



KEY | GS

**Key GeoSolutions Ltd**

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June 4, 2019

Ref: 19-187-L-001

Darwin Group Ltd  
FAO Mr J Goodwin

By email only

Dear Jamie

**re: Kendrick School**

Please find attached the draft borehole and trial pit logs for the works undertaken last week, along with a location plan and the results of the infiltration tests.

In summary, the holes encountered 0.1m of asphalt over a layer of made ground, which varied in thickness from 0.2 to 0.9m and consisted of a clayey sand with inclusions of brick and glass. Beneath the made ground the holes encountered a medium dense clayey sand.

For foundation design purposes an ABP of 100 kN/m<sup>2</sup> can be adopted for the design of pad foundations for the modules, assuming that medium dense sand is encountered at formation level.

There was no visual or olfactory evidence of contamination encountered in the boreholes, we have submitted samples for chemical analysis and expect the results back early next week.

The infiltration test returned an infiltration rate of  $3.6 \times 10^{-5}$  m/s.

We will forward the report when we have received the results of the chemical analysis. If you have any queries in the meantime please do not hesitate to contact me to discuss.

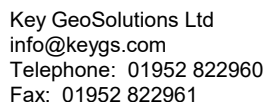
In summary,

Yours faithfully

Brian Duthie

UK Registered Ground Engineering Advisor

**Key GeoSolutions Limited**



## PAGE 1 OF 1

**PROJECT NAME** Kendrick School

**PROJECT LOCATION** Reading

**CO-ORDINATES** 471966 mE, 173040 mN

**GROUND ELEVATION** 99.85 m      **TRIAL PIT SIZE** 0.70\*2.0

**LOGGED BY** Ruby Westnedge      **CHECKED BY** BD

| DEPTH<br>(m) | SAMPLE TYPE<br>NUMBER | GRAPHIC<br>LOG | MATERIAL DESCRIPTION<br>& REMARKS                                   |
|--------------|-----------------------|----------------|---------------------------------------------------------------------|
|              |                       |                |                                                                     |
|              |                       | 0.10           | Asphalt                                                             |
|              |                       |                | Brown slightly gravelly clayey SAND with brick and glass inclusions |
|              |                       | 0.80           | 0.60m to 0.80m - brick layer                                        |
| 1            |                       |                | Light brown very gravelly slightly clayey SAND                      |
| 2            |                       | 2.00           |                                                                     |
|              |                       |                | 99.75                                                               |
|              |                       |                | 99.05                                                               |
|              |                       |                | 97.85                                                               |

Bottom of trial pit at 2.00 metres.

## NOTES

**SAMPLE TYPE KEY** U = Undisturbed D = Disturbed B = Bulk J = Jar VA = Shear Vane SPT = Standard Penetration Test

**TRIAL PIT NUMBER TP0B**

PAGE 1 OF 1

**LOGGED BY** Ruby Westnedge      **CHECKED BY** BD

| DEPTH<br>(m) | SAMPLE TYPE<br>NUMBER | GRAPHIC<br>LOG | MATERIAL DESCRIPTION<br>& REMARKS                         |
|--------------|-----------------------|----------------|-----------------------------------------------------------|
|              |                       |                |                                                           |
|              |                       | 0.10           | Asphalt                                                   |
|              |                       |                | Brown slightly gravelly clayey SAND with brick inclusions |
|              |                       | 0.50           |                                                           |
|              |                       |                | Brown very clayey slightly gravelly SAND                  |
| 1            |                       |                |                                                           |
|              |                       |                |                                                           |
|              |                       | 1.50           |                                                           |
|              |                       |                |                                                           |

Bottom of trial pit at 1.50 metres.

## NOTES

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**WELL NUMBER WS01**

PAGE 1 OF 1

**CLIENT** Darwin Group **PROJECT NAME** Kendrick School  
**PROJECT NUMBER** 19-187 **PROJECT LOCATION** Reading  
**DATE STARTED** 30/5/19 **COMPLETED** 30/5/19 **CO-ORDINATES** 471971 mE, 173040 mN  
**DRILLING CONTRACTOR** GSS **GROUND ELEVATION** 99.85 m **HOLE SIZE** 101  
**DRILLING METHOD** Windowless Sampler **LOGGED BY** Ruby Westnedge **CHECKED BY** BD

