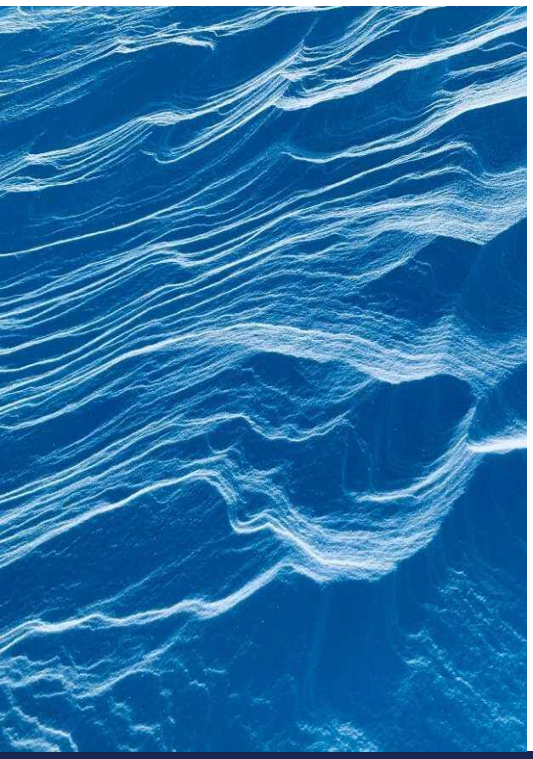

Surface and Water Drainage Strategy
AEG9097_UB10_Hillingdon_05

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water, civils and environment

Site Address: 42 The Larches
Uxbridge
London Borough of Hillingdon
UB10 0DL

UK Experts in Flood Modelling, Flood Risk Assessments, and Surface Water Drainage Strategies

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Document Issue Record

Project: Surface Water Drainage Strategy

Prepared for: SMA Studio Barnet Ltd

Reference: AEG9097_UB10_Hillingdon_05

Site Location: 42 The Larches, Uxbridge, London Borough of Hillingdon, UB10 0DL

Issue	Date	Author	Check	Auth.	Comments
1.0	28/11/2025	Jack Allen	JC	OH	First issue

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1. Introduction

1.1. Aegaea were commissioned by SMA Studio Barnet Ltd to undertake a Surface Water Drainage Strategy (SWDS) to discharge planning condition 8 attached to the planning application (Ref: 9197/APP/2025/239). Planning Condition 8;

> *Prior to commencement of the hereby approved development, (excluding demolition and site clearance) a scheme for the provision of sustainable water management shall be submitted to, and approved in writing by the Local Planning Authority. The scheme shall clearly demonstrate how the approved development will incorporate sustainable urban drainage (SuDs) in accordance with the hierarchy set out in Policy 5.13 of the London Plan and will:*
>
> *i. provide information on all SuDs features including the method employed to delay and control the surface water discharged from the site and:*
>
> *ii. provide a management and maintenance plan for the lifetime of the development of arrangements to secure the operation of the scheme throughout its lifetime. Including appropriate details of Inspection regimes, appropriate performance specification.*
>
> *The scheme shall also demonstrate the use of methods to minimise the use of potable water through water collection, reuse and recycling and will:*
>
> *iii. provide details of water collection facilities to capture excess rainwater; and how water usage will be reduced in the development.*
>
> *Thereafter the development shall be implemented and retained/maintained in accordance with these details for as long as the development remains in existence.*
>
> *REASON*
>
> *To ensure that surface water runoff is controlled to ensure the development does not increase the risk of flooding and is to be handled as close to its source as possible and Conserve water supplies in compliance with: Hillingdon Local Plan: Part 1- Strategic Policies Policy EM6 Flood Risk Management in (2012), Hillingdon Local Plan Part 2 Development Management Policies Policy DMEI 10 Water Management,*

Efficiency and Quality (2020), as well as relevant SuDs guidance contained within the London Plan (2021) and NPPF (2024).

1.2. The calculations and information contained within this report seek to address Condition 8 outlined by Hillingdon Council, as such the level of detail included is commensurate and subject to the nature of the proposals.

Site Overview

1.3. The site of the proposed development is 42 The Larches, Uxbridge, London Borough of Hillingdon, UB10 0DL (Figure 1).

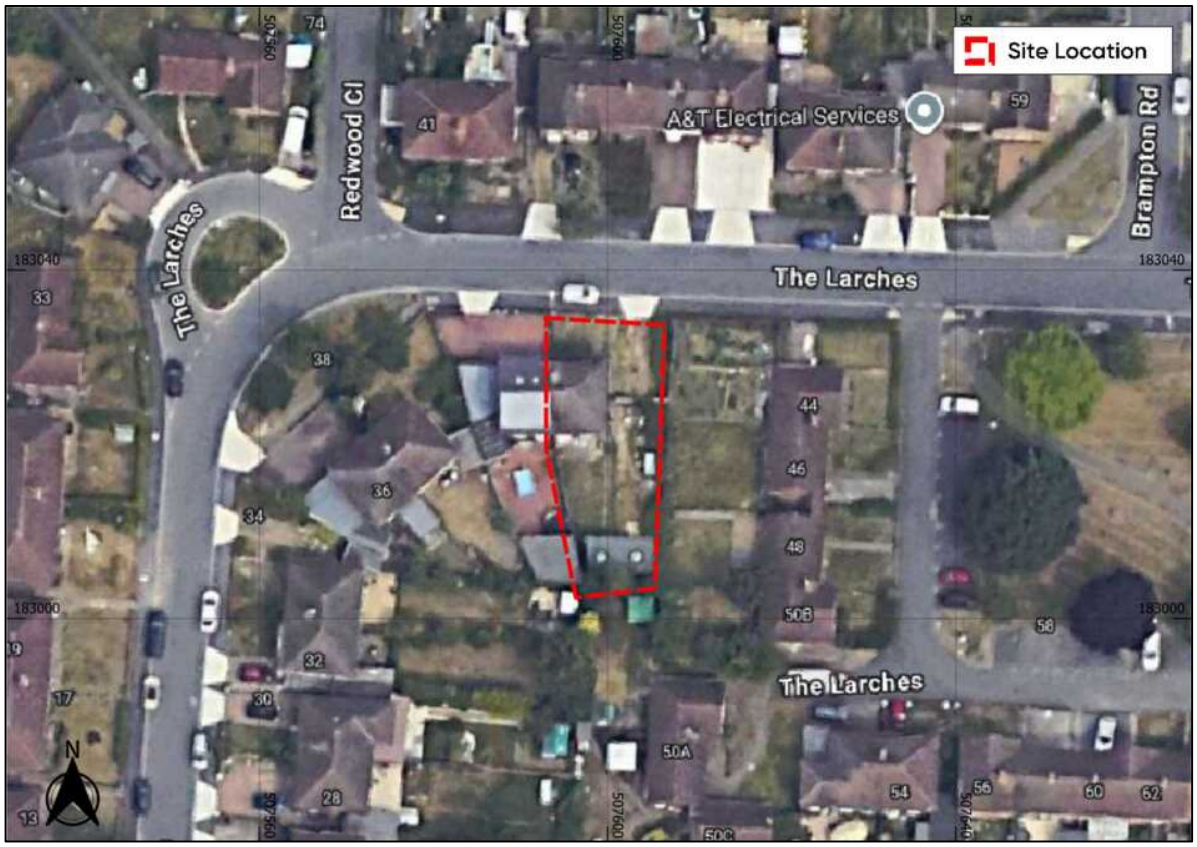


Figure 1: Site Location (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

1.4. The client has planning permission for the demolition of rear outbuilding and erection of a double storey side extension to form a new house with associated bin and cycle stores and separation of rear garden for private amenity space. The development proposals will be included in this report as Appendix A.

1.5. In the absence of a topographical survey, Environment Agency Light Detection and Ranging (LiDAR) data Digital Terrain Model has been used to review the topography of the site (Figure 2). According to the LiDAR data the minimum ground elevation on site is approximately 56.48m Above Ordnance Datum (AOD) to approximately 56.83m AOD.

