

New Reddam Boarding

Reddam House, Bearwood Road, Sindlesham, RG41 5BG

Drainage Strategy

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1. Executive Summary

Elliott Wood Partnership Ltd has been appointed by Inspired Education Holdings Limited to provide a Drainage Strategy to support the full planning application for the proposed development at Reddam House, Bearwood Road, Sindlesham, RG41 5BG.

The application seeks planning permission for the following proposals. "Demolition of existing outhouses and erection of a two-storey boarding house, associated plant equipment, new landscaping and highways works and other associated works."

The SuDS Hierarchy has been followed in order to employ the most suitable and practicable SuDS techniques to improve surface water run off rates from the site. The development will provide benefits to surface water runoff, water quality, amenity space and biodiversity through the proposal of blue roofs, green roofs, permeable paving, rain gardens and a filter strip.

It is proposed that surface water from all roof and canopy catchments will drain to and be attenuated within 4no proposed blue roof areas across the Level 1 and 2. The total discharge rate to the below ground drainage from these systems will be restricted to **2.92 l/s**.

It is proposed that surface water from this drainage network will outfall via a new 100mm diameter gravity connection to the existing drainage ditch to the east of the site.

It is proposed that foul water from the development will outfall via a new 100mm diameter connection to the existing private combined drainage network to the west of the site, which discharges to an existing combined water pumping station serving the wider site.

2. Introduction

The purpose of this report is to explain the approach taken with regards to the below ground drainage strategy. It evaluates the selection of SuDS and highlights how the drainage disposal hierarchy has been followed.

This report has been prepared in accordance with the GOV.UK Sustainable Drainage Systems: Non-statutory Technical Standards, the CIRIA SuDS Manual C753, the Wokingham SuDS Strategy (January 2017), and the Wokingham Borough Local Development Framework Sustainable Design and Construction Supplementary Planning Document

The proposed strategy is in line with the Wokingham Borough Council Managing Development Delivery Plan Policy CC10: Sustainable Drainage states that 'for brownfield sites both run-off rates and volumes be reduced to as near greenfield as practicably possible.'

3. Site Context

3.1 Site Location

The Reddam House School site is located along Hermes Close, which stretches between Mole Road and Bearwood Road, in the Borough of Wokingham. The site is centred on OS Co-ordinates E477848, N169086.

Winnersh train station and Sindlesham village are approximately 1.8km and 1km from the site, respectively.

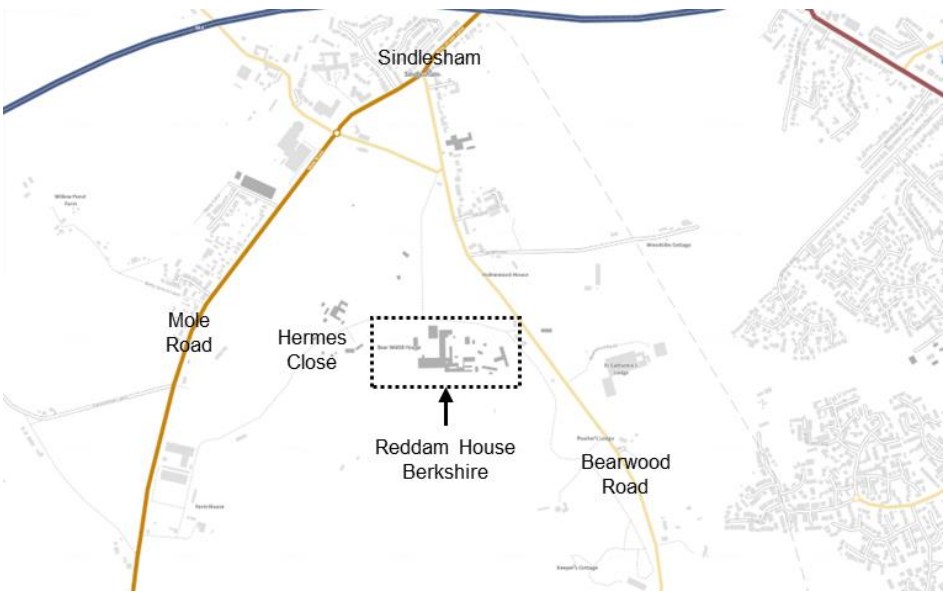


Figure 1: Site Location Plan (Ordnance Survey Map Extract)

3.2 Existing Development

The site is currently occupied by three school buildings and several trees. The proposed New Reddam Boarding House is surrounded by multiple school buildings. Boarding houses Drake House and Blake House exist directly east and north-west of New Reddam Boarding, respectively. The cadet building and science block are directly south and west of New Reddam Boarding, respectively.

Many other buildings occupy the Reddam House Berkshire site, including the main school, chapel, theatre, swimming pool, sports hall, kitchens, dining hall, and junior school. Bearwood Chapel and Bearwood College are Grade II and Grade II*, respectively.

Hermes Close provides a suitable access road to the site. However, the existing roads and paths on the site facilitate onsite pedestrian movement, so a new temporary or permanent access road to the site may be required to safely carry-out deliveries.

Proposals will need to consider these buildings, allowing for noise control and access, but this is perceived to be achievable constraints due to the recent school expansion projects.

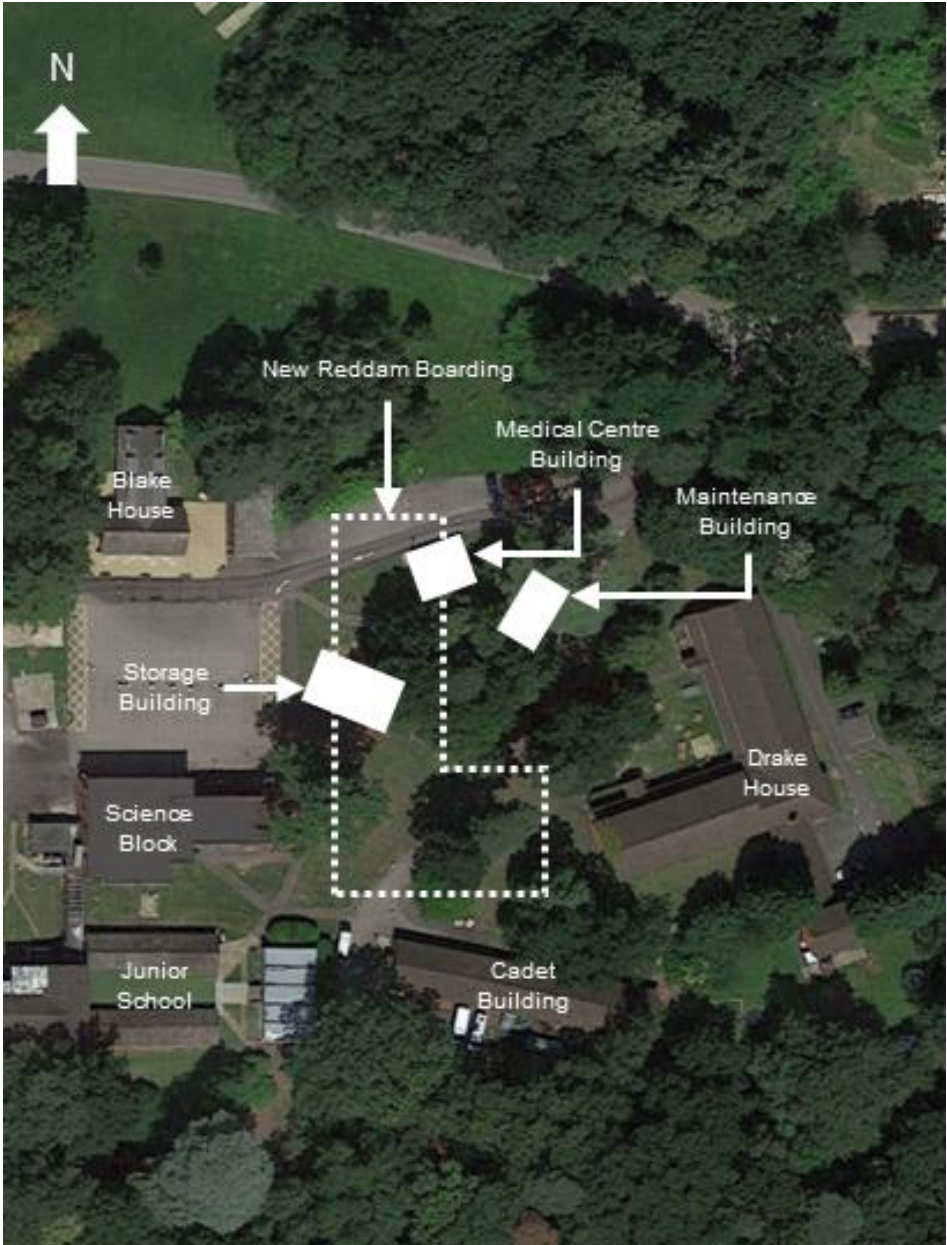


Figure 2: Site map with sketch overlay of existing and proposed buildings

3.3 Site Constraints

The site is surrounded by several veteran and notable trees, which must be considered in construction works. There is a tree preservation order (TPO) for a 22m tall Atlas Cedar tree at 73.5m on the proposed site. The foundations must avoid the Root Protection Area (RPA) and suitable building levels must be selected. For further information, refer to WSP’s Arboricultural Impact Assessment Report (July 2024).

3.4 Existing Site Topography

A topographic survey of the development site was undertaken by Tower Surveys in October 2014, prior to any works on site.

The topographic survey shows that, the levels generally fall from the east of the site (74.99mAOD) to the west (73.44mAOD). This equates to an average gradient of approximately 1:35, over a distance of approximately 53m.

Refer to **Appendix A** for topographic and utilities survey.

3.5 Ground Conditions

3.5.1 Geology

A site-specific geotechnical investigation has not yet been undertaken. We are currently investigating whether any records exist, associated with the sports hall and pool development on the school ground, in lieu of these, boreholes should be undertaken during the next design stage to determine the geotechnical properties of the ground on site.

Current conditions assumed in this report are based on geological information obtained from the British Geological Survey (BGS) website. The BGS maps indicate that the ground conditions for the proposed site may consist of London Clay Formation (clay, silt and sand) bedrock.

3.5.2 Ground Water

Three historic boreholes have been recorded to the west of the site. Groundwater was struck at 115ft (35m) below well top in borehole SU76NE24.

