

26 October 2023

Reg. No.: GS23-347

Wormtech Pty Ltd
PO Box 526
Yenda, NSW 2681

Attention: Mr. Thomas Dewing – Commercial Development Manager

Dear Sir,

**PRELIMINARY GEOTECHNICAL INVESTIGATION - EXISTING VERMICULTURE FACILITY,
LOT 487, No. 224 WOOD ROAD, YENDA, NSW**

Further to your request in response to our quotation, Q23-459B dated 13 September 2023; we have carried out preliminary geotechnical field investigation at the existing vermiculture facility on the vermiculture pad at the above subject site on 19 September 2023.

The purpose of the investigation was to determine the nature of the subsurface soils and groundwater conditions by augering, testing and sampling across the proposed site. Based upon the information obtained, comments and recommendations for the existing vermiculture pad are to be made.

It should be noted that additional boreholes were recommended to be drilled across the site with additional laboratory testing (refer to ARTL quote Q23-459, dated 14 August 2023).

1.0 SITE DESCRIPTION

The site of the existing vermiculture facility is located at Lot 487, No. 224 Wood Road, Yenda, NSW, approximately 2.8km south-east of the town center. The subject site of the existing vermiculture pad is located at the eastern side of the site directly west of the Martin Road, directly south of Wood Road and directly north of the existing leachate dam (refer to attached borehole location plan).

The existing vermiculture pad was noted to have been constructed by stripping the pre-existing topsoil and preparing the pad with sections of shallow clay-based fill (cut to fill) and noted to be generally flat with a slight slope towards the leachate pad to the south as noted at the time of the

investigation. It should also be noted that windrows or vermiculture were witnessed across the subject site of the existing vermiculture pad as witnessed at the time of the investigation (refer to attached site photo).

2.0 SITE GEOLOGY

The general topography of the area is flat, gently undulating low tablelands. The subject site in the Yenda area is underlain by alluvial flood plain deposits of black and red clayey silt, sand and gravel soils of Quaternary Deposit of Cainozoic Age in accordance with 1:250,000 Scale “Metallogenic Series Sheet SI/55-10 for Narrandera”.

3.0 INVESTIGATION PROCEDURE

3.1 Fieldwork

The fieldwork for the investigation consisted of logging and sampling of three (3) boreholes (BH1 to BH3) across the existing vermiculture pad as requested by the client and they were augered with our trailer-mounted drilling rig to the depths of 2.0m at the locations as shown in the attached borehole, DCP and DIS test location plan with small and bulk samples recovered at various depths from the boreholes for relevant laboratory testing.

Dynamic Cone Penetrometer (DCP) and Density In-situ (DIS) tests were carried out at each borehole location (BH1 to BH3) to assess the strength and compaction of the underlying material. It should be noted that GPS readings at each borehole location are given in the respective borehole logs. It should also be noted that DIS was undertaken adjacent to each borehole location and the GPS readings are given in the DIS test report (refer to ARTL report No. GD23-436, dated 18 October 2023).

The fieldwork was carried out on 19 September 2023 by our Geotechnician of Aitken Rowe Testing Laboratories Pty Ltd of Griffith, NSW, who nominated the sampling and prepared engineering logs of the boreholes. The borehole logs with explanatory note and DCP test reports are herewith attached. The DIS test report (refer to ARTL report No. GD23-436) is also herewith attached.

3.2 Laboratory Testing

To confirm and evaluate the results of the fieldwork, laboratory tests were carried out on the representative samples of the subsoil obtained from the boreholes. The relevant laboratory testing included Particle Size Distribution (PSD) test (hydrometer test method), Atterberg Limit test, Shrink Swell Index (Iss) test, Standard Maximum Dry Density (SMDD) test and permeability test on the recovered samples, which were undertaken at our NATA accredited testing laboratory in Griffith and Wagga Wagga, NSW.

The samples for permeability tests were compacted at 95% and 100% of SMDD and at nearest 100% of Standard Optimum Moisture Content (SOMC). The laboratory test reports for Particle Size

Distribution, Atterberg Limit, SMDD, SOMC and permeability tests are herewith attached. The test results for Iss and SOMC are incorporated in the respective borehole logs.

4.0 SUBSURFACE CONDITIONS

The borehole investigation across the existing vermiculture pad revealed that the site is generally underlain by fill material (in BH2 & BH3 only) comprising high plasticity silty clay (in BH2 only) to 0.2 in BH2 and low plasticity sandy silty clay (in BH3 only) to 0.1m in BH3 overlying natural medium to high and high plasticity silty clay and low plasticity sandy silty clay (in BH3 only), extending to the borehole termination depth at 2.0m in BH1 to BH3. The fill material encountered at the borehole locations (BH2 & BH3 only) appeared to have been placed “uncontrolled” and “moderately to well compacted”.

The moisture condition of the underlying clay-based fill material was generally less than plastic limit throughout the tested fill profile in BH2 and BH3 and the underlying natural clay-based material was generally greater than plastic limit throughout the investigation depth at the time of the investigation. No groundwater or seepage was encountered in the boreholes and the boreholes were found dry on completion at the time of the investigation. However, it should be noted that variations to the water table level could fluctuate with changes to the season, temperature and rainfall.

As per the DCP test result and visual observation of the resistance by auger TC bit, the underlying fill material (in BH2 & BH3 only) is assessed to be generally very stiff consistency throughout the tested fill profile and the underlying natural clay-based material is assessed to be generally stiff consistency in the upper profile then increasing to very stiff consistency throughout the investigated depth in BH1, generally firm consistency in the upper profile then increasing to stiff and very stiff consistency with depth throughout the investigated depth in BH2 and generally firm to stiff consistency in the upper profile then increasing to very stiff consistency throughout the investigated depth in BH3 at the time of the investigation.

The density in-situ tests performed at the existing surface level (DIS No. 2, 4 & 6) and at 300mm below the existing surface level (DIS No. 1, 3 & 5) across the existing vermiculture pad showed relative density results ranging from 89.0% to 105.5% SMDD at the surface level and 95.5% to 101.5% SMDD at the depth of 300mm below the existing surface level at the time of the investigation (refer to ARTL report No. GD23-436, dated 18 October 2023).

The borehole logs with explanatory note, DCP and DIS test reports are herewith attached.

5.0 SUITABILITY OF SUBSURFACE MATERIALS FOR COMPOSTING OPERATION PAD

The laboratory tests carried out on the natural clay material recovered from BH1 indicated that the material generally contains 0 to 9% gravel, 13 to 19% sand, 32% silt and 45 to 49% clay content with Plasticity Index (PI) of 28 to 42%. The material is generally classified as “CH – Silty CLAY; high

plasticity, with fine to coarse sand” and “CH – Silty CLAY; high plasticity, trace fine to coarse sand, trace fine gravel” in accordance with “AS1726 -2017 Geotechnical Site Investigations”.

The permeability test carried out on the natural clay-based material from BH1 indicates the permeability of 8×10^{-10} m/sec on high plasticity silty clay, which was compacted at 100% of SMDD at nearest 100% of SOMC. The dispersion (Emerson Class) tests carried out on the same samples showed “Emerson Class 4” and therefore the clay-based materials are considered “potentially slightly dispersive”. The laboratory test reports are attached.

The laboratory tests carried out on the fill and natural silty clay material recovered from BH3 indicated that the material generally contains 0 % gravel, 31 to 34% sand, 31 to 32% silt and 34 to 38% clay content with Plasticity Index (PI) of 17 to 18%. The material is generally classified as “CL – Sandy Silty CLAY; low plasticity, fine to coarse sand” in accordance with “AS1726 -2017 Geotechnical Site Investigations”.

The permeability test carried out on the natural clay-based material from BH3 indicates the permeability of 9×10^{-9} m/sec on low plasticity sandy silty clay, which was compacted at 95% of SMDD at nearest 100% of SOMC. The dispersion (Emerson Class) tests carried out on the same sample showed “Emerson Class 3” and therefore the clay-based materials are considered “potentially moderately dispersive”. The laboratory test reports are attached.

These results were found to be within the Department of Environment and Conservation (NSW) environmental guidelines for “Composting and Related Organics Processing Facilities (1.0×10^{-7} m/sec) for composting pads provided the subgrade material is compacted to 98% SMDD at nearest 100% of SOMC.

As stated above the density tests in-situ performed across the existing vermiculture pad showed relative density results ranging from 89.0% to 105.5% SMDD at the surface level and 95.5% to 101.5% SMDD at the depth of 300mm below the existing surface level at the time of the investigation (refer to ARTL report No. GD23-436).

It is our professional opinion that the fill and natural impermeable clay-based material encountered across the existing vermiculture pad is considered an adequate and suitable natural geological barrier between the groundwater, soil and substrata and the vermiculture across the site. It should however be noted the DCP and DIS tests at the location of BH2 (DCP2), BH3 (DCP3), DIS 3 and DIS 6 showed either poorly compacted fill or firm and firm consistency natural material to depths of 0.5m to 0.7m below the existing surface level which is considered “unsuitable” and therefore “reworking” of the surface material is highly recommended to a minimum depth 0.5m to 0.7m across the existing vermiculture pad in order to achieve the required compaction of 98% SMDD with the permeability requirements.

6.0 SITE PREPARATION FOR COMPOST PAD

The following site preparation is required across the existing vermiculture pad site prior to any composting activities in order to confirm to the permeability requirements.

