category: | 2.5 |
| Shielding Classification: | PS |
| Topographic Classification: | T3 |
| Wind Classification: | N3 |
| Design Wind Gust Speed – m/s ($V_{h,u}$): | 50 |

## Wastewater Classification & Recommendations

According to AS1547-2012 for on-site wastewater management the soil on the property is classified as **LOAM (Category 3)** with a Design Loading Rate (DLR) of 15L/m$^2$/day for secondary treated effluent.

The proposed dwelling has a calculated maximum wastewater output of 720L/day. This is based on a tank water supply and a maximum occupancy of 6 people (120L/person/day). Using the DLR of 15L/m$^2$/day, an absorption area of 48m$^2$ is required. It is proposed to install two Eljen absorption trenches with dimensions of 13.33m x 1.80m x 0.60m each containing one row of four modules. A 3000L dual-purpose septic tank will be required to provide primary treatment of effluent and a distribution box (i.e., regular two-way splitter box or SeptiSurge if required) should be installed to provide even distribution of effluent.

High and low vents will be required for this system and a surface diversion drain should be installed upslope of the absorption area to divert excess stormwater flows.

A 100% reserve area should be set aside for future wastewater requirements and should be kept free from development. There is sufficient area available on site, therefore no formal reserve area has been assigned. For further details see attached plan and Trench summary reports.

The development is exempt from E23 of the Kingborough Interim Planning Scheme 2015 as the site is greater than 5000m$^2$, no part is below 3m AHD and a circle with a diameter of 50m can be inscribed on site.

The following setback distances are required to be consistent with Building Act 2016:

| | |
|---|---|
| Upslope or level buildings: | 3m |
| Downslope buildings: | 4.25m |
| Upslope or level boundaries: | 1.5m |
| Downslope boundaries: | 10.5m |
| Downslope surface water: | 33m |

Demonstration of the system being consistent with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table.

## Construction Notes & Recommendations

According to *"AS2870-2011 Residential slabs & footings"* the site has been classified as **Class S** (0-20mm $Y_s$ range). Design and construction should be made in accordance with this classification.

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

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

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

*Director*

## Disclaimer

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

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

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

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

**GES**

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

# Assessment Report

## Site assessment for on-site waste water disposal

| | | | |
|---|---|---|---|
| Assessment for | JOSCON Tasmania Pty Ltd | Assess. Date | 14-Aug-25 |
| | | Ref. No. | |
| Assessed site(s) | Lot 2 Longmans Road, Snug | Site(s) inspected | 16-Jun-25 |
| Local authority | Kingborough | Assessed by | John Paul Cumming |

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

**Wastewater Characteristics**

Wastewater volume (L/day) used for this assessment = 720 (using the 'No. of bedrooms in a dwelling' method)
Septic tank wastewater volume (L/day) = 240
Sullage volume (L/day) = 480
Total nitrogen (kg/year) generated by wastewater = 6.5
Total phosphorus (kg/year) generated by wastewater = 2.7

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

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean rainfall (mm) | 52 | 48 | 53 | 53 | 58 | 57 | 65 | 76 | 68 | 71 | 67 | 66 |
| Adopted rainfall (R, mm) | 52 | 48 | 53 | 53 | 58 | 57 | 65 | 76 | 68 | 71 | 67 | 66 |
| Retained rain (Rr, mm) | 42 | 38 | 42 | 42 | 47 | 46 | 52 | 61 | 54 | 57 | 53 | 53 |
| Max. daily temp. (deg. C) | | | | | | | | | | | | |
| Evapotrans (ET, mm) | 130 | 110 | 91 | 63 | 42 | 29 | 32 | 42 | 63 | 84 | 105 | 126 |
| Evapotr. less rain (mm) | **88** | **72** | **49** | **21** | **-5** | **-16** | **-21** | **-19** | **9** | **27** | **52** | **73** |