Site investigations will be required to establish a better understanding of the groundwater conditions especially considering that new foundations are required.

4. Existing Drainage

4.1 Asset records

Public sewer records have been obtained from Thames Water; these are included within **Appendix B**. These show that the wider area is served by a network of separate surface and foul water sewers, although there are no public sewers near to the site.

4.2 Utilities Survey

A GPR Underground Utilities Survey of the site was undertaken by Tower Surveys Ltd in October 2014 to determine the location, depth and size of the existing services on site.

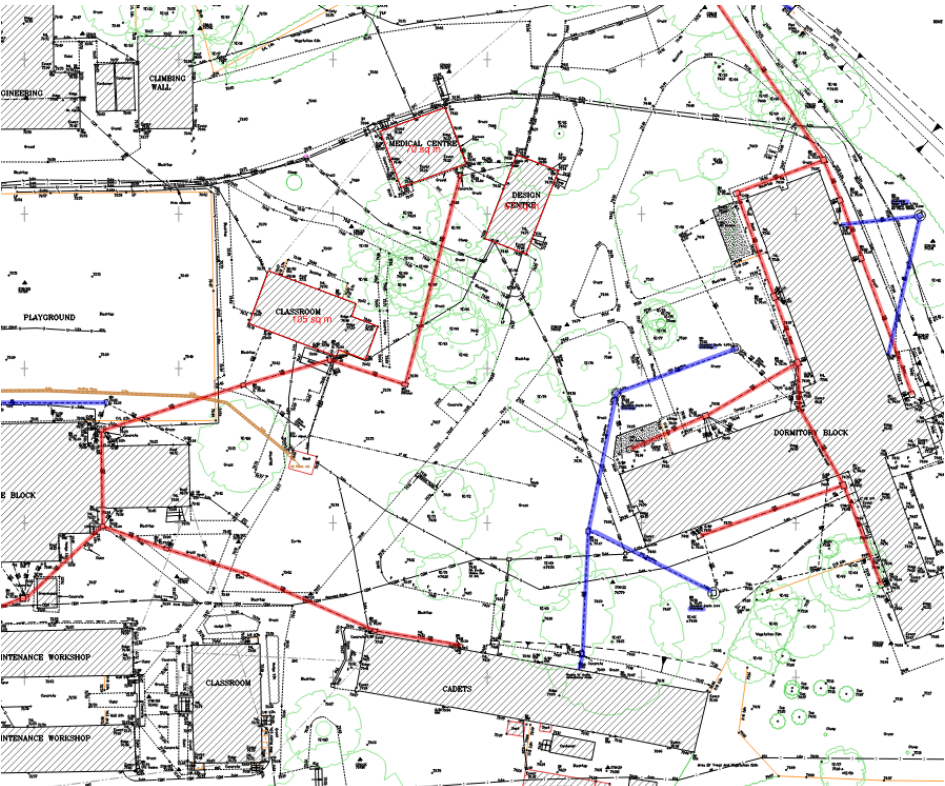
The survey indicates that all drainage from the existing Medical Centre, Maintenance Building and Storage Building connect to a combined drainage network that drains to an existing combined water pump to the west.

There is one 100mm diameter surface water pipe to the west of the site draining to the south. It is assumed that this outfalls to an existing soakaway. Surface water from the planning approved sports hall development (REF: 242130) is proposed to connect into this network.

There are 4no. soakaway chambers indicated to the east of the site. 3no. of these chambers include overflow pipes connected to a 225mm pipe draining to the south of the site. It is assumed that this outfalls to an existing soakaway.

The majority of the existing asphalt footways and carriageways appear to drain surface water onto the adjacent soft landscaping areas.

Refer to **Appendix A** for topographic and utilities survey.



5. Proposed Development

5.1 Summary of Proposed Works

The application seeks planning permission for the following proposals. "Demolition of existing outhouses and erection of a two-storey boarding house, associated plant equipment, new landscaping and highways works and other associated works."



Figure 4: Proposed Ground Floor Layout

6. Proposed Drainage Strategy

6.1 Drainage Hierarchy

The surface water drainage system has been designed in accordance with the GOV.UK *Sustainable Drainage Systems: Non-statutory Technical Standards* and the Oxfordshire County Council *Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire*

The following drainage hierarchy has therefore been considered:

- Store rainwater for later use
- Use infiltration techniques, such as porous surfaces in non-clay areas
- Attenuate rainwater in ponds or open water features for gradual release
- Attenuate rainwater by storing in tanks or sealed water features for gradual release
- Discharge rainwater direct to a watercourse
- Discharge rainwater to a surface water sewer/drain
- Discharge rainwater to a combined sewer

6.2 Use of Rainwater Harvesting

It is not proposed to use rainwater harvesting techniques for the scheme due to the required space for an appropriately sized tank, and the additional complexity involved with the routing of mains water supply within the proposed building. The demand on the potable water supply will be reduced as much as possible through the use of low flow appliances.

6.3 Use of Infiltration techniques

The principal method of discharge for the existing surface water networks serving the wider site appears to be infiltration via a series of existing soakaways. The condition and performance of these existing soakaways has not been confirmed, but it is noted that they have been installed with overflows. There location of any new soakaways would be constrained by the existing RPA's within the site.

In order to confirm suitability and design parameters, infiltration testing and groundwater monitoring will need to be undertaken across the site. Until confirmed otherwise it is assumed that new soakaways are not suitable, and an alternative discharge has been proposed.

6.4 Use of Green Roofs

Areas of combined blue and green roof have been proposed across the level one canopy areas on the western and eastern side of the building. These roofs will reduce both the total and peak surface water discharge, as well as providing benefits to biodiversity and water quality. In addition to this there are a number of planters proposed across the roof areas. Please refer to **Appendix D** for Proposed Development Plans.

As it is difficult to measure the reduction in surface water discharge, especially following multiple storm events in a short space of time, the impact of green roofs has been ignored in the calculation of surface water run-off and treated as impermeable roof areas. In reality, however they will provide some surface water attenuation. It is proposed that these areas will only be accessed for maintenance.

6.5 Use of Blue Roofs

Blue roofs have been proposed across the main roof areas at Level 2. Combined blue and green roofs have been proposed across the level one canopy areas on the western and eastern side of the building. All of the other small roof catchments, including the middle roof, the heating plantroom, lift overrun and roof access hatch, will drain into these blue roof build-ups.

The blue roof systems will discharge at a restricted rate and are designed to accommodate return periods up to the 1 in 100 year storm, with a 40% allowance for climate change, without flooding.

6.6 Use of Permeable Paving

It is proposed that the parking bays to the north of the site are constructed using permeable pavers with an unlined porous sub-base. Surface water from the parking bay catchment, as well as the adjacent asphalt carriageway, will drain through this permeable paving and infiltrate to ground.

The small area of hard landscaping to the east of the development is also proposed to be constructed as a permeable pavement.

These permeable paving systems will be designed to accommodate return periods up to the 1 in 100 year storm without flooding with a 40% allowance for climate change. Infiltration testing and groundwater monitoring will need to be undertaken within the vicinity of the proposed bays in order to confirm suitability and design parameters.

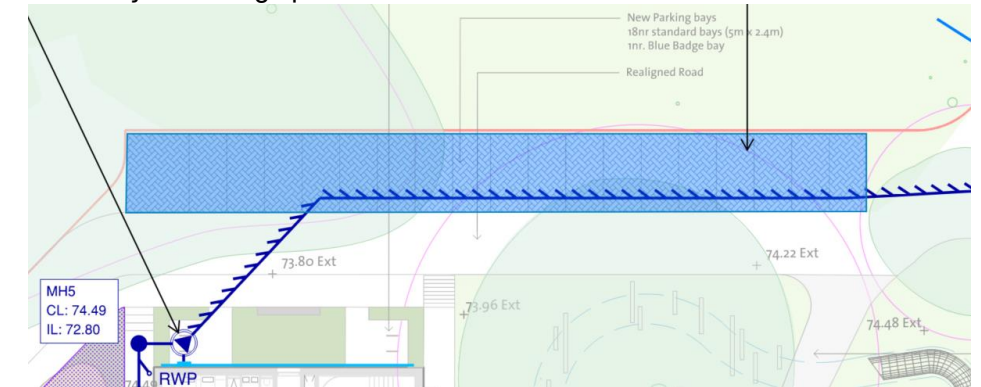


Figure 5: Permeable car park bays (Drainage Layout extract)

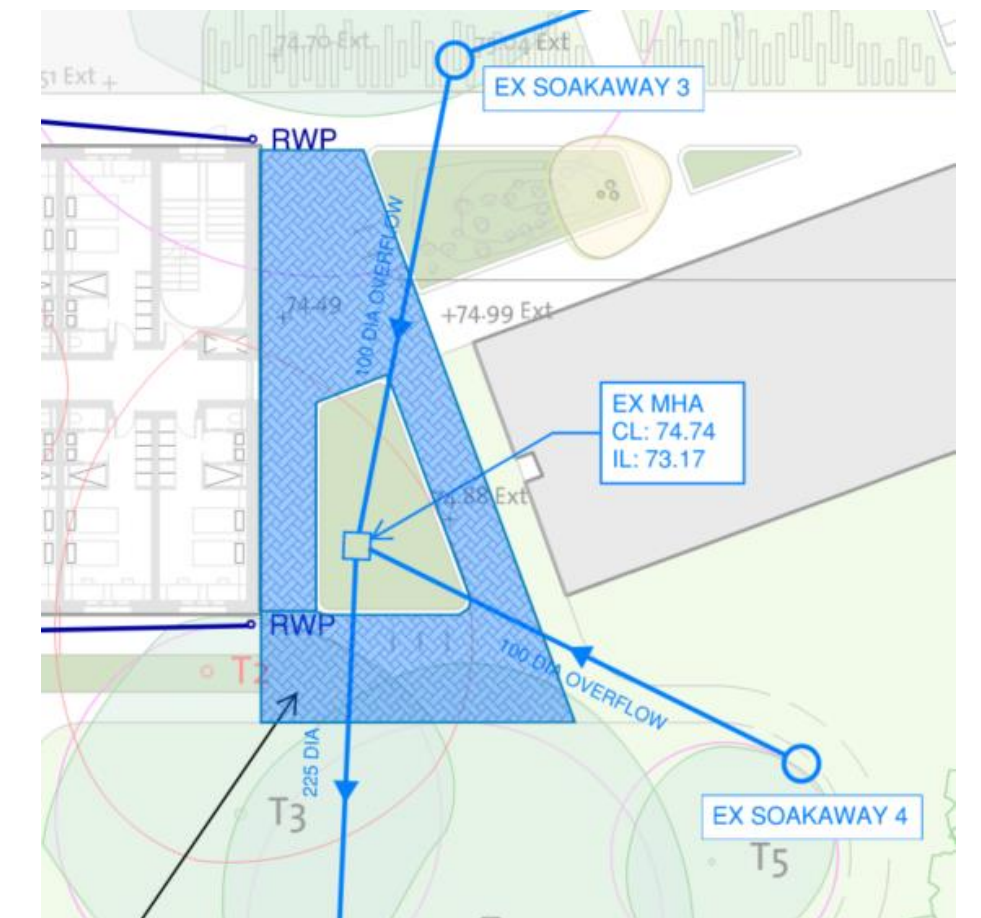


Figure 6: Permeable footway (Drainage Layout extract)

6.7 Use of Below Ground Attenuation

The opportunities for below ground attenuation are limited by the additional excavation required, and by the root protection areas (RPA's) of the trees being retained. The depth of any tank would be limited by the depth of the existing drainage network that it is proposed to connect to.