- Remove topsoil, if any, and fill to a minimum depth of 0.5m to 0.7m and stockpile for later use for landscaping and fill as appropriate.
- Remove any unsuitable material encountered at the time of the construction as required.
- Once the topsoil, fill and unsuitable materials, if any, are removed as required, the exposed fill or natural material should then be scarified to a depth of about 200mm; moisture conditioned to within 0 to -2% of SOMC and compacted to a minimum of 98% of SMDD.
- Proof roll the exposed subgrade using a minimum of 10 passes of 12 tonne dead weight roller to detect any soft, loose or heaving areas.
- Any soft, loose or heave areas, if detected during the process, should be excavated down and backfilled with appropriate approved materials, compacted in 150mm thick layers to the equivalent density of minimum 98% of SMDD.
- Any area of exposed subgrade, which exhibits shrinkage cracking and does not require re-compaction, should be watered and rolled until the shrinkage cracks do not reappear. During this undertaking, care should be exercised to ensure the surface does not become soft.
- Monitor in dry conditions. If cracks appear then immediately apply water until cracking has ceased. Alternatively, a thin layer (minimum of 0.1m) of granular material (ie sand) can be applied over the surface to protect from cracking.

7.0 GENERAL COMMENT

It should be noted that the comments and recommendations given in this report are based on a limited geotechnical investigation. The subsurface soil conditions between the completed boreholes may be found different (or may be interpreted to be different) from those expected. This can also occur with groundwater conditions, especially after climatic changes. If such differences appear to exist, we recommend that you immediately contact us.

Yours truly,



Jarrod Gornall
Senior Geotechnical Engineer



Tin Maung
Principal Geotechnical Engineer

Attachments:

- Addendum
- Plan showing Borehole, DCP & DIS Locations
- Borehole logs with explanatory note
- Dynamic Cone Penetrometer test reports
- In-situ Density test report (ARTL Report No. GD23-436)
- Laboratory test reports
- Site Photo

ADDENDUM

LIMITS OF INVESTIGATION

The recommendations made in this report are based on the assumption that the test results are representative of the overall subsurface conditions. However, it should be noted that even under optimum circumstances, actual conditions in some parts of the building site may differ from those said to exist, because no geotechnical engineer, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal all that is hidden by earth, rock and time.

The client should also be aware that our recommendations refer only to our test site locations and the ground level at the time of testing.

The recommendations in this report are based on the following: -

- a) The information gained from our investigation.
- b) The present "state of the art" in testing and design.
- c) The building type and site treatment conveyed to us by the client.
- d) Historical information.

Should the client or their agent have omitted to supply us with the correct relevant information, or make significant changes to the building type and/or building envelope, our report may not take responsibility for any consequences and we reserve the right to make an additional charge if more testing is necessary.

Notwithstanding the recommendations made in this report, we also recommend that whenever footings are close to any excavations or easements, that consideration should be given to deepening the footings.

Unless otherwise stated in our commission, any dimensions or slope direction and magnitude should not be used for any building costing calculations and/or positioning. Any sketch supplied should be considered as only an approximate pictorial evidence of our work.



Aitken Rowe Testing Laboratories Pty Ltd

Registration Number: GS23-347

Page 1 of 1

Client: WORMTECH PTY LTD – YENDA, NSW
Project: PRELIMINARY GEOTECHNICAL INVESTIGATION
 EXISTING VERMICULTURE FACILITY,
 LOT 487, No. 224 WOOD ROAD, YENDA, NSW
 BOREHOLE, DCP & DIS TEST LOCATION PLAN

AITKEN ROWE TESTING LABORATORIES PTY LTD

Borehole No.: 1

Sheet No.: 1 of 1

Ground Level: Existing

Date: 19/09/2023

Method: Auger Drilling with TC Bit

GPS N: 6208747

E: 0428575

| USCS Symbol | Description | Depth (m) | Moisture Condition | Consistency/Rel. Density | Sample | | Lab. Test L.S % -425µm | Remarks & Field Records | |
|-------------|--|-----------|--------------------|--------------------------|--------|-----|------------------------------|---|--|
| | | | | | Type | No. | | | |
| CH | Silty CLAY; high plasticity, with fine to coarse sand, red brown | 0.5 | MC<PL | VSt. | U50 | 1A | 17.0 | NATURAL Iss = 3.16 SOMC = 27.9% 1% >OMC OMC | |
| CH | Silty CLAY; high plasticity, trace sand, trace gravel, orange brown | | | | D | 1B | | | |
| CH | Silty CLAY; high plasticity, trace sand, trace gravel, yellow orange brown | | 1.0 | | | | | | |
| CH | Silty CLAY; high plasticity, trace sand, grey yellow brown | | 1.5 | | VSt. | | | | |
| | End of Borehole (BH1) @ 2.0m | 2.0 | | | | | | | |
| | | 2.5 | | | | | | | |
| | | 3.0 | | | | | | | |
| | | 3.5 | | | | | | | |
| | | 4.0 | | | | | | | |

Registration No.: GS23-347

Location: Preliminary Geotechnical Investigation - Existing Vermiculture Facility, Lot 487, No. 224 Wood Road, Yenda, NSW

Client: Wormtech Pty Ltd - Yenda, NSW

Logged By: M.S

Scale: As shown

Dry on completion

AITKEN ROWE TESTING LABORATORIES PTY LTD

Borehole No.: 2

Sheet No.: 1 of 1

Ground Level: Existing

Date: 19/09/2023

Method: Auger Drilling with TC Bit

GPS N: 6208928

E: 0428672

| USCS Symbol | Description | Depth (m) | Moisture Condition | Consistency/Rel. Density | Sample | | Lab. Test | Remarks & Field Records |
|-------------|--|-----------|--------------------|--------------------------|--------|-----|-----------|--|
| | | | | | Type | No. | | |
| CH | FILL: Silty CLAY; high plasticity, trace sand, brown | | MC<PL | VSt. | D | 2A | | FILL: Appears moderately to well compacted |
| CH | Silty CLAY; high plasticity, with fine to coarse sand, red brown | | MC>PL | St. | D | 2B | | 'Uncontrolled' |
| CH | Silty CLAY; high plasticity, trace sand, trace gravel, orange brown | 0.5 | | F | | | | NATURAL |
| | | | | | D | 2C | | 1% >OMC |
| | | 1.0 | | St. | | | | Calcareous gravel |
| CH | Silty CLAY; high plasticity, trace sand, trace gravel, yellow orange brown | 1.5 | | VSt. | | | | OMC |
| | | | | | D | 2D | | Calcareous gravel |
| | | 2.0 | | | | | | |
| | End of Borehole (BH2) @ 2.0m | 2.5 | | | | | | |
| | | 3.0 | | | | | | |
| | | 3.5 | | | | | | |
| | | 4.0 | | | | | | |

Registration No.: GS23-347

Location: Preliminary Geotechnical Investigation - Existing Vermiculture Facility, Lot 487, No. 224 Wood Road, Yenda, NSW

Client: Wormtech Pty Ltd - Yenda, NSW

Logged By: M.S

Scale: As shown

Dry on completion

AITKEN ROWE TESTING LABORATORIES PTY LTD

Borehole No.: 3

Sheet No.: 1 of 1

Ground Level: Existing

Date: 19/09/2023

Method: Auger Drilling with TC Bit

GPS N: 6208887

E: 0428554

| USCS Symbol | Description | Depth (m) | Moisture Condition | Consistency/Rel. Density | Sample | | Lab. Test L.S % -425µm | Remarks & Field Records |
|-------------|---|--------------------------|--------------------|--------------------------|--------|-----|------------------------------|--|
| | | | | | Type | No. | | |
| CL | FILL: Sandy Silty CLAY; low plasticity, fine to coarse sand, red brown | | MC<PL | VSt. | D | 3A | | FILL: Appears moderately to well compacted 'Uncontrolled' |
| CI-CH | Silty CLAY; medium to high plasticity, with fine to coarse sand, red brown | | MC>PL | F-St. | U50 | 3B | 12.5 | NATURAL Iss = 2.59 1-2% >OMC |
| CL | Sandy Silty CLAY; low plasticity, fine to coarse sand, yellow orange | 0.5 1.0 1.5 | | VSt. | D | 3C | | SOMC = 20.1% 2-3% >OMC ← Slight Seepage @ 1.4m to 1.6m ← End of Seepage |
| CI-CH | Silty CLAY; medium to high plasticity, with fine to coarse sand, yellow brown | 2.0 | | | | | | |
| | End of Borehole (BH3) @ 2.0m | 2.5 3.0 3.5 4.0 | | | | | | |

Registration No.: GS23-347

Location: Preliminary Geotechnical Investigation - Existing Vermiculture Facility, Lot 487, No. 224 Wood Road, Yenda, NSW