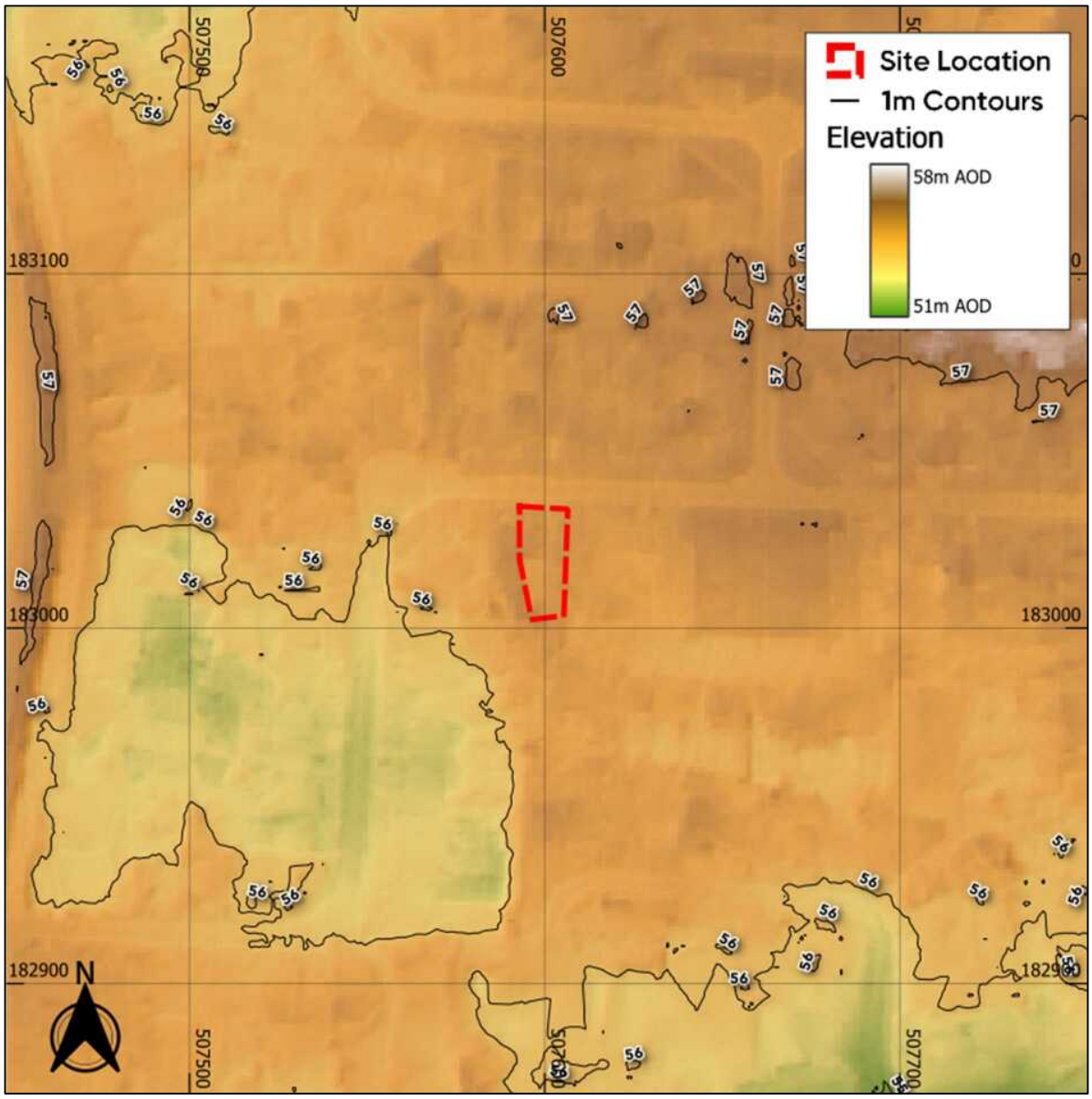


Figure 2: Site Topography (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

1.6. Hillingdon Council is the Local Planning Authority (LPA) for the site and also the designated Lead Local Flood Authority (LLFA). The site sits within the Environment Agency's Thames region. Thames Water is the water and sewerage provider for the area.

2. Surface Water Drainage Strategy

Surface Water Drainage Hierarchy

2.1. In accordance with the SuDS management train approach, the use of various SuDS measures to reduce and control surface water flows have been considered in detail for the development in Table 1 overleaf. The management of surface water has been considered in respect to the SuDS hierarchy below, as detailed in the London Plan.

Table 1: SuDS Drainage Hierarchy

SuDS Drainage Hierarchy				
			Suitability	**Comment**
	1.	**Collection for non-potable use**	✓	Water butts should be installed beneath downpipes for non-potable uses across the site.
	2.	**Infiltration**	x	Infiltration drainage will not be possible due to a lack of space on site. Infiltration features are required to have a minimum of a 5m easement from any building footprint and 2.5m from any site/ plot boundary (in accordance with Building Regulations Part H). As such, it will not be possible to provide sufficient attenuation whilst maintaining these easements.
	3.	**Discharge to surface waters**	x	There are no watercourses within the vicinity of the site.
	4.	**Discharge to surface water sewer, highway drain or similar**	✓	It is proposed that this strategy utilises the surface water sewer beneath The Larches.
	5.	**Discharge to combined sewer**	x	Discharge to surface water sewers is the preferred method of discharge.

2.2. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, it is proposed that the surface water runoff from the development is discharged into a surface water sewer.

2.3. The potential for the use of various SuDS has been considered and optimised in the design, as per Table 2.

Table 2: SuDS Components Suitability Summary Table

SuDS Component	Description	Constraints and Opportunities	Suitable?
1. Infiltrating SuDS	Infiltration can contribute to reducing runoff rates and volumes while supporting baseflow and groundwater recharge processes. The suitability and infiltration rate depends on the permeability of the surrounding soils.	Infiltration drainage will not be possible due to a lack of space on site. Infiltration features are required to have a minimum of a 5m easement from any building footprint and 2.5m from any site/ plot boundary (in accordance with Building Regulations Part H). As such, it will not be possible to provide sufficient attenuation whilst maintaining these easements.	No
2. Filter Drains and Filter Strips	Filter drains are shallow trenches filled with stone gravel that create temporary subsurface storage for the attenuation, conveyance and filtration of surface water runoff. Filter strips are uniformly graded and gently sloping strips of grass or dense vegetation, designed to treat runoff from adjacent impermeable areas by promoting sedimentation, filtration and infiltration.	Filter drains are not proposed in this strategy	No
3. Permeable Pavement	Pervious surfaces can be used in combination with aggregate sub-base and/or geocellular/modular storage to attenuate and/or infiltrate runoff from surrounding surfaces and roofs. Liners can be used where ground conditions are not suitable for infiltration.	The patio and driveway are proposed to be constructed using lined permeable paving.	Yes
4. Green & Blue Roofs	Green Roofs provide areas of visual benefit, ecological value, enhanced building performance and the	There are no flat roofs included as part of the proposed development.	No

SuDS Component	Description	Constraints and Opportunities	Suitable?
	reduction of surface water runoff. They are generally more costly to install and maintain than conventional roofs but can provide many long-term benefits and reduce the on-site storage volumes.		
5. Rainwater Harvesting (RWH)	Rainwater Harvesting is the collection of rainwater runoff for use. It can be collected from roofs or other impermeable areas, stored, treated (where required) and then used as a supply of water for domestic, commercial and industrial properties.	Rainwater harvesting should be utilised in a water butt.	Yes
6. Swales	Swales are designed to convey, treat and attenuate surface water runoff and provide aesthetic and biodiversity benefits. They can replace conventional pipework as a means of conveying runoff; however, space constraints of some sites can make it difficult incorporating them into the design.	There is not space on site for swales.	No
7. Rills and Channels	Rills and Channels keep runoff on the surface and convey runoff along the surface to downstream SuDS components. They can be incorporated into the design to provide a visually appealing method of conveyance. They also provide effectiveness in pre-treatment removal of silts.	Rills and channels are not required.	No

SuDS Component	Description	Constraints and Opportunities	Suitable?
8. Bioretention Systems	Bioretention systems can reduce runoff rates and volumes and treat pollution through the use of engineer soils and vegetation. They are particularly effective in delivering interception but can also be an attractive landscape feature whilst providing habitat and biodiversity.	Raised planters should be installed on rainwater downpipes to provide attenuation and treatment benefits.	Yes
9. Retention Ponds and Wetlands	Ponds and Wetlands are features with a permanent pool of water that provide both attenuation and treatment of surface water runoff. They enhance treatment processes and have great amenity and biodiversity benefits. Often a flow control system at the outfall controls the rates of discharge for a range of water levels during storm events.	There is not space on site for ponds and wetlands.	No
10. Detention Basins	Detention Basins are landscaped depressions that are usually dry, except during and immediately following storm events, and can be used as a recreational or other amenity facility. They are generally appropriate to manage high volumes of surface water from larger sites, such as a neighbourhood.	There is not space on site for detention basins.	No
11. Geocellular Systems	Attenuation storage tanks are used to create a below-ground void space for the temporary storage of surface	A geocellular subbase is proposed to supplement attenuation provided.	Yes

SuDS Component	Description	Constraints and Opportunities	Suitable?
	water before infiltration, controlled release or use. The inherent flexibility in size and shape means they can be tailored to suit the specific characteristics and requirements of any site.		
12. Proprietary Treatment Systems	Proprietary treatment systems are manufactured products that remove specific pollutants from surface water runoff. They are especially useful where site constraints preclude the use of other methods and can be useful in reducing the maintenance requirements of downstream SuDS.	Site is generally considered a low level of pollutant risk.	No

2.4. On review of the SuDS drainage options, it is proposed that the surface water runoff from the development is managed via geocellular storage and permeable paving. The geocellular storage will be provided as the subbase of the driveway permeable paving.

2.5. A water butt and two SuDS planters are proposed to supplement the attenuation provided in the geocellular tank but have not been accounted for in these calculations as a conservative approach.

2.6. The proposed Surface Water Drainage Layout is included as Appendix B. Construction details of the geocellular storage and permeable paving have been included in this report as Appendix C.

Infiltration Potential

2.7. The British Geological Survey's (BGS) mapping[1] shows superficial deposits of Black Park Gravel Member comprising sand and gravel underlying the site. The bedrock underlying the site is London Clay Formation comprising clay, silt and sand.

2.8. Soilscapes online mapping[2] tool which describes the soil in the area as being slowly permeable seasonally wet loamy and clayey soils, with "impeded drainage".

2.9. As such, infiltration is likely unfeasible on site.

2.10. **Furthermore, infiltration drainage will not be possible due to a lack of space on site. Infiltration features are required to have a minimum of a 5m easement from any building footprint and 2.5m from any site/ plot boundary (in accordance with Building Regulations Part H). As such, it will not be possible to provide sufficient attenuation whilst maintaining these easements.**

Nearby Watercourses

2.11. There are no watercourses within the site or its vicinity. Therefore, it is not proposed to discharge surface water into a watercourse.

Public Sewers

2.12. Thames Water Asset maps have been provided and are included in this report as Appendix D and reproduced as Figure 3 below.

