

12329/LW

26 September 2019

Bingham Hall Partnership
5 Ty-Nant Court
Morganstown
Cardiff CF15 8LW

For the attention of Mr Ray Green

Dear Sirs,

Proposed Expansion at Bike Park Wales, Abercanaid, Merthyr Tydfil

Further to your recent instruction, we have now completed the supplementary soil infiltration testing for Phase 2 at the above site and enclose for your attention a copy of the results. We can report the following findings.

Intégral Géotechnique (Wales) Limited were instructed to undertake soil infiltration testing at a number of locations across the site and carry out percolation testing within an area of the site being considered for a drainage field.

Intégral Géotechnique (Wales) Limited have previously undertaken intrusive site investigations at the site and the following reports are available:

- Gethin Woods, Abercanaid, Merthyr Tydfil, Site Investigation Report, Report No. 12329/LW/19/SI dated February 2019; and
- Proposed Expansion at Bike Park Wales, Abercanaid, Merthyr Tydfil, Soakaway Testing (SP01) Report, Report No. 12329/LW dated 16 September 2019.

This report should be read in conjunction with the above reports.

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Introduction

The site is located in Gethin Woods approximately 0.5km west of Abercanaid, at a National Grid Reference of 305160, 203410.

The site is irregular in shape and occupies an area of approximately 5 hectares. The site is situated on sloping ground, towards the base of the valley, and falls in a north easterly direction towards the River Taff from an approximate maximum elevation of 260m AOD to an approximately minimum elevation of 220m AOD. Within the areas of proposed development around the existing building and car park areas the ground level has been reprofiled to form a series of plateaus.

The car parking areas generally have a covering of either hardstanding or gravel. Areas of hardstanding, paving and gravel surface surround the existing main building. Vegetated/soft landscaped areas also surround the building and car parking areas.

The surrounding areas consist of woodland areas and cycle tracks associated with Bike Park Wales.

Proposed Development

The Phase 2 proposed development includes on site accommodation comprising a number of camping pods, shepherd's huts and lodges, along with car parking areas and play area. The use of soakaways and a drainage field are being considered.

Geology

The 1:10,560 scale geological map of the area (SO 00 SE) indicates the site to be underlain by southerly dipping strata of the South Wales Middle Coal Measures Formation of the Carboniferous Period. The dip of strata in the vicinity of the site is indicated to be 6° to 10° to the south.

These rocks typically comprise grey productive coal-bearing mudstones/siltstones, with seatearths and minor sandstone.

The conjectural outcrop of the Lower Cwmgorse Marine Band is indicated traversing approximately through the centre of the site on a northwest to the southeast trend, while the conjectural outcrop of the underlying Foraminifera and Upper Cwmgorse Marine Bands are indicated just to the north and the south of the site respectively.

A number of conjectured outcrops of the Pentre Rider, the Pentre and the Lower Pentre are indicated to the north of the site. Due to the southerly strata dips these seams would be expected to underlie the northern and central parts of the site at shallow depths, deepening in a southerly direction.

The Graig and Abergorky seams are shown to outcrop (or conjectured to outcrop) approximately through the centre of the site just below the Lower Cwmgorse Marine Band.

The conjectural outcrop of the Hafod seam is indicated to pass beneath the site, running approximately parallel to the south western edge and therefore this seam could also be shallow beneath these parts of the site.

The solid strata are indicated to be overlain by superficial deposits of Devensian Till of the Quaternary Period. These deposits generally comprise a poorly sorted variable composition of clays, sands and gravel, with some cobbles and occasional boulders. Superficial deposits are not indicated to overly the bedrock along the southwest edge of the site.

Made ground could be encountered above the superficial deposits in the vicinity of existing buildings and where car parking areas have been constructed. Made ground is not anticipated to be widespread.

Site Works

We attended the site on the 9th September 2019 in order to carry out BRE 365 compliant soil infiltration testing at three locations and BS 6297:2007 (design and installation of drainage fields for use in wastewater treatment) percolation compliant testing at three locations.

The locations of the soil infiltration testing were provided by Bingham Hall Partnership, although amended locations were agreed on site with Bike Park Wales, due to access restrictions, vegetated areas, etc., and the approximate locations are shown on Figure 1.

For the BRE 365 compliant soil infiltration testing, the three trial pits (SP02, SP04 and SP05) were excavated to depths of between 1.0m and 2.0m below existing ground level. For each infiltration test the trial pits were filled with clean water from a water bowser, and the water level was recorded over a period of time.

It should be noted that a soil infiltration test was undertaken in the Phase 2 area at the approximate location of the proposed SP03 test during the February 2019 Site Investigation and reported in Report No. 12329/LW/19/SI dated February 2019. This soil infiltration test result (previously referred to as TP01 within the 2019 Report) has been included and discussed in this report and referred to as TP01/SP03.

The trial pit logs are included in Appendix A and the soil infiltration tests are included in Appendix B.

For the BS 6297:2007 percolation compliant testing, three hand dug pits were excavated in close proximity to the proposed drainage field area. The exact drainage area was inaccessible at the time of the site visit due to the presence of dense vegetation and trees.

For each percolation test a hand dug pit measuring 300mm by 300mm in area was dug to a depth of 0.8m below existing ground level. The hand dug pits were filled with water from water containers, and the water level was monitored over a period of time.

The hand dug pit logs are included in Appendix C and the percolation test results are included in Appendix D.

Ground Conditions

The ground conditions encountered within the trial pits and hand dug pits consisted of a veneer of topsoil to typical depths of 0.15/0.25m. Locally, within trial pit SP04, topsoil was encountered to a depth of 0.70m below existing ground level.

At each test location the topsoil was underlain by superficial deposits consisting of glacial till. The glacial till deposits comprised of soft to firm, firm mottled grey brown to grey yellow brown silty clay grading into firm mottled brown grey to yellow brown grey gravelly silty clay at depths of between 0.40m and 1.20m below existing ground level.

Groundwater was not encountered within the trial pits or hand dug pits.

Test Results

Soil Infiltration Soakaway Test Results

The soil infiltration test results and drainage field percolation test results are included within Appendices B and D respectively and a summary is provided below.

