

Report in Support of Discharge of Conditions Attached to the Planning Consent – Drainage and Levels

Application Details

Demolition of existing buildings on site and erection of a single structure (for class A1 use) extending to 4289 sq.m (GEA) at ground floor and up to 3328 sq.m (GEA) at first floor, with associated access, parking and servicing.

Relevant Conditions

Condition 5:

The development permitted by this planning permission shall be carried out in accordance with the approved Flood Risk Assessment (FRA), ref.no. 1456-R2 and dated August 2012, and the following mitigation measures detailed within the FRA:

1. Finished floor levels are set no lower than 7.26m above Ordnance Datum (AOD).

Response:

It is confirmed that finished floor levels are proposed at 7.26m AOD, as indicated on the accompanying Drainage Layout Plan, Drawing No. 1456/D1.1A.

Condition 6:

No development (other than demolition of buildings) shall take place until a surface water drainage scheme for the site, based on sustainable drainage principles and an assessment of the hydrological and hydro geological context of the development, has been submitted to and approved in writing by the local planning authority. The drainage strategy should demonstrate the surface water run-off generated up to and including the 1 in 100 year 20% critical storm will not exceed the run-off from the existing site following the corresponding rainfall events. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. The scheme shall also include details of how the scheme shall be maintained and managed after completion.

Response:

The proposed surface water drainage scheme detailed on Drawing No. 1456/D1.1A is consistent with the approved Flood Risk Assessment and is based on sustainable drainage principles. The introduction of permeable paving will ensure that the impermeable site area draining to the public surface water sewers in Solent Road will be less than that which currently drains there. The attached MicroDrainage calculations confirm that the permeable paving will be suitable to drain connected car park areas with maximum water levels of just 95mm in the underlying coarse aggregate.

With regard to maintenance and management, the permeable paved areas will be cleaned with a suction sweeper at least annually.

Ground conditions and an assessment of the hydrological and hydro geological context of the development are detailed in the Subadra Environmental Investigation Report submitted with the planning application referenced IN 12899 CL 001a dated August 2012. In support, we attach records of groundwater monitoring that we have carried out. The boreholes show a consistent response to rainfall with only a relatively slight increase through the very high rainfall in mid to late 2012 and through the winter of 2012/13 when groundwater levels at many local stations were the highest on record.

A few gullies have been incorporated at low points on the southern boundary as safety features to protect against exceedence and they are not expected to operate under normal design conditions. Similarly, three conventional shallow (1.5m deep) soakaways have been included in the western area of the car park.

A small change from the drainage proposals in the FRA has been made in the SE corner of the car park where the Pizza Hut restaurant was located. This area is to remain as a tarmac surface draining to existing gullies and oversized surface water drains as shown. These discharge to the public sewer through a control chamber to limit the run-off, all as agreed at the time of construction with Southern Water Services Ltd. There will be an increase in the impermeable areas draining to this control chamber and an overflow is proposed to an existing lateral some 50m to the west that currently drains buildings and yards on the site and is no longer otherwise required. This lateral will also be used for an overflow from drainage to the west, as indicated on the Drainage Layout Plan.

The existing impermeable areas draining to public sewers in Solent Road total around 8280 sq.m whilst proposed areas total only 6470 sq.m. In their planning consultation response dated 14 September 2012 ref: PLAN-001124, Southern Water Services Ltd accepted that surface water could be discharged from the site providing that proposed flows were no greater than existing.

A class 1 bypass separator has been included on the drainage leaving the service yard. It will include a alarm for warning of high oil levels.

Condition 9:

Construction of the building hereby approved shall not commence until plans and particulars specifying the finished levels (above ordnance datum) of ground levels surrounding the building in relation to existing ground levels have been submitted to and approved by the Local Planning Authority.

Response:

The accompanying Drainage Layout Plan, Drawing No. 1456/D1.1A, indicates proposed finished levels around the site.