| DEPTH<br>(m) | SAMPLE TYPE<br>NUMBER | BLOW<br>COUNTS<br>(SPT N VALUE) | TESTS      | GRAPHIC<br>LOG | MATERIAL DESCRIPTION<br>& REMARKS                                                                | WELL DIAGRAM |
|--------------|-----------------------|---------------------------------|------------|----------------|--------------------------------------------------------------------------------------------------|--------------|
|              |                       |                                 |            |                | 0.10 Asphalt 99.75                                                                               |              |
|              |                       |                                 |            |                | Black slightly gravelly very clayey SAND with inclusions of brick and occasional glass fragments |              |
|              |                       |                                 |            |                | 1.00 0.80m - 1.00m - Brick cobble 98.85                                                          |              |
|              | X SPT                 | 1-1-2-2 (6)                     |            |                | Dark brown slightly gravelly slightly clayey SAND                                                |              |
| 2            |                       |                                 |            |                | 1.80m becomes very gravelly                                                                      |              |
|              | X SPT                 | 3-3-2-3 (11)                    |            |                | 2.60m ; hole collapsed after drilling                                                            |              |
|              |                       |                                 |            |                | 3.00m ; continuous SPT due to hole collapsing                                                    |              |
|              | X SPT                 | 5-4-4-5 (18)                    |            |                | 3.41 96.44                                                                                       |              |
|              | X SPT                 | 7-9-10-10 (36)                  |            |                |                                                                                                  |              |
| 4            | X SPT                 | 14-14-15-7 (50)                 | 7 for 35mm |                |                                                                                                  |              |

Refusal at 3.90 metres.  
Bottom of borehole at 4.31 metres.

## NOTES

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**WELL NUMBER WS02**

PAGE 1 OF 1

**CLIENT** Darwin Group **PROJECT NAME** Kendrick School  
**PROJECT NUMBER** 19-187 **PROJECT LOCATION** Reading  
**DATE STARTED** 30/5/19 **COMPLETED** 30/5/19 **CO-ORDINATES** 471976 mE, 173028 mN  
**DRILLING CONTRACTOR** GSS **GROUND ELEVATION** 99.8 m **HOLE SIZE** 101  
**DRILLING METHOD** Windowless Sampler **LOGGED BY** Ruby Westnedge **CHECKED BY** BD

| DEPTH<br>(m) | SAMPLE TYPE<br>NUMBER | BLOW<br>COUNTS<br>(SPT N VALUE) | TESTS     | GRAPHIC<br>LOG | MATERIAL DESCRIPTION<br>& REMARKS                                                                       | WELL DIAGRAM |
|--------------|-----------------------|---------------------------------|-----------|----------------|---------------------------------------------------------------------------------------------------------|--------------|
|              |                       |                                 |           |                | 0.10 Asphalt 99.70<br>Black slightly gravelly clayey SAND with inclusions of<br>crushed brick and glass |              |
|              | X SPT                 | 2-3-4-4<br>(13)                 |           |                | 1.00 98.80<br>Brown slightly gravelly slightly clayey SAND                                              |              |
| 2            |                       |                                 |           |                | 1.80m; becomes very gravelly                                                                            |              |
|              | X SPT                 | 3-3-2-4<br>(12)                 |           |                |                                                                                                         |              |
|              |                       |                                 |           |                |                                                                                                         |              |
|              | X SPT                 | 16-16-17-1<br>(50)              | 1 for 0mm |                | 3.38 96.42<br>Refusal at 3.38 metres.<br>Bottom of borehole at 3.38 metres.                             |              |