Below ground tanks are considered unsustainable given the benefits provided by the proposed strategy of attenuation via blue roofs and permeable paving.

6.8 Use of Rain Gardens

As well as managing surface water flows, rain gardens provide surface water treatment and increased biodiversity.

Two areas of unlined rain garden are proposed on the western side of the building. It is proposed that the small areas of footway adjacent to the building, including the access ramp and stairs, will drain to these rain gardens and infiltrate to ground.



Figure 7: Proposed Rain Gardens (Landscape Plan Extract)

6.9 Use of Filter Strips

As well as managing surface water flows filter strips provide surface water treatment and increased biodiversity.

It is proposed that the new access road in the south-east of the site will drain to an adjacent filter strip to the south. Surface water will drain through this filter strip and infiltrate to ground.

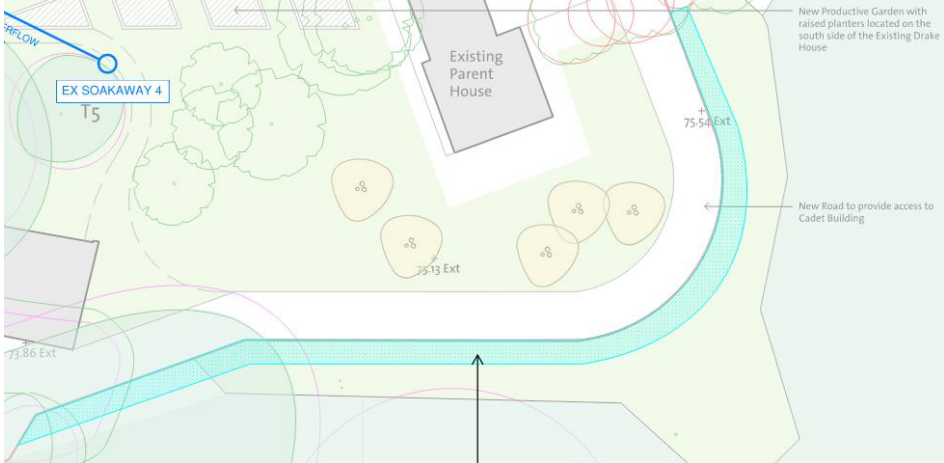


Figure 8: Filter strip (Drainage Layout extract)

6.10 Draining to Sewers and Watercourses

It is proposed that attenuated surface water from the proposed roof catchments will outfall to the existing surface water drainage ditch to the east of the site. Due to the level of the ditch, surface water will need to be pumped from the building to an outfall manhole adjacent to the ditch. Approval for discharge to the ditch is to be confirmed prior to connection.

The peak discharge rate of this outfall will be restricted to 1.0 l/s for all storm events up to and including the 1in100 year + 40% climate change event.

6.11 SuDS Evaluation

The evaluation of SuDS is demonstrated in Table 2 below.

Table 2: Evaluation of SuDS techniques

SuDS Technique	Y/N	Comment
Green / Biodiverse Roofs	Y	Areas of combined blue and green roof have been proposed across the level one canopy areas
Blue Roofs	Y	Attenuation is to be provided via blue roof storage systems. Refer to Appendix D for Proposed Blue Roof Extents Plan.
Rainwater reuse	N	Rainwater reuse is not proposed for the scheme as it is proposed to reduce water usage rather than recycle rainwater.
Basins and ponds	N	Due to the site's location and the external area available; it has been deemed that there is no feasible location for a detention basin or pond where any significant benefit can be gained.
Rain Gardens & Filter Strips	Y	Two areas of rain garden are proposed on the northern side of the site to attenuate small areas of hard landscaping. The new access road in the south-east of the site will drain to an adjacent filter strip to the south.
Permeable surfaces	Y	Permeable paving is proposed in the external car parking areas to attenuate surface water within a lined porous sub-base that extends beneath the access road.
Infiltration devices	Y	It is proposed to discharge surface water to ground through the use of unlined permeable paving, rain gardens, and a filter strip.
Tanked systems	N	Attenuation tanks are considered less sustainable than attenuation via blue roofs and permeable paving.

6.12 Greenfield Runoff Rate

In line with the National Standards (NPPF) and the Wokingham Borough Council Managing Development Delivery Plan Policy CC10: Sustainable Drainage, post-development discharge rates should be 'reduced to as near greenfield as practicably possible.'

The HR Wallingford "Greenfield runoff estimation for sites" available at uksuds.com has been used to determine the greenfield runoff rate for the building roof area (1,382m²), which is the only positively drained area of the site. All other catchments discharge directly to ground. See **Appendix E** for Greenfield Calculations.

Table 3: Greenfield Runoff rate estimations (from HR Wallingford online tool)

Return Period	Greenfield Runoff Rate (l/s)
1 in 1 year	0.39
1 in 30 years	1.07
1 in 100 years	1.48
QBar	0.46

6.13 Proposed Discharge – Peak Runoff

Surface water from all roof and canopy catchments will drain to and be attenuated within 4no proposed blue roof areas across the Level 1 and 2

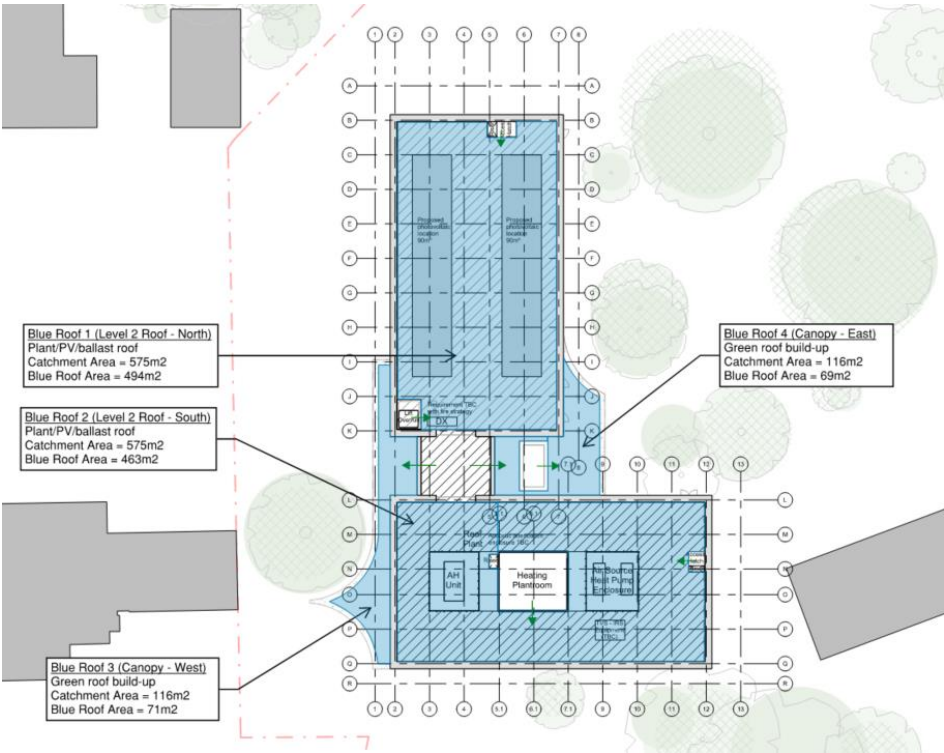


Figure 9: Proposed Blue Roof Areas

The blue roof proposals have been developed in collaboration with blue roof manufacturers Axter in order to establish proposed build-up depths and achievable discharge rates. The total discharge rate from these 4no. roof areas will be restricted to a peak discharge of **2.92 l/s** in the design 1in100 year + 40% climate change event. This is based on FEH22 rainfall data.

Table 4: Blue roof discharge rates

Blue Roof	Restricted Outflow (l/s) 1:100yrs + 40% (FEH22)	Restricted Outflow (l/s) 1:100yrs (FEH22)	Restricted Outflow (l/s) 1:30yrs (FEH22)	Restricted Outflow (l/s) 1:1yr (FSR)
1	0.80	0.66	0.58	0.30
2	0.97	0.80	0.70	0.35
3	0.57	0.47	0.40	0.18
4	0.58	0.47	0.41	0.18
Total	2.92	2.40	2.09	1.01

It is proposed that surface water from this drainage network will discharge to a below ground pumping station, which will pump to a demarcation chamber adjacent to the existing drainage ditch to the east of the site. Surface water will outfall from the demarcation chamber, via a new 100mm diameter gravity connection, to the drainage ditch.

It is not feasible to restrict discharge to the QBar greenfield runoff rate of 0.31 l/s for all storm events. However, the attenuation provided by the proposed blue roof system has been maximised to ensure discharge rates are restricted to as to as near greenfield as practicably possible.

Refer to **Appendix F** for Proposed Drainage Layouts. Refer to **Appendix G** for Blue Roof Calculation Summary.