2.13. Figure 3 shows that there are separate surface and foul water sewers beneath The Larches adjacent to the site.

2.14. **It is proposed that this strategy utilises the surface water sewer beneath The Larches.**

[1] **https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/**

[2] **https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/**

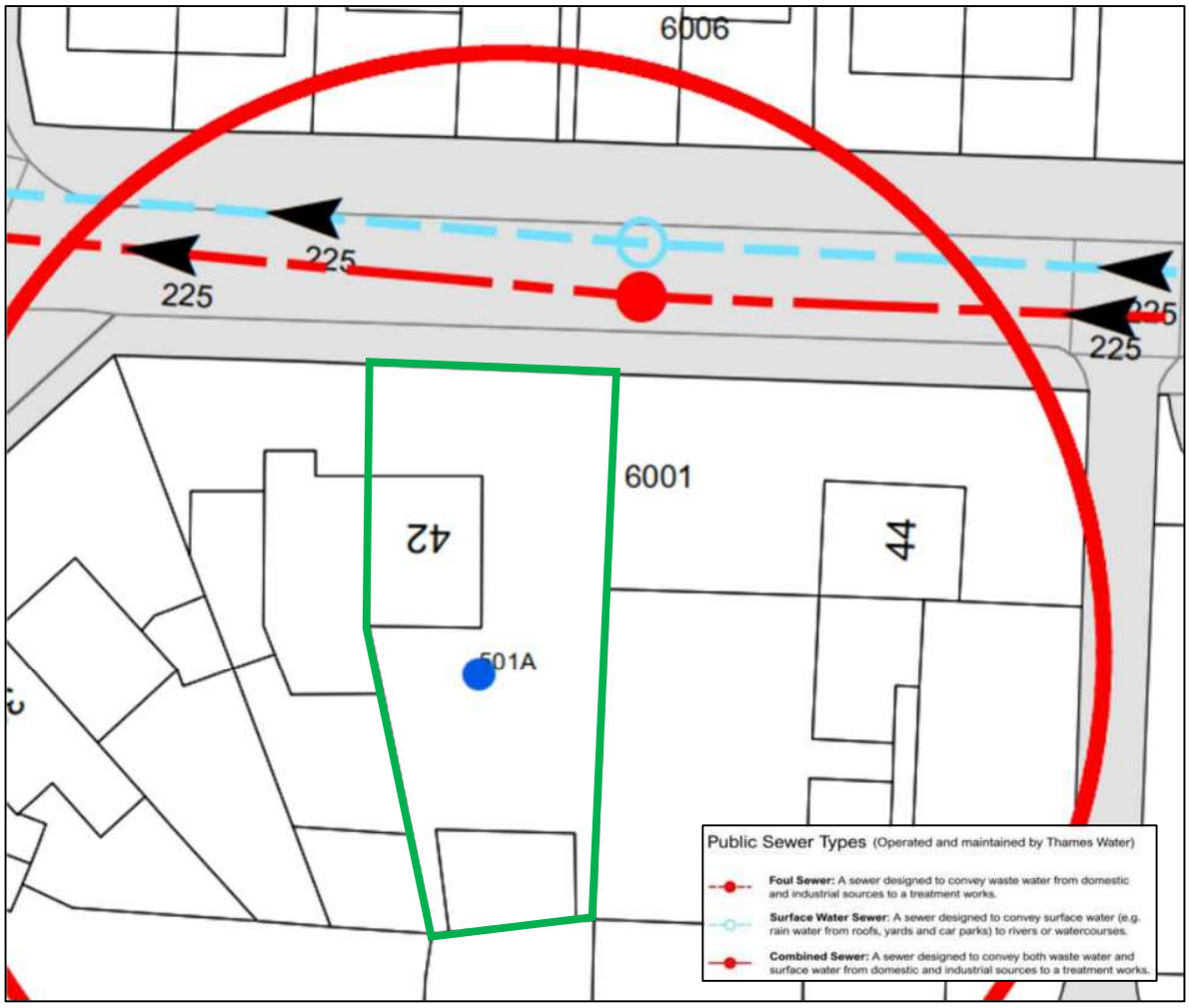


Figure 3: Thames Water Asset Map (Source: Thames Water) (Site in Green)

2.15. This strategy is subject to a capacity check and confirmation from Thames Water.

Existing and Proposed Runoff Rate

2.16. These calculations account for the proposed dwelling 42A only which has a total impermeable area of 140m^2 (0.014ha), which includes all roof areas and hardstanding surfaces.

2.17. The remaining areas within the site boundary are understood to be comprised of soft landscaping/garden areas or the existing dwelling and are therefore proposed to drain as per the existing scenario and have been excluded from attenuation calculations.

2.18. To determine the required outflow rate for the proposed surface water drainage strategy, the greenfield runoff rate for the total proposed impermeable area of the site has been calculated using the IH124 method (via the ICP SuDS variation) within InfoDrainage Software v2025.5

2.19. The IH124 method was developed as part of the original Flood Studies Report (FSR) in 1975 and was devised to calculate runoff from small catchments by estimating the mean annual flood flow (Qbar) using the following equation:

$$Qbar_{rural} = 0.00108(0.1 \times AREA)0.89 \times SAAR1.17 \times SPR2.17\ m^3/s$$

Where:

$Qbar_{rural}$ is the mean annual flood flow from a rural catchment (approximately 2.3 year return period).

AREA is the area of the hardstanding surfaces in ha.

SAAR is the Standard Average Annual Rainfall for the period 1941 to 1970 in mm.

SPR is Standard Percentage Runoff coefficient for the SOIL category. The SOIL category is extracted from UK Winter Rainfall Acceptance Potential (WRAP) map.

2.20. The ICP SuDS variation is a scaled-down version of the IH124 runoff method for estimating peak flow rates from both undeveloped and partly urbanised catchments that are smaller than 50 ha in size, which is appropriate in this instance.

2.21. The parameters used for estimating the greenfield runoff rates for the site are presented in Table 3.

Table 3 IH124 ICP SuDS Input Parameters

Greenfield runoff rates from the site – simulation criteria	
Rainfall Data	FEH22
Area	0.014 Ha
SAAR	678
SOIL	0.3
Region	Region 6

2.22. Table 4 displays the estimated greenfield runoff rates for the proposed impermeable area of 0.014 Ha. A value of 0.0l/s is rounded down from 0.05l/s from InfoDrainage Software.

Table 4: Greenfield Runoff Rates

Return Period	Greenfield Runoff Rate
1 in 1 Year	0.0 l/s
QBAR (approx. 1 in 2.33 Year)	**0.0 l/s**
1 in 30 Year	0.1 l/s
1 in 100 Year	0.1 l/s

2.23. Due to the increased risk of blockage and sedimentation it will not be possible to discharge at the greenfield runoff rate, therefore, this strategy will seek to limit runoff rates as low as possible (0.9l/s) utilising an integrated orifice outflow at the outlet of the geocellular subbase outlet (modelled as a 40mm orifice flow control).

InfoDrainage Modelling and Results

2.24. A network model has been produced in InfoDrainage software (v2025.5).

2.25. The model comprises;

- 4no. contributing catchment area across the proposed development area representing the proposed roof areas of 0.014ha (including a 10% urban creep allowance for the roof area).
- 2no permeable paving units
    - Patio Permeable Paving: 33.5m^2 plan area, 250mm deep subbase (6-20mm clean crushed stone), 50mm paving layer depth, 30% porosity and a total storage volume of 2.5m^3. Flows are restricting to 0.2l/s via a 70mm orifice before discharging into the geocellular subbase.
    - Driveway Permeable Paving: 47m^2 paving plan area (16m^2 geocellular subbase plan area), 400mm deep subbase (geocellular crates), 50mm paving layer depth, 95% porosity and a total storage volume of 6.08m^3. Flows restricted to 0.9l/s with a 40mm orifice plate before discharging into the public sewer.
- 1no inspection chamber
    - IC1: Taking flows from the south roof area, discharging into the geocellular subbase.

2.26. The Environment Agency Peak Rainfall Climate Change Allowance guidance was reviewed and subsequently the DEFRA Peak Rainfall Allowances Map was assessed to determine appropriate climate change allowances to inform the surface water drainage strategy. The upper end allowances for the Colne Management Catchment have been used for both the 1% and 3.3% annual exceedance probability events for the 2070s epoch (2061 to 2125 – 40% and 35% respectively for the 1% and 3.3% events).

2.27. The system is designed to manage runoff from up to and including the 1 in 100 (+40% allowance for climate change) storm event.

2.28. Table 5 summarises the simulation criteria for the InfoDrainage model.

Table 5: Simulation Criteria

Catchment Area Simulation Parameters	
Rainfall Data	FEH22
Total Area	0.014 Ha (including a 10% urban creep allowance on the roof area)
Return Periods	2, 30, 30+35% for climate change, 100, 100 +40% for Climate Change. Summer and Winter
Storm Durations	15, 30, 60, 120, 240, 360, 480, 600, 720, 960, 1440
Volumetric Runoff Coefficient	1.0 (summer and winter storms)
Percentage Impervious	100%
Time of Concentration	5 minutes

InfoDrainage Results

2.29. The full calculation outputs can be found in Appendix E of this report although the 1in100year +40% climate change results have been summarised below:

- The maximum flow rate into the surface water sewer beneath The Larches would be 0.9l/s for the critical storm event (120 minute summer).
- The maximum depth in the 400mm deep geocellular storage subbase would be 0.352m for the critical storm event (120 minute summer).
- The maximum depth in the 250mm patio permeable paving subbase would be 227mm for the critical storm event (120 minute summer).
- No flooding is observed in the critical storm event based on the InfoDrainage model.

2.30. As such, these results indicate that the runoff from the proposed development could be accommodated within a drainage system of the approximate size modelled, with surface water runoff restricted to 0.9l/s.

2.31. Standard 2 of the latest (2025) National standards for sustainable drainage systems (SuDS)[3] states:

> *2.1 Apply a 'SuDS approach' so that at least the first 5mm of rainfall for the majority of rainfall events does not result in runoff from the site to surface waters or piped drainage systems.*
>
> *2.2 Evidence shall be provided that the approach to managing runoff from 'everyday' rainfall has been developed alongside and in support of the management of runoff quality (standard 4) and the delivery of amenity and biodiversity benefits (standards 5 and 6).*

2.32. Table 6 demonstrates that the permeable paving and SuDS planters have a design standard of protection of the 'first flush' (i.e. first 5mm of rainfall). Therefore, the proposed SuDS features are sized to provide adequate source control for the drained areas.

Table 6: Standard of protection first 5mm, 20mm, and 50mm of rainfall

Total Development Catchment: 140m²				
Design Standard	Design Rainfall (mm)	Volume Rainfall (m³)	Storage Capacity (m³)	Result
First Flush	5	0.7	9.18	✓
5 year	20	2.8	9.18	✓
100 year	50	7	9.18	✓

Water Quality

Pollution Hazard Indices

2.33. Runoff from the proposed roof areas is considered low contamination risk and does not usually warrant any significant treatment. According to the SuDS Manual Table 26.2[4], roofs have a low pollution hazard level with hazard indices for Total Suspended Solids, Metals, and Hydrocarbons of 0.2, 0.2, and 0.05, respectively (Table 7).

[3] **https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds**

[4] **https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=C753**

2.34. The hardstanding surfaces adjacent to the property are for pedestrians only and will therefore also have a low pollution hazard level. However, the driveway will have light traffic movement and therefore have a pollution hazard index for Total Suspended Solids, Metals, and Hydrocarbons of 0.5, 0.4, and 0.4, respectively.