Within test locations TP01/SP03 and SP04, no infiltration was observed over the monitoring period.

Within test locations SP02 and SP05, an initial infiltration was observed, however after a period of 2 minutes and 15 minutes respectively, no further infiltration was observed and the water levels within each test pit remained static for a period of typically 3 hours.

Due to the lack of infiltration observed at test locations SP02 to SP05 over the monitoring period, no infiltration rates could not be calculated for any of the test locations.

Drainage Field Soil Percolation Test Results

Three percolation tests (HD01 to HD03) were undertaken in the vicinity of the proposed drainage field area.

At each test location an initial infiltration was observed as the water level dropped 5cm, however the water level in each test pit then remained static and no infiltration was observed within any location below a depth of 0.15m over a period of 3 hours.

It should be noted that the calculated soil infiltration rates and percolation rates are specific to the location and depth of the test carried out.

Conclusion

The results of the soil infiltration testing indicate that the superficial deposits consisting of glacial till at shallow depth are unsuitable for the use of sustainable drainage systems. The high clay content of the glacial till deposits prohibits and/or limits the infiltration rates within the soils.

The results of the drainage field percolation testing at the tested locations indicate that the use of a drainage field for the disposal of effluent from a foul water treatment plant is unsuitable. The high clay content of the glacial till deposits is considered to prohibit and/or limit the infiltration rates within the soils.

We trust that the above and the enclosed are to your satisfaction. However, should you have any queries or require further information, please do not hesitate to contact us.

Yours faithfully,



Lowri Williams
For
Intégral Géotechnique (Wales) Limited

Enc.

APPENDIX A

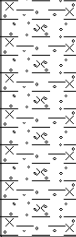
TRIAL PIT LOGS

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: SP01 Sheet 1 of 1		
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25		
Equipment: DX60R			Coordinates: 305015.00mE - 203398.00mN			Dimensions 2.10m				
Date Excavated: 11/09/2019			Level: 250.00mAOD			Depth : 2.00m 0.60m				
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description				
Depth (m)	Type	Results								
			0.20	249.80		Made Ground: Binded/Compacted Gravel				1
			0.30	249.70		Made Ground: Gravel subbase				
						Made Ground/Reworked Natural Ground: Medium dense mottled brown grey silty clayey sandy gravel. Gravel is fine to coarse angular to subrounded of siltstone and mudstone with cobbles.				
			1.10	248.90		Firm brown grey to grey brown slightly sandy silty gravelly CLAY to locally clayey gravel. Gravel is fine to coarse angular and subangular of siltstone and mudstone with some cobbles.				2
			2.00	248.00		End of Trialpit at 2.00 m				
										3
										4
										5

Remarks: 1. Trial pit terminated at 2.0m bgl. 2. Soakaway test undertaken. 3. Co-ordinates within 3 - 4m accuracy.	Groundwater: Groundwater not encountered	Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample	
	Stability: Spalling of made ground		

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: SP02 Sheet 1 of 1	
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25	
Equipment: DX60R			Coordinates: 305095.00mE - 203475.00mN			Dimensions 1.60m			
Date Excavated: 09/09/2019			Level: 234.00mAOD			Depth : 1.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.15	233.85		Topsoil: Grass/vegetation onto brown slightly gravelly silty clay with rootlets.			
						Soft to firm mottled dark grey brown slightly gravelly silty CLAY with rare cobbles.			
			0.40	233.60		Firm mottled yellow brown grey slightly gravelly to gravelly silty CLAY with rare cobbles. Gravel is fine to coarse subangular to subrounded of siltstone and mudstone.			
			1.00	233.00		End of Trialpit at 1.00 m			
Remarks:			Groundwater: Groundwater not encountered			Key:			
1. Trial pit terminated at 1.0m bgl. 2. Soakaway test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Stability: Stable			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: SP03/TP1 Sheet 1 of 1	
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25	
Equipment: JCB 3CX			Coordinates: 305200.00mE - 203493.00mN			Dimensions 2.70m			
Date Excavated: 16/01/2019			Level: 224.00mAOD			Depth : 1.70m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.10	ES					Topsoil: Grass/vegetation onto dark brown slightly gravelly silt/clay with rootlets.			
			0.20	223.80		Soft to firm yellow grey brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded of mudstone and siltstone.			
			0.80	223.20		Medium dense/firm mottled brown grey sandy gravelly CLAY to sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded of siltstone, mudstone and sandstone, with frequent cobbles and some boulders			
			1.70	222.30		End of Trialpit at 1.70 m			
Remarks: 1. Trial pit terminated at 1.7m bgl due to slow progress on suspected boulders. 2. Soakaway test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Groundwater: Groundwater not encountered Stability: Stable			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: SP04 Sheet 1 of 1	
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25	
Equipment: DX60R			Coordinates: 305188.00mE - 203411.00mN			Dimensions 2.00m			
Date Excavated: 09/09/2019			Level: 228.00mAOD			Depth : 2.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.70	227.30		Topsoil: Grass and vegetation onto brown slightly gravelly silty clay with rootlets.			
			1.20	226.80		Soft to firm, firm mottled grey yellow brown gravelly silty CLAY. Gravel is fine to coarse angular to subangular to subrounded of siltstone and mudstone.	1		
			2.00	226.00		Firm mottled brown grey slightly gravelly to gravelly CLAY. Gravel is fine to coarse angular to subangular of siltstone and mudstone with cobbles.			
						End of Trialpit at 2.00 m			
						2			
						3			
						4			
						5			
Remarks: 1. Trial pit terminated at 2.0m bgl. 2. Soakaway test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Groundwater: Groundwater not encountered Stability: Stable			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: SP05 Sheet 1 of 1		
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25		
Equipment: DX60R			Coordinates: 305199.00mE - 203364.00mN			Dimensions 1.60m				
Date Excavated: 09/09/2019			Level: 222.00mAOD			Depth : 1.00m 0.60m				
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description				
Depth (m)	Type	Results								
						Topsoil: Vegetation onto brown slightly gravelly slightly sandy silty clay with rootlets.				
			0.25	221.75		Soft to firm mottled yellow grey brown sandy locally sandy slightly gravelly clay. Gravel is fine to coarse angular to subrounded of siltstone and mudstone				
			0.50	221.50		Firm mottled brown grey slightly gravelly to gravelly CLAY. Gravel is fine to coarse angular to subangular of siltstone and mudstone with cobbles.				
			1.00	221.00		End of Trialpit at 1.00 m				
Remarks: 1. Trial pit terminated at 1.0m bgl. 2. Soakaway test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Groundwater: Groundwater not encountered			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample				
			Stability: Stable							