7. Maintenance Requirements

All SuDS will be maintained by the property owner for the lifetime of the development in accordance with the 2015 SuDS Manual, as summarised below:

Table 5: Modular System / Blue Roofs

Maintenance	Required Action	Recommended Frequency
Regular	Inspect and identify any areas that are not operating correctly. If required, take remedial action. Debris removal from catchment surface (where may cause risks to performance) Remove sediment from pre-treatment structures	Monthly for 3 months, then six monthly Monthly Annually, or as required
Remedial actions	Repair/rehabilitation of inlets, outlets, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms

Table 6: Pervious pavements

Maintenance	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosates applied directly into the weeds by an applicator rather than spraying	As required - once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth - if required, take remedial action	Three-monthly, 48 h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 7: Rain Gardens

Maintenance	Required Action	Frequency
Regular Maintenance	Litter and debris removal	
	Grass cutting – to retain grass height within specified design range	Monthly (during growing season), or as required
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
Occasional maintenance	Check for poor vegetation growth due to lack of sunlight or dropping of leaf litter, and cut back adjacent vegetation where possible	Annually
	Re-seed areas of poor vegetation growth. Alter plant types to better suit conditions, if required	Annually, or if bare soil is exposed over 10% or more of the filter strip area
Remedial actions	Repair erosion or other damage by re-turfing or reseedling	As required.
	Re-level uneven surfaces and reinstate design levels	As required.
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required.
	Remove build up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required.
	Remove and dispose of oils or petrol residues using safe standard practices	As required.
Monitoring	Inspect filter strip surface to identify evidence of erosion, compaction, ponding, sedimentation and contamination (eg oils)	Half yearly
	Check flow spreader and filter strip surface for even gradients	Half yearly
	Inspect gravel diaphragm trench upstream of filter strip for clogging	Half yearly
	Inspect silt accumulation rates and establish appropriate removal frequencies	Half yearly

Gullies / Linear channels
Inspection and removal of debris from silt trap once a year; preferably after leaf fall in the autumn.

Drainage pipes, manholes and silt traps
Inspect manholes & silt traps for build-up of silt and general debris once a year; preferably after leaf fall in the autumn. If silt/debris is building up, then clean with jetting lorry / gully sucker and inspect pipe – repeat cleaning if required. If the pipes to be jetted are plastic then a high flow, low pressure setting should be used so that the pipes are not damaged.

Unusual / unresolved problems
If the drainage system is still holding water following cleaning with a jetter, or the jetting of the system removes excessive amounts of debris this may indicate greater issues within the system. A CCTV survey is likely to be required and further advice should be sought from a drainage engineer.
NOTE: Manhole covers can be heavy and suitable lifting equipment / procedures should be used. Where possible, personnel should not enter manholes to carry out maintenance.

8. Proposed Foul Water Strategy

All foul water drainage from above ground floor will offset at high-level within the building, as designed by the M&E engineer, and drop to the below ground drainage network. All ground floor drainage will be connected to this network.

It is proposed that foul water from the development will outfall via a new 100mm diameter connection to the existing private combined drainage network to the west of the site, which discharges to an existing combined water pumping station serving the wider site. The specification of the existing pumping station is to be established in order to confirm that he has sufficient capacity for the foul flows from the proposed development.

9. Conclusion

Elliott Wood Partnership Ltd has been appointed by Inspired Education Holdings Limited to provide a Drainage Strategy to support the full planning application for the proposed development at Reddam House, Bearwood Road, Sindlesham, RG41 5BG.

The proposals comprise the demolition of existing outhouses and erection of a two-storey boarding house, associated plant equipment, new landscaping and highways works and other associated works.

The SuDS Hierarchy has been followed in order to employ the most suitable and practicable SuDS techniques to improve surface water run off rates from the site. The development will provide benefits to surface water runoff, water quality, amenity space and biodiversity through the proposal of blue roofs, green roofs, permeable paving, rain gardens and a filter strip.

It is proposed that surface water from all roof and canopy catchments will drain to and be attenuated within 4no proposed blue roof areas across the Level 1 and 2. The total discharge rate from these 4no. roof areas will be restricted to a peak discharge of **2.92 l/s** in the design 1in100 year + 40% climate change event.

It is proposed that surface water from this drainage network will discharge to a below ground pumping station, which will pump to a demarcation chamber adjacent to the existing drainage ditch to the east of the site. Surface water will outfall from the demarcation chamber, via a new 100mm diameter gravity connection, to the drainage ditch.

It is proposed that foul water from the development will outfall via a new 100mm diameter connection to the existing private combined drainage network to the west of the site, which discharges to an existing combined water pumping station serving the wider site.

Appendices

Appendix A – Topographical & Utilities Survey



NOTES	AC
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LEGEND

	SPOT LEVEL
	SURVEY STATION
	SAPLING
	TREE (INDICATIVE ONLY)
	BUILDING
	CONTOUR at 0.5 METRE INTERVALS
	BANKING
	GATE
	CHAIN LINK
	IRON RAILING
	POST AND RAIL
	POST AND WISP
	PILLAR
	WELL

ABBREVIATIONS

AC	ALTERNATING CURRENT	M4	MARKER POST
AD	ADDITIONAL	M41	MANHOLE - CIRCULAR
AE	APPROXIMATE LEVEL	M42	MANHOLE - RECTANGULAR
BS	BELLS	M43	MANHOLE - FLAT
BSL	BELLS BELOW	M44	MANHOLE - FLAT - 18" DIA.
BT	BROADBENT YOCUM	M45	MANHOLE - FLAT - 24" DIA.
BU	BURIED	M46	MANHOLE - FLAT - 30" DIA.
BSF	BRICK FOUNDATION	M47	MANHOLE - FLAT - 36" DIA.
CA	CANYON	M48	MANHOLE - FLAT - 42" DIA.
CC	CANYON CANYON	M49	MANHOLE - FLAT - 48" DIA.
CCS	CANYON CANYON	M50	MANHOLE - FLAT - 54" DIA.
CL	CLEAR	M51	MANHOLE - FLAT - 60" DIA.
CL	CLEAR	M52	MANHOLE - FLAT - 66" DIA.
CL	CLEAR	M53	MANHOLE - FLAT - 72" DIA.
CL	CLEAR	M54	MANHOLE - FLAT - 78" DIA.
CL	CLEAR	M55	MANHOLE - FLAT - 84" DIA.
CL	CLEAR	M56	MANHOLE - FLAT - 90" DIA.
CL	CLEAR	M57	MANHOLE - FLAT - 96" DIA.
CL	CLEAR	M58	MANHOLE - FLAT - 102" DIA.
CL	CLEAR	M59	MANHOLE - FLAT - 108" DIA.
CL	CLEAR	M60	MANHOLE - FLAT - 114" DIA.
CL	CLEAR	M61	MANHOLE - FLAT - 120" DIA.
CL	CLEAR	M62	MANHOLE - FLAT - 126" DIA.
CL	CLEAR	M63	MANHOLE - FLAT - 132" DIA.
CL	CLEAR	M64	MANHOLE - FLAT - 138" DIA.
CL	CLEAR	M65	MANHOLE - FLAT - 144" DIA.
CL	CLEAR	M66	MANHOLE - FLAT - 150" DIA.
CL	CLEAR	M67	MANHOLE - FLAT - 156" DIA.
CL	CLEAR	M68	MANHOLE - FLAT - 162" DIA.
CL	CLEAR	M69	MANHOLE - FLAT - 168" DIA.
CL	CLEAR	M70	MANHOLE - FLAT - 174" DIA.
CL	CLEAR	M71	MANHOLE - FLAT - 180" DIA.
CL	CLEAR	M72	MANHOLE - FLAT - 186" DIA.
CL	CLEAR	M73	MANHOLE - FLAT - 192" DIA.
CL	CLEAR	M74	MANHOLE - FLAT - 198" DIA.
CL	CLEAR	M75	MANHOLE - FLAT - 204" DIA.
CL	CLEAR	M76	MANHOLE - FLAT - 210" DIA.
CL	CLEAR	M77	MANHOLE - FLAT - 216" DIA.
CL	CLEAR	M78	MANHOLE - FLAT - 222" DIA.
CL	CLEAR	M79	MANHOLE - FLAT - 228" DIA.
CL	CLEAR	M80	MANHOLE - FLAT - 234" DIA.
CL	CLEAR	M81	MANHOLE - FLAT - 240" DIA.
CL	CLEAR	M82	MANHOLE - FLAT - 246" DIA.
CL	CLEAR	M83	MANHOLE - FLAT - 252" DIA.
CL	CLEAR	M84	MANHOLE - FLAT - 258" DIA.
CL	CLEAR	M85	MANHOLE - FLAT - 264" DIA.
CL	CLEAR	M86	MANHOLE - FLAT - 270" DIA.
CL	CLEAR	M87	MANHOLE - FLAT - 276" DIA.
CL	CLEAR	M88	MANHOLE - FLAT - 282" DIA.
CL	CLEAR	M89	MANHOLE - FLAT - 288" DIA.
CL	CLEAR	M90	MANHOLE - FLAT - 294" DIA.
CL	CLEAR	M91	MANHOLE - FLAT - 300" DIA.
CL	CLEAR	M92	MANHOLE - FLAT - 306" DIA.
CL	CLEAR	M93	MANHOLE - FLAT - 312" DIA.
CL	CLEAR	M94	MANHOLE - FLAT - 318" DIA.
CL	CLEAR	M95	MANHOLE - FLAT - 324" DIA.
CL	CLEAR	M96	MANHOLE - FLAT - 330" DIA.
CL	CLEAR	M97	MANHOLE - FLAT - 336" DIA.
CL	CLEAR	M98	MANHOLE - FLAT - 342" DIA.
CL	CLEAR	M99	MANHOLE - FLAT - 348" DIA.
CL	CLEAR	M100	MANHOLE - FLAT - 354" DIA.
CL	CLEAR	M101	MANHOLE - FLAT - 360" DIA.
CL	CLEAR	M102	MANHOLE - FLAT - 366" DIA.
CL	CLEAR	M103	MANHOLE - FLAT - 372" DIA.
CL	CLEAR	M104	MANHOLE - FLAT - 378" DIA.
CL	CLEAR	M105	MANHOLE - FLAT - 384" DIA.
CL	CLEAR	M106	MANHOLE - FLAT - 390" DIA.
CL	CLEAR	M107	MANHOLE - FLAT - 396" DIA.
CL	CLEAR	M108	MANHOLE - FLAT - 402" DIA.
CL	CLEAR	M109	MANHOLE - FLAT - 408" DIA.
CL	CLEAR	M110	MANHOLE - FLAT - 414" DIA.
CL	CLEAR	M111	MANHOLE - FLAT - 420" DIA.
CL	CLEAR	M112	MANHOLE - FLAT - 426" DIA.
CL	CLEAR	M113	MANHOLE - FLAT - 432" DIA.
CL	CLEAR	M114	MANHOLE - FLAT - 438" DIA.
CL	CLEAR	M115	MANHOLE - FLAT - 444" DIA.
CL	CLEAR	M116	MANHOLE - FLAT - 450" DIA.
CL	CLEAR	M117	MANHOLE - FLAT - 456" DIA.
CL	CLEAR	M118	MANHOLE - FLAT - 462" DIA.
CL	CLEAR	M119	MANHOLE - FLAT - 468" DIA.
CL	CLEAR	M120	MANHOLE - FLAT - 474" DIA.
CL	CLEAR	M121	MANHOLE - FLAT - 480" DIA.
CL	CLEAR	M122	MANHOLE - FLAT - 486" DIA.
CL	CLEAR	M123	MANHOLE - FLAT - 492" DIA.
CL	CLEAR	M124	MANHOLE - FLAT - 498" DIA.
CL	CLEAR	M125	MANHOLE - FLAT - 504" DIA.
CL	CLEAR	M126	MANHOLE - FLAT - 510" DIA.
CL	CLEAR	M127	MANHOLE - FLAT - 516" DIA.
CL	CLEAR	M128	MANHOLE - FLAT - 522" DIA.
CL	CLEAR	M129	MANHOLE - FLAT - 528" DIA.
CL	CLEAR	M130	MANHOLE - FLAT - 534" DIA.
CL	CLEAR	M131	MANHOLE - FLAT - 540" DIA.
CL	CLEAR	M132	MANHOLE - FLAT - 546" DIA.
CL	CLEAR	M133	MANHOLE - FLAT - 552" DIA.
CL	CLEAR	M134	MANHOLE - FLAT - 558" DIA.
CL	CLEAR	M135	MANHOLE - FLAT - 564" DIA.
CL	CLEAR	M136	MANHOLE - FLAT - 570" DIA.
CL	CLEAR	M137	MANHOLE - FLAT - 576" DIA.
CL	CLEAR	M138	MANHOLE - FLAT - 582"

