

HARRIS WALLED GARDEN, UNIVERSITY OF READING
FLOOD RISK STATEMENT & DRAINAGE STRATEGY

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HARRIS WALLED GARDEN, UNIVERSITY OF READING**FLOOD RISK STATEMENT & DRAINAGE STRATEGY****C O N T E N T S**

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1. INTRODUCTION

1.1 Executive Summary

The total site area is 2100m² comprising a walled garden, the site is currently grass/permeable. The proposals are to make the garden into a teaching space with a canopy to provide a covered teaching space, a large pond, and accessible footpaths throughout the walled garden.

Environment Agency database for of indicative flood risk maps show that the site is at very low risk of fluvial, groundwater flooding and reservoir flooding but is at moderate to high risk of surface water flooding.

This report reviews the surface water flooding that is shown on the published maps and sets of a provision of drainage for the proposed garden redesign an pond by following the SuDS hierarchy to determine the solution.

1.2 General

SFK Consulting (SFK) has been appointed by University of Reading to undertake a Flood Risk Statement (FRS) and Surface Water Drainage Strategy for the proposed redesign inside the walled garden at Harris Gardens.

This report has been prepared to accompany a planning application and considers the ground and groundwater conditions and all sources of potential flooding in recognition of current policy and advice. It will also inform the subsequent drainage design and water management of the proposed development.

1.3 Scope and Objectives

The key sources of information used to prepare this report include:

- Landscape Architect's masterplan and outline design drawings;
- Environment Agency's (EA) online database of indicative floodplain and hydrogeological maps;
- British Geological Survey (BGS) maps;
- Site Investigation data (Impact Geotechnical)
- National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG): Flood Risk and Coastal Change.

SFK Consulting cannot accept liability for the accuracy or otherwise of any information derived from third party sources.

The development area is located entirely within fluvial Flood Zone 1 and the existing and proposed area is less than 1Ha. Consequently, a full Flood Risk Assessment is not considered to be required.

This report outlines the flood risk of the site and describes the proposed surface water drainage strategy for the garden redesign and the new pond. The report provides a description of the geology and hydrogeology conditions, and the proposed surface water scheme to mitigate potential effects of the redesign.

In summary, this report provides the following information:

- A review of the flood risk to the site based upon flood data and the flood maps provided by Gov.uk,
- A review of the ground conditions across the site,
- A review of the groundwater conditions, and nearby surface water features,
- Proposals for measures to mitigate the generation of surface water runoff from the proposed development.

2. SITE CONTEXT

2.1 Site Location and Surrounding Use

The application site is to the south-east of the Town of Reading:

Harris Walled Garden
Wilderness Road
Earley
RG6 5RG

The site is centred on Easting 474030 and Northing 171427

The site comprises a historic brick walled garden, which is part of the wider Harris Gardens within the University of Reading campus. Work has been completed to preserve the historic walls; there are no other structures on the site.

The total site area is approximately 40m x 52m and within the walls is approximately 2100m². The topography is generally flat with surveyed levels of between 65.675 to 65.05m AOD and is soft landscaped.

2.2 Geology

The British Geological Survey online Maps show the site to be underlain by either superficial Head Deposits or Boyn Hill Gravel Member, overlying the London Clay Formation (part of the Thames Group).

Ground investigation was carried out on 9th and 10th October 2025, which comprised three windowless sample boreholes (WS01, WS02, WS03) to a maximum depth of 5.0m below ground level (bgl), which were installed with water monitoring wells, and three soakage tests (SA01, SA02 and SA03) undertaken in general accordance with BRE Digest 365 and to depths of 0.40m bgl to 1.0m bgl.

The following ground conditions were encountered during the investigation works, which are generally considered to be consistent with the published geology. The exploratory hole location plan and logs are provided in Appendix A.

Stratum	Depth to Top (mbgl)	Depth to Base (mbgl)
Topsoil	Ground level	0.10 – 0.20
Made Ground	Ground level – 0.20	>0.40 – 1.10
Head	0.50 – 0.60	0.70 – 2.30
Boyn Hill Gravel Member	0.70 – 1.10	>0.80 – 1.80
London Clay Formation	1.60 – 2.30	>5.00

Table 1: Geology, table extracted from ground Investigation report

Made Ground was identified in all six of the exploratory holes from ground level to a depth of up to 1.10mbgl (in WS03)

Head deposits were identified in WS01, WS02, SA01 and SA02 below the Made ground from depths ranging from 0.5m to 2.30mbgl. These cohesive soils were recorded as a firm to stiff brown mottled grey and orangish brown slightly sandy gravelly Clay. The gravel was logged as an angular and sub-angular fine to coarse flint.

Boyn Hill Gravel Member – were recorded within WS03, SA01 and SA02 from depths ranging 0.70mbgl to 1.80mbgl. This granular soil was described as a brown mottled dark brown silty gravelly fine to coarse Sand in WS03; and a brown speckled light brown clayey sandy angular to rounded fine to coarse Gravel of flint in the case of SA01 and SA02.

London Clay Formation was identified in the deeper exploratory windowless sampling holes, from depths ranging 1.60mbgl - 2.30mbgl to the maximum intrusive depth of 5.00mbgl. This stratum was initially recorded in a weathered stated, described as a firm to stiff fissured brown and bluish grey mottled silty Clay, to a depth of 3.10m-4.00mbgl. The unweathered formation was logged deeper than this.

2.3 Infiltration testing

Infiltration tests were conducted in SA01, SA02 and SA03.

The bases of the tests were within Boyn Hill Gravel for SA01 (1.0m bgl) and SA02 (0.8m bgl) and within the Made Ground for SA03 (0.4m bgl). SA03 was completed at a shallow level to represent possible proposed infiltration from paths.

The calculated coefficients in the initial tests found permeability rates of 1.10×10^{-5} m/s to 4.3×10^{-6} m/s. The repeat tests, which represent saturated conditions, represented poor drainage conditions of 7.93×10^{-6} m/s to 4.3×10^{-6} m/s.

The infiltration tests from the Ground Investigation report are reproduced in Table 2 below.

Test ref	Test Depth (m)	Initial fill level (m)	Time at 75% fill depth (mins)	Time at 25% fill Depth (mins)	K (m/s)
SA01 Test 1	1.00	0.62	20	N/A	N/A
SA01 Test 2	0.90	0.52	50	382	4.30×10^{-6}
SA01 Test 3	0.90	0.61	59	N/A	N/A
SA02 Test 1	0.80	0.62	26	345	4.38×10^{-6}
SA02 Test 2	0.75	0.58	29	330	4.57×10^{-6}
SA02 Test 3	0.75	0.58	44	N/A	N/A
SA03 Test 1	0.40	0.30	14	105	1.19×10^{-5}
SA03 Test 2	0.40	0.28	32	165	7.93×10^{-6}
SA03 Test 3	0.40	0.31	55	N/A	N/A

Table 2: Infiltration test results

2.4 Hydrological Setting

There are currently no water bodies within the confines of the site.

Whiteknights Lake to the north of the site is located within the University of Reading Campus, the southern tip is approximately 200m from the northern site boundary, and the main body of the Lake approximately 800m from the site boundary. Whiteknights Lake is understood to have been formed by damming natural springs in the mid-17th century and was later increased to the current approximate size of 5.85 hectares.

The Ordnance Survey maps show Springs in the area, with the closest at circa. 200m to the north-west of the site. There are ditches 50m to the east of the eastern boundary of the site.

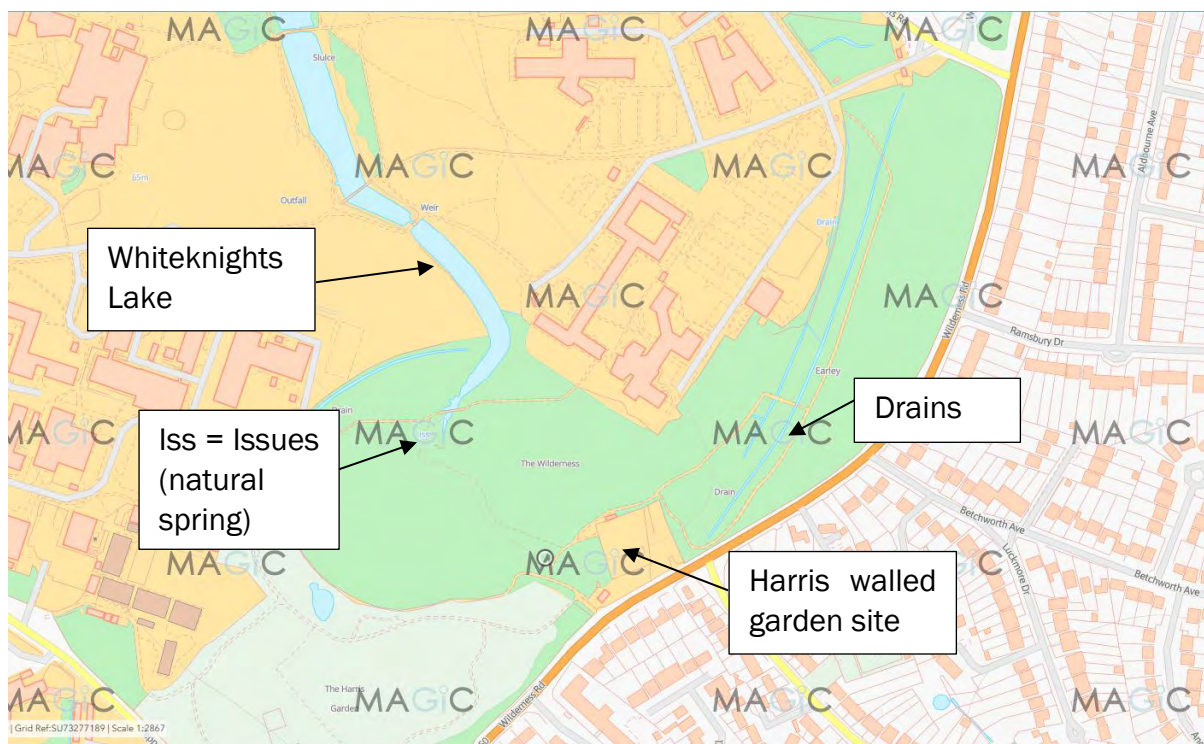


Figure 1: Extract of base map from Magic maps

2.5 Existing Flood Risk

The flood risk has been assessed from online long term flood risk mapping service, on Gov.uk website, and is summarised in table 3 and discussed below.