1456/C/R1.1/RTFC
22.10.14

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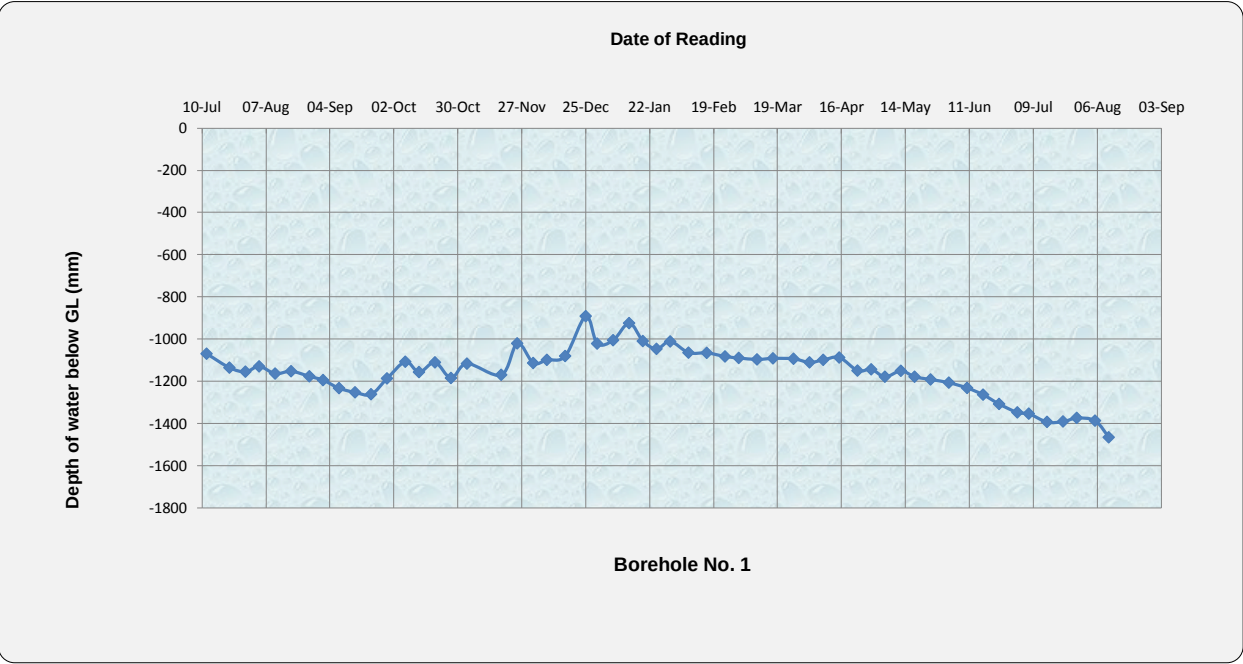
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Region	England and Wales	Cv (Winter)	0.840																													
M5-60 (mm)	19.500	Shortest Storm (mins)	15																													
Ratio R	0.350	Longest Storm (mins)	1440																													
Summer Storms	Yes	Climate Change %	+30																													
Time (mins)	Area																															
From: To:	(ha)																															
0	4 0.057																															
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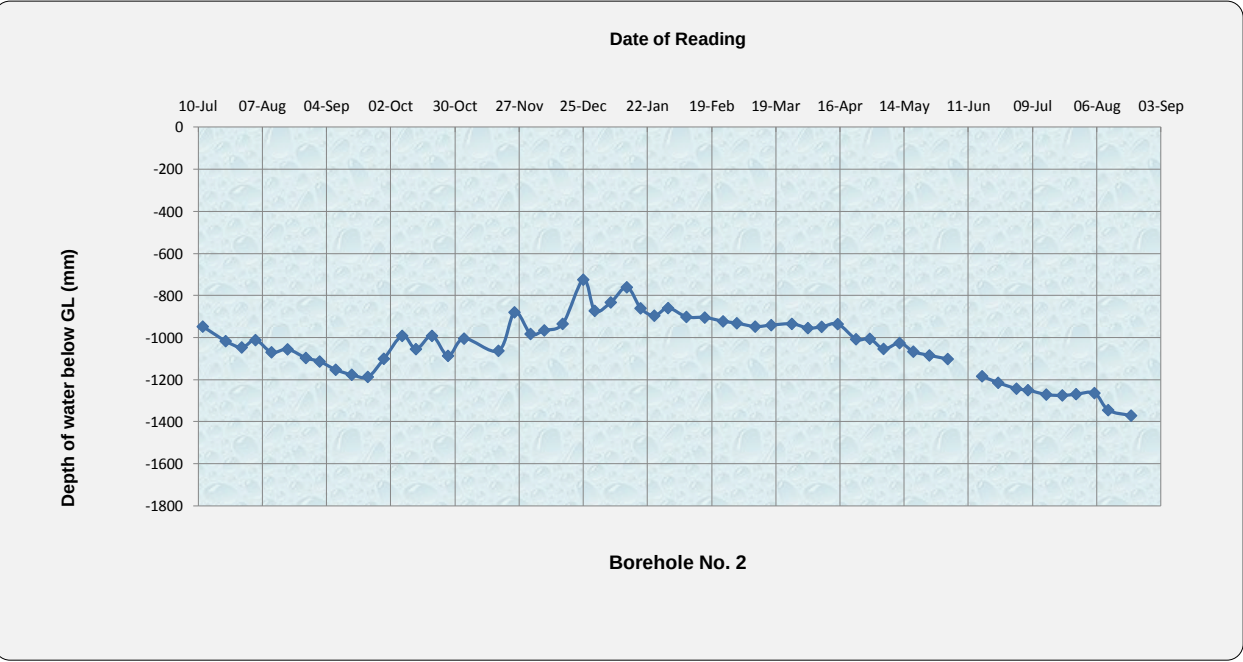
Robert Clark Associates		Page 4
Willow Cottage Herne Lane Rustington BN16 3EE	Retail Park Solent Road Design check on sample permeable parking area	
Date 22 October 2014 File Permeable car park test.srcx	Designed by RTFC Checked by	
Micro Drainage	Source Control 2014.1.1	
Model Details Storage is Online Cover Level (m) 0.480 Porous Car Park Structure Infiltration Coefficient Base (m/hr) 1.54800 Membrane Percolation (mm/hr) 1000 Max Percolation (l/s) 66.7 Safety Factor 5.0 Porosity 0.30 Invert Level (m) 0.000 Width (m) 50.0 Length (m) 4.8 Slope (1:X) 60.0 Depression Storage (mm) 5 Evaporation (mm/day) 3 Cap Volume Depth (m) 0.000		
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Groundwater Monitoring at Solent Retail Park Havant