Annual evapotranspiration less retained rain (mm) = 330

**Soil characterisitics**

Texture = LOAM Category = 3 Thick. (m) = 2
Adopted permeability (m/day) = 1.5 Adopted LTAR (L/sq m/day) = 15 Min depth (m) to water = 3

**Proposed disposal and treatment methods**

| | |
|---|---|
| Proportion of wastewater to be retained on site: | All wastewater will be disposed of on the site |
| The preferred method of on-site primary treatment: | In dual purpose septic tank(s) |
| The preferred method of on-site secondary treatment: | In-ground |
| The preferred type of in-ground secondary treatment: | Trench(es) |
| The preferred type of above-ground secondary treatment: | None |
| Site modifications or specific designs: | Not needed |

**Suggested dimensions for on-site secondary treatment system**

| | |
|---|---|
| Total length (m) = | 27 |
| Width (m) = | 1.8 |
| Depth (m) = | 0.6 |
| Total disposal area (sq m) required = | 48 |
| comprising a Primary Area (sq m) of: | 48 |
| and a Secondary (backup) Area (sq m) of: | |

Sufficient area is available on site

Comments

The calculated DLR for the Category 3 soils on site is 15L/m$^2$/day for secondary treated effluent, which yields a minimum absorption area of 48m$^2$ required for the proposed dwelling. Therefore the system should have the capacity to cope with predicted climatic and loading events.

**GES**

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

# Site Capability Report

## Site assessment for on-site waste water disposal

| | | | |
|---|---|---|---|
| Assessment for | JOSCON Tasmania Pty Ltd | Assess. Date | 14-Aug-25 |
| | | Ref. No. | |
| Assessed site(s) | Lot 2 Longmans Road, Snug | Site(s) inspected | 16-Jun-25 |
| Local authority | Kingborough | Assessed by | John Paul Cumming |

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

| Alert | Factor | Units | Value | Confid level | Limitation Trench | Limitation Amended | Remarks |
|---|---|---|---|---|---|---|---|
| | Expected design area | sq m | 10,000 | V. high | Very low | | |
| | Density of disposal systems | /sq km | 2 | Mod. | Very low | | |
| | Slope angle | degrees | 11 | High | Moderate | | |
| | Slope form | Straight simple | | High | Low | | |
| | Surface drainage | Mod. good | | High | Low | | |
| | Flood potential | Site floods <1:100 yrs | | High | Very low | | |
| | Heavy rain events | Infrequent | | High | Moderate | | |
| | Aspect (Southern hemi.) | Faces N | | V. high | Very low | | |
| | Frequency of strong winds | Common | | High | Low | | |
| | Wastewater volume | L/day | 720 | High | Moderate | | |
| | SAR of septic tank effluent | | 1.4 | High | Low | | |
| | SAR of sullage | | 2.5 | High | Moderate | | |
| | Soil thickness | m | 2.0 | V. high | Very low | | |
| | Depth to bedrock | m | 2.0 | V. high | Low | | |
| | Surface rock outcrop | % | 0 | V. high | Very low | | |
| | Cobbles in soil | % | 0 | V. high | Very low | | |
| | Soil pH | | 5.5 | High | Low | | |
| | Soil bulk density | gm/cub. cm | 1.5 | High | Low | | |
| | Soil dispersion | Emerson No. | 7 | V. high | Very low | | |
| A | Adopted permeability | m/day | 1.5 | Mod. | High | | |
| | Long Term Accept. Rate | L/day/sq m | 15 | High | Very low | | |

Comments.
This site has the capability to accept secondary treated wastewater.