Flood source	Probability
Fluvial	Very low
Surface Water	Mapping has Identified medium and high risk areas of surface water flooding in the northern part of the site, and on Wilderness road outside of the site to the south. See discussion below
Groundwater	This location is outside of a groundwater flood alert area.
Reservoirs	Flooding from reservoirs is unlikely in this area.

Table 3: Flood risk summary

The Fluvial (River) Flood Risk Map (Figure 2 below) shows the entire site to be located within Flood Zone 1, at very low risk of fluvial flooding.

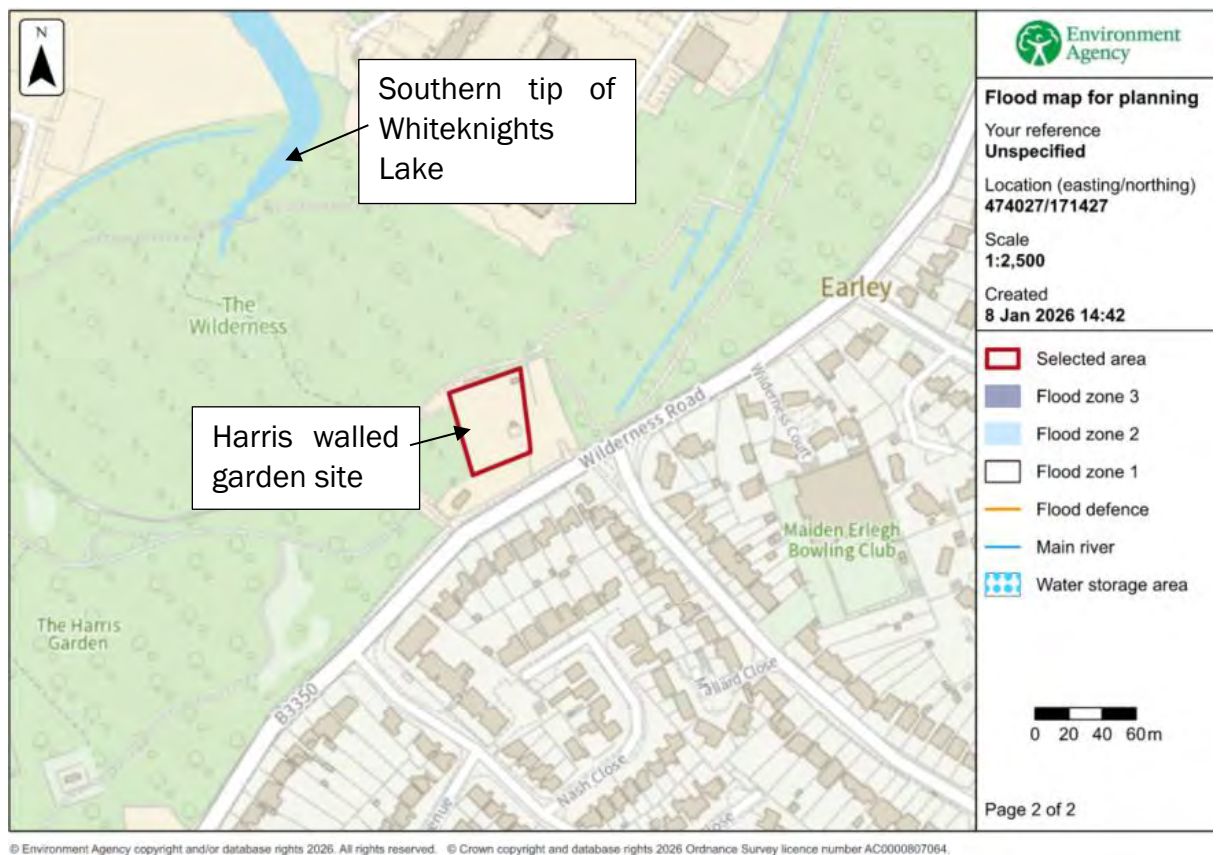


Figure 2: Fluvial flood zone map for planning, accessed January 2026.

The Surface Water Flood Risk Map from the long-term flood risk service (Figure 3 below) shows the northern part of the site to be at medium to high risk of surface water flooding, with a route of surface water flooding extending from Whiteknights lake, at a change in direction within the Lake, and towards the site.

There is an additional area of surface water flooding within Wilderness Road.

Surface water flooding normally occurs due to the topography of an area and the extent of impermeable surfacing, when runoff cannot drain away through normal drainage systems.

It is likely that the mapping is reflective of the general topography between Whiteknights Lake and the site, and the natural fall of the land and does not consider the perimeter walls, which would prevent the flow of overflowing surface water from the lake into the site.

The site itself is currently permeable, and although the infiltration testing has identified poor drainage conditions, there are currently no impermeable areas on the site. It is therefore unlikely that the mapping is consistent with the surface water

generated falling only of the site, and it is showing a route of surface water from the lake and surrounding campus buildings. This route would not occur as the mapping shows due to the perimeter brick walls, and surface water would more likely lay in the lower levels of The Wilderness, the soft landscaped areas to the north of the site.



Figure 3: Surface Water flood map, Surface water map - Check your long term flood risk - GOV.UK, accessed January 2026

2.6 Hydrogeological Setting

The EA has developed Groundwater Source Protection Zones shown on MagicMap to assist in the assessment of risk to groundwater supplies taken from an abstraction point. The site **does not** lie within a Groundwater Source Protection Zone.

MagicMaps also shows that the site is not located in a Drinking Water Protected or safeguard Areas for groundwater abstraction and is not within a Drinking Water Protected Area (Surface Water). The site is in a Drinking Water Safeguard Zone (Surface Water), which covers a large area of Reading and the surrounding area.

2.7 Groundwater

The EA flood maps show groundwater flooding to be unlikely in this area. The boreholes were carried out to 5.0m below ground level and were found to be dry during drilling, apart from WS03 where groundwater was encountered at a depth of 1.50mbgl during the investigation.

Three rounds of subsequent monitoring have been completed so far, dated 05/11/2025 and 27/11/2025 during the winter months which show the groundwater within the Head or Byon Hill gravel member at the highest level of 1.32m below ground level. The window sampling holes were installed from a similar topographic level.

WS02 was a shallower installation than the other two and the slotted pipe terminated within the Head Deposits at 1.5m below ground level; it was found to be dry during drilling.

Based on the recorded levels shown in Table 4, in conclusion, groundwater causing groundwater flooding at the surface are considered unlikely.

Date		05/11/2025	27/11/2025	08/01/2026
WS01 Head & into top of London Clay Base: 2.50m	Groundwater	1.95	1.45	1.58
	Depth(m)			
WS02 Head Base: 1.50.	Groundwater	Dry	Dry	1.05
	Depth (m)			
WS03 Made Ground, Boyn Hill Gravel Member into top of London Clay Base: 2.10m	Groundwater	1.42	1.32	1.20
	Depth (m)			

Table 4: groundwater monitoring results

3. EXISTING DRAINAGE

There is no existing drainage on the site.

4. ASSESSMENT OF PROPOSED DEVELOPMENT

4.1 Development Proposals

The redesign proposals are shown on Appendix B, and comprise:

- A new pond
- Canopy teaching area
- Boardwalk adjacent to the pond
- Paths through the site (bound gravel surfacing)
- A compost toilet

4.2 Flood Risk Vulnerability

Table 2 (Flood Risk Vulnerability Classification) in the Technical Guidance to the NPPF, classifies various land uses according to their vulnerability from flooding. The vulnerability classes can then be used to assess which types of development are appropriate in each flood zone.

The proposed development will comprise “Amenity open space, nature conservation and biodiversity” and thus classified as “Water compatible development”.

All forms of development are permitted in Zone 1, and thus, the proposed development is considered acceptable for the site based on flood risk classification.

5. DRAINAGE STRATEGY

5.1 Surface Water Runoff

The proposed garden redesign will incorporate a pond, approximately 20m at the longest point by 6.5m at the widest point; the pond is proposed to have shallow banks at the perimeter, and marginal planting.

The footpaths and teaching areas will be approximately 857m² which will be bound gravel surfacing to allow accessible use. The increase in impermeable area within the walled garden will be to 41% impermeable.

The NPPF identifies that rainfall intensities will increase in the future because of the predicted effects of climate change, resulting in an increase in surface water runoff. Table 1 “peak rainfall intensity allowance in small catchments (less than 5km²) or urban drainage catchment” of the NPPF shows the recommended national precautionary sensitivity ranges for peak rainfall intensity.

The storage volumes have been calculated for the impact of climate site, with 20% and 40% allowance considered for various storm events. Rainfall intensities have been calculated for the impermeable area using the Wallingford Procedure, and the Modified Rational Method has subsequently been used to calculate existing runoff rates from the site for various return periods for the impermeable areas. A ratio of 1.1 has been applied to assess using FEH data.

The Greenfield runoff rate has been calculated using UK Suds, and FEH point data.

Calculations are summarised in Table 5 below, and presented in Appendix C. These show that there is an increase in run-off in comparison to the Greenfield runoff rate, and the drainage strategy will mitigate that impact.