Table 7: Pollutant Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Proposed roof and hardstanding surfaces	Very Low	0.2	0.2	0.05
Driveway	Low	0.5	0.4	0.4

SuDS Mitigation Indices

2.35. According to the CIRIA SuDS Manual Table 26.3 the mitigation indices for permeable paving for total suspended solids, metals and hydrocarbons is 0.7, 0.6, and 0.7 respectively. As such, any areas draining via permeable paving have sufficient treatment.

2.36. Any areas that do not drain via the permeable paving (such as roof areas) will drain via SuDS planters at the downpipes. According to the CIRIA SuDS Manual Table 26.3 the mitigation indices for SuDS planters for total suspended solids, metals and hydrocarbons is 0.8, 0.8, and 0.8 respectively (Table 8). Additionally, permeable paving has mitigation indices for total suspended solids, metals and hydrocarbons is 0.7, 0.7, and 0.5 respectively.

Table 8: Pollution Mitigation Indices

SuDS Feature	Total Suspended Solids (TSS)	Metals	Hydrocarbons
SuDS Planters	0.8	0.8	0.8
Permeable Paving	0.7	0.7	0.5

Maintenance

2.37. Table 9, 10 and 11 presents details regarding the maintenance requirements for the proposed SuDS included as part of the development, taken from the CIRIA C753 The SuDS manual. Each manufacturer will have bespoke requirements however the below should be used as a guide. All SuDS are to be maintained by the property owner.

Table 9: Geocellular Storage and Permeable Paving - Specific SuDS Maintenance Requirements (Source: CIRIA SuDS Manual)

Maintenance Schedule	Required Action	Typical Frequency
Geocellular Storage		
Regular Maintenance	Inspect and identify any area that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial Actions	Repair/ rehabilitate inlets, outlet, 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
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required
Permeable Paving		
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
Occasional Maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphospate applied directly into the weeks by an applicator rather than a sprayer	As required
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm 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 structure by remedial sweeping	Every 10 to 15 years 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, 48hr after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 10: Maintenance Requirements for Bioretention Systems

Maintenance Schedule	Required Action	Typical Frequency
Bioretention Systems		
Regular Maintenance	Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary	Quarterly
	Check operation of underdrains by inspection of flows after rain	Annually
	Assess plants for disease infection, poor growth, invasive species etc and replace as necessary	Quarterly
	Inspect inlets and outlets for blockage	Quarterly
	Remove litter and surface debris and weeds	Quarterly
	Replace any plants, to maintain planting density	As required
	Remove sediment, litter and debris build-up from around inlets or from forebays	Quarterly to biannually
Remedial Actions	Remove and replace filter medium and vegetation above	As required but likely to be > 20 years
Occasional Maintenance	Infill any holes or scour in the filter medium, improve erosion protection if required	As required
	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch	As required

Table 11: Specific SuDS Maintenance Requirements for Water Butt (Source: CIRIA SuDS Manual)

Maintenance Schedule	Required Action	Typical Frequency
Water Butts		
Regular Maintenance	Check inflow and overflows - Visually inspect the downpipe connections, filters/diverters (if used), tap/spigot, and overflow pipe.	Monthly (or quarterly, depending on surrounding trees)
	Gutter inspection - Check and clear the gutters above the downpipe that feeds the water butt	Monthly (or quarterly, depending on surrounding trees)
	Monitor water level - Check that the water butt is being used (emptied) and refilling naturally.	Monthly (or quarterly, depending on surrounding trees)
	Internal cleaning - Empty the water butt completely and disconnect it from the downpipe. Use a long-handled brush, warm water, and a mild, non-toxic detergent to scrub the interior walls. Rinse thoroughly.	Bi-Annual (Twice per Year)
	Tap/Spigot Check - Dismantle the tap/spigot (if possible) and clean it to ensure it is free of sediment and working smoothly.	Bi-Annual (Twice per Year)
	External Inspection - Check the butt for cracks, leaks, or signs of instability (is the base still level and secure?). Ensure the lid is tight.	Bi-Annual (Twice per Year)
Remedial Actions	If Water flow from the tap becomes very slow, or water has a strong odour. Perform the full Bi-Annual clean and focus on removing sludge from the bottom, which is the likely cause of the issue.	As required
	Before a period of prolonged frost is expected. Either drain the butt completely or leave the tap open slightly to allow any water freezing at the base to drain, preventing the plastic from cracking due to ice expansion.	As required
	After a heavy storm or periods of high leaf-fall. Clean any internal filters or first-flush diverters used in the system to ensure debris is not hindering flow into the butt.	As required

Designing for Exceedance

2.38. Exceedance events are those greater than the design rainfall event, i.e. greater than the 100 year rainfall event plus 40% increase for climate change.

2.39. Periods of exceedance occur when the rate of surface water runoff exceeds the drainage system capacity. Conveyance beneath ground cannot, generally, be economically or sustainably

constructed to the scale required for the most extreme rainfall events. This may result, on occasion, in the surface water runoff exceeding the capacity of the drainage network, with excess water (exceedance flow) being conveyed above ground.

2.40. For situations where extreme rainfall intensity exceeds inlet capacities, or for extreme storm events exceeding the design flood event considered for drainage design, exceedance flows should flow away from the buildings on site into the highway drainage systems (driveway permeable paving is to be laid with a slight fall away from the dwelling towards the highway or the garden).

3. Conclusions

3.1. Aegaea were commissioned by SMA Studio Barnet Ltd to undertake a Surface Water Drainage Strategy (SWDS) to discharge planning condition 8 attached to the planning application (Ref: 9197/APP/2025/239).

3.2. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, it is proposed that the surface water runoff from the development is discharged into a surface water sewer.

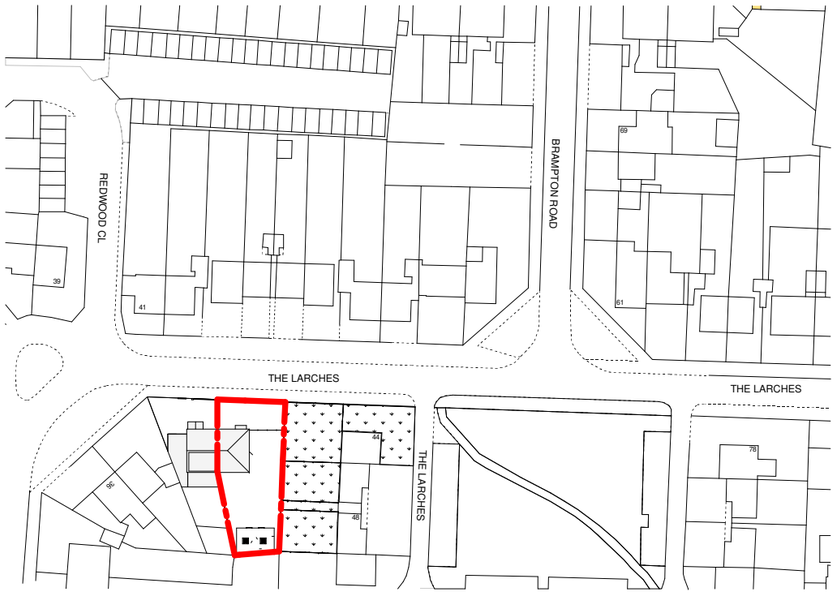
3.3. On review of the SuDS drainage options, it is proposed that the surface water runoff from the development is managed via geocellular storage and permeable paving. The geocellular storage will be provided as the subbase of the driveway permeable paving.

3.4. The full calculation outputs can be found in Appendix E of this report although the 1in100year +40% climate change results have been summarised below:

- The maximum flow rate into the surface water sewer beneath The Larches would be 0.9l/s for the critical storm event (120 minute summer).
- The maximum depth in the 400mm deep geocellular storage subbase would be 0.352m for the critical storm event (120 minute summer).
- The maximum depth in the 250mm patio permeable paving subbase would be 227mm for the critical storm event (120 minute summer).
- No flooding is observed in the critical storm event based on the InfoDrainage model.

3.5. As such, these results indicate that the runoff from the proposed development could be accommodated within a drainage system of the approximate size modelled, with surface water runoff restricted to 0.9l/s.

Appendix A - Development Proposals



1 LOCATION PLAN

1 : 1250

0m 25m 50m 75m 100m 125m

VISUAL SCALE 1:1250

DATE	REV	DESCRIPTION	CH'K	APP
11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS

PURPOSE OF ISSUE

PLANNING

SMA Design + Planning
www.smastudiolondon-barnet.com
f.shawkat@smastudiolondon.com

PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

SITE PLAN

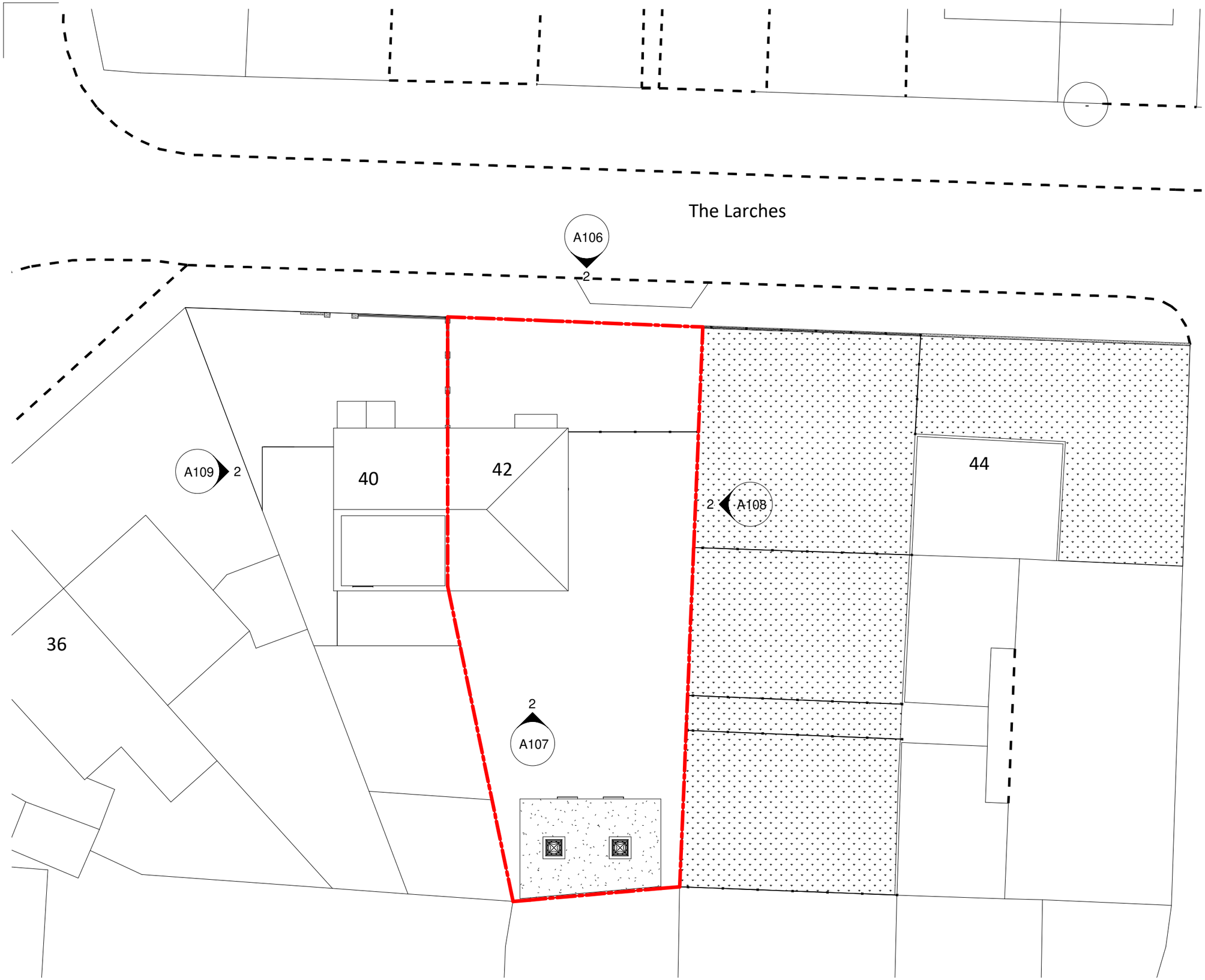
CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)
1 : 1250