APPENDIX B

SOIL INFILTRATION TEST RESULTS

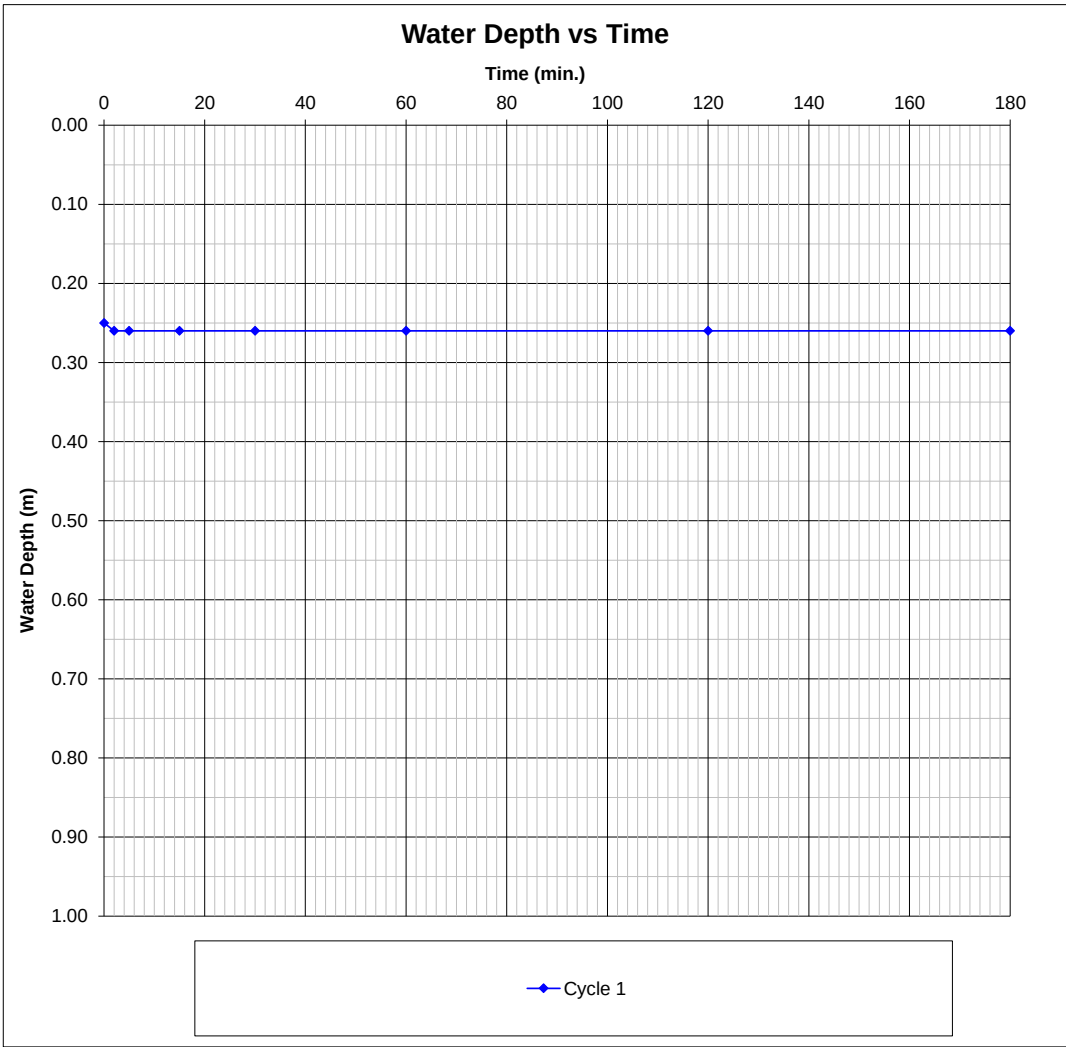
BRE365 SOIL INFILTRATION RATE TEST - SP02

12329 Bike Park Wales

Trial Pit Information	
Length (m)	1.60
Width (m)	0.60
Depth (m)	1.00
Groundwater	Dry
Weather Conditions	Raining
Date	09-Sep-19

[illegible]

Final Excavation Depth (m)	Cycle 1	Cycle 2	Cycle 3
At end of testing cycle	1.00		
Water Depths (m)			
Water depth at start of test	0.25		
Water depth at end of test	0.26		
Effective depth (measured)	0.01		
% Effective storage depth	0.01		
Effective Storage Depths (m)			
Effective storage depth (100%)	0.75		
Effective storage depth (75%)	0.56		
Effective storage depth (50%)	0.38		
Effective storage depth (25%)	0.19		
Outflow Time (min)			
Time for measured outflow	180		
Time for 100% outflow			
Time for 75-25% outflow			
Volume of Outflow (m³)			
Over measured effective depth	0.01		
Over 100% effective depth	0.72		
From 75% - 25% effective depth	0.36		
Surface Area (m²)			
For 100% effective storage	4.26		
For 50% effective storage	2.61		
Over measured depth	1.00		
Soil Infiltration Rate (m/s)	Cycle 1	Cycle 2	Cycle 3
Over 100% effective depth	#DIV/0!		
Over measured depth	8.9E-07		
Over 75% - 25% effective depth	#DIV/0!		