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Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

# Environmental Sensitivity Report

## Site assessment for on-site waste water disposal

| | | | |
|---|---|---|---|
| Assessment for | JOSCON Tasmania Pty Ltd | Assess. Date | 14-Aug-25 |
| | | Ref. No. | |
| Assessed site(s) | Lot 2 Longmans Road, Snug | Site(s) inspected | 16-Jun-25 |
| Local authority | Kingborough | Assessed by | John Paul Cumming |

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

| Alert | Factor | Units | Value | Confid level | Limitation Trench | Limitation Amended | Remarks |
|---|---|---|---|---|---|---|---|
| A | Cation exchange capacity | mmol/100g | 50 | High | High | | |
| A | Phos. adsorp. capacity | kg/cub m | 0.3 | High | High | | |
| | Annual rainfall excess | mm | -330 | High | Very low | | |
| | Min. depth to water table | m | 3 | High | Very low | | |
| | Annual nutrient load | kg | 9.2 | High | Low | | |
| | G'water environ. value | Agric non-sensit | | V. high | Low | | |
| | Min. separation dist. required | m | 2 | High | Very low | | |
| | Risk to adjacent bores | Very low | | V. high | Very low | | |
| | Surf. water env. value | Agric non-sensit | | V. high | Low | | |
| | Dist. to nearest surface water | m | 300 | V. high | Low | | |
| | Dist. to nearest other feature | m | 40 | V. high | Moderate | | |
| | Risk of slope instability | Low | | V. high | Low | | |
| | Distance to landslip | m | 60 | V. high | Moderate | | |

Comments

The land application area complies with all setback distances. Planting out of the absorption area with suitable species will aid nutrient uptake.

Demonstration of wastewater system being consistent with *Building Act 2016 Guidelines for On-site Wastewater*

| **Acceptable Solutions** | **Performance Criteria** | **Compliance** |
|---|---|---|
| A1<br>Horizontal separation distance from a building to a land application area must comply with one of the following:<br>a) be no less than 6m; or<br>b) be no less than:<br>(i) 3m from an upslope building or level building;<br>(ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building;<br>(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<br>a) The land application area is located so that<br>(i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and<br>(ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation | Consistent with A1 (b) (i)<br>Land application area will be located with a minimum separation distance of 3m from an upslope or level building.<br><br>Consistent with A1 (b) (iii)<br>Land application area will be located with a minimum separation distance of 4.25m of downslope building. |
| A2<br>Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b)<br>(a) be no less than 100m; or<br>(b) be no less than the following:<br>(i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or<br>(ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water. | P2<br>Horizontal separation distance from downslope surface water to a land application area must comply with all of the following:<br>a) Setbacks must be consistent with AS/NZS 1547 Appendix R;<br>b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. | Consistent with A2 (b) (ii)<br>Land application area will be located with a minimum separation distance of 33m of downslope surface water. |

| | | |
|---|---|---|
| A3<br><br>Horizontal separation distance from a property boundary to a land application area must comply with either of the following:<br><br>(a) be no less than 40m from a property boundary; or<br><br>(b) be no less than:<br><br>(i) 1.5m from an upslope or level property boundary; and<br><br>(ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or<br><br>(iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary. | P3<br><br>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:<br><br>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br><br>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. | Consistent with A3 (b) (i)<br>Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary<br><br>Consistent with A3 (b) (iii)<br>Land application area will be located with a minimum separation distance of 10.5m of downslope property boundary. |
| A4<br><br>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient. | P4<br><br>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following:<br><br>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br><br>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable | No bore or well identified within 50m |

| | | |
|---|---|---|
| A5<br>Vertical separation distance between groundwater and a land application area must be no less than:<br>(a) 1.5m if primary treated effluent; or<br>(b) 0.6m if secondary treated effluent | P5<br>Vertical separation distance between groundwater and a land application area must comply with the following:<br>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable | No groundwater encountered. |
| A6<br>Vertical separation distance between a limiting layer and a land application area must be no less than:<br>(a) 1.5m if primary treated effluent; or<br>(b) 0.5m if secondary treated effluent | P6<br>Vertical setback must be consistent with AS/NZS1547 Appendix R. | No limiting layer identified. |
| A7<br>nil | P7<br>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 | Consistent with P7. |