DRAWING NUMBER	REV
A101	B



1 EXISTING BLOCK PLAN
1 : 200

DATE	REV	DESCRIPTION	CH'K	APP
11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS

PURPOSE OF ISSUE
PLANNING

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PROJECT
42 The Larches, Uxbridge
UB10 0DL

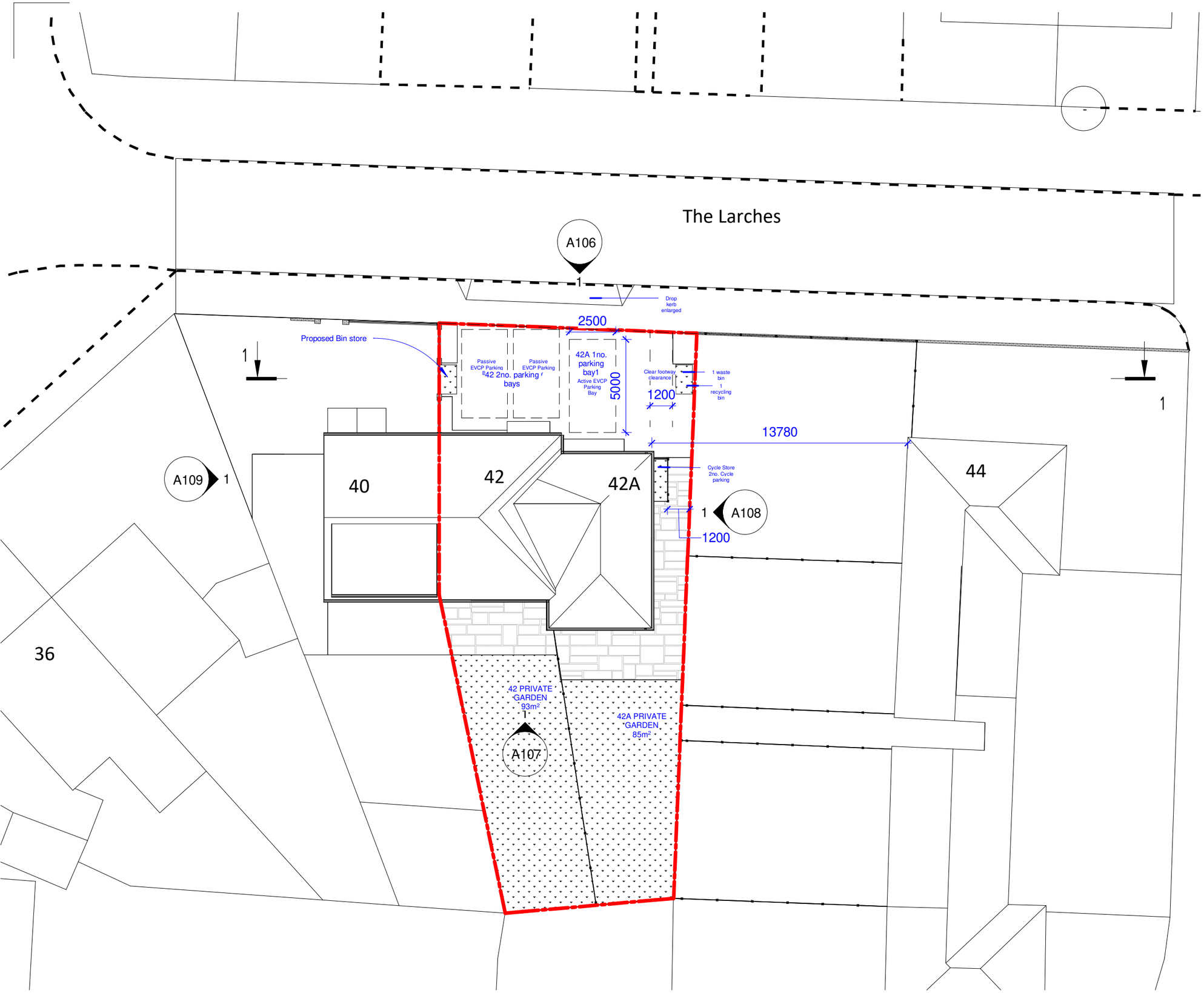
TITLE
EXISTING BLOCK PLAN

CLIENT
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)
1 : 200

DRAWING NUMBER	REV
A102	B



1 PROPOSED BLOCK PLAN

1 : 200

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

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TITLE

PROPOSED BLOCK PLAN

CLIENT

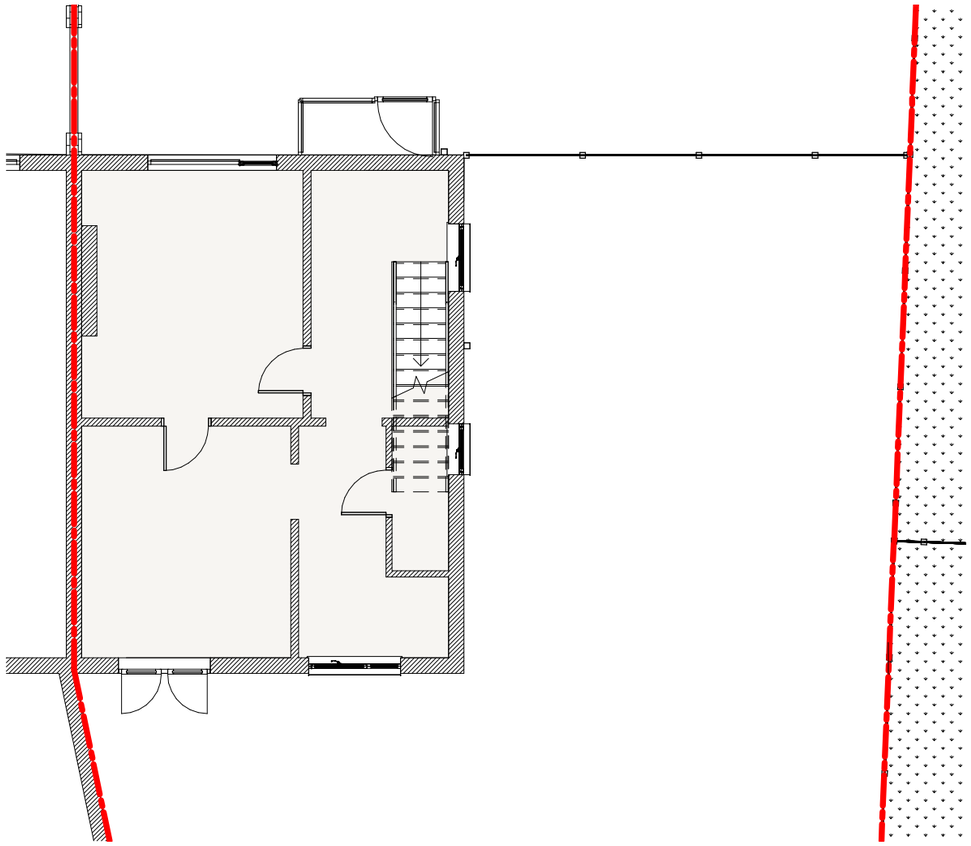
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