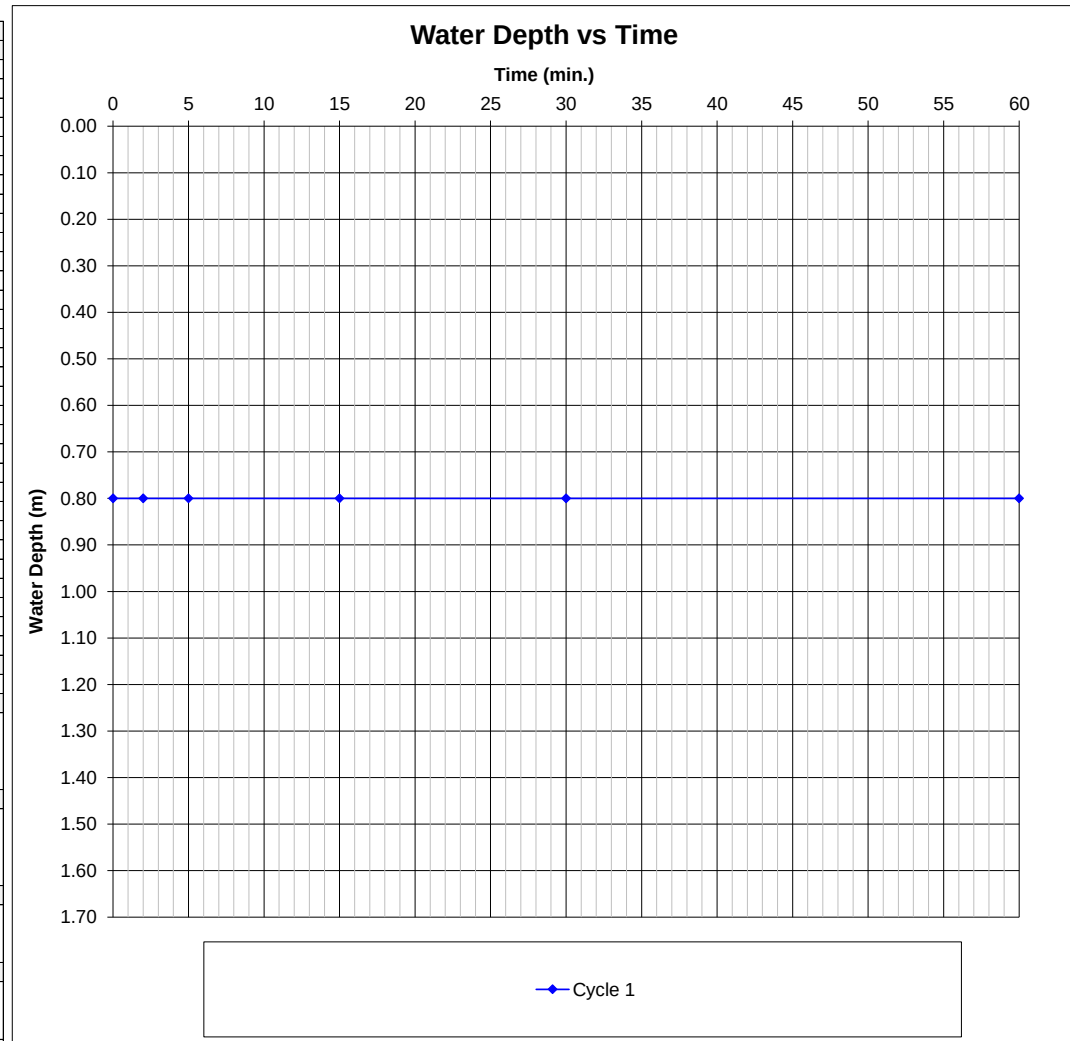
BRE365 SOIL INFILTRATION RATE TEST - SP03 (TP1)

12329 Bike Park Wales

Trial Pit Information	
Length (m)	2.70
Width (m)	0.70
Depth (m)	1.70
Groundwater	Dry
Weather Conditions	Raining
Date	16-Jan-19

[illegible]

Final Excavation Depth (m)	Cycle 1	Cycle 2	Cycle 3
At end of testing cycle	1.70		
Water Depths (m)			
Water depth at start of test	0.80		
Water depth at end of test	0.80		
Effective depth (measured)	0.00		
% Effective storage depth	0.00		
Effective Storage Depths (m)			
Effective storage depth (100%)	0.90		
Effective storage depth (75%)	0.68		
Effective storage depth (50%)	0.45		
Effective storage depth (25%)	0.23		
Outflow Time (min)			
Time for measured outflow	60		
Time for 100% outflow			
Time for 75-25% outflow			
Volume of Outflow (m³)			
Over measured effective depth	0.00		
Over 100% effective depth	1.70		
From 75% - 25% effective depth	0.85		
Surface Area (m²)			
For 100% effective storage	8.01		
For 50% effective storage	4.95		
Over measured depth	1.89		
Soil Infiltration Rate (ml/s)	Cycle 1	Cycle 2	Cycle 3
Over 100% effective depth	#DIV/0!		
Over measured depth	0.0E+00		
Over 75% - 25% effective depth	#DIV/0!		