Client: Wormtech Pty Ltd - Yenda, NSW

Logged By: M.S

Scale: As shown

Seepage @ 1.4m to 1.6m



AITKEN ROWE TESTING LABORATORIES PTY LTD

LOG SYMBOLS

| LOG COLUMN | SYMBOL | DEFINITION | | |
|---|-------------------|---|-----------------------|-----------------------------|
| Groundwater Record | | Standing water level. Time delay following completion of drilling may be shown. | | |
| | | Groundwater seepage into borehole or excavation noted during drilling or excavation. | | |
| Samples | D | Disturbed bag sample taken between the depths indicated by lines. | | |
| | U | Undisturbed 50mm diameter tube sample taken between the depths indicated by lines | | |
| Field Tests | 4, 7, 10 N=17 | Standard Penetration Test (S.P.T.) performed between depths indicated by lines. Individual figures show blows per 150mm penetration driven by SPT hammer. | | |
| | 5 | Dynamic Cone Penetration Test performed between depths indicated by lines. | | |
| | 7 | Individual figures show blows per 100mm penetration for 60 degree solid cone driven by 9 kg hammer. | | |
| | 3 | | | |
| Moisture Condition (Silt or Clay based) | MC<PL | Moisture content estimated to be less than plastic limit. | | |
| | MC=PL | Moisture content estimated to be approx. equal to plastic limit. | | |
| | MC>PL | Moisture content estimated to be greater than plastic limit. | | |
| Moisture Condition (Gravel or Sand based) | D | DRY – runs freely through fingers. | | |
| | M | MOIST – does not run freely but no free water visible on soil surface. | | |
| | W | WET – free water visible on soil surface. | | |
| Consistency (Silt or Clay based) | VS | VERY SOFT – unconfined compressive strength less than 25kPa. | | |
| | S | SOFT – unconfined compressive strength 25-50 kPa. | | |
| | F | FIRM – unconfined compressive strength 50-100kPa. | | |
| | St. | STIFF – unconfined compressive strength 100-200kPa. | | |
| | VSt. | VERY STIFF – unconfined compressive strength 200-400kPa. | | |
| | H | HARD – unconfined compressive strength greater than 400kPa. | | |
| Relative Density (Gravel or Sand based) | | Description | Density Index Range % | 'N' Value Range Blows/300mm |
| | VL | VERY LOOSE | <15 | 0-5 |
| | L | LOOSE | 15-35 | 6-10 |
| | MD | MEDIUM DENSE | 35-65 | 11-30 |
| | D | DENSE | 65-85 | 31-60 |
| | VD | VERY DENSE | >85 | >60 |
| Hand Penetrometer Readings | 300 250 280 | Numbers indicate individual test results in kPa on representative undisturbed material. | | |
| Laboratory Test | L.S. % | Linear Shrinkage (As per TfNSW Method T113) | | |
| | M.C. % | Field Moisture Content (As per Australian Standard AS1289.2.1.1 or TfNSW Method T120) | | |
| | Iss | Shrink-Swell Index (As per Australian Standard AS1289.7.1.1) | | |
| Piezometer Construction | Fill | | Piezometer | |
| | | Bentonite | | Solid Pipe |
| | | Washed Fine Graded Gravel | | Slotted Screen |
| Remarks | 'V' bit | Hardened steel 'V' shaped bit. | | |
| | 'TC' bit | Tungsten Carbide wing bit. | | |

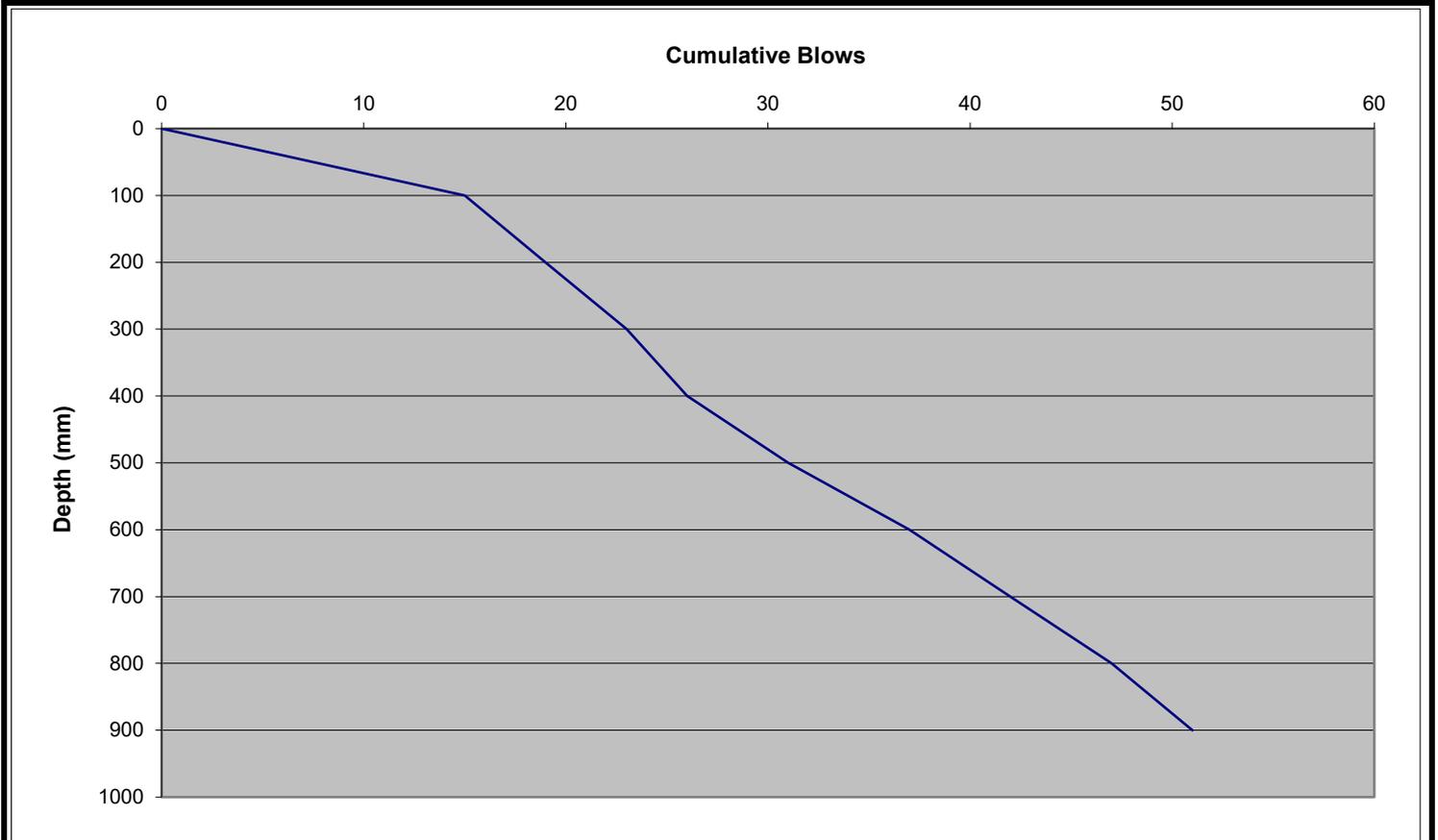
Aitken Rowe Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

DYNAMIC CONE PENETROMETER REPORT

| | |
|---|--|
| CLIENT: WORMTECH PTY LTD - YENDA, NSW | PAGE: 1 OF: 3 DCP: 1 (BH1) |
| PROJECT: PRELIMINARY GEOTECHNICAL INVESTIGATION EXISTING VERMICULTURE FACILITY | REGISTRATION NO: GS23-347 |
| LOCATION: LOT 487, No. 224 WOOD ROAD, YENDA, NSW | DATE OF TEST: 19/09/2023 |
| SOIL DESCRIPTION: REFER TO BOREHOLE LOGS | DEPTH BELOW ESL (mm): NIL |
| DEPTH OF GROUND WATER TABLE IF INTERSECTED: N/A | MOISTURE CONDITION: REFER TO LOGS |
| | TEST METHOD: AS 1289.6.3.2 |

| Depth(m) | Blows | Est. CBR |
|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|
| 0.0 - 0.1 | 15 | 38 | 1.5 - 1.6 | * | * | 3.0 - 3.1 | * | * | 4.5 - 4.6 | * | * |
| 0.1 - 0.2 | 4 | 7 | 1.6 - 1.7 | * | * | 3.1 - 3.2 | * | * | 4.6 - 4.7 | * | * |
| 0.2 - 0.3 | 4 | 7 | 1.7 - 1.8 | * | * | 3.2 - 3.3 | * | * | 4.7 - 4.8 | * | * |
| 0.3 - 0.4 | 3 | 5 | 1.8 - 1.9 | * | * | 3.3 - 3.4 | * | * | 4.8 - 4.9 | * | * |
| 0.4 - 0.5 | 5 | 9 | 1.9 - 2.0 | * | * | 3.4 - 3.5 | * | * | 4.9 - 5.0 | * | * |
| 0.5 - 0.6 | 6 | 12 | 2.0 - 2.1 | * | * | 3.5 - 3.6 | * | * | 5.0 - 5.1 | * | * |
| 0.6 - 0.7 | 5 | 9 | 2.1 - 2.2 | * | * | 3.6 - 3.7 | * | * | 5.1 - 5.2 | * | * |
| 0.7 - 0.8 | 5 | 9 | 2.2 - 2.3 | * | * | 3.7 - 3.8 | * | * | 5.2 - 5.3 | * | * |
| 0.8 - 0.9 | 4 | 7 | 2.3 - 2.4 | * | * | 3.8 - 3.9 | * | * | 5.3 - 5.4 | * | * |
| 0.9 - 1.0 | END | * | 2.4 - 2.5 | * | * | 3.9 - 4.0 | * | * | 5.4 - 5.5 | * | * |
| 1.0 - 1.1 | * | * | 2.5 - 2.6 | * | * | 4.0 - 4.1 | * | * | 5.5 - 5.6 | * | * |
| 1.1 - 1.2 | * | * | 2.6 - 2.7 | * | * | 4.1 - 4.2 | * | * | 5.6 - 5.7 | * | * |
| 1.2 - 1.3 | * | * | 2.7 - 2.8 | * | * | 4.2 - 4.3 | * | * | 5.7 - 5.8 | * | * |
| 1.3 - 1.4 | * | * | 2.8 - 2.9 | * | * | 4.3 - 4.4 | * | * | 5.8 - 5.9 | * | * |
| 1.4 - 1.5 | * | * | 2.9 - 3.0 | * | * | 4.4 - 4.5 | * | * | 5.9 - 6.0 | * | * |