STATION CO-ORDINATES				
STATION	EASTING	NORTHING	LEVEL	DESCRIPTION
STN1	47767.98	169107.03	23.03	SURVEY NAIL
STN2	47767.98	169107.03	23.03	SURVEY NAIL
STN3	47768.35	169111.61	23.28	WOODEN PEG
STN4	47768.35	169111.61	23.28	WOODEN PEG
STN5	47768.35	169111.61	23.28	WOODEN PEG
STN6	47768.44	169118.13	23.38	WOODEN PEG
STN7	47768.44	169118.13	23.38	WOODEN PEG
STN8	47768.44	169118.13	23.38	WOODEN PEG
STN9	47768.78	169140.23	23.54	WOODEN PEG
STN10	47768.78	169140.23	23.54	WOODEN PEG
STN11	47768.81	169122.72	24.08	SURVEY NAIL
STN12	47768.81	169122.72	24.08	SURVEY NAIL
STN13	47768.07	169114.45	23.27	SURVEY NAIL
STN14	47768.07	169114.45	23.27	SURVEY NAIL
STN15	47768.07	169114.45	23.27	SURVEY NAIL
STN16	47767.47	169094.22	23.55	WOODEN PEG
STN17	47767.47	169094.22	23.55	WOODEN PEG
STN18	47767.47	169094.22	23.55	WOODEN PEG
STN19	47767.60	169091.73	23.48	WOODEN PEG
STN20	47767.60	169091.73	23.48	WOODEN PEG
STN21	47767.22	169062.77	24.91	WOODEN PEG
STN22	47767.22	169062.77	24.91	WOODEN PEG
STN23	47762.41	169087.38	24.03	WOODEN PEG
STN24	47762.41	169087.38	24.03	WOODEN PEG
STN25	47762.41	169087.38	24.03	WOODEN PEG
STN26	47764.53	169055.38	23.92	WOODEN PEG
STN27	47764.53	169055.38	23.92	WOODEN PEG
STN28	47764.53	169055.38	23.92	WOODEN PEG
STN29	47765.42	169068.67	23.76	WOODEN PEG
STN30	47765.42	169068.67	23.76	WOODEN PEG
STN31	47765.42	169068.67	23.76	WOODEN PEG
STN32	47764.28	169084.56	23.70	WOODEN PEG
STN33	47764.28	169084.56	23.70	WOODEN PEG
STN34	47764.28	169084.56	23.70	WOODEN PEG
STN35	47764.28	169116.94	24.24	WOODEN PEG
STN36	47764.28	169116.94	24.24	WOODEN PEG
STN37	47764.28	169116.94	24.24	WOODEN PEG
STN38	47767.78	169094.08	23.54	WOODEN PEG
STN39	47767.78	169094.08	23.54	WOODEN PEG
STN40	47767.78	169094.08	23.54	WOODEN PEG
STN41	47767.78	169094.08	23.54	WOODEN PEG
STN42	47767.78	169094.08	23.54	WOODEN PEG
STN43	47767.78	169094.08	23.54	WOODEN PEG
STN44	47767.78	169094.08	23.54	WOODEN PEG
STN45	47767.78	169094.08	23.54	WOODEN PEG
STN46	47767.78	169094.08	23.54	WOODEN PEG
STN47	47767.78	169094.08	23.54	WOODEN PEG
STN48	47767.78	169094.08	23.54	WOODEN PEG
STN49	47767.78	169094.08	23.54	WOODEN PEG
STN50	47767.78	169094.08	23.54	WOODEN PEG
STN51	47767.78	169094.08	23.54	WOODEN PEG
STN52	47767.78	169094.08	23.54	WOODEN PEG
STN53	47767.78	169094.08	23.54	WOODEN PEG
STN54	47767.78	169094.08	23.54	WOODEN PEG
STN55	47767.78	169094.08	23.54	WOODEN PEG
STN56	47767.78	169094.08	23.54	WOODEN PEG
STN57	47767.78	169094.08	23.54	WOODEN PEG
STN58	47767.78	169094.08	23.54	WOODEN PEG
STN59	47767.78	169094.08	23.54	WOODEN PEG
STN60	47767.78	169094.08	23.54	WOODEN PEG

UNLESS OTHERWISE STATED THE SURVEY STATIONS LISTED ABOVE ARE ONLY INTENDED TO BE USED FOR TOPOGRAPHICAL SURVEY AT THE STATED SCALE. DUE CONSIDERATION SHOULD BE GIVEN TO LONGTERM STABILITY OF SURVEY STATION MARKERS.

NO ALLOWANCE HAS BEEN MADE FOR SUB SURFACE ENTRY INTO MANHOLES OR OTHER CHAMBERS OR VOIDS BELOW GROUND LEVEL. THEREFORE ANY DETAILS RELATING TO DEPTHS, SIZES ETC. ARE TAKEN FROM ABOVE GROUND AND AS SUCH

THE CONTRACTOR IS TO CHECK AND VERIFY ALL CRITICAL DIMENSIONS AND LEVELS BEFORE WORK STARTS.

BEFORE SERVICE SHOWN ON THIS DRAWING MAY BE ASSUMED ROUTES AND WILL NOT BE OF CONTRACTOR'S CONNECTION. CONTRACTORS SHOULD UNDERTAKE SUITABLE VALIDATION WORK AND TAKE PARTICULAR CARE DURING EXCAVATION WORK. SAFE DIGGING PRACTICES SHOULD BE FOLLOWED.

SHOULD THERE BE ANY CONFLICT BETWEEN THE DETAILS INDICATED ON THIS DRAWING AND THOSE INDICATED ON OTHER DRAWINGS, THEN TOWER SURVEYS

IT IS IMPORTANT TO NOTE THAT THE SAME ACCURACIES IMPLIED BY THE PLOTTING SCALE ARE EQUALLY APPLICABLE TO DIGITAL DATA SUPPLIED FOR CAD.

VISIBLE FEATURES IN THE VICINITY OF THE BOUNDARIES, AS SHOWN ON THIS SURVEY, MAY NOT REPRESENT THE EXTENT OF LEGALLY CONVEYED OWNERSHIP.

DESCRIPTION	REV	DATE	DRWN	APP
DRAWING STATUS				

INFORMATION

Tower Surveys Ltd
Chartered Surveyors

NO. 1 SOUTH HOUSE
BOND ESTATE, BOND AVENUE
BLITCHLEY
MILTON KEYNES
MK1 1SW

Geomatics-Land, Engineering & Building

 **RICS**

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info@towersurveys.co.uk
www.towersurveys.co.uk