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# AS1547:2012 – Loading Certificate – Eljen System Design

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

**Site Address:** Lot 2 Longmans Road, Snug

**System Capacity:** 6 persons @ 120L/person/day

**Summary of Design Criteria**

**DLR:** 15L/$m^2$/day

**Absorption area:** 48$m^2$

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

**Water saving features fitted:** Standard fixtures

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

**Typical loading change consequences:** Expected to be minimal due to capacity of system and site area (provided loading changes within 25% of design)

**Overloading consequences:** Continued overloading may cause hydraulic failure of the absorption area and require upgrading/extension of the area. Risk considered acceptable due to visible signs of overloading and owner monitoring.

**Underloading consequences:** Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non occupation. Under such circumstances additional maintenance of the system may be required. Risk considered acceptable.

**Lack of maintenance / monitoring consequences:** Issues of underloading/overloading and condition of the absorption area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Septic tank de-sludging must also be monitored to prevent excessive sludge and scum accumulation. Monitoring and regulation by the property owner required to ensure compliance.

**Other operational considerations:** Owners/occupiers must be aware of the operational requirements and limitations of the system, including the following; the absorption area must not be subject to traffic by vehicles or heavy stock and should be fenced if required. The absorption area must be kept with adequate grass cover to assist in evapotranspiration of treated effluent in the absorption bed. The septic tank must be desludged at least every 3 years, and any other infrastructure such as septic tank outlet filters must also be cleaned regularly (approx. every 6 months depending upon usage). Foreign materials such as rubbish and solid waste must be kept out of the system.

# CERTIFICATE OF THE RESPONSIBLE DESIGNER

**Section 94**
**Section 106**
**Section 129**
**Section 155**

Form **35**

To: JOSCON Tasmania Pty Ltd *Owner name*
119 Harrington Street *Address*
Hobart 7000 *Suburb/postcode*

## Designer details:

Name: Vinamra Gupta
Category: Civil Engineer
Business name: Geo-Environmental Solutions
Phone No: 03 6223 1839
Business address: 29 Kirksway Place
Battery Point 7004
Fax No: N/A
Licence No: 685982720
Email address: office@geosolutions.net.au

## Details of the proposed work:

**Owner/Applicant** JOSCON Tasmania Pty Ltd
Designer's project reference No. J11816
**Address:** Longmans Road
Lot No: 143579/2
Snug 7054

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

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

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

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

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

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

Other details:

Dual-purpose septic tank with Eljen trenches to provide secondary treatment of effluent.

## Design documents provided:

The following documents are provided with this Certificate –

*Document description:*

| | | |
|---|---|---|
| Drawing numbers: | Prepared by: Geo-Environmental Solutions | Date: Aug-25 |
| Schedules: | Prepared by: | Date: |
| Specifications: | Prepared by: Geo-Environmental Solutions | Date: Aug-25 |
| Computations: | Prepared by: | Date: |
| Performance solution proposals: | Prepared by: Geo-Environmental Solutions | Date: Aug-25 |
| Test reports: | Prepared by: Geo-Environmental Solutions | Date: Aug-25 |

**Standards, codes or guidelines relied on in design process:**

AS1547:2012 On-site domestic wastewater management.

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

**Any other relevant documentation:**

Geo-Environmental Assessment - Lot 2 Longmans Road Snug - Aug-25

**Attribution as designer:**

I Vinamra Gupta, 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: | Vinamra Gupta |  | 14/08/2025 |
| Licence No: | 685982720 | | |

## Assessment of Certifiable Works: (TasWater)

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

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

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

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

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

## Certification:

I ..... Vinamra Gupta..... 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: | Vinamra Gupta |  | 14/08/2025 |

# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

**Section 321**

**Form 55**

To: JOSCON Tasmania Pty Ltd *Owner /Agent*
119 Harrington Street *Address*
Hobart 7000 *Suburb/postcode*

## Qualified person details:

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

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

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

## Details of work:

Address: Longmans Road
Snug 7054
Lot No:
Certificate of title No: 143579/2

The assessable item related to this certificate: Classification of foundation Conditions according to AS2870-2011

*(description of the assessable item being certified)*
*Assessable item includes –*
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

## Certificate details:

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

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

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

In issuing this certificate the following matters are relevant –

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

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

Site Classification consistent with AS2870-2011.