| | |
|---|--|
| <p>Accredited for compliance with ISO/IEC 17025 - Testing.</p> <p>ACCREDITATION NUMBER: 4679</p> <p><small>WORLD RECOGNISED ACCREDITATION</small></p> | <p>REMARKS:</p> <div style="text-align: center; margin-top: 20px;"> <p>APPROVED SIGNATORY: Jarrod Gornall</p> <p>DATE: 24/10/2023</p> </div> |
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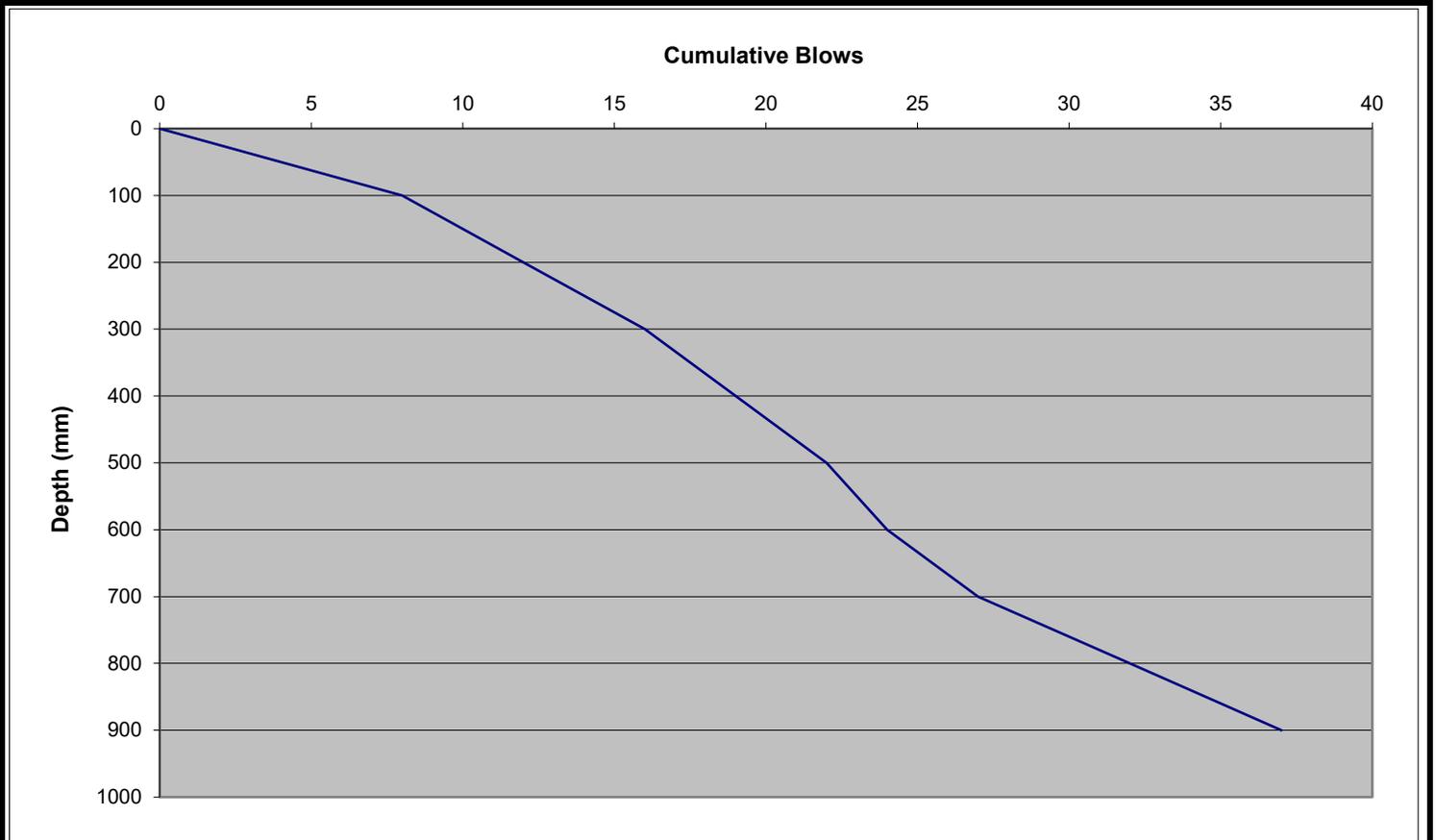
Aitken Rowe Testing Laboratories Pty Ltd

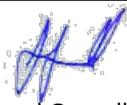
ARTL Griffith: 17b Battista Street, Griffith NSW 2680

DYNAMIC CONE PENETROMETER REPORT

| | |
|---|--|
| CLIENT: WORMTECH PTY LTD - YENDA, NSW | PAGE: 2 OF: 3 DCP: 2 (BH2) |
| PROJECT: PRELIMINARY GEOTECHNICAL INVESTIGATION EXISTING VERMICULTURE FACILITY | REGISTRATION NO: GS23-347 |
| LOCATION: LOT 487, No. 224 WOOD ROAD, YENDA, NSW | DATE OF TEST: 19/09/2023 |
| SOIL DESCRIPTION: REFER TO BOREHOLE LOGS | DEPTH BELOW ESL (mm): NIL |
| DEPTH OF GROUND WATER TABLE IF INTERSECTED: N/A | MOISTURE CONDITION: REFER TO LOGS |
| | TEST METHOD: AS 1289.6.3.2 |

| Depth(m) | Blows | Est. CBR |
|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|
| 0.0 - 0.1 | 8 | 17 | 1.5 - 1.6 | * | * | 3.0 - 3.1 | * | * | 4.5 - 4.6 | * | * |
| 0.1 - 0.2 | 4 | 7 | 1.6 - 1.7 | * | * | 3.1 - 3.2 | * | * | 4.6 - 4.7 | * | * |
| 0.2 - 0.3 | 4 | 7 | 1.7 - 1.8 | * | * | 3.2 - 3.3 | * | * | 4.7 - 4.8 | * | * |
| 0.3 - 0.4 | 3 | 5 | 1.8 - 1.9 | * | * | 3.3 - 3.4 | * | * | 4.8 - 4.9 | * | * |
| 0.4 - 0.5 | 3 | 5 | 1.9 - 2.0 | * | * | 3.4 - 3.5 | * | * | 4.9 - 5.0 | * | * |
| 0.5 - 0.6 | 2 | 3 | 2.0 - 2.1 | * | * | 3.5 - 3.6 | * | * | 5.0 - 5.1 | * | * |
| 0.6 - 0.7 | 3 | 5 | 2.1 - 2.2 | * | * | 3.6 - 3.7 | * | * | 5.1 - 5.2 | * | * |
| 0.7 - 0.8 | 5 | 9 | 2.2 - 2.3 | * | * | 3.7 - 3.8 | * | * | 5.2 - 5.3 | * | * |
| 0.8 - 0.9 | 5 | 9 | 2.3 - 2.4 | * | * | 3.8 - 3.9 | * | * | 5.3 - 5.4 | * | * |
| 0.9 - 1.0 | END | * | 2.4 - 2.5 | * | * | 3.9 - 4.0 | * | * | 5.4 - 5.5 | * | * |
| 1.0 - 1.1 | * | * | 2.5 - 2.6 | * | * | 4.0 - 4.1 | * | * | 5.5 - 5.6 | * | * |
| 1.1 - 1.2 | * | * | 2.6 - 2.7 | * | * | 4.1 - 4.2 | * | * | 5.6 - 5.7 | * | * |
| 1.2 - 1.3 | * | * | 2.7 - 2.8 | * | * | 4.2 - 4.3 | * | * | 5.7 - 5.8 | * | * |
| 1.3 - 1.4 | * | * | 2.8 - 2.9 | * | * | 4.3 - 4.4 | * | * | 5.8 - 5.9 | * | * |
| 1.4 - 1.5 | * | * | 2.9 - 3.0 | * | * | 4.4 - 4.5 | * | * | 5.9 - 6.0 | * | * |



| | |
|--|---|
|  <p>Accredited for compliance with ISO/IEC 17025 - Testing.</p> <p>ACCREDITATION NUMBER: 4679</p> <p><small>WORLD RECOGNISED ACCREDITATION</small></p> | <p>REMARKS:</p> <div style="text-align: center; margin-top: 20px;">  APPROVED SIGNATORY: Jarrod Gornall DATE: 24/10/2023 </div> |
|--|---|

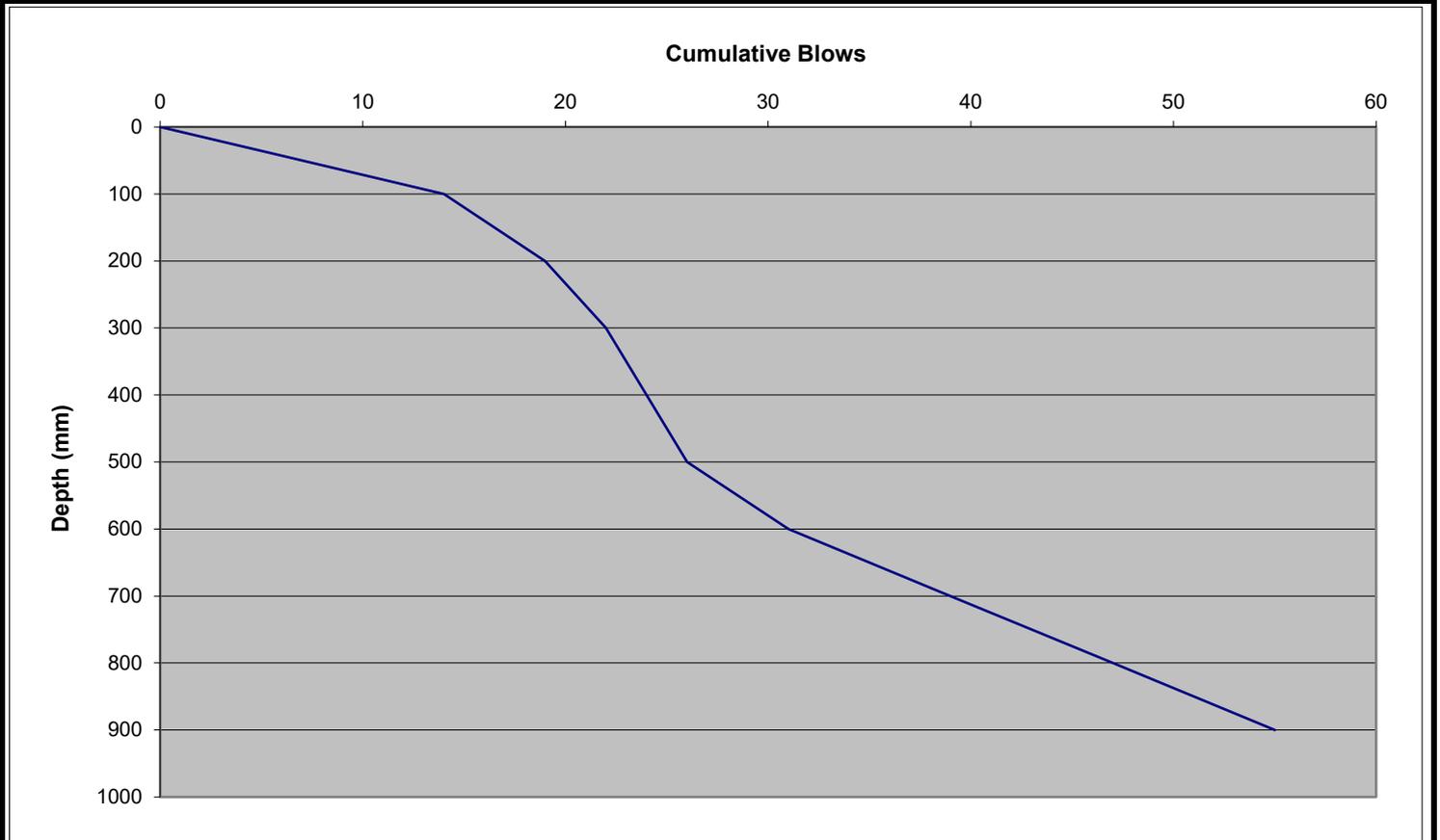
Aitken Rowe Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