**NOTES**

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**WELL NUMBER WS03**

PAGE 1 OF 1

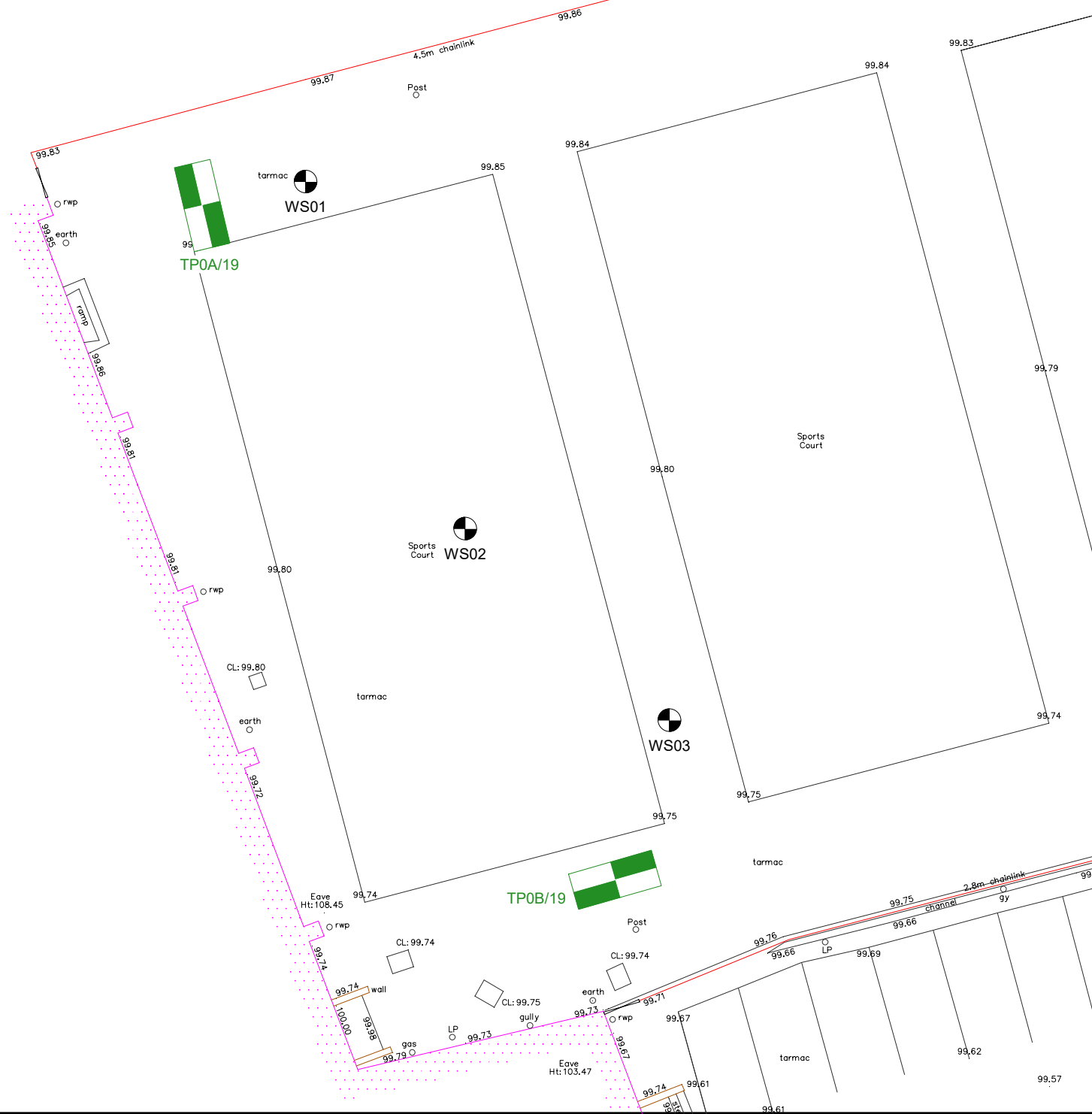
**CLIENT** Darwin Group **PROJECT NAME** Kendrick School  
**PROJECT NUMBER** 19-187 **PROJECT LOCATION** Reading  
**DATE STARTED** 30/5/19 **COMPLETED** 30/5/19 **CO-ORDINATES** 471984 mE, 173022 mN  
**DRILLING CONTRACTOR** GSS **GROUND ELEVATION** 99.75 m **HOLE SIZE** 101  
**DRILLING METHOD** Windowless Sampler **LOGGED BY** Ruby Westnedge **CHECKED BY** BD

| DEPTH<br>(m) | SAMPLE TYPE<br>NUMBER | BLOW<br>COUNTS<br>(SPT N VALUE) | TESTS       | GRAPHIC<br>LOG | MATERIAL DESCRIPTION<br>& REMARKS                                                                                             | WELL DIAGRAM   |
|--------------|-----------------------|---------------------------------|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------------|----------------|
|              |                       |                                 |             |                | 0.10 Asphalt<br>0.30 Brown slightly gravelly clayey SAND with brick<br>inclusions<br>Brown very clayey slightly gravelly SAND | 99.65<br>99.45 |
| 2            | SPT                   | 1-4-7-6<br>(18)                 |             |                |                                                                                                                               |                |
|              | SPT                   | 3-2-2-2<br>(9)                  |             |                | 2.00m; hole collapsed                                                                                                         |                |
|              | SPT                   | 15-17-18<br>( )                 | 18 for 70mm |                |                                                                                                                               |                |
|              |                       |                                 |             | 3.37           |                                                                                                                               | 96.38          |

Refusal at 3.37 metres.  
Bottom of borehole at 3.37 metres.

**NOTES**

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## NOTES

1.



|      |                 |       |          |
|------|-----------------|-------|----------|
| 01   | First Issue     | RW    | 31/05/19 |
| Rev. | Revision Detail | Drawn | Date     |

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CLIENT:

**DarwinGroup**  
Construction Has Evolved

PROJECT:

Kendrick School

TITLE:

## Borehole and Trial Pit Location Plan

|                 |                            |                  |
|-----------------|----------------------------|------------------|
| Drawn:<br>RW    | Checked:<br>BD             | Date:<br>May '19 |
| Scale:<br>1:200 | Original Sheet Size:<br>A4 | Status:<br>DRAFT |

|             |                 |           |
|-------------|-----------------|-----------|
| Drawing No. | <b>FIGURE 2</b> | Revision: |
|             |                 | <b>01</b> |



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