



**Your Ref:** DA136/2015  
**Our Ref:** 15044  
**Contact:** Garry Salvestro

12 May 2016

The General Manager  
Gundagai Shire Council  
PO Box 34  
Gundagai NSW 2722

ATTN: Mr Brent Livermore

Dear Sir,

**RE: PROPOSED EXTENSION TO EXISTING WASTE MANAGEMENT FACILITY – 303 BURRA ROAD, GUNDAGAI – ADDITIONAL INFORMATION – ADDENDUM 2**

I refer to Council's letter of 18 April 2016 requesting further information to assist in the assessment of the subject DA.

Please find attached document titled *Addendum 2 to Environmental Impact Statement* that addresses the information requests made by Council. This will be included with Part C to the EIS document submitted with the development application and is to be read in conjunction with Parts A and B.

Note the Air Quality/Noise/Greenhouse Gas impacts will be addressed in subsequent Addendum 3, as a response to EPA's letter of 27/4/16.

Also the additional A1 plans requested have been delivered to Council separately on 11/5/16.

If you require further clarification, please don't hesitate to contact our office on (02) 69 218 588.

Yours sincerely,

Garry Salvestro  
Director  
Salvestro Planning



# Environmental Impact Statement

## Proposed Extension to Existing Waste Management Facility (Class 2 Solid Landfill)

303 Burra Road, Gundagai



Prepared for MH Earthmoving Pty Ltd  
December 2015 (Revised May 2016)

Part C – EIS Addendums

## Addendum 2 to Environmental Impact Statement

# Proposed Extension to Existing Waste Management Facility (Class 2 Solid Landfill)

303 Burra Road, Gundagai

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Prepared for MH Earthmoving Pty Ltd  
May 2016

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## Response to Additional Information Request – DA136/2015 – GSC 18/4/16

### 1 INTRODUCTION

The following addendum document is in response to additional information request issued by Council on the 18 April 2016. It is to be read in conjunction with:

- Environmental Impact Statement and Attachments (Parts A & B), as originally lodged with Gundagai Shire Council (GSC) on 21 December 2015; and
- EIS Part C - Addendum 1 lodged with GSC on 1 April 2016; and

It is noted that Council's information request in relation to air quality/noise assessment/greenhouse gas impacts will be addressed in subsequent Addendum 3, as a response to the more information request from EPA dated 27/4/16. The request for A1 site plan/construction plans has been satisfied with the separate lodgement of those plans with Council. Consequently, the topics covered in this addendum relate to only alternative sites discussion and sourcing of clay and other materials.

### 2 ALTERNATIVE SITES

The additional information provided below is to be read in conjunction with Section 3.3 of the EIS Part A document and Addendum 1.

Clause 7(1)(c) of Schedule 2 of the Regulations states that an EIS must include:

- *"an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,"*

As previously noted, the suggestion of alternative sites was also considered. The applicant's consideration of alternatives included:

1. Do Nothing – this was rejected as VISY must dispose of the by-product waste stream as solid waste. Reuse of the by-product as a soil amendment product was ceased due to changes in legislation that now prohibits that activity. The applicant has an existing contract to find a suitable site for the disposal of the subject waste product. The consequences of not carrying out the development include the necessity for VISY to find alternative waste disposal sites outside of the local/regional area that would potential be unviable and, in turn, potentially threaten the ongoing operation of the plant. The economic implications for the local region would be significant and unacceptable. In addition, the consequences for the applicant would be the loss of a significant contract and potential closure of a local business with flow on effects of job loss and impact on the economic and social well-being of those persons directly and indirectly involved.
2. Develop a disused quarry at Cootamundra – this was rejected as the site has significant issues with groundwater. Major infrastructure would be required to be installed to make the site operational, including establishing suitable access arrangements and connection to essential services.