AEP ¹	50%	10%	3.33%	1%
Existing flows: Greenfield runoff rate (for whole site)	0.7	1.2	1.7	2.4
Proposed flows to footpaths/canopy Includes 20% climate change and 1.1 FEH factor	11	18	24	31

Proposed flows to footpaths/canopy Includes 40% climate change and 1.1 FEH factor	13	21	28	36

¹ AEP = Annual Exceedance Probability

Table 5: Existing and Proposed Peak Run-off

5.2 Surface Water Drainage Strategy

5.2.1 Sustainable Drainage discharge hierarchy

The Planning Practice Guidance states “Generally the aim should be discharging surface runoff as high up the following hierarchy of drainage options as reasonably practicable:

1. Into the ground (infiltration)
2. To a surface water body;
3. To a surface water sewer, highway drain or another drainage system;
4. To a combined sewer.”

Groundwater monitoring found levels between 1.95m bgl to 1.20m bgl in WS1 and WS3. The first two rounds of monitoring in WS02 were found to be dry, this is a shallower installation and the third round (1.05m bgl) might represent perched groundwater. Although the infiltration rates are variable and poor when saturated, rainwater would be able to permeate into the underlying strata at a slow rate.

To hold water in the pond, it is proposed that the lower level of the pond is lined. The pond is 1.01m at maximum depth. The mid-level and high-level plateaus of the pond will allow infiltration. The paths closest to the pond will be allowed to drain directly to the new pond. The paths further away from the pond, will have drainage infiltration trenches. The drainage design features are discussed in further detail below.

Pond Design

The design proposals show no incoming water to the pond from a stream or pipes, and no outflow point. This would create a body of water without any movement or aeration which can become stagnant. Still water encourages over production of bacteria and algae, which leads to unpleasant odours and a poor environment for plant growth and pondlife.

As there is no flow envisaged for the pond natural methods should be utilised to promote movement of water to ensure proper oxygenation and prevent stagnation of the pond water. Marginal and submerged planting will aid the oxygenation, if movement of water is also encouraged naturally or by providing mechanical aeration.

It is proposed that the roof drainage from the canopy and the surface water from the nearby paths is directed to the pond. This will aid water movement after rainfall events. In dry times of the year, movement of water may be needed mechanically.

There are no vehicular routes on the site, and therefore the run-off entering the pond has a low risk of being detrimental quality.

It is unlikely that the proposed pond will be fed from groundwater as the known groundwater levels are deeper than the proposed pond.

Pond levels in relation to geology

The soakaway tests were completed with the base of the trial pits within the Byon Gravels (SA-01 and SA02) and base within the Made Ground (SA-03). The soil infiltration results represented poor drainage/infiltration conditions for all test locations, especially in saturated soil. An improved Infiltration will occur when the soil is not saturated.

Appendix D shows the expected geology at different levels of the pond and the location of the pond lining. The base of the pond is expected to be founded within the Byon gravel member. To permanently hold water, it is proposed that the lower part of the pond is fully lined with a butyl liner which is anchored into position.

The middle level ledges/plateaus within the pond are likely to be founded within the Boyn Gravel strata and Head deposits. The Head deposits are more clayey, and less likely to allow infiltration.

The middle-level plateaus are proposed to be constructed as partially wetted with a geotextile or a punctured butyl liner. Although this would reduce the size of the permanent water pool, it would reduce the likelihood of flooding in the wider area as they would allow partial infiltration into the underlying soil. In the summer months these upper levels may be dry, and consideration will be given to plant types to suit variable conditions.

The higher plateaus are likely to be formed within Made Ground. Made Ground is variable with high organic content, these areas will be underlain with a geotextile to allow partial infiltration.

The paths closest to the pond will crossfall to the landscape area and to the pond directly. The runoff will utilise the middle and upper plateaus of the pond as they

allow infiltration. These infiltrating plateaus will reduce the risk of the pond overflowing, the upper plateau provides approximately 26m³ volume (See Appendix D2).

Pond outfall/overflow requirement

There are no outfalls or overflows proposed as there is no nearby stream or river. Overflow from the pond area will be contained within the walled garden area due to the perimeter walls and will not create any downstream flooding outside of the site. Depending on the weather conditions at the time and the level of the pond, there is a residual risk that localised flooding could occur within the site confines, within the soft landscaped areas across the site.

Drainage solution for the new canopies and footpaths furthest from the pond

The surface water drainage from the new canopy will be routed to the pond and to drainage infiltration trenches.

The proposed paths further from the pond will have crossfalls to adjacent drainage trenches, filled with 4/20 gap graded stone to provide attenuation. See Appendix E. The trench sizes have been calculated as trench soakaways for 1in10 +20% climate change storm events.

To maximise the distance between the infiltration zone and the underlying groundwater, the trenches are sized for more than 1in10 +20% climate change (0.3m deep trench required).

Location	Area	Drainage feature
Paths furthest from the pond	347m ²	Infiltration trench filled with 4/20 gap-graded stone. 0.3m deep trench required for 1 in 10 +20% cc. Design provides 0.35m deep trench + 0.15m shingle top.
Paths & canopy close to pond	510 m ²	Upper plateaus of pond, providing infiltration

Table 6: Drainage strategy

6. CONCLUSIONS

The site is at low risk of fluvial, groundwater and reservoir flooding. The site is shown to have moderate to high risk of surface water flooding, but as described in this report, the published maps appears to show the potential of surface water flooding from the nearby large Whiteknights Lake, and does not consider the perimeter brick walls of the walled garden site which would prevent this surface water reaching this site.

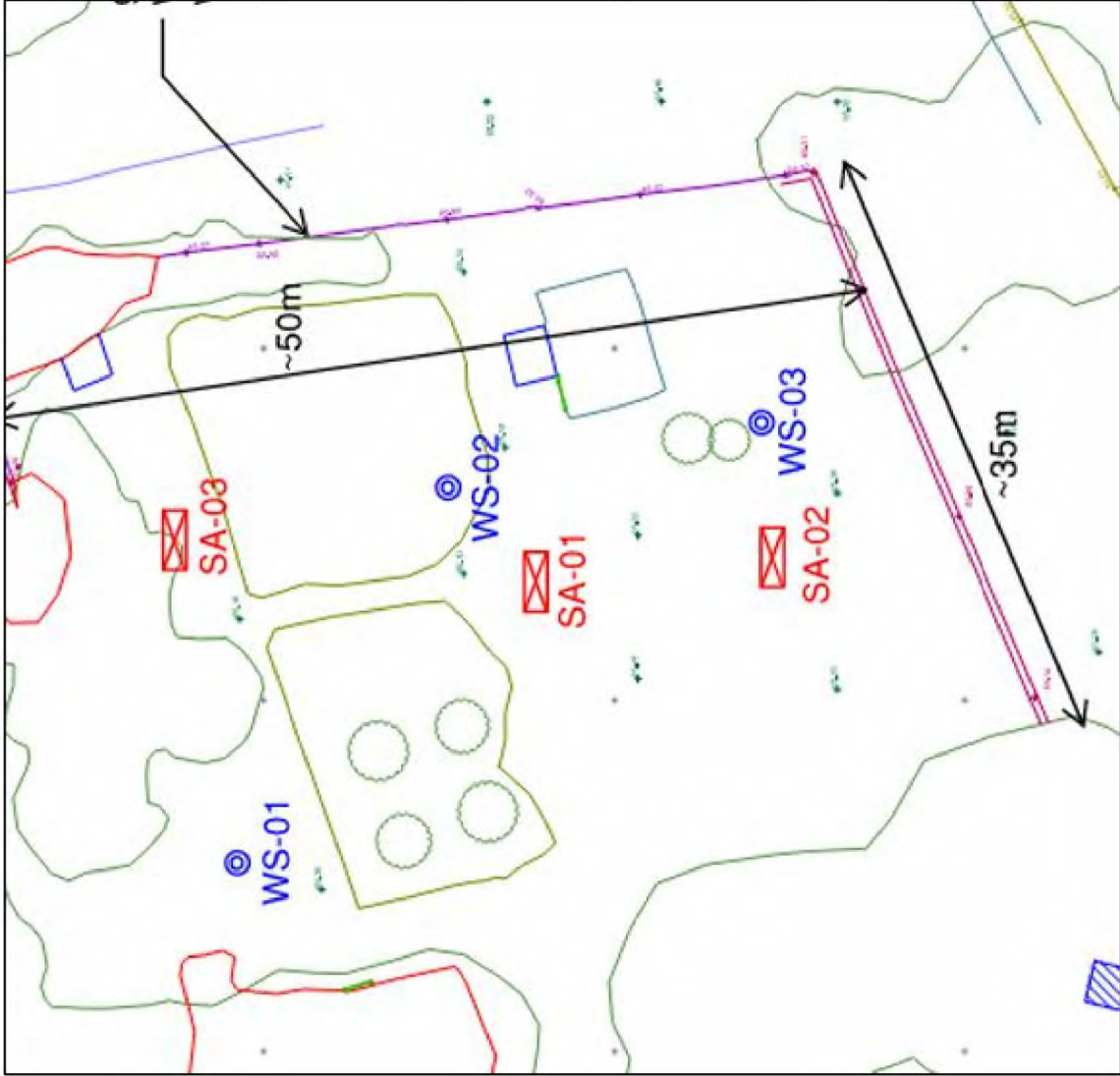
The proposals for the site are for a new pond with accessible footpaths around the site, and a covered teaching area.

The groundwater levels were taken during the winter period and found to be at the shallowest level, 1.0.5m below ground level at the highest monitored level; the proposed pond will be 1.01m below ground level at the deepest level. The pond will be lined at the deepest section, with the middle and upper plateaus allowing infiltration to reduce the risk of the pond overflowing into other parts of the walled site.

Although the run-off rate from the site will increase due to the proposed footpaths, it will be managed within the site utilising the pond and infiltration trenches. Run-off from larger storm events will be contained within the site confines due to the perimeter brick walls.