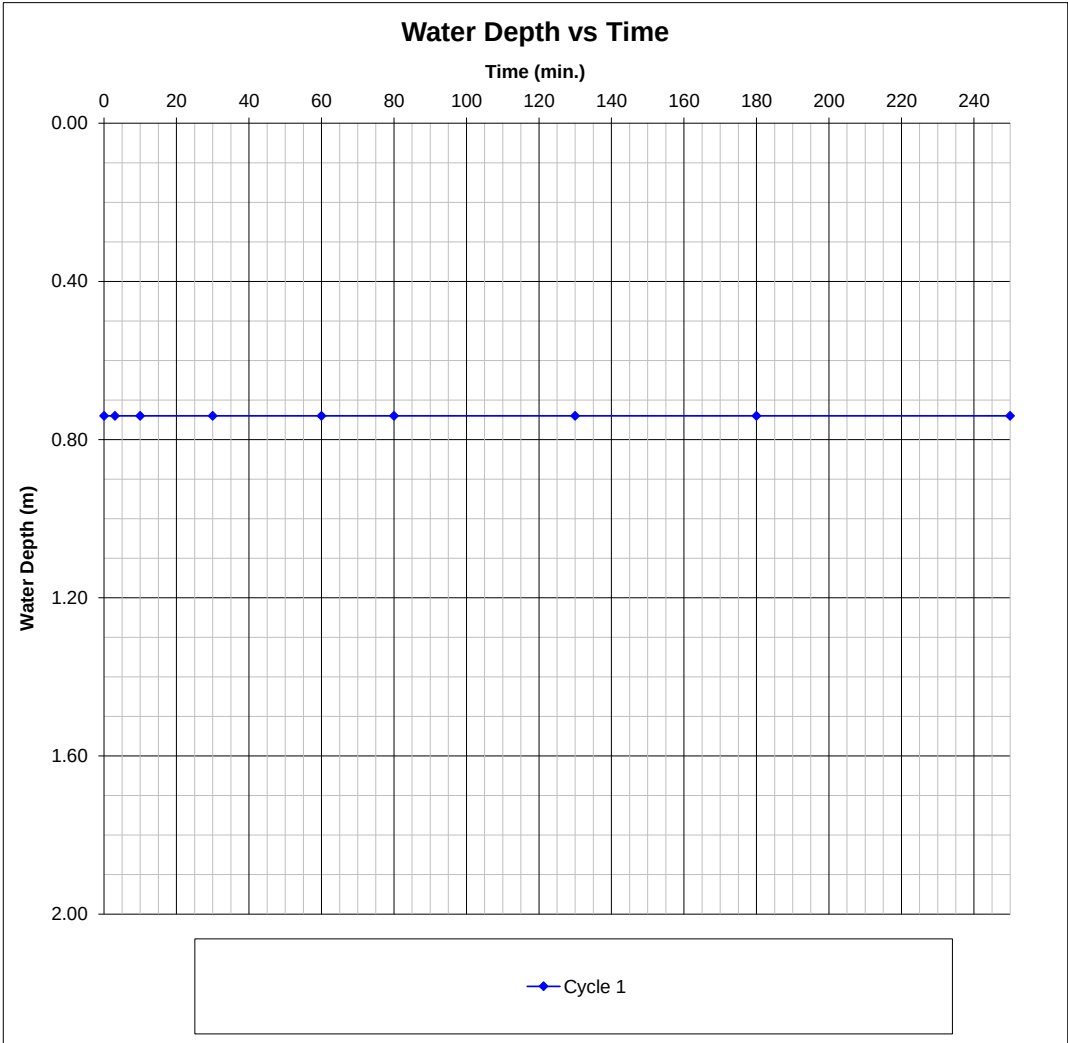


BRE365 SOIL INFILTRATION RATE TEST - SP04

12329 Bike Park Wales

Trial Pit Information	
Length (m)	2.00
Width (m)	0.60
Depth (m)	2.00
Groundwater	Dry
Weather Conditions	Raining
Date	09-Sep-19

Remarks

[illegible]

BRE365 SOIL INFILTRATION RATE TEST - SP05

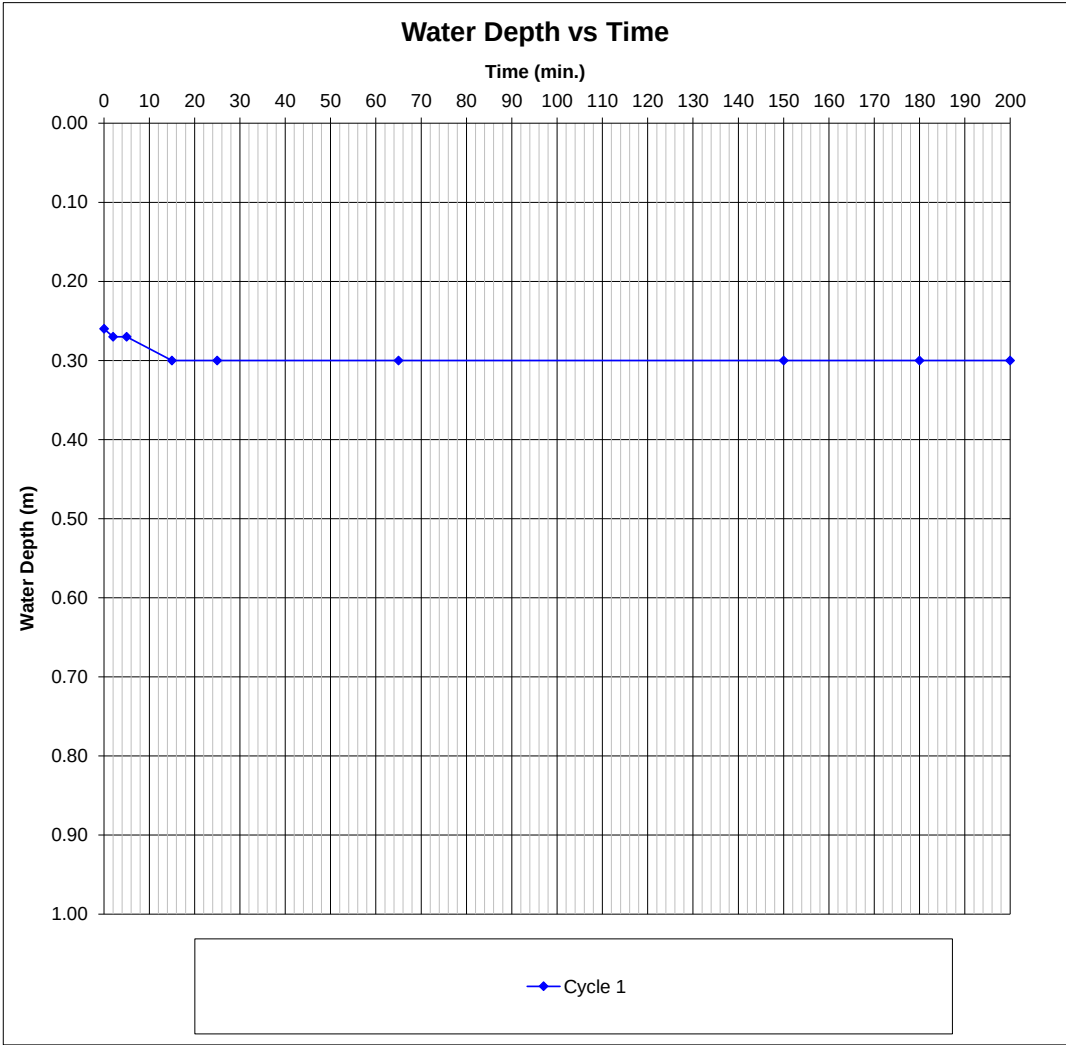
12329 Bike Park Wales

Trial Pit Information	
Length (m)	1.60
Width (m)	0.60
Depth (m)	1.00
Groundwater	Dry
Weather Conditions	Raining
Date	09-Sep-19