Max groundwater level 891mm below ground level on 25th December 2012

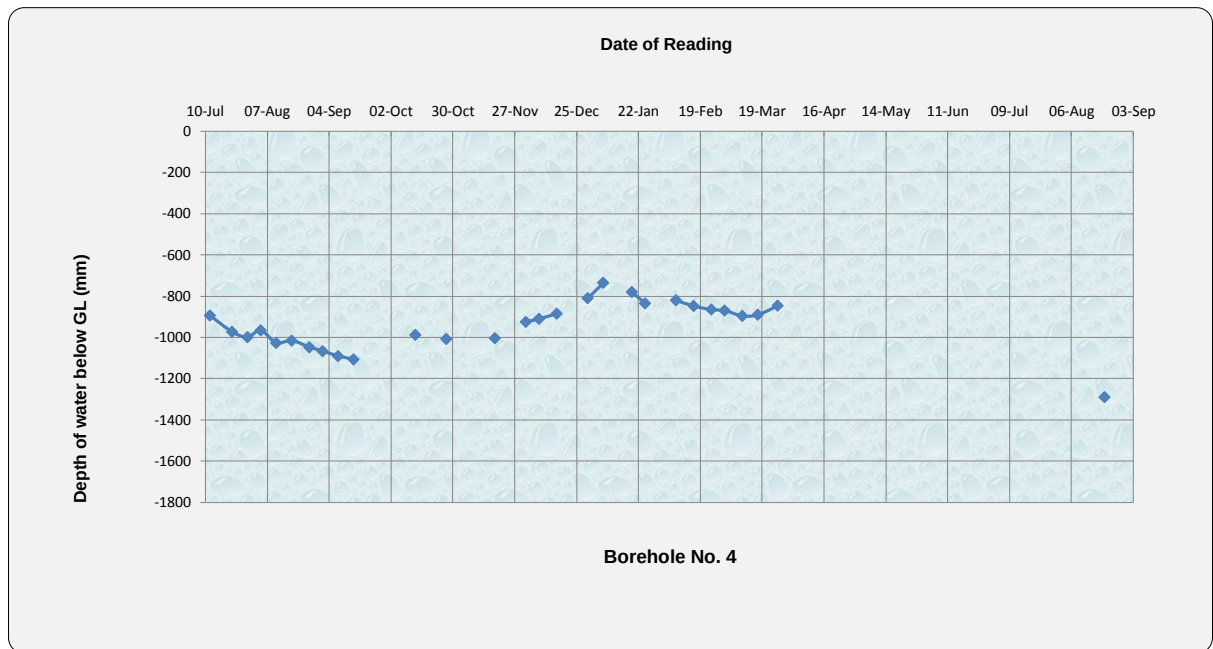
Min groundwater level 1465mm below ground level on 11th August 2013