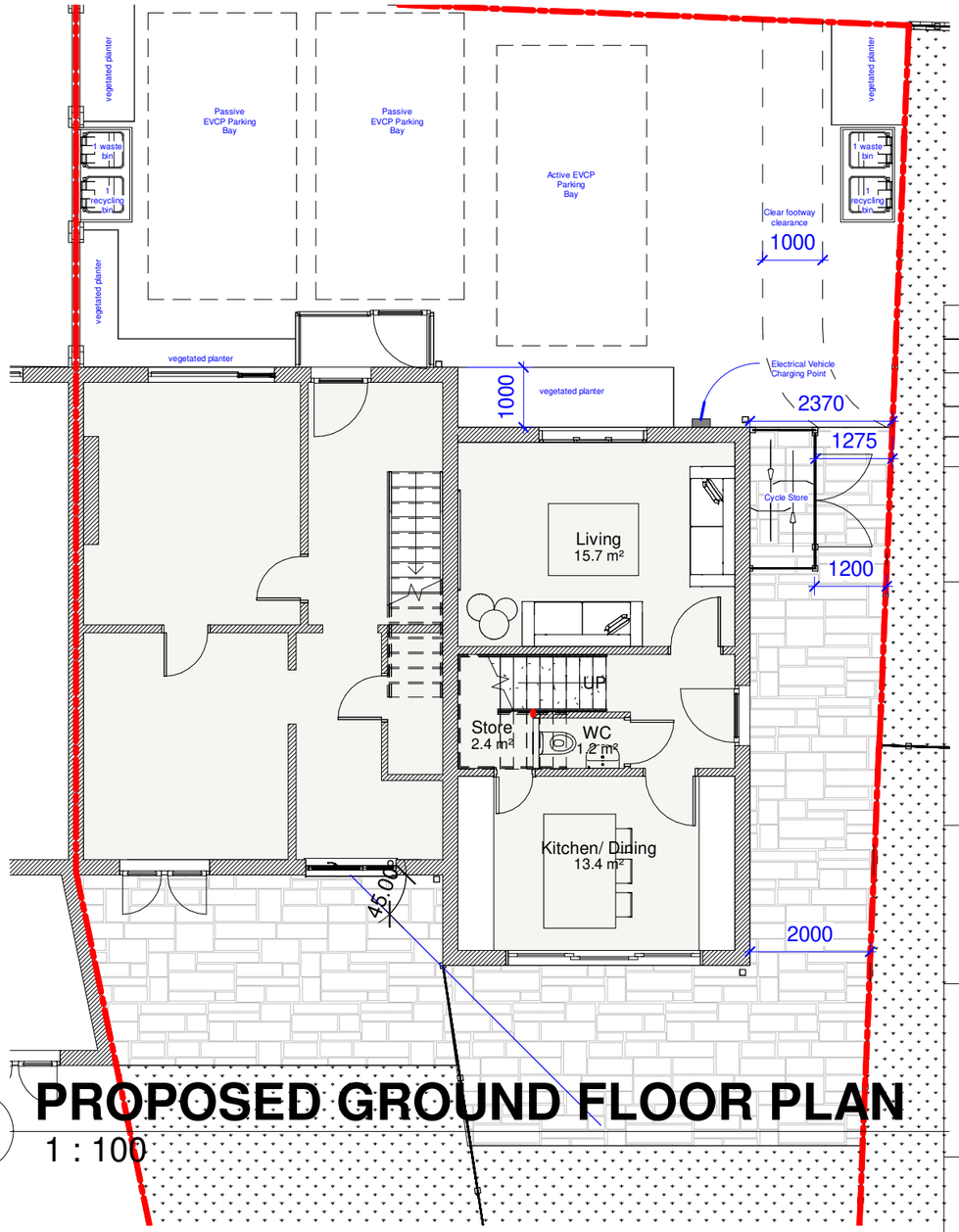
SCALE (@ A3)

1 : 200

DRAWING NUMBER	REV
A103	B



1 EXISTING GROUND FLOOR PLAN
1 : 100



2 PROPOSED GROUND FLOOR PLAN
1 : 100

No.42A
NEW SIDE HOUSE
GROUND FLOOR = 37m²
FIRST FLOOR = 35m²
Total = 72m²
GARDEN = 85m²

NDSS requirement for 2B 3P = 70m²

0 2 4 6 8m
1:200

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE
PLANNING

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PROJECT
42 The Larches, Uxbridge
UB10 0DL

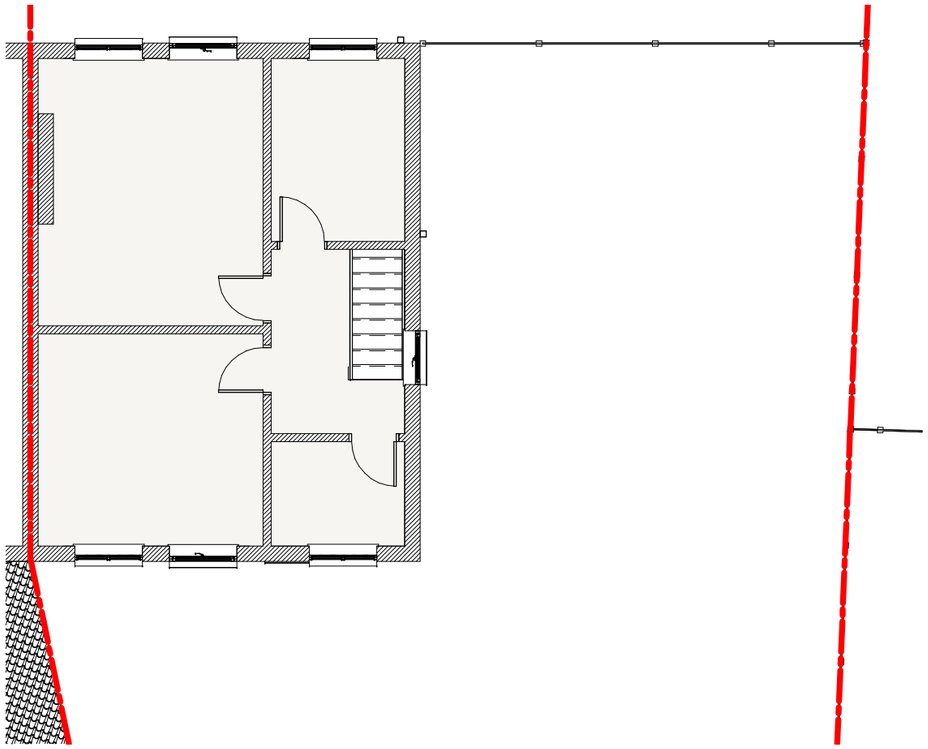
TITLE
GROUND FLOOR PLAN

CLIENT
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

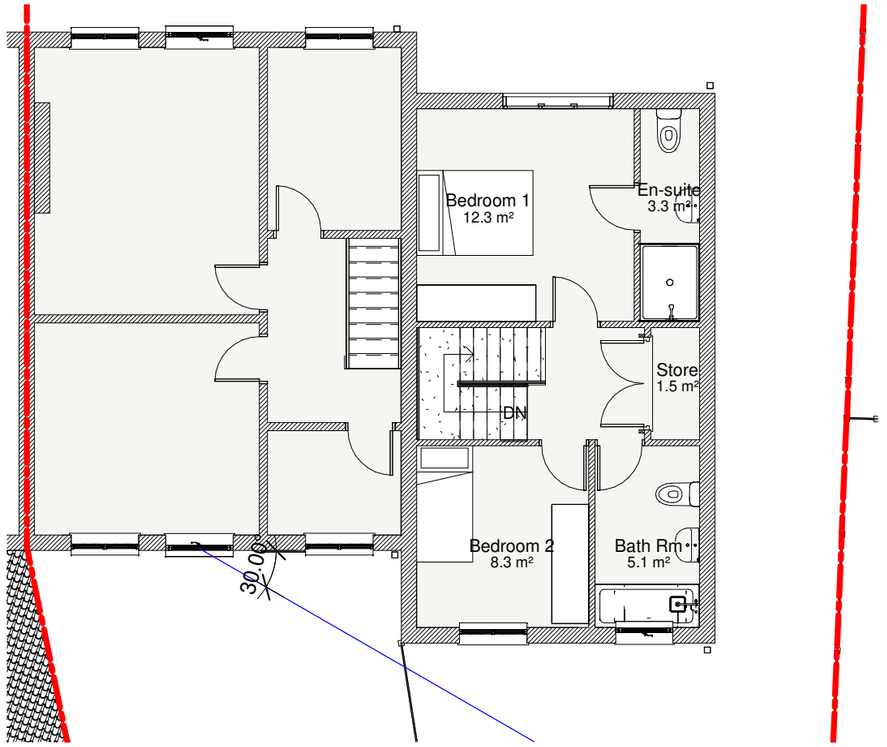
SCALE (@ A3)
1 : 100

DRAWING NUMBER	REV
A104	B



1 EXISTING FIRST FLOOR PLAN

1 : 100



2 PROPOSED FIRST FLOOR PLAN

1 : 100

No.42A
NEW SIDE HOUSE
GROUND FLOOR = 37m²
FIRST FLOOR = 35m²
Total = 72m²
GARDEN = 85m²

NDSS requirement for 2B 3P = 70m²

0 1 2 3 4m
1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE
PLANNING

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PROJECT
42 The Larches, Uxbridge
UB10 0DL

TITLE
FIRST FLOOR PLANS

CLIENT
Shoor Developments Ltd

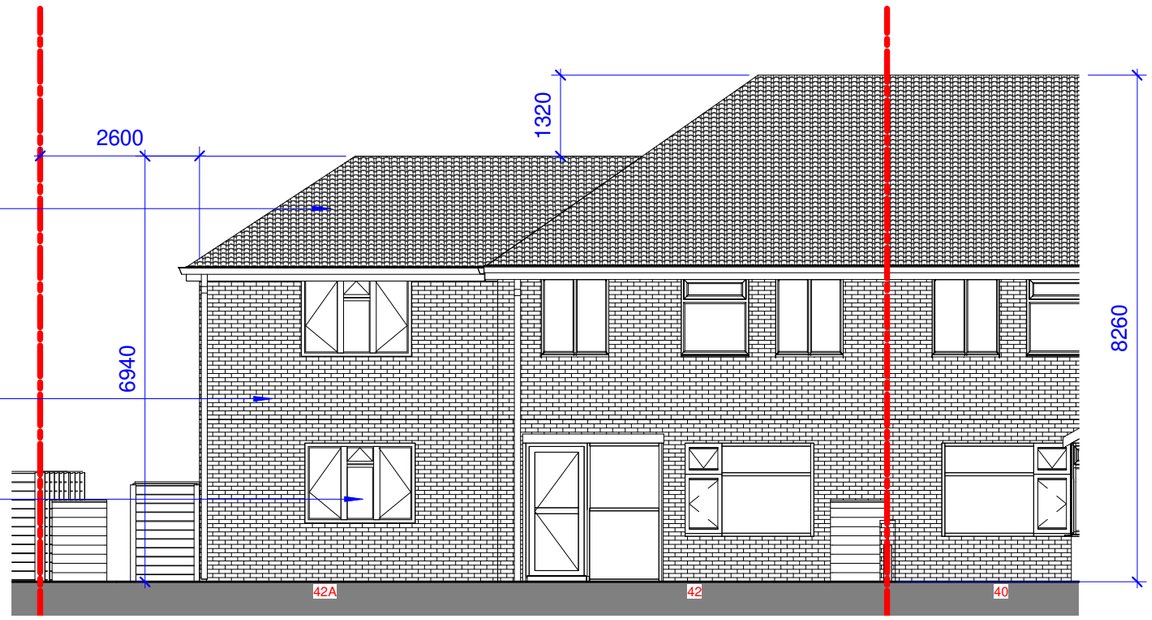
DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)
1 : 100