Remarks

[illegible]

Final Excavation Depth (m)	Cycle 1	Cycle 2	Cycle 3
At end of testing cycle	1.00		
Water Depths (m)			
Water depth at start of test	0.26		
Water depth at end of test	0.30		
Effective depth (measured)	0.04		
% Effective storage depth	0.05		
Effective Storage Depths (m)			
Effective storage depth (100%)	0.74		
Effective storage depth (75%)	0.56		
Effective storage depth (50%)	0.37		
Effective storage depth (25%)	0.19		
Outflow Time (min)			
Time for measured outflow	200		
Time for 100% outflow			
Time for 75-25% outflow			
Volume of Outflow (m³)			
Over measured effective depth	0.04		
Over 100% effective depth	0.71		
From 75% - 25% effective depth	0.36		
Surface Area (m²)			
For 100% effective storage	4.22		
For 50% effective storage	2.59		
Over measured depth	1.14		
Soil Infiltration Rate (m/s)	Cycle 1	Cycle 2	Cycle 3
Over 100% effective depth	#DIV/0!		
Over measured depth	2.8E-06		
Over 75% - 25% effective depth	#DIV/0!		



APPENDIX C

HAND DUG PIT LOGS

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: HD01 Sheet 1 of 1	
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25	
Equipment: HD			Coordinates: 305205.00mE - 203499.00mN			Dimensions 0.30m			
Date Excavated: 09/09/2019			Level: 225.00mAOD			Depth : 0.80m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.20	224.80		Topsoil: Grass/vegetation onto brown slightly gravelly silt/clay with rootlets.			
						Soft to firm yellow grey brown to brown slightly sandy slightly gravelly silty clay with some cobbles at base.			
			0.80	224.20		End of Trialpit at 0.80 m			
						1			
						2			
						3			
						4			
						5			
Remarks: 1. Hand dug pit to 0.8m bgl. 2. Percolation test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Groundwater: Groundwater not encountered Stability: Stable			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Bike Park Wales			Project No.: 12329		Trial Pit No.: HD02 Sheet 1 of 1	
Location: Abercanaid			Client: Bike Park Wales			Logged By: LW		Scale 1:25	
Equipment: HD			Coordinates: 305199.00mE - 203507.00mN			Dimensions 0.30m			
Date Excavated: 09/09/2019			Level: 226.00mAOD			Depth : 0.80m		0.30m	
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.20	225.80		Topsoil: Grass/vegetation onto brown slightly gravelly silty/clay with rootlets.			
						Soft to firm brown slightly gravelly silty CLAY			
			0.50	225.50		Firm mottled grey brown gravelly CLAY. Gravel is fine to coarse angular to subrounded of siltstone and mudstone.			
			0.80	225.20		End of Trialpit at 0.80 m			
Remarks: 1. Hand dug pit to 0.8m bgl. 2. Percolation test undertaken. 3. Co-ordinates within 3 - 4m accuracy.			Groundwater: Groundwater not encountered			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
Stability: Stable									

[illegible]

APPENDIX D

PERCOLATION TEST RESULTS

Date	09-Sep-19
Engineer	LW
Main Stratigraphic Unit	Glacial Till
Pit Stable ?	Yes
Weather Conditions	Raining

09-Sep-19
LW 12329

Glacial Till
Yes
Raining

[illegible]

Length (m)	0.30
Width (m)	0.30
Depth (m)	0.80

Water Depth at Start of Test (m)	0
Water Depth at End of Test (m)	

Effective Depth (Measured) (m)	0
% Effective Storage Depth	0.00%

	Depth below GL		
Effective Storage Depth (100%) (m)	0.8		
Effective storage depth (75%) (m)	0.6	0.60	0
Effective storage depth (50%) (m)	0.4		
Effective storage depth (25%) (m)	0.2	0.2	0

Time for measured outflow		minutes
Time for 100% outflow (see graph or readings?)		minutes
Time for 75-25% outflow (see graph)		minutes

Volume outflowing between measured effective depth	0.000	m ³
Volume outflowing over 100% effective depth	0.072	m ³
Volume outflowing between 75% and 25% effective depth	0.036	m ³