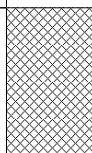
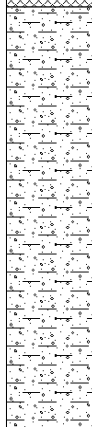
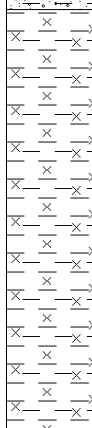
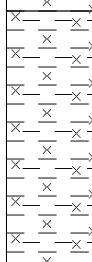
APPENDICES

APPENDIX A EXPLORATORY LOCATION PLAN AND LOGS



Project:		Walled Garden		Title:		Hole Location Plan	
Job Number:		P25.272		Client:		DBR Limited	
Drawing:		P25.272.HLP		Revision:		-	
Drawn:		RG		Date:		10/10/2025	
Checked by:		GC		Scale:		NTS	
Notes: 1. Do not scale from this drawing. 2. All dimensions must be checked on site prior to commencement of work. 3. Where applicable this drawing is to be read in conjunction with other consultants drawings. 4. This drawing is the copyright of Impact Geotechnical Ltd.						 Impact Geotechnical Limited www.impactgeo.co.uk	

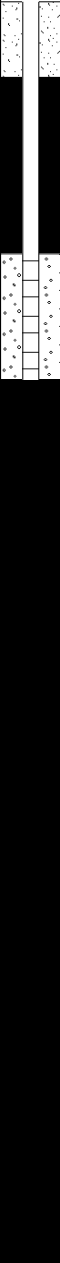
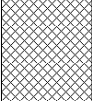
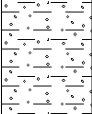
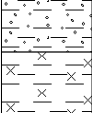
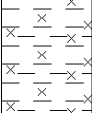
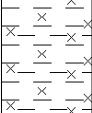
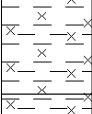
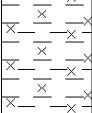
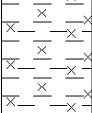
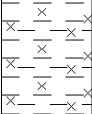


Project Name: Walled Garden				Client: DBR Limited				Date: 09/10/2025			
Location: Wilderness Road, Reading, RG6 5RG				Contractor: Impact Geotechnical Ltd							
Project No. : P25.272				Crew Name: GC/BW				Drilling Equipment: Archway Dart			
Borehole Number WS01		Hole Type WLS		Level		Logged By RG		Scale 1:30		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.50	D	N=6 (0,0/1,1,2,2)	0.60		MADE GROUND: Firm dark brown slightly sandy gravelly Clay. Sand is fine and medium. Gravel is sub-angular fine and medium brick and flint. Rare sub-angular fine gravel of clinker.		1		
		1.00 1.00	D SPT								
		1.50	D	N=9 (1,1/2,2,2,3)	2.30		Firm to stiff brown mottled grey and orangish brown slightly sandy gravelly CLAY. Gravel is angular and sub-angular fine to coarse flint. (HEAD).		2		
		2.00 2.00	D SPT								
		2.50	D	N=13 (1,2/3,3,3,4)	4.00		Firm to stiff fissured brown and bluish grey mottled silty CLAY. Fissures are sub-horizontal and sub-vertical very closely spaced and gleyed. Locally scattered with sub-angular fine gravel of claystone. (Weathered LONDON CLAY FORMATION).		3		
		3.00 3.00	D SPT								
		3.50	D	N=13 (1,2/2,3,4,4)	5.00		Firm to stiff laminated bluish grey silty CLAY. (LONDON CLAY FORMATION).		4		
		4.00	SPT								
		4.50	D	N=18 (2,7/5,5,4,4)	5.00		At 5.00mbgl: Claystone band.		5		
		5.00	SPT								
										6	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
CAT scanned prior to drilling. Hand excavated buried service clearance pit to 1.00mbgl. Groundwater seepage at 5.00mbgl. Installed with groundwater monitoring standpipe comprising 35mm diameter pipe, finished at the surface within raised barrel cover. What3words location: ///hills.rinse.search											



Percussion Drilling Log

Project Name: Walled Garden		Client: DBR Limited		Date: 09/10/2025	
Location: Wilderness Road, Reading, RG6 5RG		Contractor: Impact Geotechnical Ltd			
Project No. : P25.272		Crew Name: GC/BW		Drilling Equipment: Archway Dart	
Borehole Number WS02	Hole Type WLS	Level	Logged By RG	Scale 1:30	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			TOPSOIL: Dark brown sandy silty Clay. Sand is fine and medium. Frequent roots.	
		0.50	D		0.60			MADE GROUND: Firm dark brown slightly sandy gravelly Clay. Sand is fine and medium. Gravel is sub-angular fine and medium brick and flint. Rare sub-angular fine gravel of clinker.	
		1.00	D					Firm to stiff brown mottled grey and greyish brown slightly gravelly CLAY. Gravel is angular and sub-angular fine to coarse flint. (HEAD).	1
		1.00	SPT	N=14 (1,2/3,4,4,3)					
		1.50	D		1.60			From 1.40m to 1.60mbgl: Locally very sandy with fine and medium Sand.	
		2.00	D					Firm to stiff fissured brown and bluish grey mottled silty CLAY. Fissures are sub-horizontal and sub-vertical very closely spaced and gleyed. Locally scattered with sub-angular fine gravel of claystone. (Weathered LONDON CLAY FORMATION).	2
		2.00	SPT	N=13 (1,1/3,3,3,4)					
		2.50	D						
		3.00	D		3.10			Firm to stiff laminated bluish grey silty CLAY. (LONDON CLAY FORMATION).	3
		3.00	SPT	N=15 (1,2/3,3,4,5)					
		3.50	D						
		4.00	SPT	N=14 (1,2/2,4,4,4)					4
		4.50	D						
		5.00	SPT	N=16 (1,2/3,4,4,5)	5.00				5
								End of Borehole at 5.000m	6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks CAT scanned prior to drilling. Hand excavated buried service clearance pit to 1.00mbgl. Groundwater not encountered. Installed with groundwater monitoring standpipe comprising 35mm diameter pipe, finished at the surface within raised barrel cover. What3words location: ///goat.serves.plank										
--	--	--	--	--	--	--	--	--	--	---

Percussion Drilling Log

Project Name: Walled Garden		Client: DBR Limited		Date: 09/10/2025	
Location: Wilderness Road, Reading, RG6 5RG		Contractor: Impact Geotechnical Ltd			
Project No. : P25.272		Crew Name: GC/BW		Drilling Equipment: Archway Dart	
Borehole Number WS03	Hole Type WLS	Level	Logged By RG	Scale 1:30	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
					0.20			TOPSOIL: Dark brown sandy silty Clay. Sand is fine and medium. Frequent roots.	1		
		0.50	D		0.60			MADE GROUND: Stiff dark brown slightly sandy slightly gravelly Clay. Sand is fine and medium. Gravel is sub-angular fine to coarse brick and flint.			
		1.00 1.00	D SPT	N=16 (1,1/2,2,6,6)	1.10			MADE GROUND: Firm brown very sandy slightly gravelly Clay. Sand is fine and medium. Gravel is angular to sub-rounded fine to coarse flint. Occasional sub-angular medium and coarse gravel of brick. Rare oyster shells. Rare sub-angular fine gravel of clinker.			
		1.50	D		1.80			<i>From 0.80m to 1.10mbgl: Becoming a Sand.</i> Medium dense brown locally mottled dark brown silty gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine and medium flint. (BOYN HILL GRAVEL MEMBER). <i>From 1.30m to 1.40mbgl: Locally abundant with coarse Sand and fine Gravel.</i>	2		
		2.00 2.00	D SPT	N=13 (1,2/2,3,4,4)				Firm bluish grey silty CLAY. Rarely scattered with claystone. (LONDON CLAY FORMATION).			
		2.50	D								
		3.00 3.00	D SPT	N=13 (1,2/3,3,3,4)						3	
		3.50	D								
		4.00	SPT	N=15 (1,2/3,3,4,5)	4.00			Firm to stiff bluish grey silty CLAY. (LONDON CLAY FORMATION).	4		
		4.50	D								
		5.00	SPT	N=14 (1,2/3,3,4,4)	5.00					5	
		End of Borehole at 5.000m									
											6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
		2.00	116								

Remarks CAT scanned prior to drilling. Hand excavated buried service clearance pit to 1.00mbgl. Groundwater strike at 1.50mbgl. Installed with groundwater monitoring standpipe comprising 35mm diameter pipe, finished at the surface within raised barrel cover. What3words location: ///richer.escape.baked										
--	--	--	--	--	--	--	--	--	--	---





Trial Pit Log

Project Name: Walled Garden		Client: DBR Limited		Date: 09/10/2025 - 10/10/2025	
Location: Wilderness Road, Reading, RG6 5RG		Contractor: Impact Geotechnical Ltd			
Project No. : P25.272		Crew Name: GC/BW		Equipment: Hand tools	
Location Number SA02	Location Type TP	Level	Logged By RG	Scale 1:10	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.30			Vegetation over MADE GROUND: Dark brown sandy gravelly Clay. Sand is fine and medium. Gravel is sub-angular and sub-rounded fine and medium brick and flint. Occasional roots.	1
								Firm brown sandy slightly gravelly CLAY. Sand is fine and medium. Gravel is angular to sub-rounded fine to coarse flint. (Possible MADE GROUND).	
								Firm to stiff brown mottled grey and orangish brown gravelly CLAY. Gravel is angular and sub-angular fine to coarse flint. (HEAD).	
								(Dense) Brown speckled light brown clayey sandy angular to rounded fine to coarse GRAVEL of flint. Sand is fine to coarse. (BOYN HILL GRAVEL MEMBER).	
								End of Borehole at 0.800m	
					0.80				2