3. Develop a disused quarry at Coolac - this site was also rejected as the site has similar issues with groundwater. Major infrastructure would also be required to be installed to make the site operational, including establishing suitable access arrangements and connection to essential services.
4. Access to and expansion of Bellettes Landfill, Tumut – this alternative was rejected due to the limitations of the existing acceptance of waste (3000tpa) and restrictions to enabling expansion to the existing operation.
5. Access to and expansion of Bald Hill Landfill, Jugiong - this alternative was rejected due to the limitations of the existing acceptance of waste (15000tpa) and restrictions to enabling expansion to the existing operation.
6. Access to Woodlawn Landfill, Tarago – this alternative was rejected due to access restrictions by rail only and potential excessive costs in establishing an efficient and cost effective waste transfer system from source to landfill.
7. Expansion of existing Burra Road Landfill site, Gundagai – this alternative provided the best opportunities to establish a sustainable landfill operation to meet the projected needs of both VISY and the applicant (see attached letter of support from VISY). The opportunities offered by the current site, particularly in terms of current infrastructure investment, established environmental monitoring facilities and natural features of site far outweigh the attributes of any other alternative site.

The final site selection process undertaken by the applicant is summarised in the following table:

**Table 1: Consideration of Alternative Options**

| Assessment Criteria                                      | Alternative Option |           |           |           |           |           |           |
|----------------------------------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                          | 1                  | 2         | 3         | 4         | 5         | 6         | 7         |
| 1 ability to satisfy project objectives                  | N/A                | 1         | 1         | 1         | 1         | 0         | 3         |
| 2 acceptability of environmental impacts                 | N/A                | 0         | 0         | 2         | 2         | 3         | 2         |
| 3 acceptability of any environmental risks/uncertainties | N/A                | 2         | 2         | 2         | 2         | 2         | 2         |
| 4 ability to handle abnormal events (natural/accidental) | N/A                | 2         | 2         | 2         | 2         | 2         | 2         |
| 5 efficiency to meet present demand                      | N/A                | 1         | 1         | 0         | 1         | 2         | 3         |
| 6 flexibility to meet future demand                      | N/A                | 1         | 1         | 0         | 1         | 2         | 3         |
| 7 opportunity to maximise recycling/reuse of wastes      | N/A                | 1         | 1         | 1         | 1         | 2         | 2         |
| 8 efficient use of land & natural resources              | N/A                | 1         | 1         | 2         | 2         | 2         | 3         |
| 9 relative environmental, economic and social costs      | N/A                | 0         | 0         | 1         | 1         | 1         | 2         |
| 10 proximity to source                                   | N/A                | 1         | 1         | 2         | 2         | 0         | 2         |
| 11 access to suitable road network                       | N/A                | 1         | 1         | 2         | 2         | 0         | 2         |
| 12 availability of essential/operational services        | N/A                | 0         | 0         | 1         | 2         | 2         | 3         |
| <b>Criteria Score Total</b>                              | N/A                | <b>11</b> | <b>11</b> | <b>16</b> | <b>19</b> | <b>18</b> | <b>29</b> |

Ref: N/A = Not Applicable 0 = Unacceptable 1 = Poor 2 = Good 3 = Excellent

### 3 CLAY LINER SOURCE DETAILS

The information in this section expands on information contained in Section 3.4.2 of the EIS Part A document and Addendum 1.

As noted previously, approximately 58,000m<sup>3</sup> of clay (or approximately 62,700 tonnes) will be required for clay liner construction for the landfill development as proposed. Approximately 10% of the clay will be sourced onsite with the balance to be sourced from appropriately licensed pits and will have permeability characteristics consistent with EPA requirements.

Testing for permeability will be undertaken prior to acceptance on site in accordance with current practice (see attached test results for clay currently utilised by the existing landfill operation). Clay will not be accepted unless it satisfies EPA's requirements as per specification contained in EPA Guide to Solid Waste Landfill 2015 (*insitu hydraulic conductivity of less than 1 x 10<sup>-9</sup> m/s. The clay should contain no rock or soil clumps greater than 50 mm in any dimension*).