DYNAMIC CONE PENETROMETER REPORT

| | |
|---|-----------------------------------|
| CLIENT: WORMTECH PTY LTD - YENDA, NSW | PAGE: 3 OF: 3 DCP: 3 (BH3) |
| PROJECT: PRELIMINARY GEOTECHNICAL INVESTIGATION EXISTING VERMICULTURE FACILITY | REGISTRATION NO: GS23-347 |
| LOCATION: LOT 487, No. 224 WOOD ROAD, YENDA, NSW | DATE OF TEST: 19/09/2023 |
| SOIL DESCRIPTION: REFER TO BOREHOLE LOGS | DEPTH BELOW ESL (mm): NIL |
| DEPTH OF GROUND WATER TABLE IF INTERSECTED: N/A | MOISTURE CONDITION: REFER TO LOGS |
| | TEST METHOD: AS 1289.6.3.2 |

| Depth(m) | Blows | Est. CBR |
|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|
| 0.0 - 0.1 | 14 | 35 | 1.5 - 1.6 | * | * | 3.0 - 3.1 | * | * | 4.5 - 4.6 | * | * |
| 0.1 - 0.2 | 5 | 9 | 1.6 - 1.7 | * | * | 3.1 - 3.2 | * | * | 4.6 - 4.7 | * | * |
| 0.2 - 0.3 | 3 | 5 | 1.7 - 1.8 | * | * | 3.2 - 3.3 | * | * | 4.7 - 4.8 | * | * |
| 0.3 - 0.4 | 2 | 3 | 1.8 - 1.9 | * | * | 3.3 - 3.4 | * | * | 4.8 - 4.9 | * | * |
| 0.4 - 0.5 | 2 | 3 | 1.9 - 2.0 | * | * | 3.4 - 3.5 | * | * | 4.9 - 5.0 | * | * |
| 0.5 - 0.6 | 5 | 9 | 2.0 - 2.1 | * | * | 3.5 - 3.6 | * | * | 5.0 - 5.1 | * | * |
| 0.6 - 0.7 | 8 | 17 | 2.1 - 2.2 | * | * | 3.6 - 3.7 | * | * | 5.1 - 5.2 | * | * |
| 0.7 - 0.8 | 8 | 17 | 2.2 - 2.3 | * | * | 3.7 - 3.8 | * | * | 5.2 - 5.3 | * | * |
| 0.8 - 0.9 | 8 | 17 | 2.3 - 2.4 | * | * | 3.8 - 3.9 | * | * | 5.3 - 5.4 | * | * |
| 0.9 - 1.0 | END | * | 2.4 - 2.5 | * | * | 3.9 - 4.0 | * | * | 5.4 - 5.5 | * | * |
| 1.0 - 1.1 | * | * | 2.5 - 2.6 | * | * | 4.0 - 4.1 | * | * | 5.5 - 5.6 | * | * |
| 1.1 - 1.2 | * | * | 2.6 - 2.7 | * | * | 4.1 - 4.2 | * | * | 5.6 - 5.7 | * | * |
| 1.2 - 1.3 | * | * | 2.7 - 2.8 | * | * | 4.2 - 4.3 | * | * | 5.7 - 5.8 | * | * |
| 1.3 - 1.4 | * | * | 2.8 - 2.9 | * | * | 4.3 - 4.4 | * | * | 5.8 - 5.9 | * | * |
| 1.4 - 1.5 | * | * | 2.9 - 3.0 | * | * | 4.4 - 4.5 | * | * | 5.9 - 6.0 | * | * |



| | |
|---|---|
|  <p>Accredited for compliance with ISO/IEC 17025 - Testing.</p> <p>ACCREDITATION NUMBER: 4679</p> <p>WORLD RECOGNISED ACCREDITATION</p> | REMARKS: |
| | <p>APPROVED SIGNATORY:  Jarrod Gornall</p> <p>DATE: 24/10/2023</p> |



AITKEN ROWE Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

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PAGE: 1

OF: 1

REQUEST NO: *

ORDER NO: *

TEST REPORT - RELATIVE COMPACTION

CLIENT : WORMTECH PTY LTD - YENDA, NSW

PROJECT : EXISTING VERMICULTURE FACILITY,
LOT 487, No. 224, WOOD ROAD,
YENDA, NSW

TEST METHODS : AS1289.2.1.1

AS1289.5.4.1

AS1289.5.7.1

AS1289.5.8.1

SECTIONS REPRESENTED : EXISTING VERMICULTURE PAD

LOT No. : *

LAYER & MATERIAL : FILL/NATURAL - CLAY

DATE/S OF LAB COMPACTION: 20/09/2023

SAMPLING PROCEDURE: AS1289.1.2.1

CLAUSE: 6.4b

DATE OF SAMPLING (LAB COMP.) 19/09/2023

REGISTRATION No. : R12b **GD23-436**

| SAMPLE OR SITE No. | 1 | 2 | 3 | 4 | 5 | 6 |
|---|----------------------|----------|----------|----------|----------|----------|
| EASTING | 428575 | 428575 | 428675 | 428675 | 428552 | 428552 |
| NORTHING | 6208750 | 6208750 | 6208930 | 6208930 | 6208881 | 6208881 |
| DATE OF TEST (FIELD DENSITY) | 19/09/23 | 19/09/23 | 19/09/23 | 19/09/23 | 19/09/23 | 19/09/23 |
| TIME OF TEST | 1320 | 1330 | 1340 | 1400 | 1410 | 1420 |
| DEPTH BELOW FINAL LEVEL (mm) | 300 | 0 | 300 | 0 | 300 | 0 |
| REDUCED LEVEL (m) | * | * | * | * | * | * |
| TESTED DEPTH (mm) | 300 | 300 | 300 | 300 | 300 | 300 |
| FIELD DRY DENSITY (0.01 t/m ³) | 1.48 | 1.75 | 1.48 | 1.68 | 1.71 | 1.44 |
| FIELD WET DENSITY (0.01 t/m ³) | 1.90 | 1.99 | 1.80 | 1.93 | 1.89 | 1.75 |
| PCWD. PEAK CONVERTED WET DENSITY (0.01 t/m ³) | 1.86 | 1.89 | 1.88 | 1.89 | 1.88 | 1.97 |
| APCWD. ADJ. PEAK CONVERTED WET DENSITY (0.01 t/m ³) | * | * | * | * | * | * |
| MAXIMUM DRY DENSITY (0.01 t/m ³) | * | * | * | * | * | * |
| ADJUSTED MAXIMUM DRY DENSITY (0.01 t/m ³) | * | * | * | * | * | * |
| OPTIMUM MOISTURE CONTENT (0.5 %) | 28.0 | 18.5 | 24.0 | 19.5 | 16.0 | 22.0 |
| ADJUSTED OPTIMUM MOISTURE CONTENT (0.5 %) | * | * | * | * | * | * |
| FIELD MOISTURE VARIATION (0.5 %) | 0.0 | 5.0 | 2.5 | 4.5 | 5.5 | 0.5 |
| | (WET/DRY): | WET | DRY | DRY | DRY | DRY |
| CONTENT ACTUAL (0.5 %) | 28.0 | 14.0 | 22.0 | 15.0 | 10.5 | 21.5 |
| MOISTURE RATIO (0.5 %) | 100.5 | 74.0 | 90.5 | 76.5 | 66.0 | 97.5 |
| OVERSIZE DETERMINATIONS (as required) | +37.5mm (0.1%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | -37.5 +19.0mm (0.1%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DENSITY OF OVERSIZE (where applicable) (0.01 t/m ³) | N/A | N/A | N/A | N/A | N/A | N/A |
| FRACTION TESTED (mm) | -19.0 | -19.0 | -19.0 | -19.0 | -19.0 | -19.0 |
| COMPACTIVE EFFORT | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD |
| TIME FROM ADDITION OF ADDITIVE TO LAB. COMPACTION | N/A | N/A | N/A | N/A | N/A | N/A |
| MD DETERMINATION BEFORE/AFTER COMPACTION | After | After | After | After | After | After |
| DENSITY RATIO (0.5 %) | 101.5 | 105.5 | 95.5 | 102.5 | 100.5 | 89.0 |
| SPECIFIED DENSITY RATIO (%) | N/A | N/A | N/A | N/A | N/A | N/A |