Max groundwater level 725mm below ground level on 25th December 2012

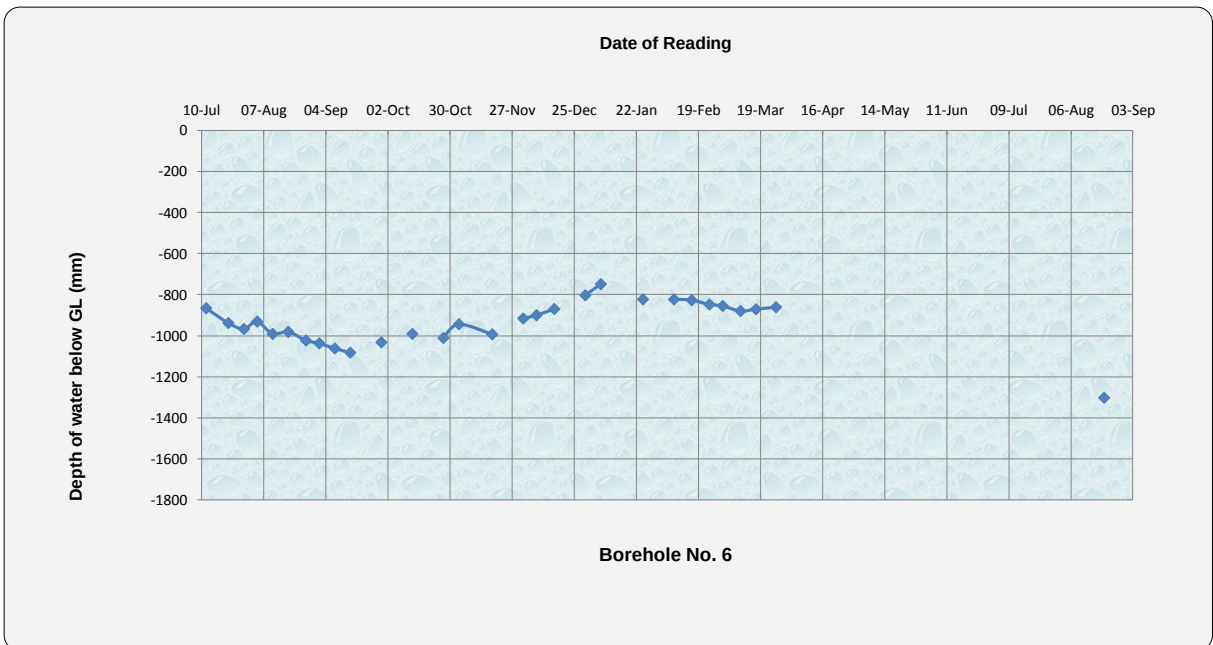
Min groundwater level 1371mm below ground level on 21st August 2013

Groundwater Monitoring at Solent Retail Park Havant



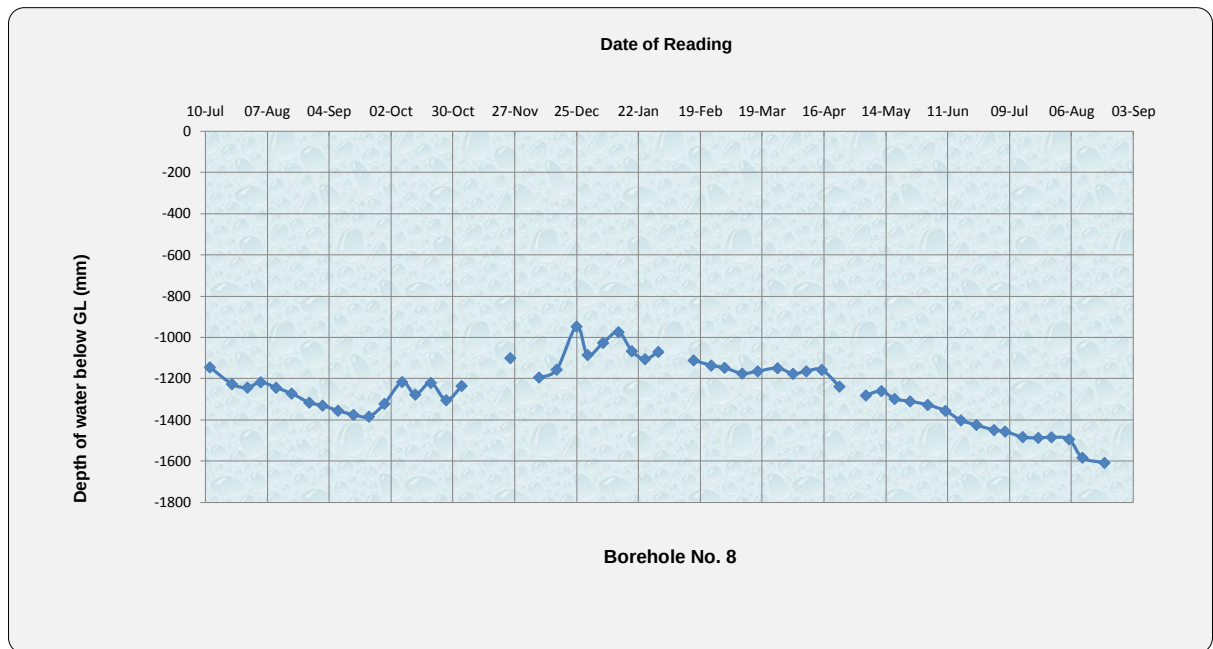
Max groundwater level 735mm below ground level on 6th January 2013