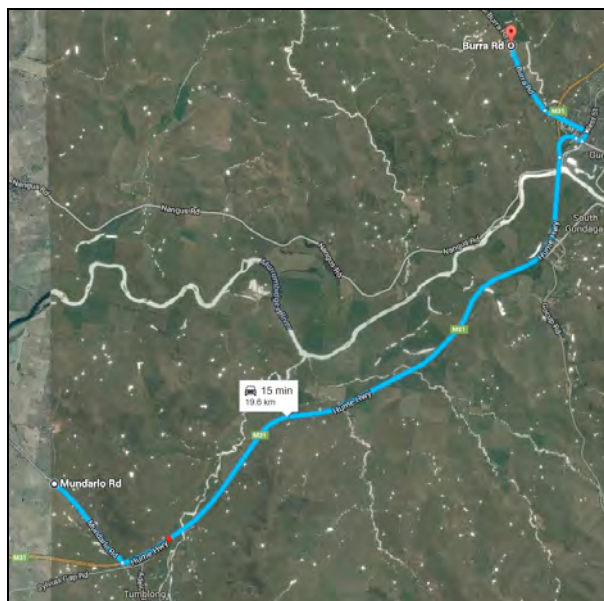
As indicated above, 90% of required clay (approximately 52,200m<sup>3</sup>) will be sourced off site. This equates to approximately 3,480m<sup>3</sup> per year over the expected life of the landfill site. The current viable and legitimate sources include:

1. **Bethungra Road, Nangus:** The clay from this source has been tested during the current operation of the landfill (see results attached) and meets the required hydraulic conductivity EPA standard. For the purposes of supplying the proposed subject expanded landfill operation, the applicant is preparing a development application for approval of GSC and subsequent licencing of EPA, to be completed prior to operation commencing. The expected transport route to be taken by heavy vehicle haulage of the clay product will involve Burra Road, Punch Street, West Street, Nangus Road and Bethungra Road.



**Figure 1:** Transport Route – Bethungra Road to Burra Road

2. **Tumblong Reserve Road, Bangus:** This is a Council controlled and licenced gravel pit with clay materials available as indicated by Council (see attached correspondence from Gundagai Shire Council). Council has also offered other pits under its control for the supply of suitably tested clay for the subject landfill. Subject to finalised agreements and testing, the expected transport route to be taken by heavy vehicle haulage of the clay product will involve, Burra Road, Punch Street, West Street, Hume Highway, Old Hume Highway (Mundarlo Road) and Tumblong Reserve Road.



**Figure 2:** Transport Route – Tumblong Reserve Road to Burra Road



**Part C – EIS Addendum 2 Attachments**

**List of Attachments:**

ATTACHMENT 1: VISY LETTER OF SUPPORT – 31/08/2015

ATTACHMENT 2: DMM CLAY TEST RESULTS – 21/09/2015

ATTACHMENT 3: GUNDAGAI SHIRE EMAIL RE SOURCE OF CLAY FROM EXISTING PITS –  
29/04/2016

**ATTACHMENT 1: VISY LETTER OF SUPPORT – 31/08/2015**

31 August 2015

To Whom It May Concern,

**Re: Burra Road Landfill Development**

We are writing to you in regards to our full support for any future expansion at the Burra Road Landfill site. Since 2013 Visy has been sending process waste (Class 2 Solid Waste) to the NSW EPA Licensed landfill.

Visy Pulp and Paper, Tumut and MH Earthmoving Pty Ltd have established a strong working relationship during this period, which has seen the efficient removal and disposal of Visy's waste in accordance with the conditions set out in Environment Protection Licence number 20297.

MH Earthmoving Pty Ltd has always provided impeccable service and reliability in regard to the contract held with Visy. Collections have been as required five days per week to avoid the build up of stockpiled waste at the Visy site.

Waste is delivered during operational hours to the immaculately presented Burra Road Landfill site, which is a credit to MH Earthmoving Pty Ltd who has continued to maintain this high quality presentation over the past two years of operation.