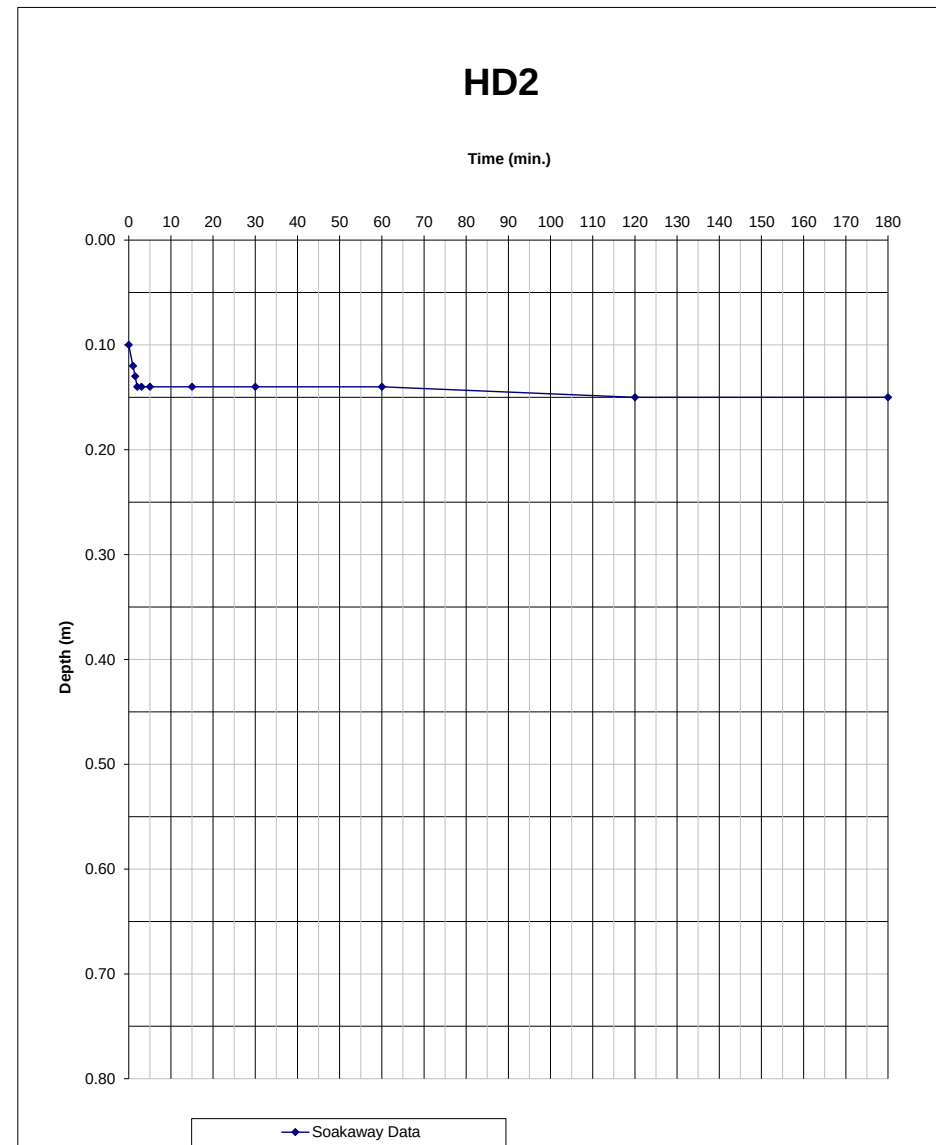
(100% effective Storage)		(75-25% effective storage)		(over measured Depth)	
Length Area (m ²)	0.48	Length Area (m ²)	0.24	Length Area (m ²)	0.00
Width Area (m ²)	0.48	Width Area (m ²)	0.24	Width Area (m ²)	0.00
Base (m ²)	0.09	Base (m ²)	0.09	Base (m ²)	0.09

(100% effective storage)	1.05	m ²
(50% effective storage)	0.57	m ²
(Over Measured depth)	0.09	m ²

Over 100% effective depth:	#DIV/0!	m/s
Over measured Depth	#DIV/0!	m/s
Over 75% - 25% effective depth:	#DIV/0!	m/s

Vp: 0.00 s/mm

Negligible infiltration observed



Date	09-Sep-19
Engineer	LW
Main Stratigraphic Unit	Glacial Till
Pit Stable ?	Yes
Weather Conditions	Raining

Date	09-Sep-19
Engineer	LW
Main Stratigraphic Unit	Glacial Till
Pit Stable ?	Yes
Weather Conditions	Raining

[illegible]

Length (m)	0.30
Width (m)	0.30
Depth (m)	0.80

Water Depth at Start of Test (m)	0
Water Depth at End of Test (m)	

Effective Depth (Measured) (m)	0
% Effective Storage Depth	0.00%

	Depth below GL		
Effective Storage Depth (100%) (m)	0.8		
Effective storage depth (75%) (m)	0.6	0.60	0
Effective storage depth (50%) (m)	0.4		
Effective storage depth (25%) (m)	0.2	0.2	0

Time for measured outflow		minutes
Time for 100% outflow (see graph or readings?)		minutes
Time for 75-25% outflow (see graph)		minutes

Volume outflowing between measured effective depth	0.000	m ³
Volume outflowing over 100% effective depth	0.072	m ³
Volume outflowing between 75% and 25% effective depth	0.036	m ³

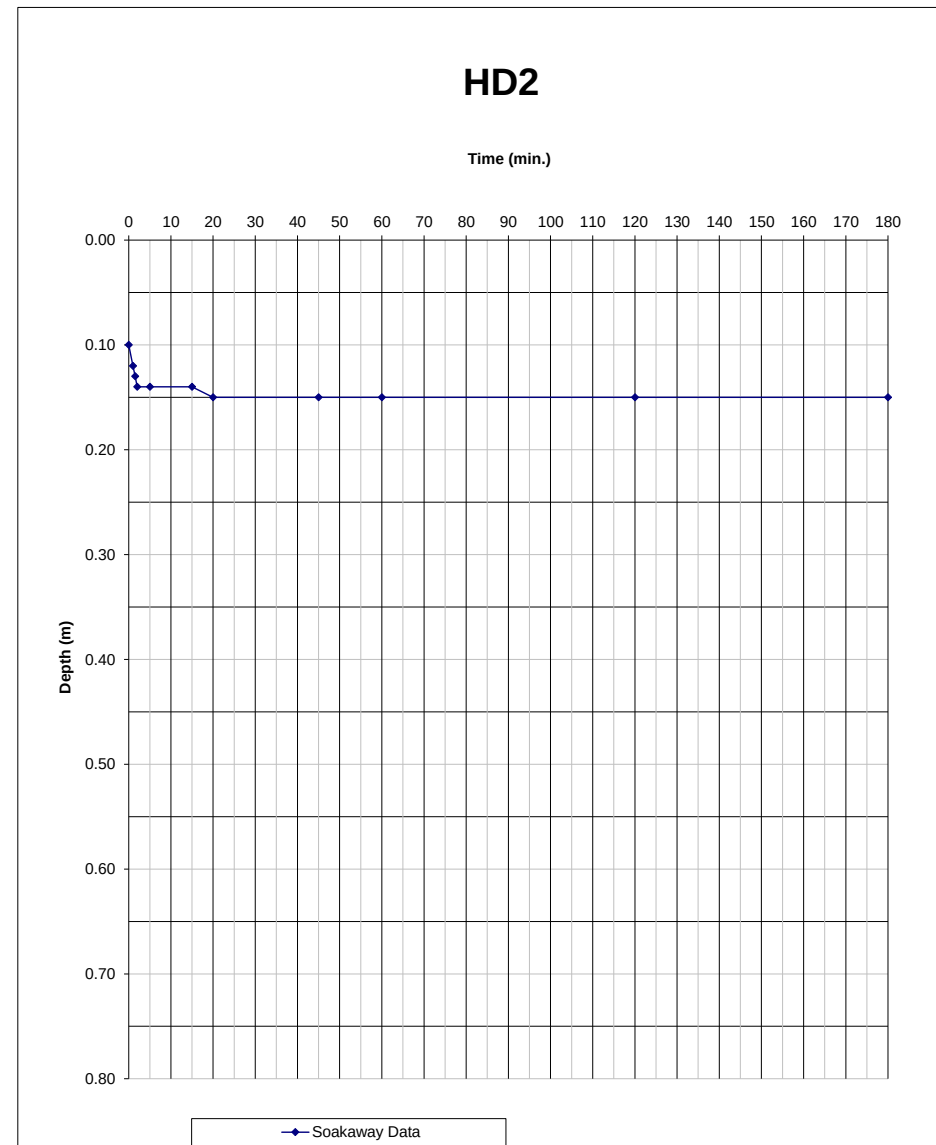
(100% effective Storage)		(75-25% effective storage)		(over measured Depth)	
Length Area (m ²)	0.48	Length Area (m ²)	0.24	Length Area (m ²)	0.00
Width Area (m ²)	0.48	Width Area (m ²)	0.24	Width Area (m ²)	0.00
Base (m ²)	0.09	Base (m ²)	0.09	Base (m ²)	0.09