*Scope and/or Limitations*

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

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

Qualified person:

*Signed:*

*Certificate No:* J11816

*Date:* 01/07/2025

# Eljen GSF System Design Program

RESET FORM

| | | | | | |
|---|---|---|---|---|---|
| Date: | 6-Aug-25 | Client Name: | JOSCON | | |
| Site Address: | Lot 2 Longmans Road, Snug | | | Council Area: | Kingborough |
| Designer: | VG:EF | Designer Phone Number: | 62231839 | Is this new construction Y or N: | Y |
| Plumber: | Cameron Ward | Plumber Phone Number: | 0407782308 | Plumber License Number: | 1110675 |

***Note: This design program is a guide only. All design constraints and limitations must be addressed by the designer prior to design and installation.***

| System Design Information | | Design Notes and Comments |
|---|---|---|
| Design Occupancy (Number of persons): | 3 | This is for (1) Trench , so need (2) trenches 1.8M Wide X 1 |
| Daily Design Flow (L/Person/Day): | 120 | |
| Total Daily Design Flow (L/Day): | 360 | |
| Trench or Bed | Bed | |
| Soil Category *(Note: Soil Catagories 4-6 May Require additional design consideration. Please reference AS/1547 2012 when designing in these soil types.)* | 2 - Sandy Loams | |
| Site Design Loading Rate (L/mm/day): | 15 | |
| System Area Slope (%): | 0% | |
| System Area Slope (converted from % slope to degrees slope): | 0.00 | |
| System Basal Area Bore Log Depth: *(Note: Must be greater than 600 mm)* | 600 | |
| Maximum System Length Based on Site Constraints: | 15 | |
| Desired Rows or Trenches in System | 1 | |
| Distribution Type (G = Gravity - P = Pump to Gravity - LPD = Low Pressure Distribution): | G | |

eljen PACIFIC

8/8/2025

| System Dimensions | |
|---|---|
| **Would you like to use a specific width?** | **Y** |
| **Specific Width (m)** | **1.8** |

| | Treatment Zone | Dispersal Zone Extension |
|---|---|---|
| **Length (m)** | **5.18** | **13.33** |
| **Width (m)** | **0.90** | **1.8** |
| **Sand Height (m)** | **0.15** | **0.15** |
| **Sand Area ($m^2$)** | **4.66** | **24** |

| System Capacity | |
|---|---|
| **Total Daily Design Flow (L/Day):** | **360** |
| **Minimum Number of A42 Units Required** | **4** |
| **Units per Row** | **4** |
| **Length of Rows with 0.15 m Sand Extension** | **5.18** |
| **End to End Space Between Modules (TRENCH ONLY)** | |

| Materials | |
|---|---|
| **Minimum Number of A42 Units Required** | **4** |
| **The system requires a high vent. Are using 50mm or 100mm pipe?** | |
| **Low vent** | **1 x 100mm vent** |
| **Effluent Filter** | **1** |
| **Inspection Ports** | **2** |
| **Pipe Required (m)** | **5.18** |
| **Estimate of System Sand Required (tonnes)** | **7.85** |

Ground Floor FFL 354.00

C.T.143579-2
3.726ha

SURFACE DIVERSION DRAIN

DISTRIBUTION BOX

ELJEN TRENCHES

INDICATIVE LOCATION
DUAL-PURPOSE SEPTIC TANK
(MIN 3000L)
MIN 1:60 FALL

TH1
TH2
TH3

Nail in peg 351.32

Nail in peg 343.20

Track centreline

Gravel Driveway
879.47 m²

Entry Path

Stake

B.M. Nail in peg
R.L. 353.74
A.H.D.