Visy would like to build on the current well established relationship with MH Earthmoving Pty Ltd and continue into the future. The Burra Road Landfill site completely supports Visy's landfill requirements and is also more environmentally sustainable and cost effective than alternate landfills with much greater haulage distances.

Should you have any questions please do not hesitate to contact me on 02 6947 7900.

Yours sincerely

Jean Yves Nouaze  
General Manager  
Visy Pulp and Paper, Tumut

  
Matt O'Donovan  
Environmental Manager  
Visy Pulp and Paper, Tumut

PULP & PAPER

**ATTACHMENT 2: DMM CLAY TEST RESULTS – 21/09/2015**

## Page 1 of 1

**Macquarie Geotechnical Job No.**

(Quote on all correspondence)

**DMM**

|                           |                                       |
|---------------------------|---------------------------------------|
| <b>Receivable Details</b> | Macquarie Geotechnical                |
| <b>Address:</b>           | 3 Watt Drive,<br>NSW 2795<br>Bathurst |
| <b>Phone Number:</b>      | 02 6332 2011                          |
| <b>Email:</b>             | bmorris@macgeo.com.au                 |
| <b>Contact Name:</b>      | Brad Morris                           |

[illegible]

|                  |       |                                                                                   |
|------------------|-------|-----------------------------------------------------------------------------------|
| Relinquished by: | Date: | MG Contact: David McMahon<br>Phone: 02 6332 2011<br>Email: bnmorris@macgeo.com.au |
|------------------|-------|-----------------------------------------------------------------------------------|

**MACQUARIE**

**GEO↑TECH**

Macquarie Geotechnical  
3 Watt Drive  
PO Box 71  
BATHURST NSW 2795  
Phone: 02 6332 2011

|                                                                                        |                                                  |
|----------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>* Legend:</b> S = Soil, W = Water, F = Filter<br>T = Tube, C = Concrete<br>R = Rock | <b>Comments:</b> _____<br><br>_____<br><br>_____ |
|----------------------------------------------------------------------------------------|--------------------------------------------------|