CLIENT

BEARWOOD COLLEGE
PROJECT TITLE

PROJECT TITLE
BEARWOOD COLLEGE
WOKINGHAM

DRAWING DETAIL

TOPOGRAPHICAL SURVEY AS OF 20/10/14

SHEET 2 OF 2

DRAWN		DATE
NW		

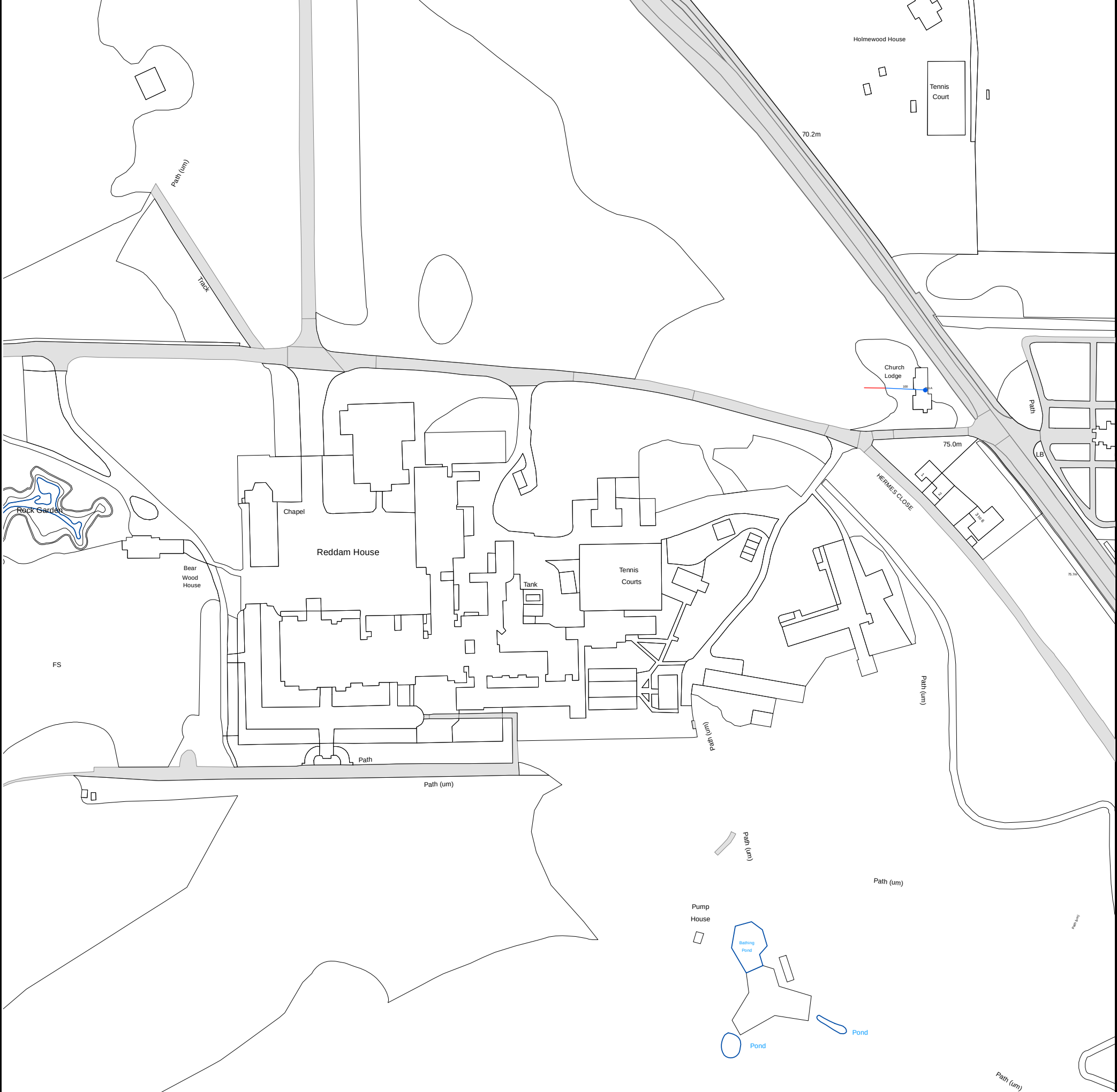
PROJECT ENGINEER	JW	OCTOBER 2014	
CHECKED	AJC	SCALE	SHEET SIZE
		1-200	A0

APPROVED JW	1.200	A0
DRAWING NUMBER R-M9936 / 205		REVISION

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CAD REFERENCE \\2014\Projects\R-M9936\IR-M9936_204-206_ISSUE01	CTB REFERENCE \\CTB-files\ITS-Todo-v01	Tower Surveys Limited, with the copyright of this drawing. This written consent must be obtained before any reproduction of this drawing is permitted.	DRAWING NUMBER R-M9936 / 205 REVISION
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Appendix B – Thames Water Asset Records



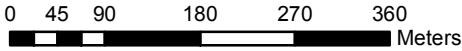
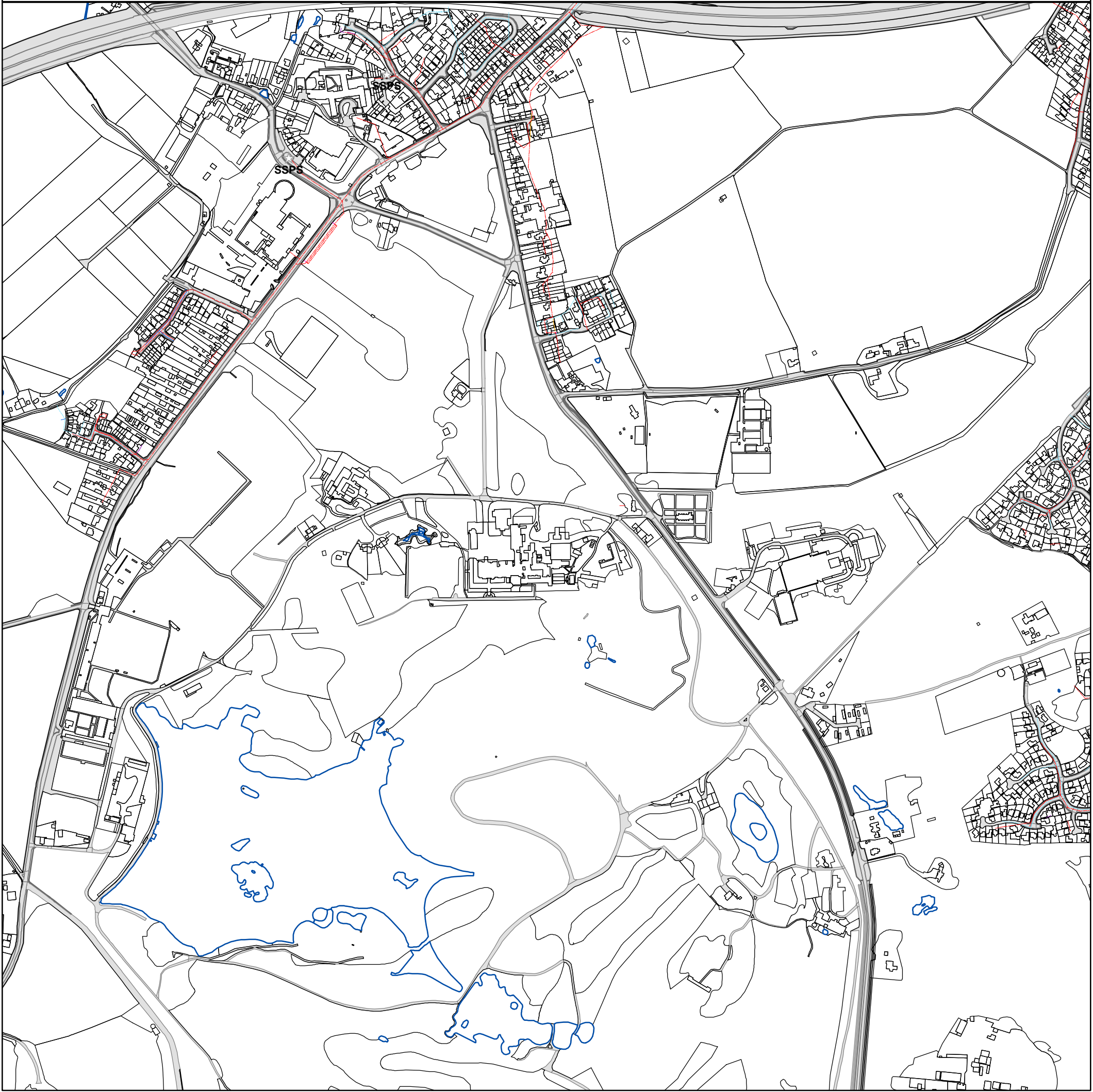
The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 477780,169097

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
911A	n/a	n/a
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.		



The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

Scale: 1:7161
Width: 2000m
Printed By: ASuji
Print Date: 04/11/2024
Map Centre: 477780,169097
Grid Reference: SU7769SE

Comments:



Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

	Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Storm Sewer
	Sludge Sewer
	Foul Trunk Sewer
	Surface Trunk Sewer
	Combined Trunk Sewer
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Vacuum
	Thames Water Proposed
	Vent Pipe
	Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer		Culverted Watercourse
	Proposed		Decommissioned Sewer
	Content of this drainage network is currently unknown		Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve		Meter
	Dam Chase		Vent
	Fitting		

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Ancillary		Drop Pipe
	Control Valve		Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Inlet		Outfall
	Undefined End		

Other Symbols

Symbols used on maps which do not fall under other general categories.

	Change of Characteristic Indicator		Public / Private Pumping Station
	Invert Level		Summit

Areas

Lines denoting areas of underground surveys, etc.

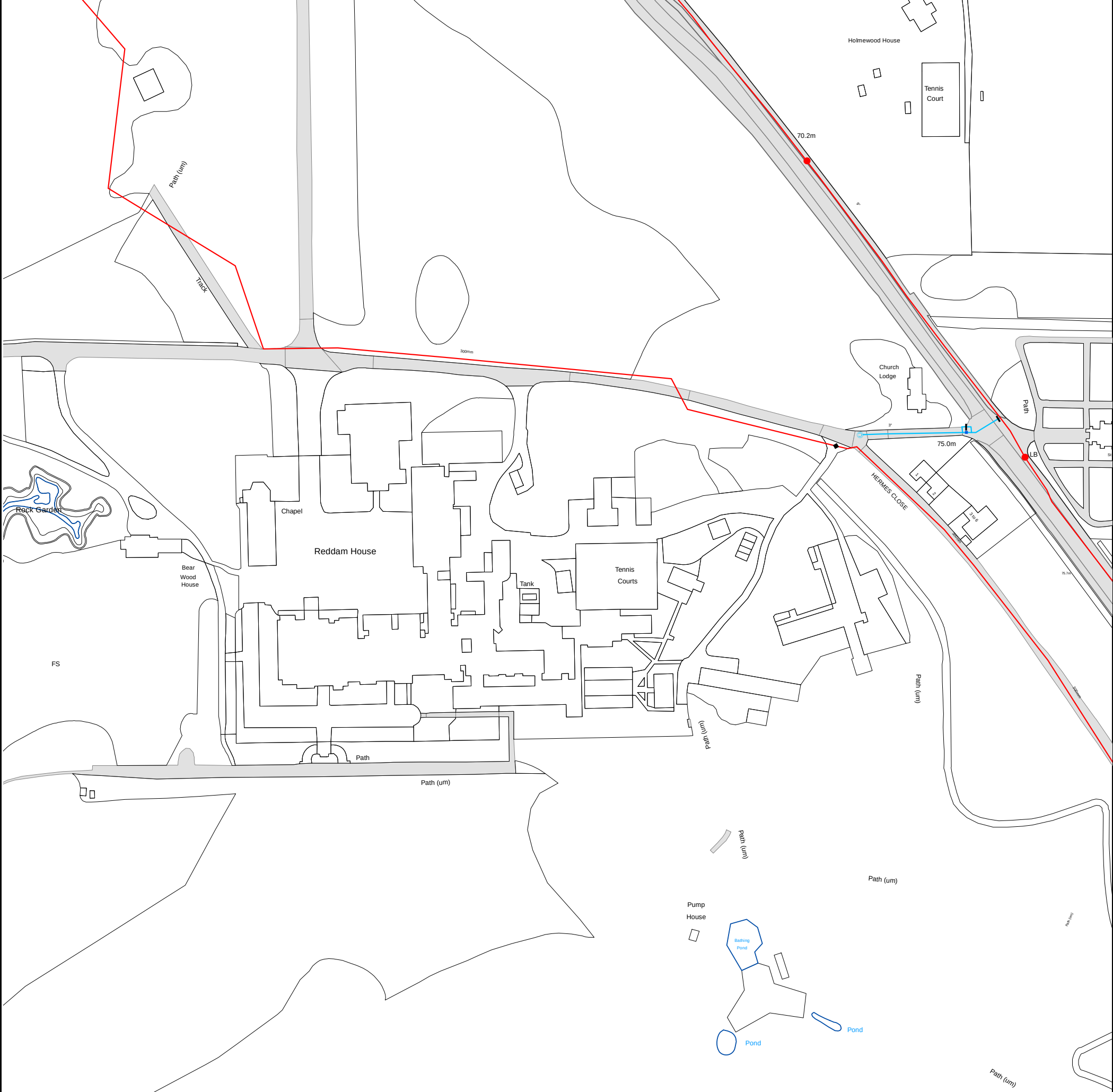
	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement	Ducts may contain high voltage cables. Please check with Thames Water.
	Conduit Bridge	
	Subway	
	Tunnel	