Star 338.44
250°22'10"
372.92
46941
196745
165841
21300
18250
18950
20570
Star 355.13
255°36'00"
48.80
Star 348.16
256°34'00"
137.35
Star 311.59
Pipe 328.34
160°21'40"
119.72
Star 323.44
328.93
329.12
329.22
329.48
329.59

**Wastewater system:**

Dual-purpose septic tank (min 3000L) with outlet filter and venting according to NCC Vol 3 Tas C2D6

Surface diversion drain

Distribution box

Eljen trenches (48m²)
2 x 13.33m x 1.8m x 0.45m

Min 3m separation

Min 3m from upslope or level buildings
Min 4.25m from downslope buildings
Min 1.5m from upslope or level boundaries
Min 10.5m from downslope boundary
Min 33m from downslope surface water

Refer to GES report

Dr. John Paul Cumming
Building Services Designer-Hydraulic
CCC774A

14/08/2025

GES
GEO-ENVIRONMENTAL SOLUTIONS
29 Kirksway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

Approximate Test Hole Location

0 2 4 6 8m
1:200

| No. | Date | Int. | Amendment changes as per cover sheet |
|---|---|---|---|

Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
- All materials to be installed according to manufacturers specifications.
- Do not scale from these drawings.
- No changes permitted without consultation with designer.

Designer:

ANOTHER PERSPECTIVE PTY LTD
PO BOX 171
NORTH HOBART
LIC. NO. 685230609 (S. Turvey)
Ph: (03) 6231 4122
Fx: (03) 6231 4166
Email:
info@anotherperspective.com.au

Client / Project info

PROPOSED FARMER & TRICKETT RESIDENCE (2004)