|                                                                                                                                                     |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  |               |                                                                                                                                                                               |       |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|---|---|---|
| <b>DM McMahon Pty Ltd</b><br><b>PO Box 6118</b><br><b>WAGGAWAGGA NSW 2650</b><br><b>Ph: 0269 310 510 Fax: 0269 310 511</b>                          |                                   |                                                                                                                                                                                                                                           |                   |  |               | PAGE: 1<br>OF: 1<br>SUBMITTED BY: DM<br>DATE SUBMITTED: 21/09/15<br>NO OF SAMPLES: 1<br>SAMPLING METHOD: client<br>CLAUSE: *<br>SPECIFICATIONS: *<br>PREPARATION METHOD: T105 |       |   |   |   |   |   |
| <b>TEST REPORT</b><br>PAVEMENT MATERIALS, FILLS, SUBGRADE AND SOILS                                                                                 |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  |               |                                                                                                                                                                               |       |   |   |   |   |   |
| CLIENT: Martin Hay Earthmoving<br>JOB DESCRIPTION: Nangus Clay: Permeability Testing                                                                |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  |               |                                                                                                                                                                               |       |   |   |   |   |   |
| MATERIAL SOURCE: Stockpile<br>PROPOSED USE: Earthworks Material<br>MATERIAL TYPE: Yellowish Clay                                                    |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  | JOB NO.: 3434 |                                                                                                                                                                               |       |   |   |   |   |   |
| SAMPLE NUMBER:                                                                                                                                      |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  | 1             |                                                                                                                                                                               |       | * | * | * | * |   |
| SITE OR CHAINAGE (m):                                                                                                                               |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  | *             |                                                                                                                                                                               |       | * | * | * | * |   |
| DEPTHS BETWEEN WHICH SAMPLES TAKEN (m):                                                                                                             |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  | *             |                                                                                                                                                                               |       | * | * | * | * |   |
| SPECIFIED LIMITS LISTED BELOW FOR:                                                                                                                  |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | *     | * | * | * | * |   |
| TESTS                                                                                                                                               | PRETREATMENT:                     |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T106                                                                                                                                                | 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 %               |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T107                                                                                                                                                | WHOLE SAMPLE                      | PASS 425µm SIEVE %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | PASS 75µm SIEVE %                                                                                                                                                                                                                         |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | LESS THEN 13.5µm %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T107                                                                                                                                                | -2.36mm                           | PASS 425µm SIEVE %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | PASS 75µm SIEVE %                                                                                                                                                                                                                         |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | LESS THEN 13.5µm %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | OBSERVATIONS                                                                                                                                                                                                                              |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| RATIOS                                                                                                                                              | A -                               | PASS 425µm %                                                                                                                                                                                                                              |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
|                                                                                                                                                     |                                   | B -                                                                                                                                                                                                                                       | PASS 75/425 µm %  |                                                                                  |               |                                                                                                                                                                               | *     | * | * | * | * | * |
|                                                                                                                                                     |                                   |                                                                                                                                                                                                                                           | BELOW 13.5/75µm % |                                                                                  |               |                                                                                                                                                                               | *     | * | * | * | * | * |
| AS1289.3.1.2                                                                                                                                        |                                   | LIQUID LIMIT %                                                                                                                                                                                                                            |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| AS1289.3.2.1                                                                                                                                        |                                   | PLASTIC LIMIT %                                                                                                                                                                                                                           |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| AS1289.3.3.1                                                                                                                                        |                                   | PLASTICITY INDEX %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T113                                                                                                                                                |                                   | LINEAR SHRINKAGE %                                                                                                                                                                                                                        |                   |                                                                                  |               | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T111                                                                                                                                                | MAX. DRY DENSITY t/m <sup>3</sup> |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | 1.814 | * | * | * | * |   |
|                                                                                                                                                     | OPTIMUM MOISTURE CONTENT %        |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | 13.5  | * | * | * | * |   |
| AS1289.3.8.1                                                                                                                                        | EMERSON AGGREGATE TEST            |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | *     | * | * | * | * |   |
| T120                                                                                                                                                | FIELD MOISTURE CONTENT %          |                                                                                                                                                                                                                                           |                   |                                                                                  | *             | *                                                                                                                                                                             | 5.4   | * | * | * | * |   |
| <br>ACCREDITED FOR<br><b>TECHNICAL COMPETENCE</b><br>Number: 3349 |                                   | Accredited for compliance with ISO/IEC 17025. The results of these tests, calibrations and/or measurement included in this document are traceable to Australian/National Standards. This document shall not be reproduced except in full. |                   |                                                                                  |               | All samples are oven dried and dry sieved preparation unless otherwise stated                                                                                                 |       |   |   |   |   |   |
|                                                                                                                                                     |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  |               | APPROVED SIGNATORY: <br>DM McMahon<br>DATE: 24/09/15                                      |       |   |   |   |   |   |
| Z:\Report & Data Sheets Proforma\Reports\Test Report All Rev 2 Jun 14.xlsx                                                                          |                                   |                                                                                                                                                                                                                                           |                   |                                                                                  |               |                                                                                                                                                                               |       |   |   |   |   |   |

# FALLING HEAD PERMEABILITY REPORT

|                 |                                   |                            |               |
|-----------------|-----------------------------------|----------------------------|---------------|
| <b>Client:</b>  | DM McMahon Pty Ltd                | <b>Source:</b>             | 3434 - Nangus |
| <b>Address:</b> | 4a Norton St WAGGA WAGGA NSW 2650 | <b>Sample Description:</b> | Silty CLAY    |
| <b>Project:</b> | Material Assessments              | <b>Report No:</b>          | 18259-FHP     |
| <b>Job No:</b>  | B15011                            | <b>Lab No:</b>             | 18259         |