REMARKS: *

*



Accredited for compliance with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER: 4679

APPROVED SIGNATORY: Michael Scremin

DATE: 18/10/2023



AITKEN ROWE Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

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PAGE 1 OF 1

SAMPLED BY: ARTL

DATE SAMPLED: 19/09/2023

DATE SUBMITTED: 19/09/2023

SAMPLING METHOD: AS1289.1.2.1

SAMPLING CLAUSE: 6.5.3

DATES TESTED: 21/09/23-26/10/23

ORDER No.: *

TEST REPORT: GEOTECHNICAL INVESTIGATION - SOIL ANALYSIS

CLIENT : WORMTECH PTY LTD - YENDA, NSW

JOB DESCRIPTION : PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY,
LOT 487, No. 224 WOOD ROAD, YENDA, NSW

MATERIAL SOURCE : IN-SITU BOREHOLES

PROPOSED USE : DESIGN

MATERIAL TYPE : REFER TO BOREHOLE LOGS

REGISTRATION No : R28 **GS23-347**

| SAMPLE NUMBER : | | 1A | 1B | 3A | 3B | 3C | * |
|---|--|----------------|----------------|----------------|--------------|----------------|---|
| SAMPLING LOCATION : | | BH1 | BH1 | BH3 | BH3 | BH3 | * |
| DEPTHS BETWEEN WHICH SAMPLES TAKEN (mm) : | | 0-250 | 250-600 | 0-100 | 100-400 | 400-1500 | * |
| TESTS | TEST ELEMENT | * | * | * | * | * | * |
| AS1289.3.6.1 | PASS 100.0mm SIEVE % | * | * | * | * | * | * |
| | PASS 75.0mm SIEVE % | * | * | * | * | * | * |
| | PASS 53.0mm SIEVE % | * | * | * | * | * | * |
| | PASS 37.5mm SIEVE % | * | * | * | * | * | * |
| | PASS 26.5mm SIEVE % | * | * | * | * | * | * |
| | PASS 19.0mm SIEVE % | * | * | * | * | * | * |
| | PASS 13.2mm SIEVE % | * | * | * | * | * | * |
| | PASS 9.50mm SIEVE % | * | * | * | * | * | * |
| | PASS 6.70mm SIEVE % | * | * | * | * | * | * |
| | PASS 4.75mm SIEVE % | * | * | * | * | * | * |
| PASS 2.36mm SIEVE % | * | * | * | * | * | * | |
| AS1289.3.1.2 | LIQUID LIMIT % | 62 | 55 | 33 | * | 35 | * |
| AS1289.3.2.1 | PLASTIC LIMIT % | 14 | 13 | 16 | * | 17 | * |
| AS1289.3.3.1 | PLASTICITY INDEX | 48 | 42 | 17 | * | 18 | * |
| | PREPARATION METHOD | AS1289.1.1-5.3 | AS1289.1.1-5.3 | AS1289.1.1-5.3 | * | AS1289.1.1-5.3 | * |
| AS1289.5.1.1 (NOT DRY PREPPED) | STANDARD MAX. DRY DENSITY t/m ³ | * | 1.50 | * | * | 1.67 | * |
| | OPTIMUM MOISTURE CONTENT % | * | 27.9 | * | * | 20.1 | * |
| | OVERSIZE MATERIAL % RETAINED ON 19.0mm | * | 0 | * | * | 0 | * |
| | LL METHOD OF CURING TIME DETERMINATION | * | VISUAL | * | * | VISUAL | * |
| | CURING DURATION HOURS | * | 171 | * | * | 171 | * |
| AS1289.3.4.1 (PREP-AIR DRIED) | LINEAR SHRINKAGE % | 17.0 | * | * | 12.5 | * | * |
| | LENGTH OF MOULD mm | 253 | * | * | 253 | * | * |
| | MOULDING MOISTURE CONDITIONING METHOD | AS1289.3.1.2 | * | * | AS1289.3.1.2 | * | * |
| | CRUMBLING (CR) OR CURLING (CU) OCCURRED | CA | * | * | CA | * | * |
| AS1289.2.1.1 | FIELD MOISTURE CONTENT % | * | * | * | * | * | * |
| AS1289.3.8.1 (AIR DRIED) | EMERSON CLASS | 4 | 4 | * | 3 | * | * |
| | TYPE OF WATER | DISTILLED | DISTILLED | * | DISTILLED | * | * |



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance
with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER:
4679

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All samples are oven dried and dry sieved during prep. unless otherwise stated

APPROVED SIGNATORY :

Jarrold Gornall

DATE: 26/10/2023



AITKEN ROWE Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

TEST REPORT

SOIL REACTIVITY- DETERMINATION OF THE SHRINKAGE INDEX OF A SOIL
SHRINK SWELL INDEX

SAMPLED BY: ARTL
DATE SAMPLED: 19/9/2023
DATE SUBMITTED: 19/9/2023
DATE TESTED (from): 25/09/2023
DATE TESTED (to): 4/10/2023
No. OF SAMPLES: 2
TEST METHODS: AS1289.7.1.1
AS1289.2.1.1

CLIENT: WORMTECH PTY LTD - YENDA, NSW

JOB DESCRIPTION PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY,
LOT 487, No. 224 WOOD ROAD, YENDA, NSW

REGISTRATION NO: R26 **GS23-347**

| | | | |
|---|-------------|-------------|---|
| SAMPLE No.: | 1A | 3B | * |
| BOREHOLE No.: | BH1 | BH3 | * |
| DEPTH (mm): | 0-250 | 100-400 | * |
| NATURE OF SPECIMEN (U50/REMOULDED): | U50 | U50 | * |
| SHRINK SWELL INDEX (ISS): | 3.16 | 2.59 | * |
| INITIAL SWELL M.C. %: | 17.6 | 16.5 | * |
| FINAL SWELL M.C. %: | 24.7 | 17.2 | * |
| DESCRIPTION OF SOIL: | CLAY | CLAY | * |
| ESTIMATED PERCENTAGE OF INERT INCLUSIONS: | <2% | <2% | * |
| EXTENT OF SOIL CRUMBLING DURING SHRINKAGE: | N/A | N/A | * |
| EXTENT OF CRACKING OF SHRINKAGE SPECIMEN: | MINOR | MINOR | * |
| (WHERE REMOULDED) SPECIMEN DENSITY (t/m ³): | * | * | * |
| MOISTURE ADDED TO ACHIEVE OMC (%): | * | * | * |
| COMPACTIVE EFFORT (BLOWS/ LAYER): | * | * | * |
| SAMPLE No.: | * | * | * |
| BOREHOLE No.: | * | * | * |
| DEPTH: | * | * | * |
| NATURE OF SPECIMEN (U50/REMOULDED): | * | * | * |
| SHRINK SWELL INDEX (ISS): | * | * | * |
| INITIAL SWELL M.C. %: | * | * | * |
| FINAL SWELL M.C. %: | * | * | * |
| DESCRIPTION OF SOIL: | * | * | * |
| ESTIMATED PERCENTAGE OF INERT INCLUSIONS: | * | * | * |
| EXTENT OF SOIL CRUMBLING DURING SHRINKAGE: | * | * | * |
| EXTENT OF CRACKING OF SHRINKAGE SPECIMEN: | * | * | * |
| (WHERE REMOULDED) SPECIMEN DENSITY (t/m ³): | * | * | * |
| MOISTURE ADDED TO ACHIEVE OMC (%): | * | * | * |
| COMPACTIVE EFFORT (BLOWS/ LAYER): | * | * | * |



Accredited for compliance with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER: 4679

WORLD RECOGNISED ACCREDITATION

APPROVED SIGNATORY: _____

Jarrod Gornall

DATE: _____

24/10/2023

Aitken Rowe Testing Laboratories Pty Ltd

ARTL Griffith: 17b Battista Street, Griffith NSW 2680

PERMEABILITY / DISPERSION REPORT

CLIENT: WORMTECH PTY LTD - YENDA, NSW
 PROJECT: PRELIMINARY GEOTECHNICAL INVESTIGATION
 EXISTING VERMICULTURE FACILITY,
 LOT 487, No. 224 WOOD ROAD, YENDA, NSW

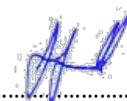
PAGE 1 OF 1
 SAMPLED BY: ARTL
 DATE SAMPLED: 19/09/2023
 DATE SUBMITTED: 19/09/2023
 TEST DATE/S: 21/09/23-
 6/10/23
 ORDER No.: *
 TEST METHODS: AS1289.6.7.2
 AS1289.5.1.1
 AS1289.2.1.1
 *

MATERIAL TYPE: REFER TO BOREHOLE LOGS
 SOURCE OF MATERIAL: IN-SITU BOREHOLES
 PORTION OF STRUCTURE: EXISTING VERMICULTURE PAD
 SURCHARGES ADDED: 2.65
 PRESSURE APPLIED: 3KPa
 % RETAINED ON NOMINAL SIEVE: NIL
 NOMINAL SIEVE SIZE: -19.0

REGISTRATION No: R23 **GS23-347**

| SAMPLE No. | TEST PIT No. | DEPTH (m) | MAX. DRY DENSITY (t/m ³) | OPTIMUM MOISTURE (%) | DRY DENSITY OF SPECIMEN (t/m ³) | MOULDING MOISTURE (%) | ACTUAL % OF MDD | PERMEABILITY m / sec AS1289.6.7.2 | EMERSON CLASS AS1289.3.8.1 |
|------------|--------------|-----------|--------------------------------------|----------------------|---|-----------------------|-----------------|-----------------------------------|----------------------------|
| 1B | BH1 | 250-600 | 1.50 | 27.9 | 1.50 | 28.0 | 100 | 8x10 ⁻¹⁰ | 4 |
| 3C | BH3 | 400-1500 | 1.67 | 20.1 | 1.59 | 20.0 | 95 | 9x10 ⁻⁹ | * |
| * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * |
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| * | * | * | * | * | * | * | * | * | * |
| * | * | * | * | * | * | * | * | * | * |

