

**Appendix 7                      -                      CBR Test Results**

# **In-Situ Plate Bearing Determination of Equivalent In-Situ CBR Value Test Results**

**Glan Gors  
Wrexham**

## **FACTUAL REPORT**

Prepared for:

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**Report Reference: 370407**

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**TR 370407**

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## 1.0 Introduction

Following your instructions two (2) plate-bearing tests were carried out in accordance with BS 1377-9: 1990, and the Design Guidance for Road Pavement Foundations IAN 73/06.

A 300mm Ø plate was loaded in increments until at least 1.25mm of settlement was recorded.

Settlement was recorded for each increment at one-minute intervals until movement ceased (<0.05mm after one minute). The modulus of sub grade reaction was then calculated and the equivalent CBR determined in accordance with the Design Guidance for Road Pavement Foundations IAN 73/06.

**Site Address:** Glan Cors, Wrexham

**Date of Test:** 12/02/2013

**Material Tested:** Landfill Fill

**Weather Conditions:** Overcast

**Tested By:** Mr Iolo Owen and Mr Simon Melbourne

This report was prepared by: \_\_\_\_\_



*Mrs Lisa Roberts*

This report is issued on behalf of Celtest Limited by: \_\_\_\_\_



(✓) *Mr. Irfon LI Owen – Site Testing Manager*  
( ) *Mr. Hefin Hughes – Site Support Manager*

**Date of issue:** 15<sup>th</sup> February 2013

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## 2.0 Location Plan

- Not Provided

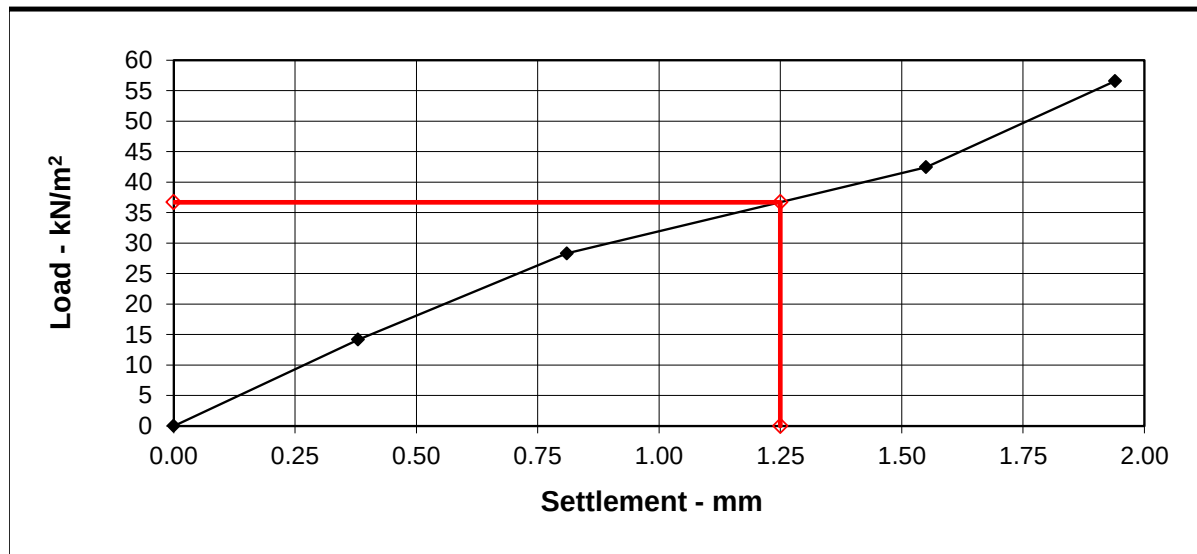
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### 3.1 – Location 1

|                                                               |                         |
|---------------------------------------------------------------|-------------------------|
| Test Location:                                                | Location 1              |
| Plate Size:                                                   | 300 mm                  |
| Material:                                                     | Made ground - soft clay |
| Reaction Load:                                                | JCB Digger              |
| Initial Temp:                                                 | 3.0°C                   |
| Final Temp:                                                   | 3.0°C                   |
| Depth of Test level from Ground Level:                        | 1m                      |
| Distance Between Edge of Loaded Plate and Wall of Excavation: | 300mm                   |

| Load (Tonne) | Load (kN) | Pressure (kN/m <sup>2</sup> ) | Cumulative Settlement (mm) | Time Taken To Achieve Settlement (min) |
|--------------|-----------|-------------------------------|----------------------------|----------------------------------------|
| 0.0          | 0.0       | 0.00                          | 0.00                       | 0                                      |
| 0.10         | 1.0       | 14.15                         | 0.38                       | 4                                      |
| 0.20         | 2.0       | 28.29                         | 0.81                       | 4                                      |
| 0.30         | 3.0       | 42.44                         | 1.55                       | 4                                      |
| 0.40         | 4.0       | 56.58                         | 1.94                       | 3                                      |



|                               |                            |
|-------------------------------|----------------------------|
| Load at settlement of 1.25mm  | 37 kN/m <sup>2</sup>       |
| Modulus of sub-grade reaction | 12895 kN/m <sup>2</sup> /m |
| Equivalent CBR Value          | 0.8 %                      |