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
1.00	0.30	Stable	None				

Remarks

CAT scanned prior to excavation. Groundwater not encountered. What3words location: ///refuse.agree.softly





APPENDIX B PROPOSED LAYOUT



Legend:

- Structure - Area: 51m²
- Self-binding gravel footpath
Buff colour - Area: 724m²
- Timber boardwalk with timber substructure
- Area: 30m²
- Mediterranean style planting
- Area: 272m²
- Rubble garden planting
- Area: 50m²
- Dry heathland planting
- Area: 128m²
- Wetland planting with riparian grass seeding
(Wet heathland & Bog style planting)
- Area: 207
- Native planting
- Area: 175m²
- Amenity grass seeding
- Area: 36m²
- Wildflower areas (sandy soil)
- Area: 143m²
- Wildflower areas (acidic soil)
- Area: 72m²
- Food production
- Area: 73m²
- Pond
- Area: design to be completed
- Timber bench seating
- Total: 16no.
- Ornamental tree planting
- Total: tbc
- Drainage culvert
- All edges to be 19x150mm tanalised wood fixed in place using 45x45mm wooden pegs and suitable nails

P07	Issued for Information	11/11/25	AC	DJK
P06	Issued for Information	07/11/25	AC	DJK
P05	Issued for Information	08/09/25	DJK	DJK
P04	Issued for Information	04/08/25	OH	DJK
P03	Issued for Information	31/07/25	OH	DJK
P02	Issued for Information	30/07/25	OH	DJK
P01	First Issue	29/07/25	OH	NH
Rev	Description	Date	Dr	App
by			by	by
OH		29/07/25		NH

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client name	University of Reading
project	Reading University Walled Garden
drawing	Proposed Landscape Plan
computer file	110.32.1.110EM_Profile_Folder_redirection\antonic.castho\Documents\Revit_Plan\Local_Files\Revit_2024\00290-AHR-ZZ-ZZ-ML-0001 - Landscape_Mode_Antonic.Castho\03RMF.rvt
project number	2024.00290.021
scale	1 : 150 @A1
drawing number	RWG-AHR-ZZ-ZZ-DR-L-9001
rev	P07
issue status	S2
This drawing is to be read in conjunction with all related drawings. All dimensions must be checked and verified on site before commencing any work or producing shop drawings. The originator should be notified immediately of any discrepancy. This drawing is copyright and remains the property of AHR.	

APPENDIX C CALCULATIONS

UoR Walled Garden - runoff to pond 1 in 2 year storm event
KJS Jan-26

Total Depth of rainfall - The Manual Method According to the Wallingford Procedure

i)

M5-60 = 20 mm
r = 0.4

 Ratio 1.1 for FEH

ii) M5-D = Z1 (M5-60)

Storm Duration	Total Rainfall	Z1	Z2
M5-15	12.29 mm	0.63	0.79
M5-30	15.71 mm	0.79	0.80
M5-60	19.39 mm	1.00	0.81
M5-120	25.46 mm	1.22	0.82
M5-240	31.72 mm	1.52	0.83
M5-360	35.20 mm	1.63	0.84
M5-600	39.31 mm	1.97	0.84
M5-1440	40.74 mm	2.53	0.84

iii) MT-D = Z2 (M5-D)

Storm Duration	Total Rainfall	Total Rainfall + 40% CC	Total Rainfall +20% CC	Intensity	Intensity + CC	Intensity + 20% CC
M2-15	9.8 mm	13.7 mm	11.7	39.1 mm/hr	54.7 mm/hr	46.9
M2-30	12.6 mm	17.6 mm	15.1	25.2 mm/hr	35.3 mm/hr	30.2
M2-60	15.7 mm	22.0 mm	18.8	15.7 mm/hr	22.0 mm/hr	18.8
M2-120	20.9 mm	29.3 mm	25.1	10.5 mm/hr	14.6 mm/hr	12.5
M2-240	26.4 mm	37.0 mm	31.7	6.6 mm/hr	9.3 mm/hr	7.9
M2-360	29.4 mm	41.2 mm	35.3	4.9 mm/hr	6.9 mm/hr	5.9
M2-600	33.0 mm	46.2 mm	39.6	3.3 mm/hr	4.6 mm/hr	4.0
M2-1440	34.3 mm	48.1 mm	41.2	1.4 mm/hr	2.0 mm/hr	3.4

Impermeable Area	
0 ha	Existing
0.1137 ha	Proposed

Peak run-off calculated using Modified Rational Method

Peak Run-off -- Qp = 3.61CviA (l/s)

Storm Event	Existing Peak Runoff (l/s)	Post-Development Peak Runoff (inc 40 CC) (l/s)	Post-Development Peak Runoff (inc 20% CC) (l/s)	Increase over existing (l/s)
M2-15	0	17	14	16.8
M2-30	0	11	9	10.9
M2-60	0	7	6	6.8
M2-120	0	5	4	4.5
M2-240	0	3	2	2.8
M2-360	0	2	2	2.1
M2-600	0	1	1	1.4
M2-1440	0	1	1	0.6

Storm Event	Total Volume Existing imp. Area (m³)	Proposed Development Total Volume (incl. 40 %CC) (m³)	Proposed Development Total Volume (incl. 20% CC) (m³)	Increase Over Existing (m³)
M2-15	0.00	15.54	13.32	15.54
M2-30	0.00	20.04	17.18	20.04
M2-60	0.00	24.96	21.40	24.96
M2-120	0.00	33.27	28.52	33.27
M2-240	0.00	42.08	36.07	42.08
M2-360	0.00	46.80	40.11	46.80
M2-600	0.00	52.52	45.02	52.52
M2-1440	0.00	54.64	46.84	54.64

UoR Walled Garden - runoff to pond 1 in 10 year storm event
KJS Jan-26

Total Depth of rainfall - The Manual Method According to the Wallingford Procedure

i)

M5-60 = 20 mm
r = 0.4

ii) M5-D = Z1 (M5-60)

Storm Duration	Total Rainfall	Z1	Z2
M5-15	12.29 mm	0.63	1.23
M5-30	15.71 mm	0.79	1.24
M5-60	19.39 mm	1.00	1.24
M5-120	25.46 mm	1.22	1.24
M5-240	31.72 mm	1.52	1.21
M5-360	35.20 mm	1.63	1.20
M5-600	39.31 mm	1.97	1.19
M5-1440	40.74 mm	2.53	1.18

iii) MT-D = Z2 (M5-D)

Storm Duration	Total Rainfall	Total Rainfall + 40% CC	Total Rainfall + 20% CC	Intensity	Intensity + 40% CC
M10-15	15.9 mm	22.2 mm	19.0	63.4	88.8
M10-30	20.4 mm	28.5 mm	24.4	40.7	57.0
M10-60	25.4 mm	35.5 mm	30.4	25.4	35.5
M10-120	32.0 mm	44.8 mm	38.4	16.0	22.4
M10-240	38.8 mm	54.3 mm	46.6	9.7	13.6
M10-360	42.6 mm	59.6 mm	51.1	7.1	9.9
M10-600	47.1 mm	65.9 mm	56.5	4.7	6.6
M10-1440	48.7 mm	68.1 mm	58.4	2.0	2.8

Impermeable Area	
0 ha	Existing
0.1137 ha	Proposed

Peak run-off calculated using Modified Rational Method

Peak Run-off -- Qp = 3.61CviA (l/s)

Storm Event	Existing Peak Runoff (l/s)	Post-Development Peak Runoff (incl 40%CC) (l/s)	Post-Development Peak Runoff (incl 20% CC) (l/s)	Increase over existing for 40% CC(l/s)
M10-15	0	27	23	27.3
M10-30	0	18	15	17.5
M10-60	0	11	9	10.9
M10-120	0	7	6	6.9
M10-240	0	4	4	4.2
M10-360	0	3	3	3.1
M10-600	0	2	2	2.0
M10-1440	0	1	1	0.9

Storm Event	Total Volume Existing imp. Area (m³)	Proposed Development Total Volume (incl. 40% CC) (m³)	Proposed Development Total Volume (incl. CC) (m³)	Increase Over Existing (m³)
M10-15	0.00	25.25	21.64	25.25
M10-30	0.00	32.41	27.78	32.41
M10-60	0.00	40.37	34.60	40.37
M10-120	0.00	50.92	43.65	50.92
M10-240	0.00	61.79	52.97	61.79
M10-360	0.00	67.76	58.08	67.76
M10-600	0.00	74.96	64.25	74.96
M10-1440	0.00	77.46	66.39	77.46

UoR Walled Garden - runoff to pond 1 in 30 year storm event
KJS Jan-26

Total Depth of rainfall - The Manual Method According to the Wallingford Procedure

i)

M5-60 =	20	mm
r =	0.4	

ii) M5-D = Z1 (M5-60)

Storm Duration	Total Rainfall	Z1	Z2
M5-15	12.53 mm	0.63	1.51
M5-30	15.80 mm	0.79	1.53
M5-60	20.00 mm	1.00	1.54
M5-120	24.33 mm	1.22	1.53
M5-240	30.33 mm	1.52	1.51
M5-360	32.67 mm	1.63	1.50
M5-600	39.33 mm	1.97	1.47
M5-1440	50.67 mm	2.53	1.42

iii) MT-D = Z2 (M5-D)

Storm Duration	Total Rainfall	Total Rainfall + 40% CC	Total Rainfall + 20%CC	Intensity	Intensity + 40%CC
M30-15	21.42 mm	30.0 mm	25.70	85.7	120.0
M30-30	27.96 mm	39.1 mm	33.55	55.9	78.3
M30-60	34.80 mm	48.7 mm	41.76	34.8	48.7
M30-120	42.29 mm	59.2 mm	50.75	21.1	29.6
M30-240	49.98 mm	70.0 mm	59.98	12.5	17.5
M30-360	54.30 mm	76.0 mm	65.16	9.1	12.7
M30-600	59.42 mm	83.2 mm	71.30	5.9	8.3
M30-1440	61.17 mm	85.6 mm	73.40	2.5	3.6