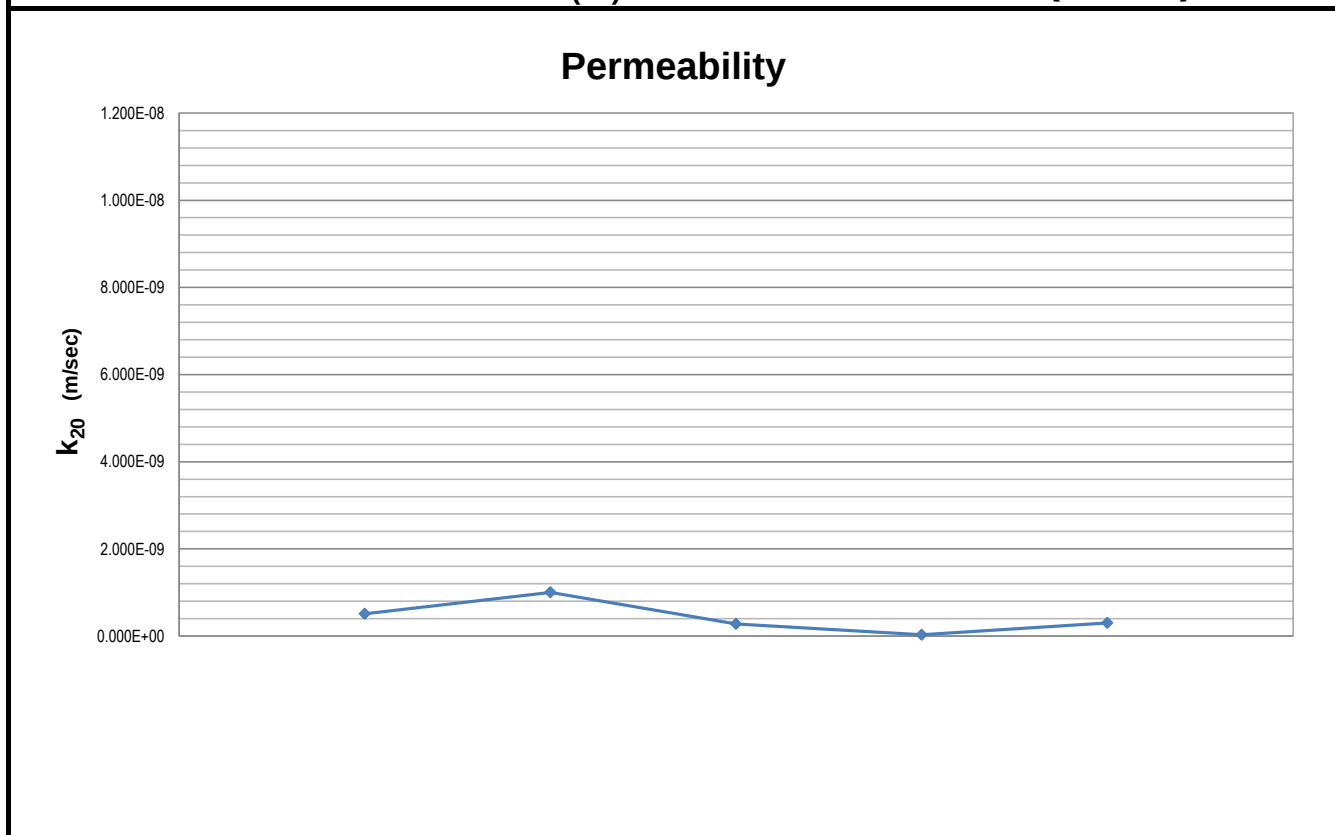
|                        |                                                                                                                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Procedure:</b> | <input checked="" type="checkbox"/> AS1289 6.7.2 Soil strength and consolidation tests - Determination of a soil - Falling head method for a remoulded specimen                     |
|                        | <input type="checkbox"/> AS1289 5.1.1 Soil compaction and density tests - Determination of the dry density/moisture content relationship of a soil using standard compactive effort |
|                        | <input type="checkbox"/> AS1289 5.2.1 Soil compaction and density tests - Determination of the dry density/moisture content relationship of a soil using modified compactive effort |