DRAWING NUMBER	REV
A105	B

2 EXISTING FRONT ELEVATION

1 : 100



1 PROPOSED FRONT ELEVATION

1 : 100

0 1 2 3 4m

1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

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UB10 0DL

TITLE

FRONT ELEVATIONS

CLIENT

Shoor Developments Ltd

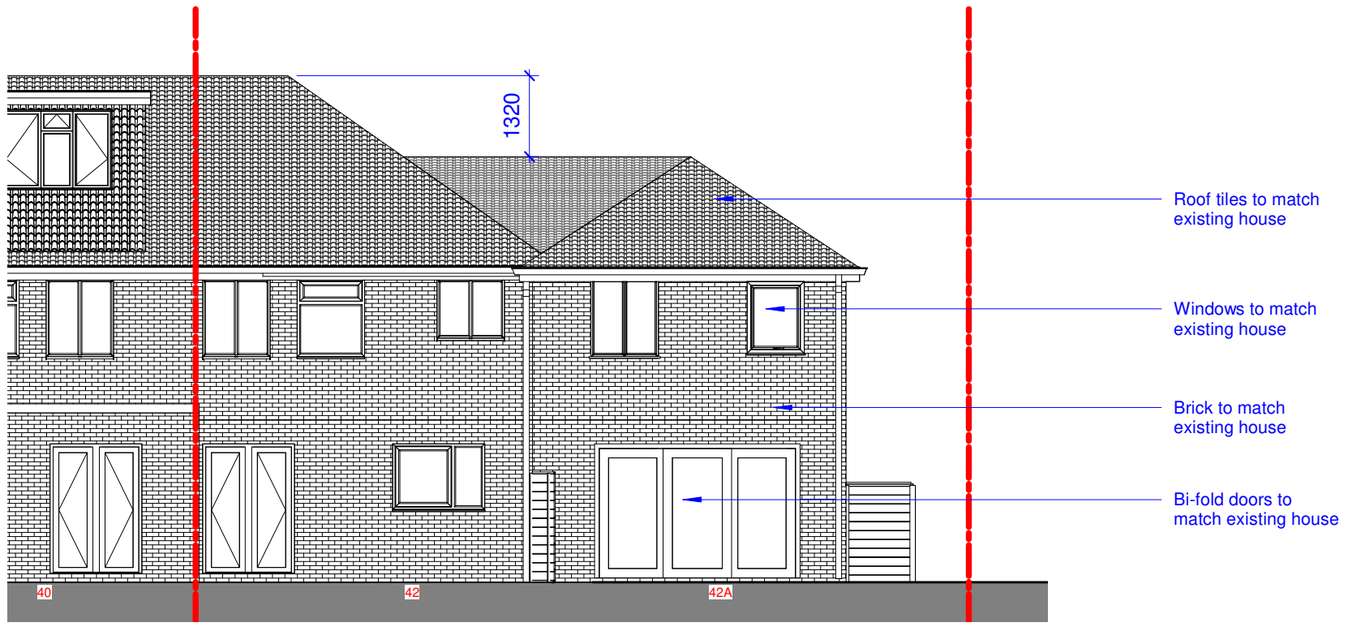
DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)
1 : 100

DRAWING NUMBER	REV
A106	B

2 EXISTING REAR ELEVATION

1 : 100



1 PROPOSED REAR ELEVATION

1 : 100

0 1 2 3 4m
1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

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PROJECT

42 The Larches, Uxbridge
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TITLE

REAR ELEVATIONS

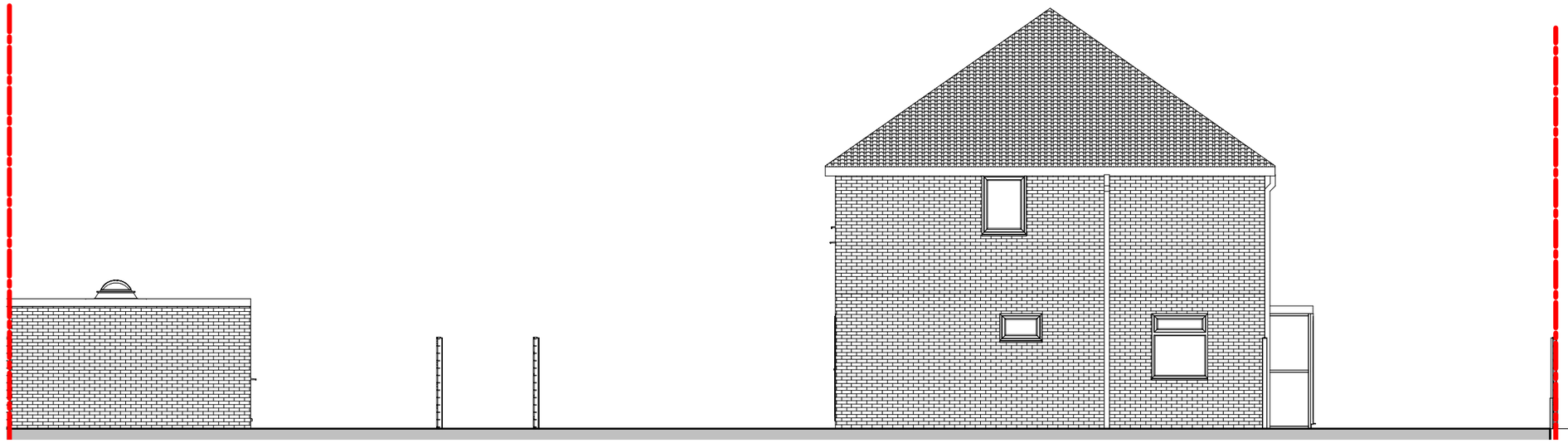
CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

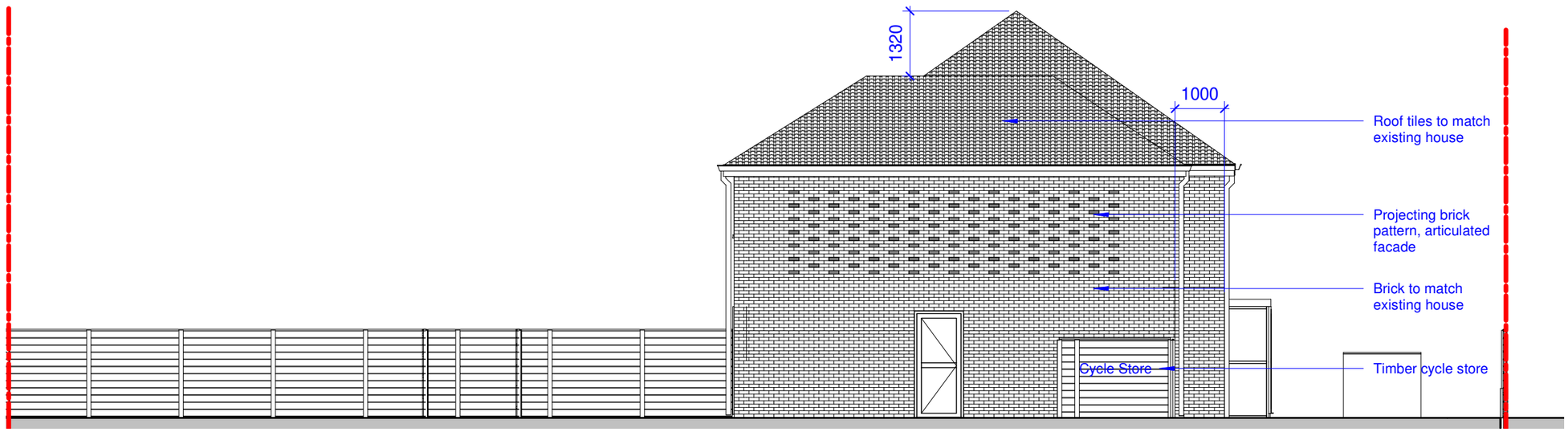
SCALE (@ A3)
1 : 100

DRAWING NUMBER	REV
A107	B



2 **EXISTING SIDE ELEVATION 1**

1 : 100



1 **PROPOSED SIDE ELEVATION 1**

1 : 100

0 1 2 3 4m

1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

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PROJECT

42 The Larches, Uxbridge
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TITLE

SIDE 1 ELEVATIONS

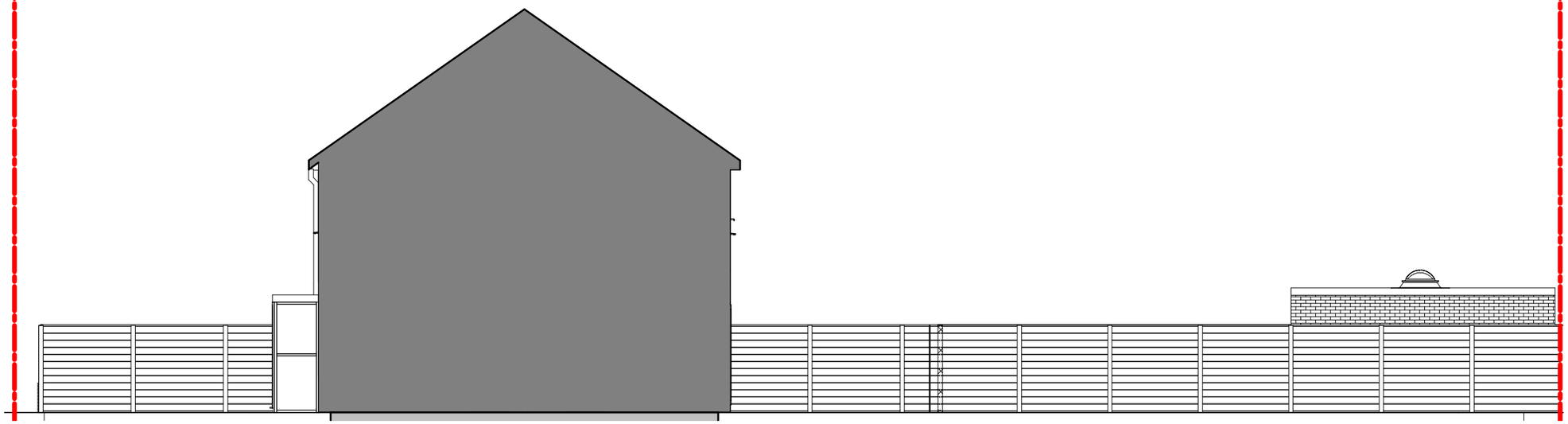
CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