Impermeable Area	
0 ha	Existing
0.1137 ha	Proposed

Peak run-off calculated using Modified Rational Method

Peak Run-off -- $Q_p = 3.61CvIA$ (l/s)

Storm Event	Existing Peak Runoff (l/s)	Post-Development Peak Runoff (inc 40%CC) (l/s)	Post-Development Peak Runoff (inc 20%CC) (l/s)	Increase over existing (l/s)
M30-15	0	37	32	36.9
M30-30	0	24	21	24.1
M30-60	0	15	13	15.0
M30-120	0	9	8	9.1
M30-240	0	5	5	5.4
M30-360	0	4	3	3.9
M30-600	0	3	2	2.6
M30-1440	0	1	2	1.1

Storm Event	Total Volume Existing imp. Area (m³)	Proposed Development Total Volume (incl. 40%CC) (m³)	Proposed Development Total Volume (incl. 20%CC) (m³)	Increase Over Existing (m³)
M30-15	0.00	34.10	29.23	34.10
M30-30	0.00	44.51	38.15	44.51
M30-60	0.00	55.39	47.48	55.39
M30-120	0.00	67.32	57.70	67.32
M30-240	0.00	79.56	68.19	79.56
M30-360	0.00	86.43	74.09	86.43
M30-600	0.00	94.58	81.07	94.58
M30-1440	0.00	97.37	83.46	97.37

UoR Walled Garden - runoff to pond 1 in 100 year storm event
KJS Jan-26

Total Depth of rainfall - The Manual Method According to the Wallingford Procedure

i)

M5-60 = 20 mm
r = 0.4

 ratio 1.1 for FEH

ii) M5-D = Z1 (M5-60)

Storm Duration	Total Rainfall	Z1	Z2
M5-15	12.29 mm	0.63	1.95
M5-30	15.71 mm	0.79	2.00
M5-60	19.39 mm	1.00	2.03
M5-120	25.46 mm	1.22	2.01
M5-240	31.72 mm	1.52	1.96
M5-360	35.20 mm	1.63	1.93
M5-600	39.31 mm	1.97	1.90
M5-1440	40.74 mm	2.53	1.87

iii) MT-D = Z2 (M5-D)

Storm Duration	Total Rainfall	Total Rainfall + 40% CC	Total Rainfall + 20% CC	Intensity	Intensity + CC
M100-15	27.7 mm	38.8 mm	33.28	110.9	155.3
M100-30	36.4 mm	51.0 mm	43.69	72.8	101.9
M100-60	45.7 mm	64.0 mm	54.85	45.7	64.0
M100-120	54.1 mm	75.8 mm	64.96	27.1	37.9
M100-240	63.0 mm	88.2 mm	75.59	15.7	22.0
M100-360	68.1 mm	95.3 mm	81.71	11.3	15.9
M100-600	74.1 mm	103.7 mm	88.90	7.4	10.4
M100-1440	76.1 mm	106.6 mm	91.33	3.2	4.4

Impermeable Area	
0 ha	Existing
0.1137 ha	Proposed

Peak run-off calculated using Modified Rational Method

Peak Run-off -- Qp = 3.61CviA (l/s)

Storm Event	Existing Peak Runoff (l/s)	Post-Development Peak Runoff (inc CC) (l/s)	Post-Development Peak Run-ff (inc CC 20%) (l/s)	Increase over existing (l/s)
M100-15	0	48	41	47.8
M100-30	0	31	27	31.4
M100-60	0	20	17	19.7
M100-120	0	12	10	11.7
M100-240	0	7	6	6.8
M100-360	0	5	4	4.9
M100-600	0	3	3	3.2
M100-1440	0	1	2	1.4

Storm Event	Total Volume Existing imp. Area (m³)	Proposed Development Total Volume (incl. 40% CC) (m³)	Proposed Development Total Volume (incl. 20% CC) (m³)	Increase Over Existing (m³)
M100-15	0.00	44.14	37.83	44.14
M100-30	0.00	57.96	49.68	57.96
M100-60	0.00	72.76	62.37	72.76
M100-120	0.00	86.16	73.85	86.16
M100-240	0.00	100.27	85.94	100.27
M100-360	0.00	108.39	92.90	108.39
M100-600	0.00	117.92	101.07	117.92
M100-1440	0.00	121.15	103.84	121.15



Infiltration volume design tool

www.uksuds.com | Infiltration volume design tool (<https://www.uksuds.com/>)

Canopy and
planter area 1 in
10 +20% CC

This is an estimation of the infiltration volumes and drain-down time to half empty the infiltration system in line with the on CIRIA infiltration drainage R156 guidance (1996) and CIRIA SuDS manual (C753, 2015). This information may be used as the basis for designing an infiltration system for the drainage of surface water runoff from sites.

Project details

Date	19/01/2026
Calculated by	KJS
Reference	24095
Model version	2.2.2

Site details

Site name	UoR - Harris Walled Garden
Site location	Reading

Infiltration system

Infiltration system	Infiltration trench
Type	Infiltration from sides and base

Geometry, porosity and infiltration

Width (m)	0.8	m
Length (m)	10	m
Infiltration coefficient (m/s)	0.00000793	m/s
Porosity of fill material	30% - e.g. High-porosity sand/gravel	

Area to be drained

Total area (m ²)	30	m ²
Factor of safety	1.5	

Rainfall

Rainfall input type	FEH22 CSV file	
	FEH_Point_Rainfall_FEH22_AM_474012_171415.csv	
Return period (years)	10	
Climate change allowance factor	120%	



Infiltration volume design tool

www.uksuds.com | Infiltration volume design tool (<https://www.uksuds.com/>)

This is an estimation of the infiltration volumes and drain-down time to half empty the infiltration system in line with the on CIRIA infiltration drainage R156 guidance (1996) and CIRIA SuDS manual (C753, 2015). This information may be used as the basis for designing an infiltration system for the drainage of surface water runoff from sites.

Project details

Date	19/01/2026
Calculated by	KJS
Reference	24095
Model version	2.2.2

Site details

Site name	UoR - Harris Walled Garden
Site location	Reading

Infiltration system

Infiltration system	Infiltration trench
Type	Infiltration from sides and base

Geometry, porosity and infiltration

Width (m)	0.5	m
Length (m)	10	m
Infiltration coefficient (m/s)	0.00000793	m/s
Porosity of fill material	30% - e.g. High-porosity sand/gravel	

Area to be drained

Total area (m ²)	20	m ²
Factor of safety	1.5	

Rainfall

Rainfall input type	FEH22 CSV file	
	FEH_Point_Rainfall_FEH22_AM_474012_171415.csv	
Return period (years)	10	
Climate change allowance factor	120%	

Results

Soakaway minimum height (m)	0.3	m
Time for half-emptying (hours)	1.2	hours
Critical duration (hours)	1.0	hours

Please note storage volume estimation are subject to uncertainty. Infiltration system height and base area are reported to the nearest 1m or 1m² value when the height or base area are greater than 10m or 10m²; and reported to the nearest to 0.1m or 0.1m² value when the height or base area are less than 10m or 10m².

Disclaimer

This report was produced using the infiltration volume design tool (2.2.2) developed by HR Wallingford and available at [uksuds.com](https://www.uksuds.com) (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate infiltration volumes and drain-down times. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

HR Wallingford are not responsible for any rainfall data shared that is subject to licensing terms imposed by UK Centre for Ecology & Hydrology's Flood Estimation Handbook web service (<https://fehweb.ceh.ac.uk/Home/Terms> (<https://fehweb.ceh.ac.uk/Home/Terms>)).

Results

Soakaway minimum height (m)	0.3	m
Time for half-emptying (hours)	1.5	hours
Critical duration (hours)	2.0	hours

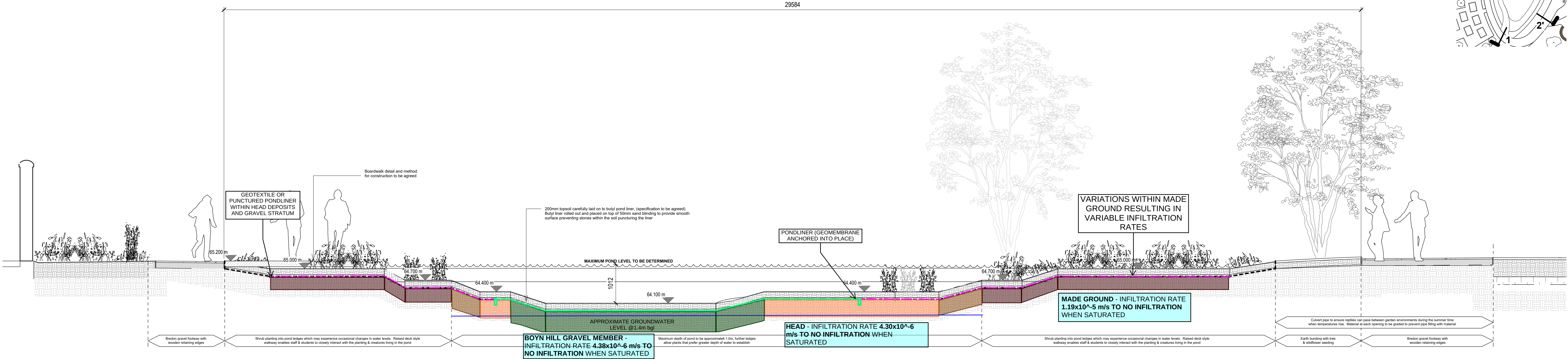
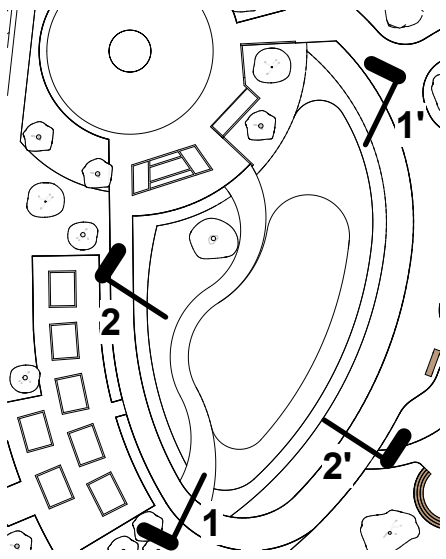
Please note storage volume estimation are subject to uncertainty. Infiltration system height and base area are reported to the nearest 1m or 1m² value when the height or base area are greater than 10m or 10m²; and reported to the nearest to 0.1m or 0.1m² value when the height or base area are less than 10m or 10m².