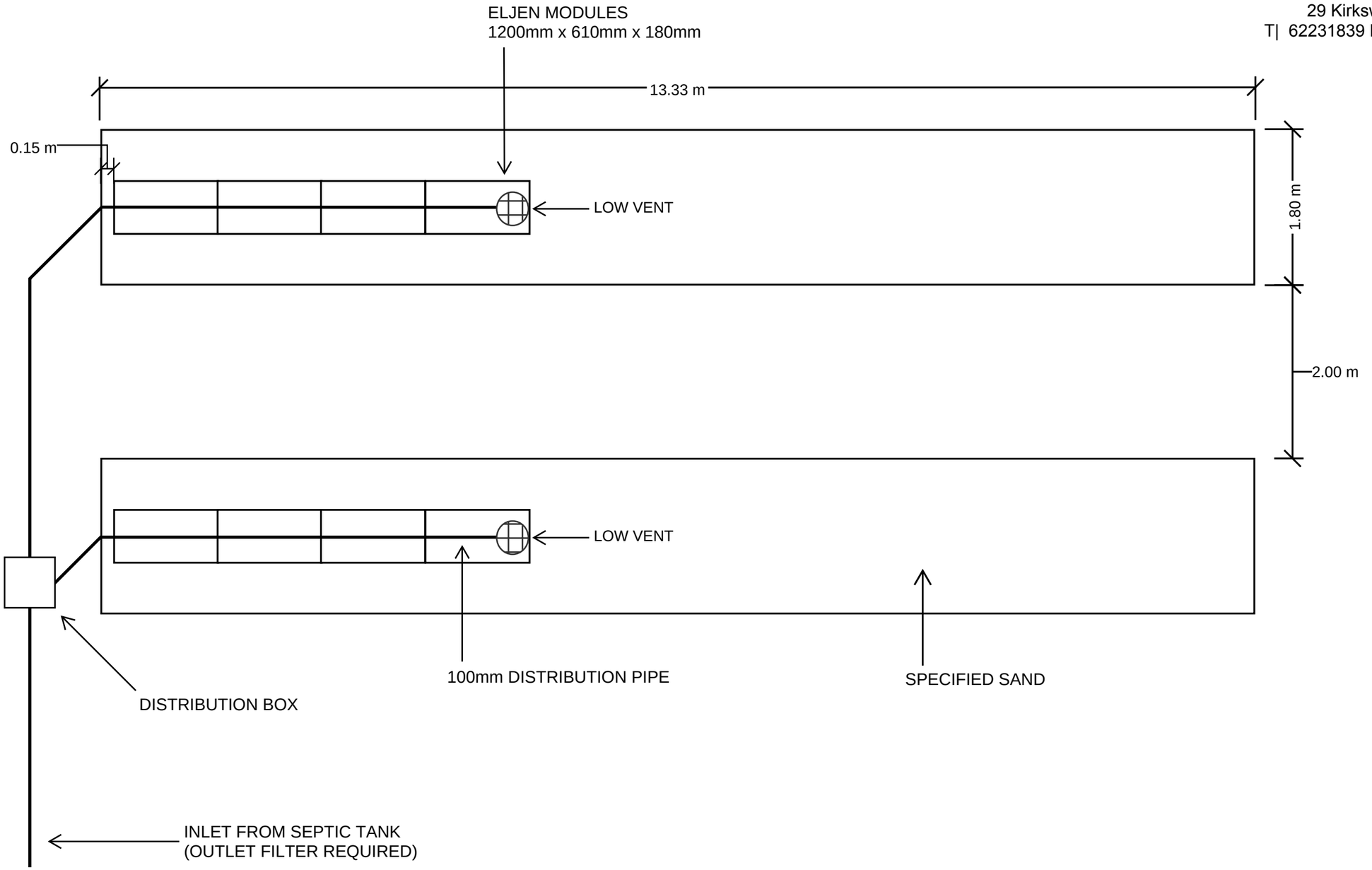
Lot 2, Longmans Road,
SNUG

JOSCON TASMANIA

LOCATION PLAN 2

| | | |
|---|---|---|
| Drawn | SW | AP2025-2469 |
| Date | 15 May 2025 | Sheet 01a/03 |
| Scale | 1 : 500 | |

GEO-ENVIRONMENTAL
SOLUTIONS
29 Kirksway Place, Battery Point
T| 62231839 E| office@geosolutions.net.au




| | | | | | |
|---|---|---|---|---|---|
| Do not scale from these drawings. Dimensions to take precedence over scale. | Eljen Trenches Plan View - 48m$^2$<br>Trench dimensions 13.33m x 1.8m<br>1 row of 4 units per trench | | | | |