(100% effective storage)	1.05	m ²
(50% effective storage)	0.57	m ²
(Over Measured depth)	0.09	m ²

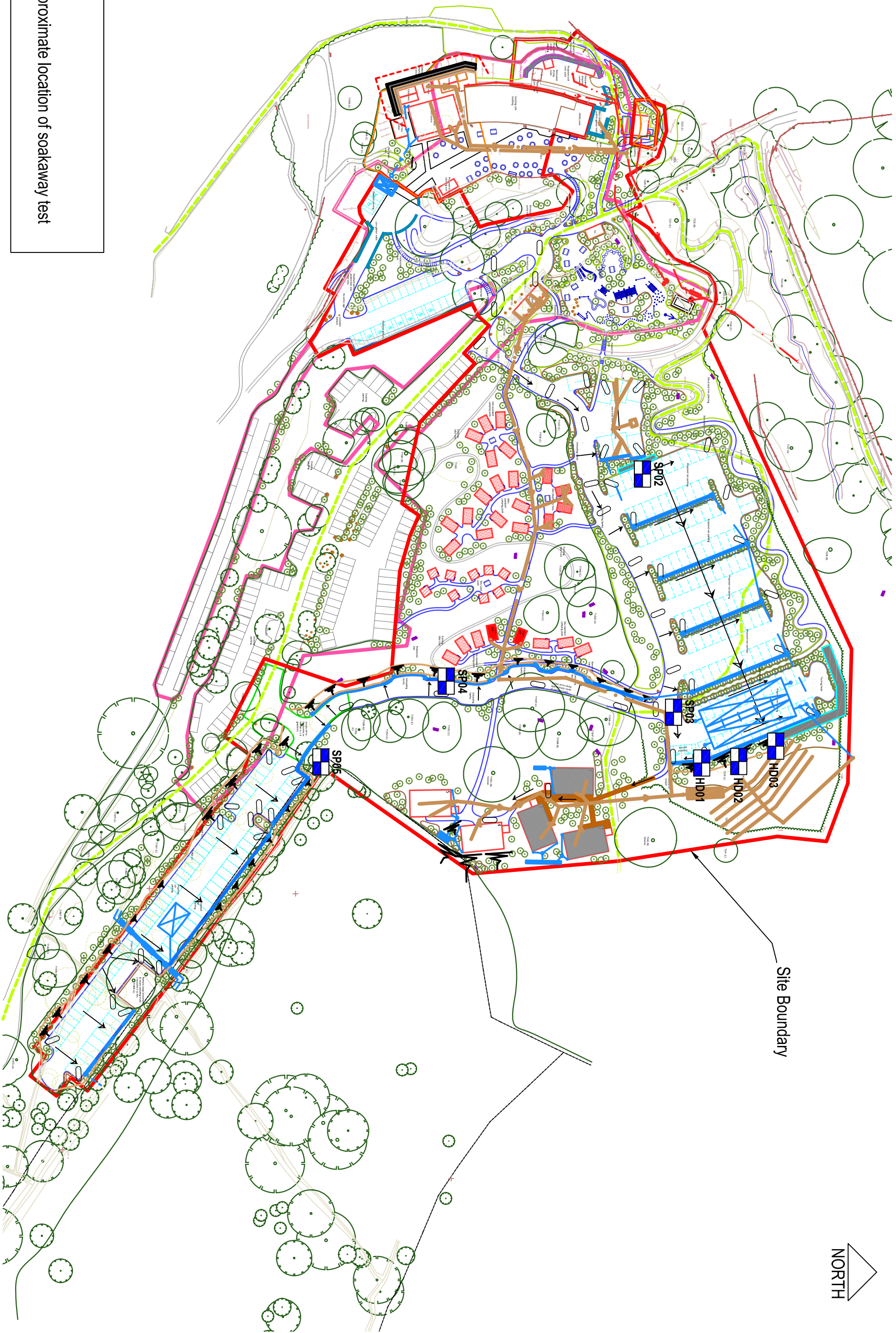
Over 100% effective depth:	#DIV/0!	m/s
Over measured Depth	#DIV/0!	m/s
Over 75% - 25% effective depth:	#DIV/0!	m/s

Vp: 0.00 s/mm

Negligible infiltration observed



FIGURES



NORTH

Site Boundary

KEY



Approximate location of soakaway test

Figure 1: Site Plan

Project: Bike Park Wales Expansion

Client: Bike Park Wales

Job No.: 12329

Scale: 1:1250 at A3

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