5) 'na' or '0' on a manhole indicates that data is unavailable.

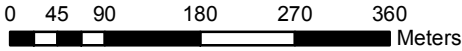
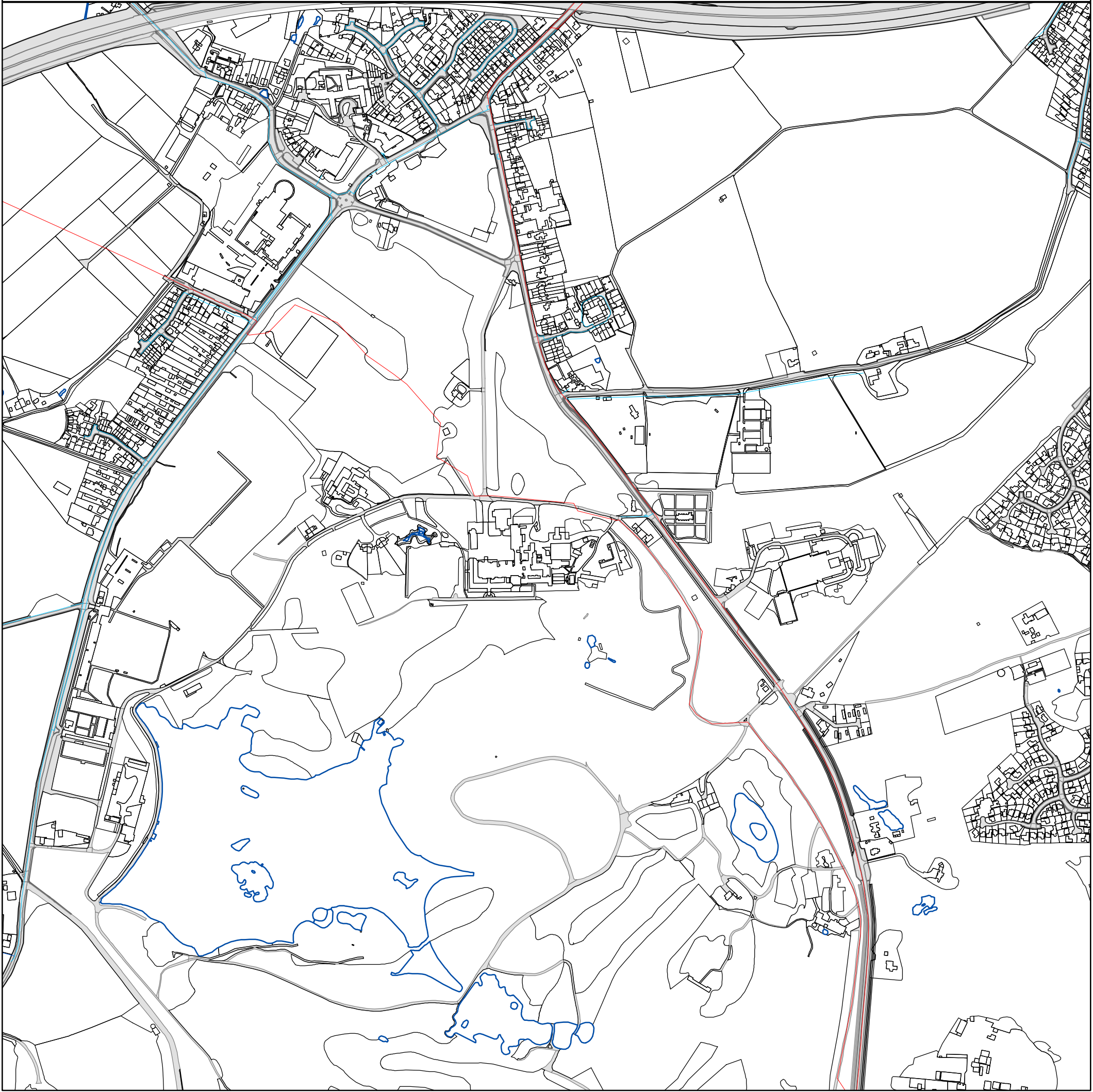
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 477780, 169097.

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.



The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

Scale: 1:7161
Width: 2000m
Printed By: ASuji
Print Date: 04/11/2024
Map Centre: 477780,169097
Grid Reference: SU7769SE

Comments:



Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

- 4"** **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 16"** **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 3" SUPPLY** **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 3" FIRE** **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 3" METERED** **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger
- Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

Other Water Pipes (Not Operated or Maintained by Thames Water)

- Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
- Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Appendix C – Existing Brownfield Runoff Calculations

Modified Ration Method for Brownfield Runoff
Project Number: 2240251
Project Name: Reddam Boarding House
Date: 06/11/2024

$Q = 2.78 \times C_v \times C_r \times I \times A$

Q = flow rate (l/s)
Cv = Volumetric Runoff Coefficient
Cr = Routing Coefficient
I - Rainfall intensity
A = Area (Ha)

Under summer rainfall conditions Cv ranges from 0.6 - 0.9, for fully impermeable areas value of 0.75 should be used.

The routing coefficieint varies between 1 and 2 and accounts for the effect of rainfall characterisits and catchment shape on the peak runoff magnitude
The SuDS manual recoomends a fixed value for Cr of 1.3 for design.

Rainfall intensity is calculated following Walling Procedure Volume 4 and is as follows:

1.0

Determination of M5-60 min and r

60 minute, 5 year storm (M5-60) has a rainfall depth
M5-60 20.000
Ratio r 0.4

2.0

Determination of M5-D

M5-D = Z1 (M5-60min)
Z1 is taken from A3.a or A.3b for values between 0.12 and 0.45 and for durations between 5 minutes and 48 hours read to 0.01.

Assuming 1yr 15min, 30yr 15 min, 100yr 15min

Z1 0.64
M5-15 12.8 mm

3.0

Determination of MT-D

MT-D is obtained from the relationship:
MT-D = Z2(M5-D)

Taken from Table A1 for 1yr return period 15min storm	Taken from Table A1 for 30yr return period 15min storm	Taken from Table A1 for 100yr return period 15min storm
Z2 = 0.62	Z2= 1.56	Z2= 1.99
M1-15= 7.9	M30-15= 20.0	M100-15= 25.5

4

Determination of point rainfall intensities

i= 31.744 mm/hr	i= 79.872 mm/hr	i= 101.888 mm/hr
-----------------	-----------------	------------------

5

Application of areal reduction factor

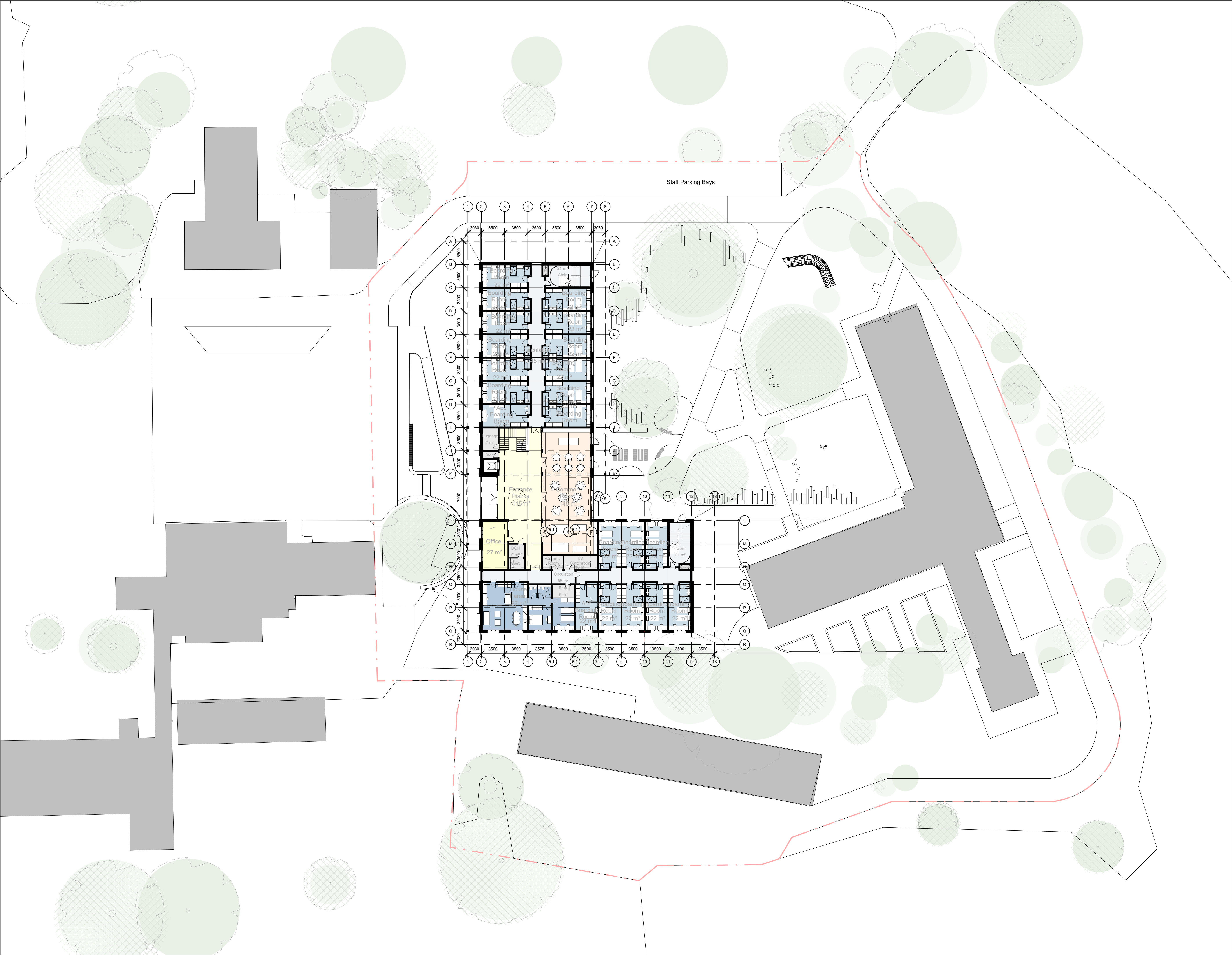
From chart A4 where area is greater than 1km2
ARF= 1