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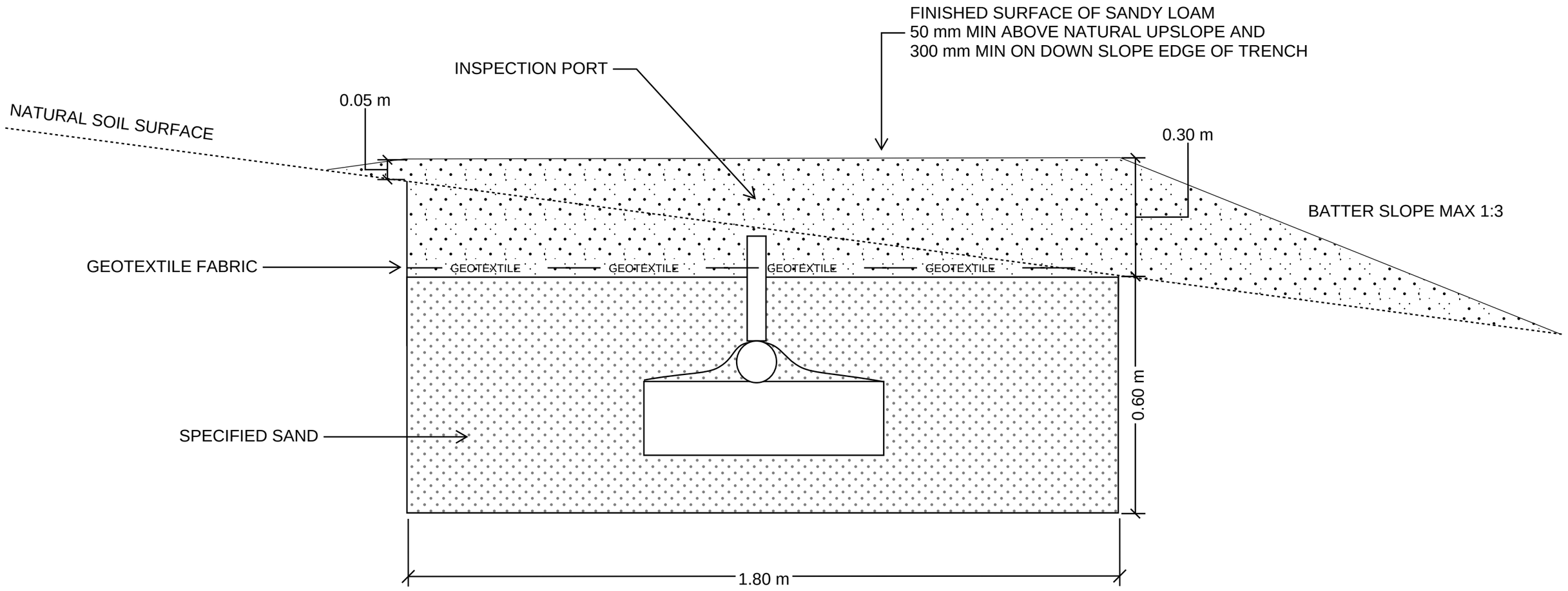


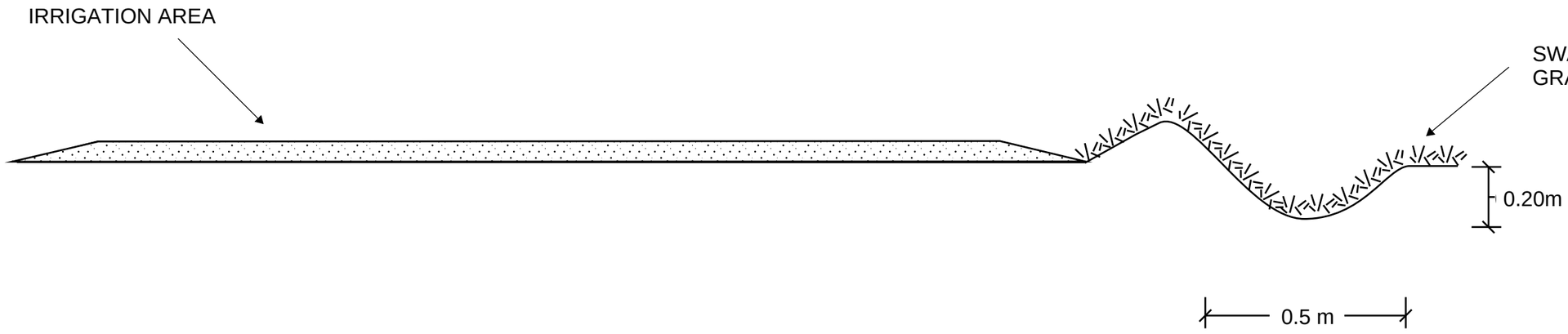

| | | | | | |
|---|---|---|---|---|---|
| Do not scale from these drawings. Dimensions to take precedence over scale. | Geo-Environmental Solutions | | Date: Aug 2025 | Terraced Eljen Absorption Trench Detail | Sheet 1 of 1 |

GEO-ENVIRONMENTAL
SOLUTIONS
29 Kirksway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

**TYPICAL GRASSED SWALE DRAIN CROSS-SECTION**

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

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




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