Min groundwater level 1290mm below ground level on 21st August 2013



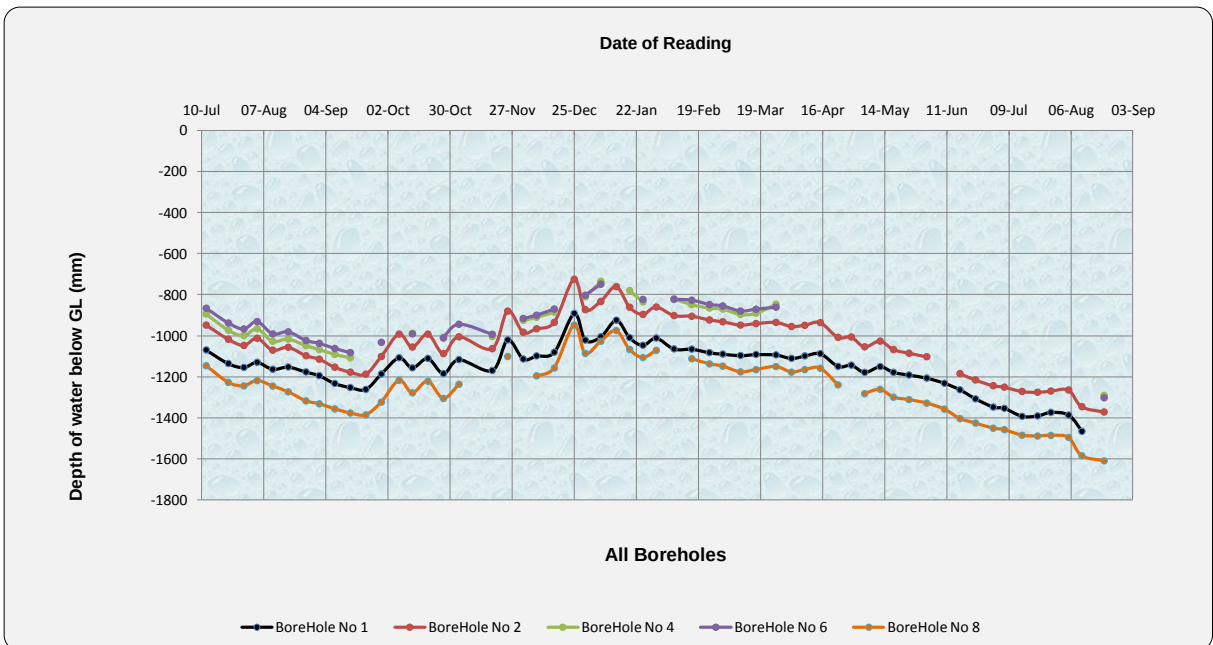
Max groundwater level 749mm below ground level on 6th January 2013

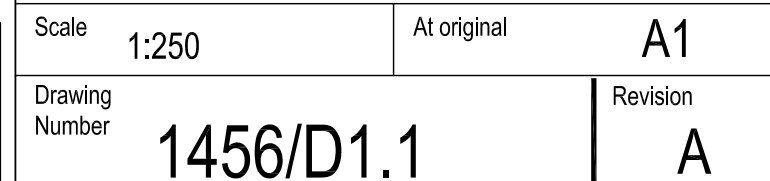
Min groundwater level 1302mm below ground level on 21st August 2013



Max groundwater level 948mm below ground level on 25th December 2012

Min groundwater level 1609mm below ground level on 21st August 2013





-  Proposed surface water drainage
-  Proposed foul water drainage
-  Existing private surface water drainage
-  Existing public surface water drainage
-  Existing private foul water drainage
-  Existing public foul water drainage
-  Permeable concrete block paving
-  Proposed channel/ slot drainage
-  Proposed lighting columns