|                  |                   |                      |            |
|------------------|-------------------|----------------------|------------|
| <b>Sampling:</b> | Sampled by Client | <b>Date Sampled:</b> | 19/09/2015 |
|------------------|-------------------|----------------------|------------|

|                     |                                             |
|---------------------|---------------------------------------------|
| <b>Preparation:</b> | Prepared in accordance with the test method |
|---------------------|---------------------------------------------|

| RESULTS                                          |       |                                              |              |
|--------------------------------------------------|-------|----------------------------------------------|--------------|
| Standard Maximum Dry Density (t/m <sup>3</sup> ) | 1.81  | Hydraulic Gradient                           | 0.0          |
| Optimum Moisture Content (%)                     | 13.5  | Surcharge (kPa)                              | 0.0          |
| Placement Moisture Content (%)                   | 13.5  | Head Pressure Applied (kPa)                  | 0.0          |
| Moisture Ratio (%)                               | 99.7  | Standard Compaction                          | Standard     |
| Placement Dry Density (t/m <sup>3</sup> )        | 1.81  | Percentage Material Retained/Sieve Size (mm) | 0 % on 9.5   |
| Density Ratio (%)                                | 100.1 | Sample Height and Diameter (mm)              | 103.6 x 98.3 |

**PERMEABILITY**  $k_{(20)} = 3.05E-10$  (m/sec)



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.

NATA Accredited Laboratory Number: 14874

Authorised Signatory:

Bradley Morris

7/10/2015

Date:



Macquarie Geotechnical  
3 Watt Drive  
Bathurst NSW 2795

**ATTACHMENT 3: GUNDAGAI SHIRE EMAIL RE SOURCE OF CLAY FROM  
EXISTING PITS – 29/04/2016**

**From:** Phil McMurray <[pmcmurray@gundagai.nsw.gov.au](mailto:pmcmurray@gundagai.nsw.gov.au)>

**Date:** 29 April 2016 at 4:56:09 PM AEST

**To:** "martin@nhem.com.au" <[martin@nhem.com.au](mailto:martin@nhem.com.au)>

**Cc:** Brent Livermore <[blivermore@gundagai.nsw.gov.au](mailto:blivermore@gundagai.nsw.gov.au)>, Andrew Brock <[abrock@gundagai.nsw.gov.au](mailto:abrock@gundagai.nsw.gov.au)>

**Subject:** Clay sources for your development

Hi Martin,

Following up on your phone call in regards to potential clay supply for your development application for the expansion of the landfill.

I understand that you have been investigating the potential to source some clay from within Council controlled gravel quarries. And in particular you have visited Bangus Gravel Pit for its suitability.

Bangus Pit is on Portion 283, Parish of Bangus, Old Hume Highway, Tumblong. I confirm that Gundagai Shire Council is the Mine Holder of Bangus Pit. This Pit is registered under the Department of Primary Industries as Mine ID 41986, as a Borrow Pit for construction material on an intermittent basis.

Councils Mines Manager, and Works Overseer is Mr Kevin Britt, whom is the key contact within Council for the activities and distribution of resources from the Pit. Council does offer pit materials for sale in accordance with its adopted fees and charges policy.

The availability of material from Bangus Pit would be subject to quantity data being supplied. The material would need to pass your own permeability/compaction tests for suitability as a lining material.

Council has other Pits and if you require details of these just let me know.

I trust this helps.

Regards,

Phil.



Phillip McMurray | General Manager

GUNDAGAI SHIRE COUNCIL

PO Box 34

255 Sheridan Street GUNDAGAI NSW 2722

Tel: 02 6944 0201 | Fax: 02 6944 1475 | Mob: 0413 884 164

[www.gundagai.nsw.gov.au](http://www.gundagai.nsw.gov.au)