Disclaimer

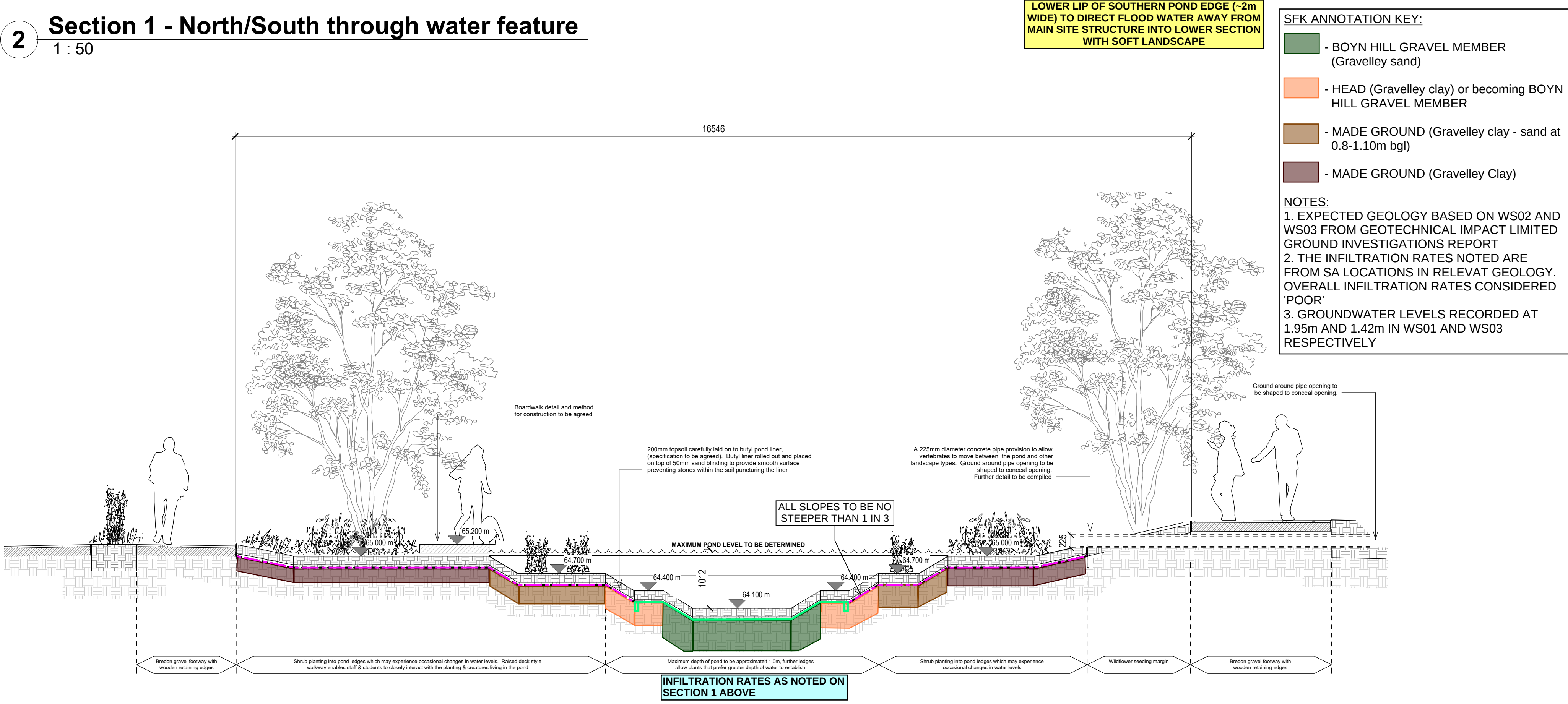
This report was produced using the infiltration volume design tool (2.2.2) developed by HR Wallingford and available at [uksuds.com](https://www.uksuds.com) (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate infiltration volumes and drain-down times. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

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APPENDIX D POND GEOLOGY



2 Section 1 - North/South through water feature
1 : 50



3 Section 2 - East/West through water feature
1 : 50

SFK ANNOTATION KEY:

- BOYN HILL GRAVEL MEMBER (Gravelly sand)
- HEAD (Gravelly clay) or becoming BOYN HILL GRAVEL MEMBER
- MADE GROUND (Gravelly clay - sand at 0.8-1.10m bgl)
- MADE GROUND (Gravelly Clay)

NOTES:

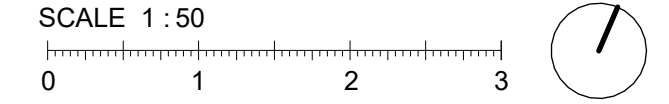
1. EXPECTED GEOLOGY BASED ON WS02 AND WS03 FROM GEOTECHNICAL IMPACT LIMITED GROUND INVESTIGATIONS REPORT
2. THE INFILTRATION RATES NOTED ARE FROM SA LOCATIONS IN RELEVAT GEOLOGY. OVERALL INFILTRATION RATES CONSIDERED 'POOR'
3. GROUNDWATER LEVELS RECORDED AT 1.95m AND 1.42m IN WS01 AND WS03 RESPECTIVELY

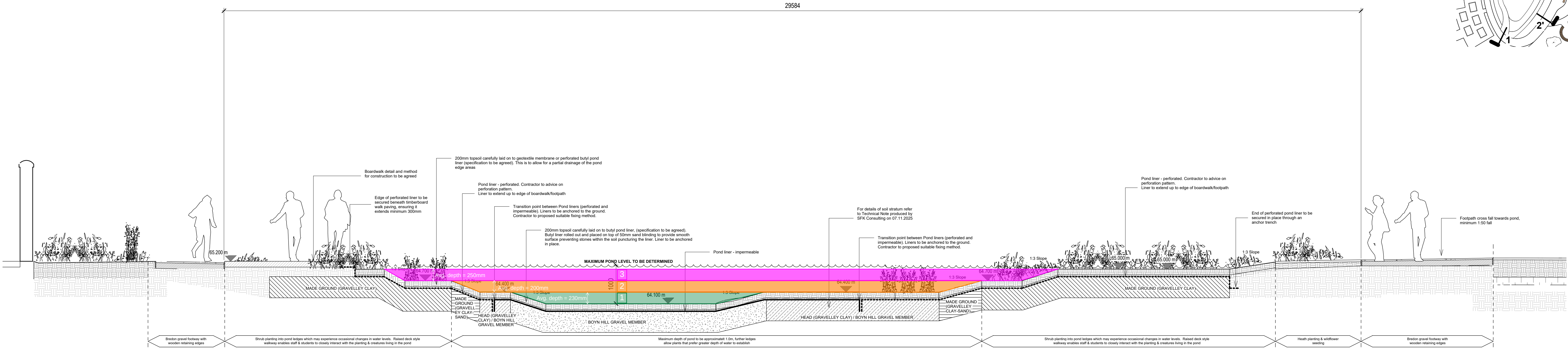
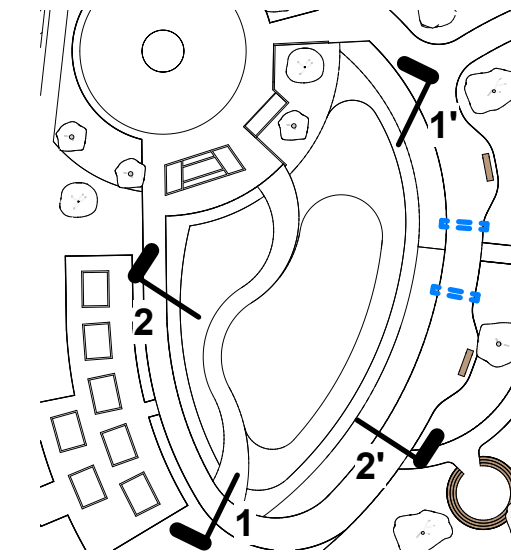
SFK Mark up Appendix D					
P04	Issued for Information	06/11/25	AC	DJK	
P03	Issued for Information	25/09/25	DJK	DJK	
P02	Issued for Information	22/09/25	TM	DJK	
P01	Issued for Information	08/09/25	DJK	DJK	
Rev	Description	Date	Dr	App	by
OH		09/05/25	NH		