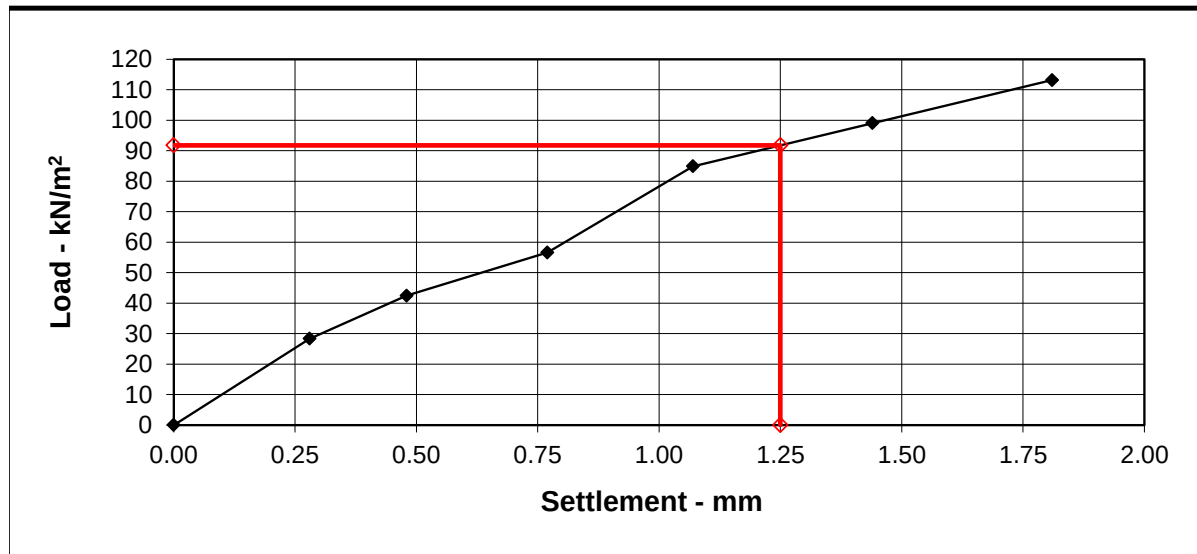
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### 3.2 – Location 2

|                                                               |                         |
|---------------------------------------------------------------|-------------------------|
| Test Location:                                                | Location 2              |
| Plate Size:                                                   | 300 mm                  |
| Material:                                                     | Made ground - soft clay |
| Reaction Load:                                                | JCB Digger              |
| Initial Temp:                                                 | 3.0°C                   |
| Final Temp:                                                   | 3.0°C                   |
| Depth of Test level from Ground Level:                        | 1m                      |
| Distance Between Edge of Loaded Plate and Wall of Excavation: | 300mm                   |

| Load (Tonne) | Load (kN) | Pressure (kN/m <sup>2</sup> ) | Cumulative Settlement (mm) | Time Taken To Achieve Settlement (min) |
|--------------|-----------|-------------------------------|----------------------------|----------------------------------------|
| 0.0          | 0.0       | 0.00                          | 0.00                       | 0                                      |
| 0.20         | 2.0       | 28.29                         | 0.28                       | 3                                      |
| 0.30         | 3.0       | 42.44                         | 0.48                       | 3                                      |
| 0.40         | 4.0       | 56.58                         | 0.77                       | 3                                      |
| 0.60         | 6.0       | 84.87                         | 1.07                       | 3                                      |
| 0.70         | 7.0       | 99.02                         | 1.44                       | 3                                      |
| 0.80         | 8.0       | 113.16                        | 1.81                       | 4                                      |



|                               |                            |
|-------------------------------|----------------------------|
| Load at settlement of 1.25mm  | 92 kN/m <sup>2</sup>       |
| Modulus of sub-grade reaction | 32238 kN/m <sup>2</sup> /m |
| Equivalent CBR Value          | 4.0 %                      |