REMARKS: *

APPROVED SIGNATORY: 

Jarrod Gornall

DATE: 10/10/2023



AITKEN ROWE TESTING LABORATORIES PTY LTD

ARTL Wagga: 4/2 Riedell Street, Wagga Wagga NSW 2650

TEST REPORT - GRADING/HYDROMETER

CLIENT: WORMTECH PTY LTD - YENDA, NSW

JOB DESCRIPTION: PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY
LOCATION: LOT 487, No. 224 WOOD ROAD,
YENDA, NSW

PAGE: 1 OF 4

SAMPLE No.: 1A

SAMPLED BY: ARTL

DATE SAMPLED: 19/09/2023

DATE SUBMITTED: 19/09/2023

TEST METHOD: AS1289.3.6.3

AS1289.3.6.1

TEST HOLE: BH1

DEPTH: 0-250mm

TEST DATES: 12-14/10/2023

HYDROMETER TYPE: BULB

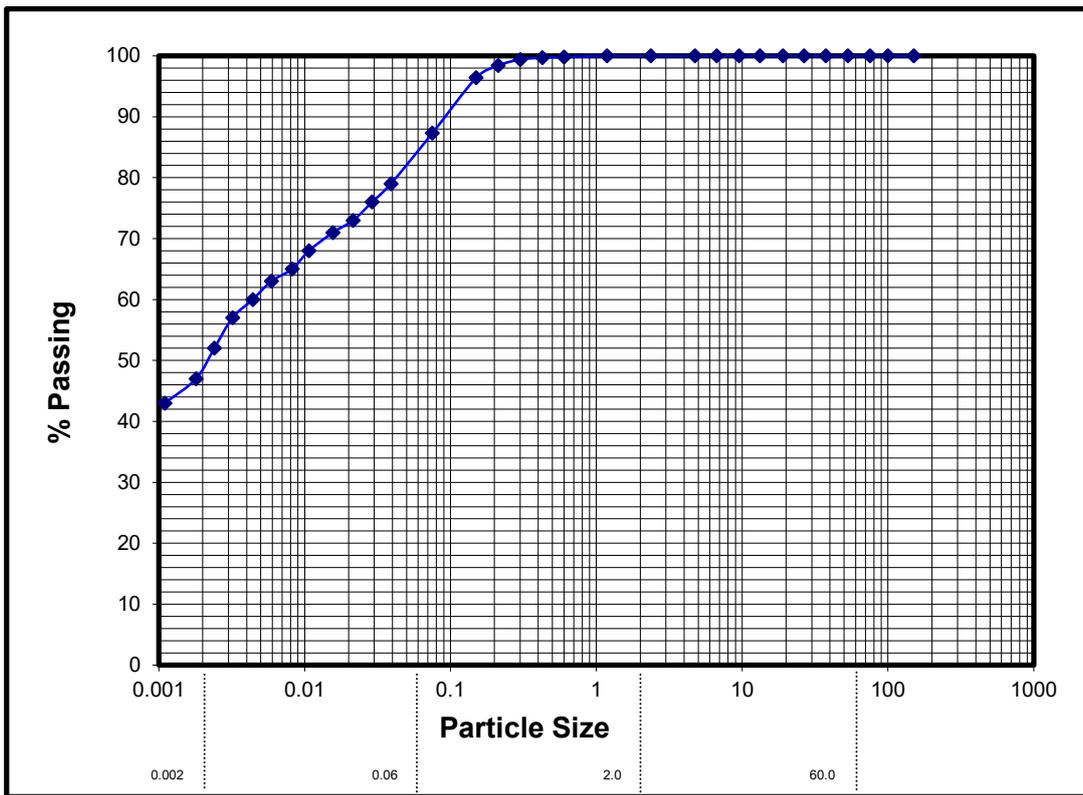
REGISTRATION No.: R36 **GS23-347**

METHOD OF DISPERSION

- i). AGENT
 - ii). MIXER
 - iii). HYDROMETER
- CALIBRATED IN g/l

PERCENTAGE LOSS IN PRETREATMENT: NIL

SOIL CLASSIFICATION: Silty CLAY; high plasticity, with fine to coarse sand



| Particle Size (mm) | % Passing |
|--------------------|-----------|
| 150 | 100 |
| 100 | 100 |
| 75 | 100 |
| 53 | 100 |
| 37.5 | 100 |
| 26.5 | 100 |
| 19 | 100 |
| 13.2 | 100 |
| 9.5 | 100 |
| 6.7 | 100 |
| 4.75 | 100 |
| 2.36 | 100 |
| 1.18 | 100 |
| 0.6 | 99.8 |
| 0.425 | 99.7 |
| 0.3 | 99.4 |
| 0.212 | 98.4 |
| 0.15 | 96.4 |
| 0.075 | 87.3 |
| 0.06 | 80.5 |
| 0.02 | 72.0 |
| 0.006 | 61.9 |
| 0.002 | 48.7 |

| CLAY | SILT 32% | | | SAND 19% | | | GRAVEL 0% | | | COBBLES |
|------|----------|--------|--------|----------|--------|--------|-----------|--------|--------|---------|
| | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | |
| 49% | 13% | 10% | 9% | 12% | 7% | 1% | 0% | 0% | 0% | 0% |



Accredited for compliance with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER: 4679

APPROVED SIGNATORY

Jarrod Gornall

DATE: 23/10/2023



AITKEN ROWE TESTING LABORATORIES PTY LTD

ARTL Wagga: 4/2 Riedell Street, Wagga Wagga NSW 2650

PAGE: 2 OF 4

SAMPLE No.: 1B

TEST REPORT - GRADING/HYDROMETER

SAMPLED BY: ARTL

DATE SAMPLED: 19/09/2023

DATE SUBMITTED: 19/09/2023

TEST METHOD: AS1289.3.6.3

AS1289.3.6.1

CLIENT: WORMTECH PTY LTD - YENDA, NSW

TEST HOLE: BH1

JOB DESCRIPTION: PRELIMINARY GEOTECHNICAL INVESTIGATION

EXISTING VERMICULTURE FACILITY

DEPTH: 250-600mm

LOCATION: LOT 487, No. 224 WOOD ROAD,

YENDA, NSW

TEST DATES: 12-14/10/2023

HYDROMETER TYPE: BULB

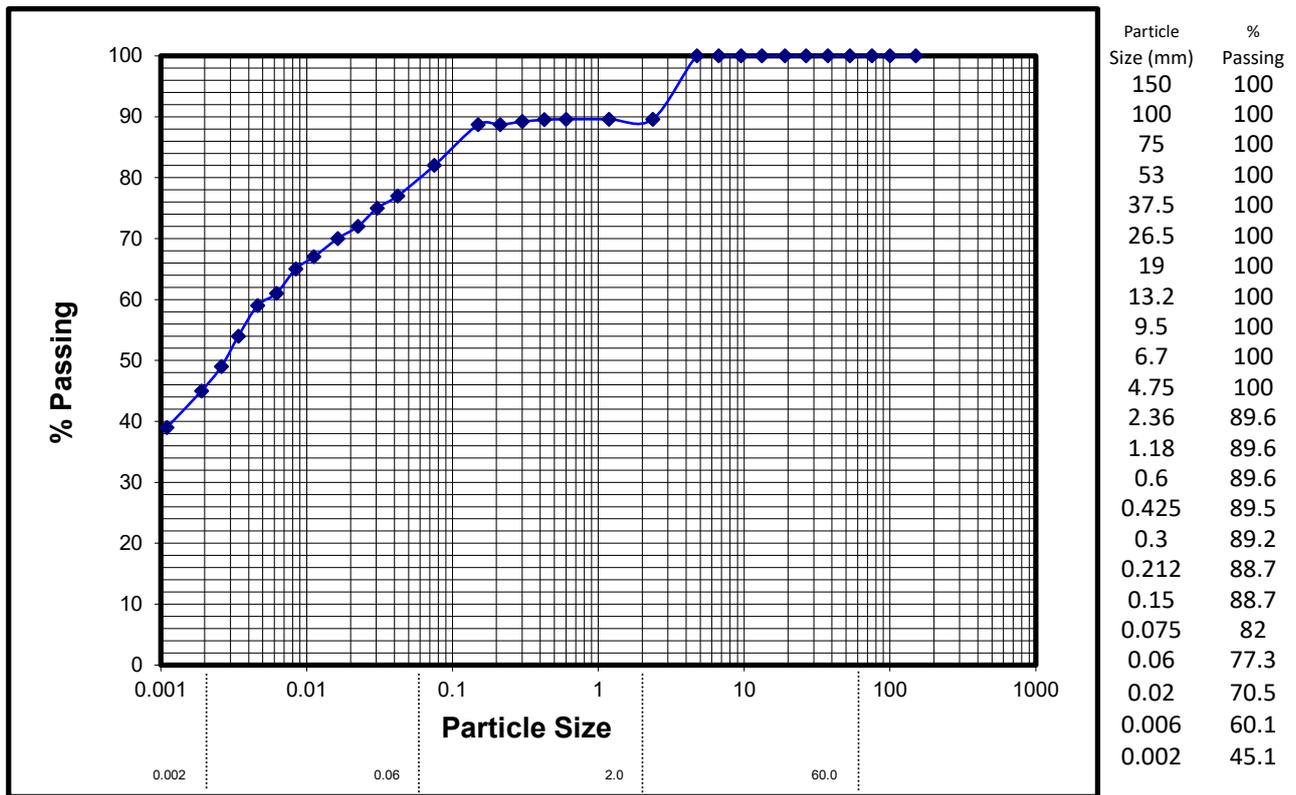
REGISTRATION No.: R36 **GS23-347**

METHOD OF DISPERSION

- i). AGENT
 - ii). MIXER
 - iii). HYDROMETER
- CALIBRATED IN g/l

PERCENTAGE LOSS IN PRETREATMENT: NIL

SOIL CLASSIFICATION: Silty CLAY; high plasticity, trace fine to coarse sand, trace fine gravel



| CLAY | SILT 32% | | | SAND 13% | | | GRAVEL 9% | | | COBBLES |
|------|----------|--------|--------|----------|--------|--------|-----------|--------|--------|---------|
| | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | |
| 45% | 15% | 10% | 7% | 8% | 4% | 2% | 9% | 0% | 0% | 0% |