AHR Architects Ltd
Vinty Building
Wine Street
Bristol
BS1 2BD
United Kingdom

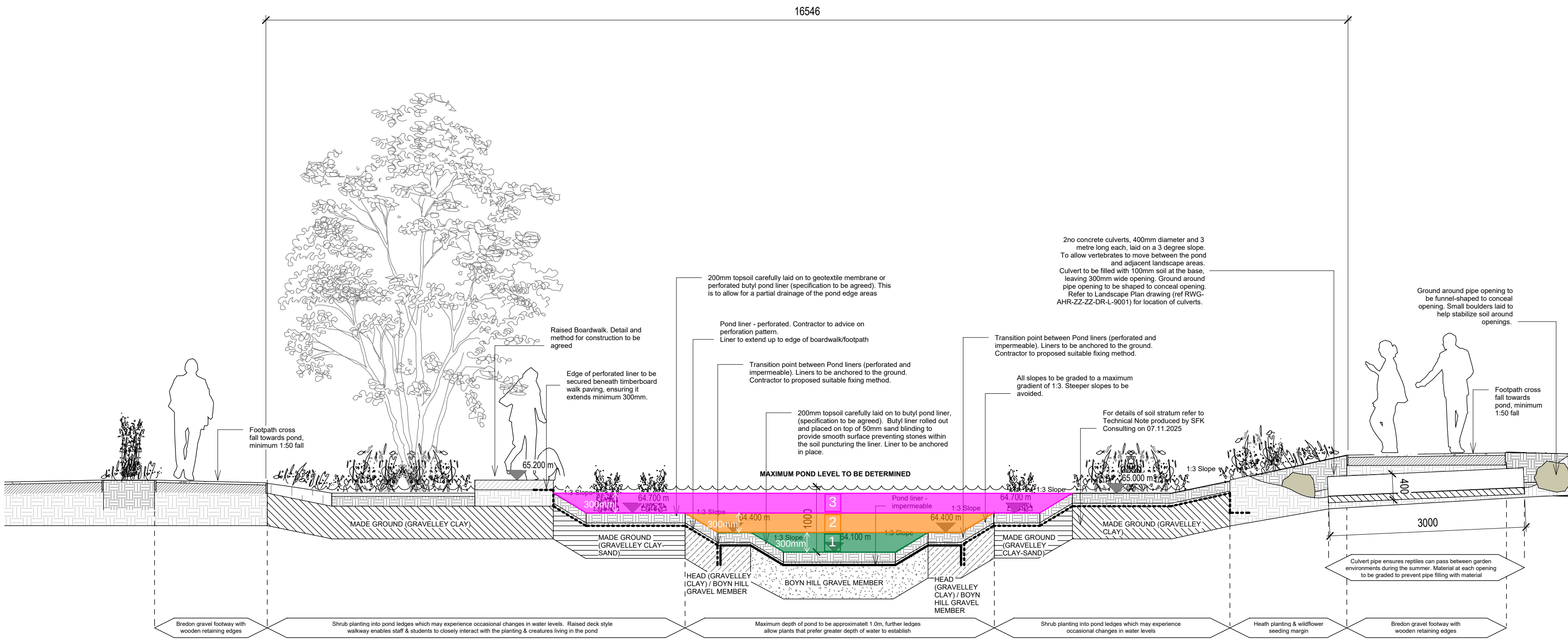
T +44(0)117 9299146
E bristol@ahr.co.uk
www.ahr.co.uk

client name	University of Reading		
project	Reading University Walled Garden		
drawing	Pond Sections		
computer file	\\10.32.1.110\EM_Profile_Folder_redactor\antonic.castho\Documents\Revit_Plan_Land\Revit\2024\00290-AHR-ZZ-ZZ-M-L-0001 - Landscape Model_Antonic.Castho\03MVP.rvt		
project number	2024.00290.021	scale	As indicated@A1
drawing number	RWG-AHR-ZZ-ZZ-DR-L-9105	rev	P04
		issue status	S2
This drawing is to be read in conjunction with all related drawings. All dimensions must be checked and verified on site before commencing any work or producing shop drawings. The originator should be notified immediately of any discrepancy. This drawing is copyright and remains the property of AHR.			





2 Section 1 - North/South through Pond
1 : 50



3 Section 2 - East/West through Pond
1 : 50

VOLUME CALCULATIONS:

VOLUME = SURFACE AREA x AVERAGE DEPTH

VOLUME 1 = 6.2m² x 0.23m
= 1.426m³

VOLUME 2 = 50m² x 0.2m
= 10m³

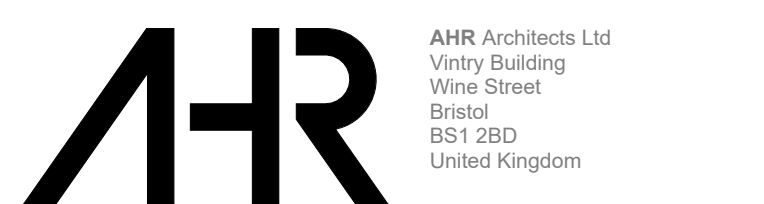
VOLUME 3 = 104m² x 0.25m
= 26m³

TOTAL VOLUME = 37.425m³

**SFK CONSULTING MARKUP
FOR PLANNING
APPLICATION**

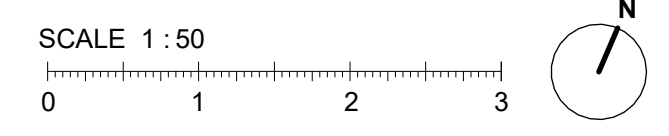
NOTE:
For details of soil stratum refer to Technical Note produced by SFK Consulting, dated 07/11/2025.

P07	Update Pond liner	02/12/25	AC	DJK
P06	Amendments Pond Sections	26/11/25	AC	DJK
P05	Update Pond section/planting & Raised pond	17/11/25	AC	DJK
P04	Issued for Information	07/11/25	AC	DJK
P03	Issued for Information	25/09/25	DJK	DJK
P02	Issued for Information	22/09/25	TM	DJK
P01	Issued for Information	08/09/25	DJK	DJK
Rev	Description	Date	Dr	App
by			by	by
OH		09/05/25	NH	

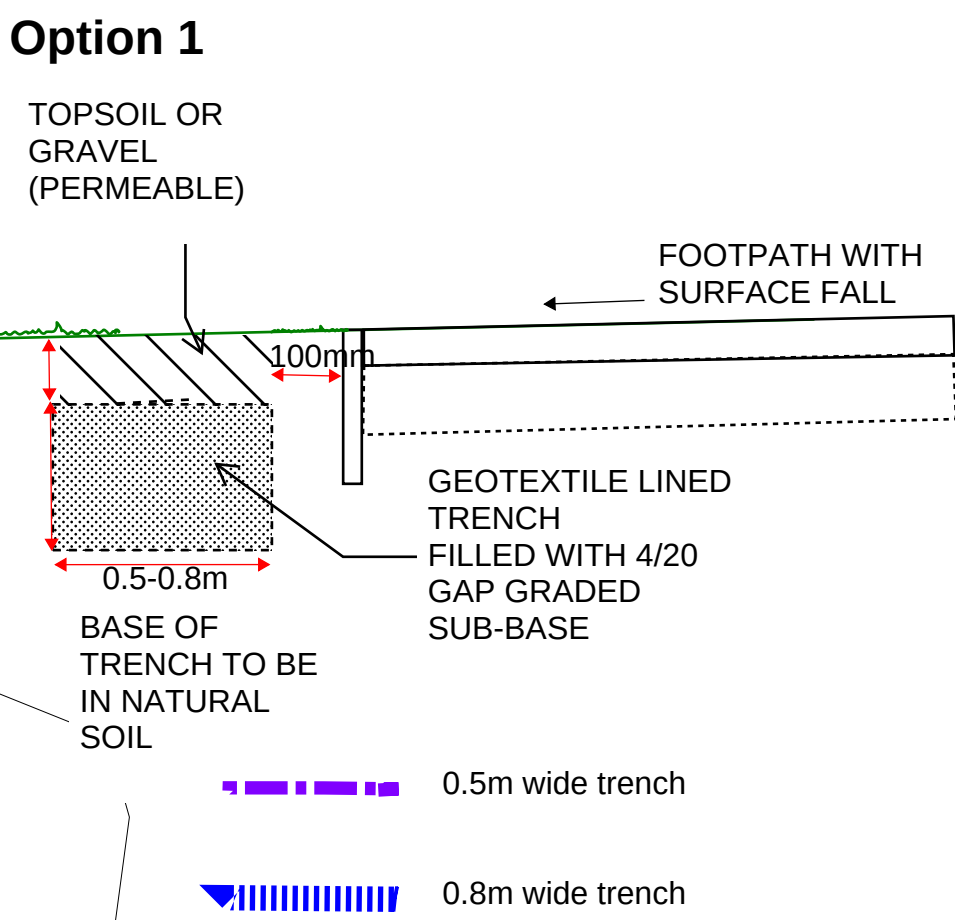


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client name	University of Reading		
project	Reading University Walled Garden		
drawing	Pond Sections		
computer file	\\10.32.1.11\DEM_Profile_Folder_redactor\antonia.castillo\Documents\Reading\Local\Reading\2024\RWG-AHR-ZZ-ZZ-DR-L-9105 - Landscape\Node_Antonia.Castillo\3RWF.rvt		
project number	2024.00290.021	scale	As indicated@A1
drawing number	RWG-AHR-ZZ-ZZ-DR-L-9105	rev	P07
		issue status	S2
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APPENDIX E DRAINAGE STRATEGY



P04	Update footpath setting out and levels	05/12/25	AC	DJK
P03	Path Levels & Setting Out Update	28/11/25	AC	DJK
P02	Issued for Information	07/11/25	AC	DJK
P01	Issued for Information	01/10/25	TM	DJK

R: Infiltration trench mark up: Rev C

origir

O: SFK

03.02.26



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client name	
University of Reading	
project	
Reading University Walled Garden	
drawing	
Proposed Landscape Levels Plan	
computer file	plot date
\\10.32.1.110\EM_Profile_Folder_read\proj\antonicastillo\Documents\Revit_Plan_Level_Footpath_2024\RWG-AHR-ZZ-ZZ-DR-L-9130 - Landscape Model_Antonicastillo338W.rvt	
project number	scale
2024.00290.021	1 : 150 @A1
drawing number	rev
RWG-AHR-ZZ-ZZ-DR-L-9130	P04
	S2

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