Average 1yr intensity 31.7	Average 30yr intensity 79.9	Average 100yr intensity 101.9	Average 100yr+40% intensity 142.6
-------------------------------	--------------------------------	----------------------------------	--------------------------------------

Area (Ha) 0.0242

Storm Return Period	Existing Discharge (L/S)
1yr	2.1
30yr	5.2
100yr	6.7
100yr+40%	9.4

Appendix D – Proposed Development Plans



HAPTIC

Royce Studios, Unit 2 23-41 Wenlock Road London N1 7SG

+44 (0) 207 099 2933 studio@hapticarchitects.com
www.hapticarchitects.com

General Notes:

- Do not scale off this drawing.
- Use figured dimensions only.
- All dimensions to be verified prior to the commencement of any work or the production of any shop drawing.
- All omissions and discrepancies to be reported to the Architect immediately.
- This drawing is to be read in conjunction with all related Architect's and Engineer's drawings and any other relevant information.

Key

- Site Boundary
- Boarding
- BOH
- Circulation
- Circulation - Private
- Common Spaces
- House Parent
- Kitchen
- Parking
- Plant
- Staff

revision	date	by	appr	description
Key Plan				

Client

Inspired Education

Project Name

Reddam House - New Boarding

Project Address

Reddam House, Berkshire, RG41 5BG

Design Stage

Concept Design

Drawing Title

GA Plan - Ground Floor

Scale	Sheet Size	Date
1 : 250	A1	19/12/2024
1 : 500	A2	

Drawn	Checked	Approved
SAR	LBE	SGR

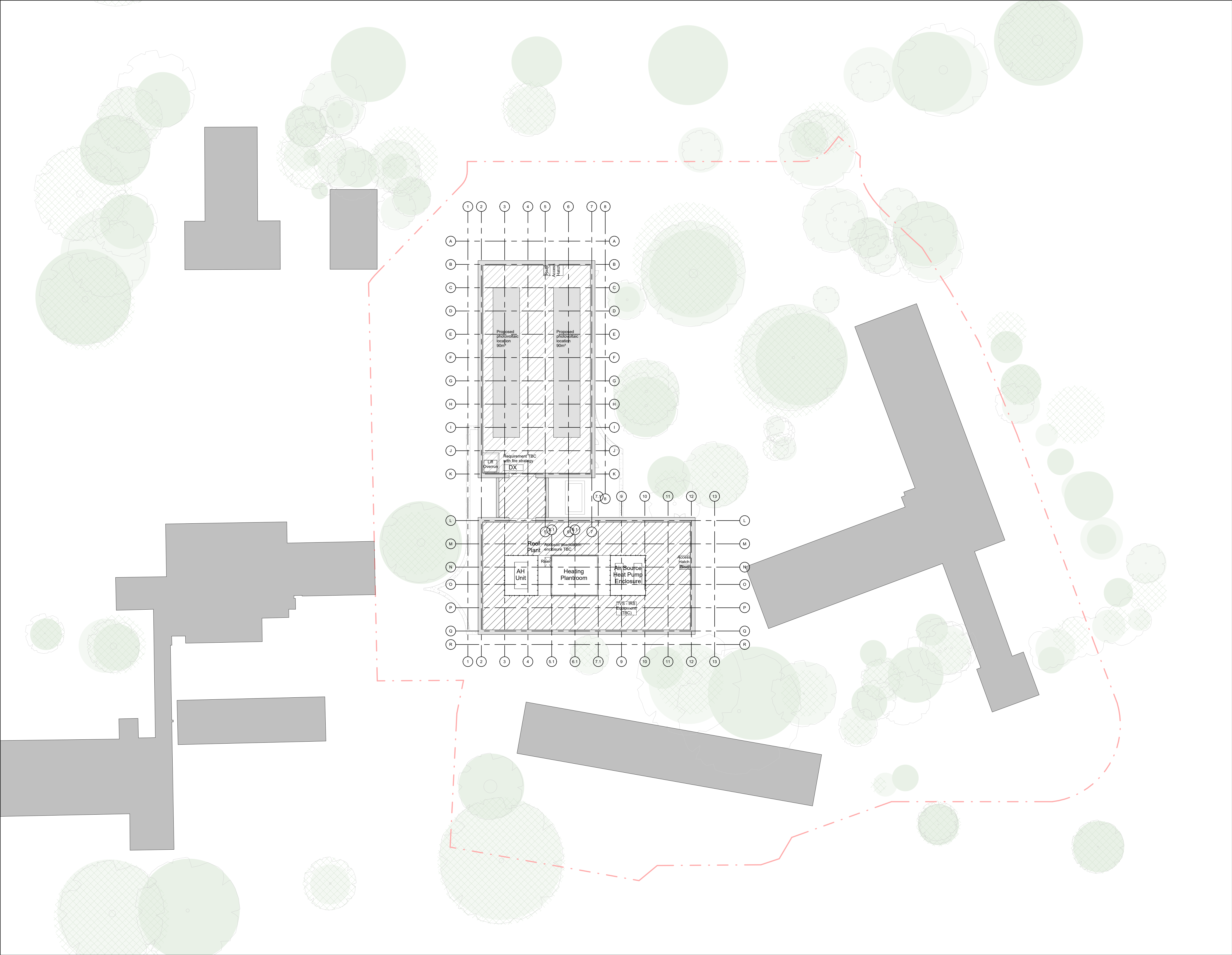
Revision

13/12/2024 12:57:47

For Planning

Drawing No.

RDH - HAP - ZZ - 00 - DR - A - PL11000



HAPTIC

Royle Studios, Unit 2 23-41 Wenlock Road London N1 7SG
+44 (0) 207 099 2933 studio@hapticarchitects.com
www.hapticarchitects.com

General Notes:

- Do not scale off this drawing.
- Use figured dimensions only.
- All dimensions to be verified prior to the commencement of any work or the production of any shop drawing.
- All omissions and discrepancies to be reported to the Architect immediately.
- This drawing is to be read in conjunction with all related Architect's and Engineer's drawings and any other relevant information.

Key

--- Site Boundary

revision	date	by	appr	description
Key Plan				

Client
Inspired Education

Project Name
Reddam House - New Boarding

Project Address
Reddam House, Berkshire, RG41 5BG

Design Stage
Concept Design

Drawing Title
GA Plan - Roof

Scale	Sheet Size	Date
1 : 250	A1	19/12/2024
1 : 500	A2	

Drawn SAR Checked LBE Approved SGR
Revision 13/12/2024 13:04:50
Drawing No. RDH - HAP - ZZ - RF - DR - A - PL11002



- GENERAL NOTES:
1. ALL DIMENSIONS AND LEVELS SHALL BE CHECKED ON SITE PRIOR TO CONSTRUCTION WORK COMMENCING.
 2. ALL LANDSCAPE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND SPECIFICATIONS.
 3. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE LANDSCAPE SPECIFICATION.
 4. ANY DISCREPANCY CONCERNING THE DRAWINGS SHOULD BE REFERRED TO THE CA IMMEDIATELY.
 5. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE
 6. ALL LEVELS IN METRES.
 7. DO NOT SCALE OFF THIS DRAWING.
 8. EXISTING SERVICE ALIGNMENTS SHALL BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION WORK COMMENCING.

Site Area

Existing Trees Retained with Root Protection Area
Refer to Tree Survey for further information

Existing Trees Removed
Refer to Arboricultural Impact Assessment prepared by WSP for further information

Levels
XX.XX Ext Existing Levels
XX.XX Proposed Levels
XX.XX FFL Finished Floor Levels

Existing Structures Removed

Existing Grassland Retained

Proposed New Trees

Proposed Shrub and Perennial Planting
Biodiverse species

Proposed Seating

Proposed New Paving to Public areas

Proposed Bark Mulch
to alleviate compaction within the RPA

Pot	17.12.2024	For Planning		GJ	RB
Rev	Date	Description		Drawn	Ch'd

B **BD Landscape Architects**

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GLOUCESTERSHIRE, GL20 5NX
REGISTERED IN ENGLAND, NO.6739137

CLIENT	Inspired
PROJECT	Reddam House
TITLE	Landscape Plan

Status: Planning	Drawn: GJ	Checked: RB
Date: 1:250 @ A1	Date: 07.10.2024	Approved: RB

Drawing & Revision Number:
0363-BDL-XX-XX-DR-L-0001-P01

KEY:

- 1 Gravel margins incorporated along the edges of the canopy structure.
- 2 Biodiverse Green Roof over 1st Floor Canopies
- 3 'Blue Roof' rainwater attenuation system at Roof level