Accredited for compliance with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER: 4679

APPROVED SIGNATORY

Jarrod Gornall

DATE: 23/10/2023



AITKEN ROWE TESTING LABORATORIES PTY LTD

ARTL Wagga: 4/2 Riedell Street, Wagga Wagga NSW 2650

PAGE: 3 OF 4

SAMPLE No.: 3A

TEST REPORT - GRADING/HYDROMETER

SAMPLED BY: ARTL

DATE SAMPLED: 19/09/2023

DATE SUBMITTED: 19/09/2023

TEST METHOD: AS1289.3.6.3

AS1289.3.6.1

TEST HOLE: BH3

DEPTH: 0-100mm

TEST DATES: 12-14/10/2023

HYDROMETER TYPE: BULB

REGISTRATION No.: R36 **GS23-347**

CLIENT: WORMTECH PTY LTD - YENDA, NSW

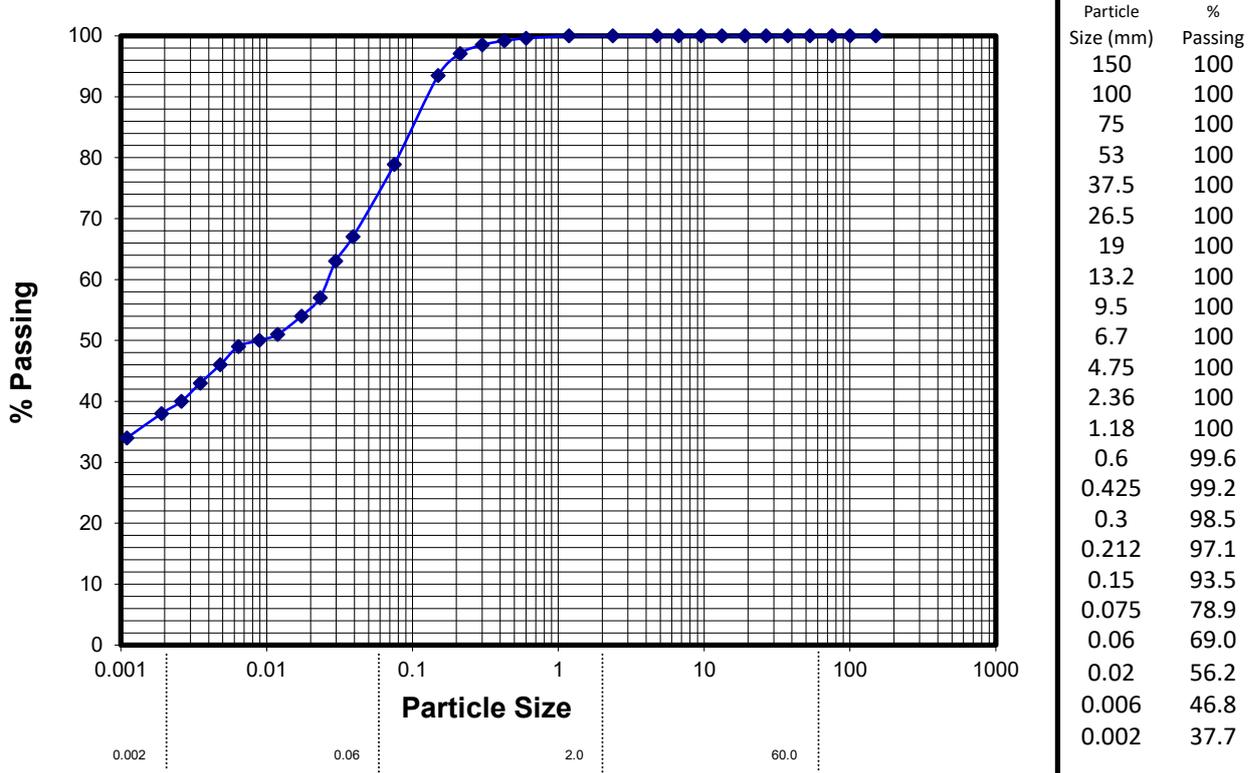
JOB DESCRIPTION: PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY
LOCATION: LOT 487, No. 224 WOOD ROAD,
YENDA, NSW

METHOD OF DISPERSION

- i). AGENT
 - ii). MIXER
 - iii). HYDROMETER
- CALIBRATED IN g/l

PERCENTAGE LOSS IN PRETREATMENT: NIL

SOIL CLASSIFICATION: Sandy Silty CLAY; low plasticity, fine to coarse sand



| CLAY | SILT 31% | | | SAND 31% | | | GRAVEL 0% | | | COBBLES |
|------|----------|--------|--------|----------|--------|--------|-----------|--------|--------|---------|
| | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | FINE | MEDIUM | COARSE | |
| 38% | 9% | 9% | 13% | 19% | 11% | 1% | 0% | 0% | 0% | 0% |



Accredited for compliance with ISO/IEC 17025 - Testing.

ACCREDITATION NUMBER: 4679

APPROVED SIGNATORY

Jarrod Gornall

DATE: 23/10/2023



AITKEN ROWE TESTING LABORATORIES PTY LTD

ARTL Wagga: 4/2 Riedell Street, Wagga Wagga NSW 2650

PAGE: 4 OF 4

SAMPLE No.: 3C

TEST REPORT - GRADING/HYDROMETER

SAMPLED BY: ARTL

DATE SAMPLED: 19/09/2023

DATE SUBMITTED: 19/09/2023

TEST METHOD: AS1289.3.6.3

AS1289.3.6.1

TEST HOLE: BH3

DEPTH: 400-1600mm

TEST DATES: 12-14/10/2023

HYDROMETER TYPE: BULB

REGISTRATION No.: R36 **GS23-347**

CLIENT: WORMTECH PTY LTD - YENDA, NSW

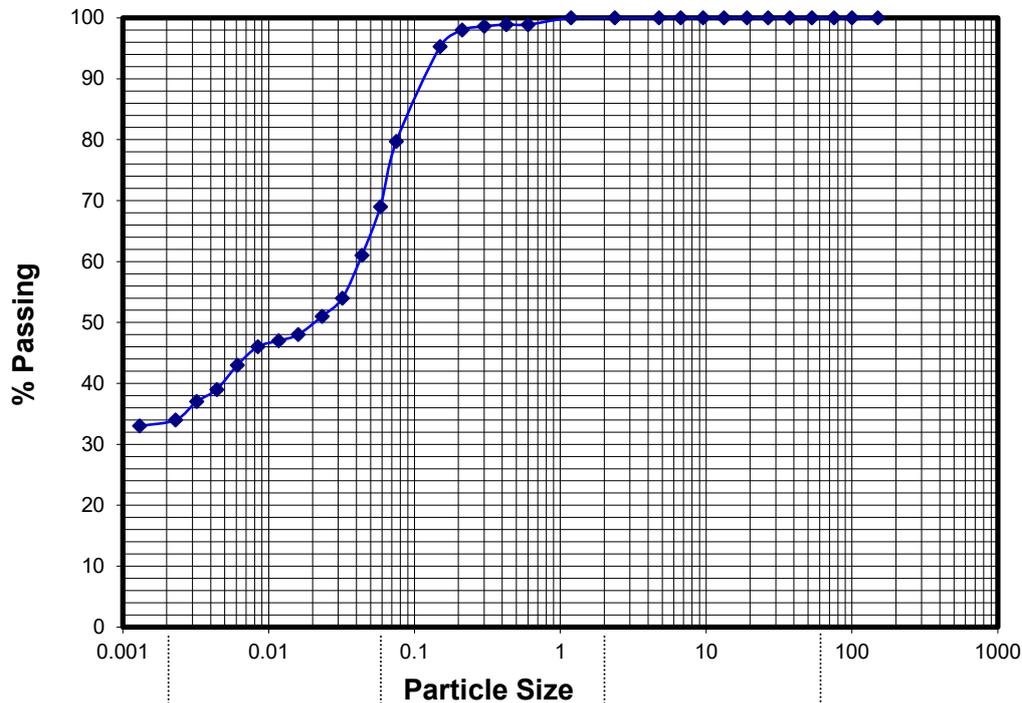
JOB DESCRIPTION: PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY
LOCATION: LOT 487, No. 224 WOOD ROAD,
YENDA, NSW

METHOD OF DISPERSION

- i). AGENT
 - ii). MIXER
 - iii). HYDROMETER
- CALIBRATED IN g/l

PERCENTAGE LOSS IN PRETREATMENT: NIL

SOIL CLASSIFICATION: Sandy Silty CLAY; low plasticity, fine to coarse sand





Aitken Rowe Testing Laboratories Pty Ltd

Registration Number: GS23-347

Page 1 of 1

Client: WORMTECH PTY LTD – YENDA, NSW
Project: PRELIMINARY GEOTECHNICAL INVESTIGATION
EXISTING VERMICULTURE FACILITY,
LOT 487, No. 224 WOOD ROAD, YENDA, NSW
SITE PHOTO