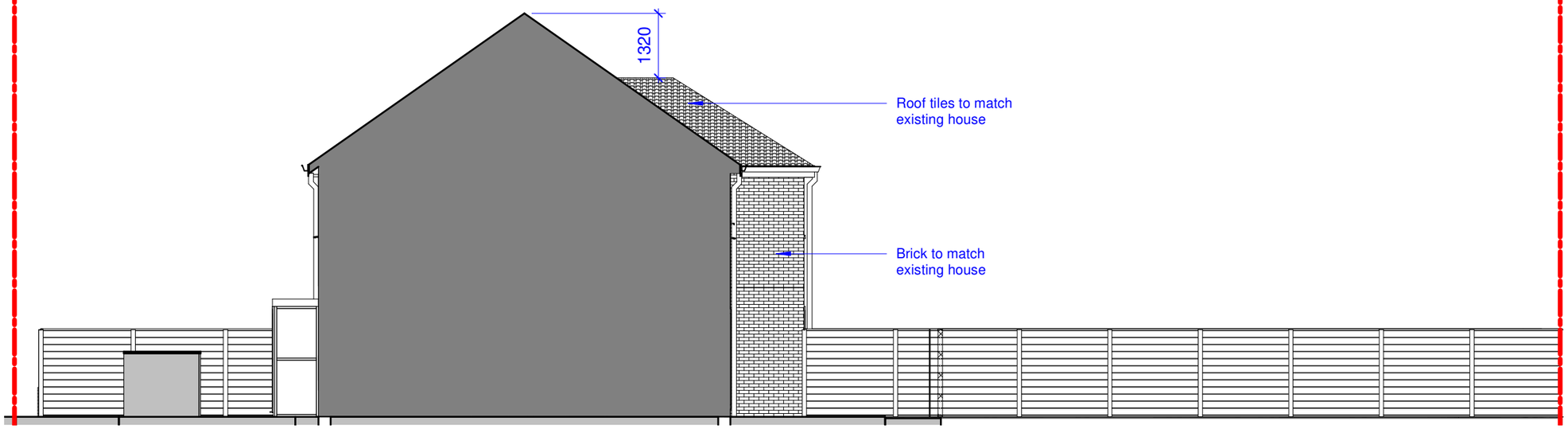
SCALE (@ A3)
1 : 100

DRAWING NUMBER	REV
A108	B



2 EXISTING SIDE ELEVATION 2

1 : 100



1 PROPOSED SIDE ELEVATION 2

1 : 100

0 1 2 3 4m

1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

SIDE 2 ELEVATIONS

CLIENT

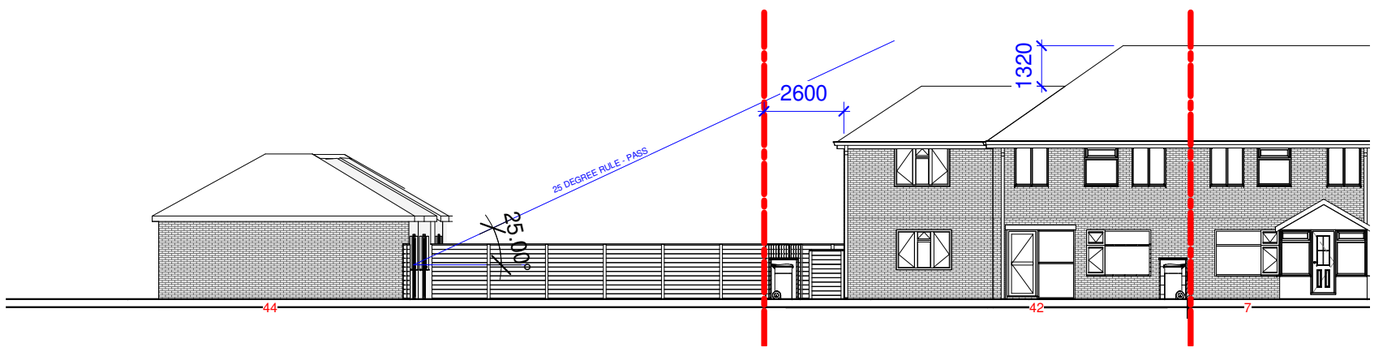
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

1 : 100

DRAWING NUMBER	REV
A109	B



1 PROPOSED SITE SECTION

1 : 200

0 2 4 6 8m

1:200

DATE	REV	DESCRIPTION	CH'K	APP
11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS

PURPOSE OF ISSUE

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PROJECT

42 The Larches, Uxbridge
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TITLE

SITE SECTION

CLIENT

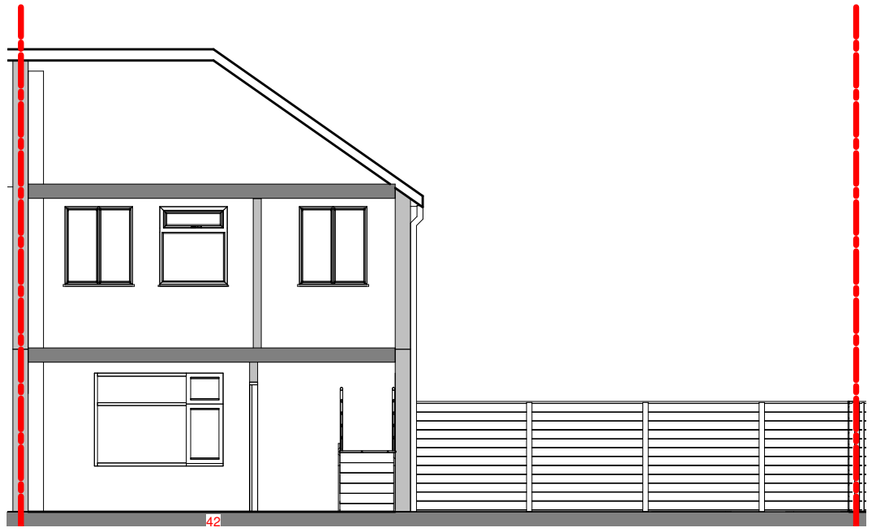
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

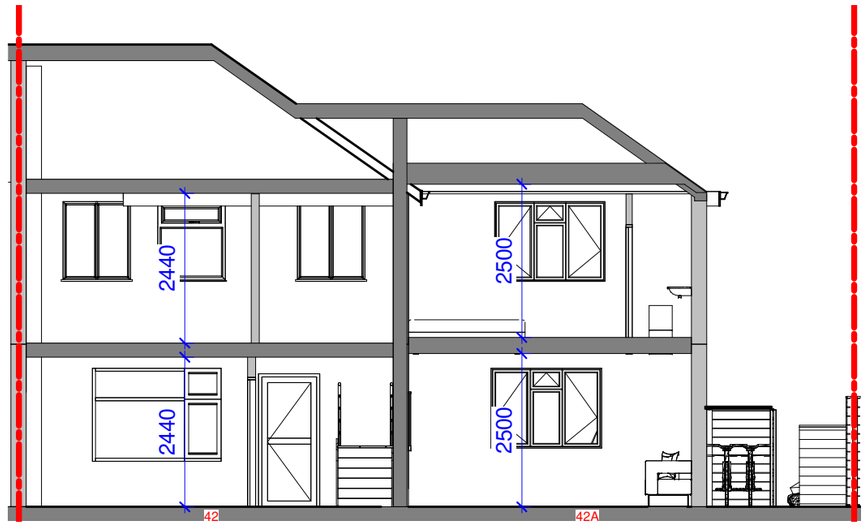
1 : 200

DRAWING NUMBER	REV
A110	B



1 EXISTING SECTION

1 : 100



2 PROPOSED SECTION

1 : 100

0 1 2 3 4m

1:100

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

CROSS SECTION

CLIENT

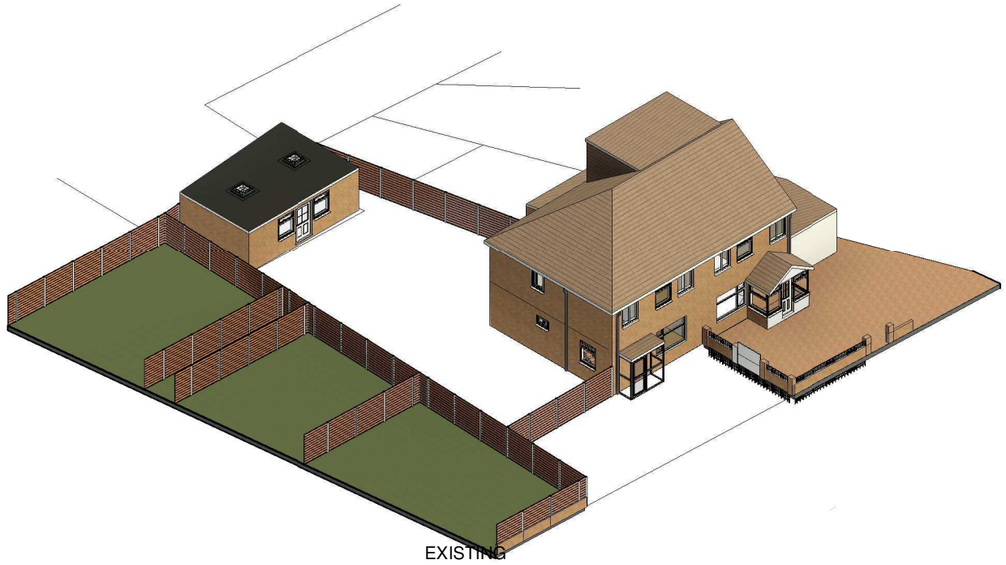
Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

1 : 100

DRAWING NUMBER	REV
A111	B



EXISTING

PROPOSED

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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f.shawkat@smastudiolondon.com

PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

EXTERNAL VIEWS

CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

DRAWING NUMBER	REV
A112	B

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

EXTERNAL VIEW

CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

DRAWING NUMBER	REV
A113	B

11/11/2024	B	PLANNING	FS	FS
22/08/2024	A	ISSUED FOR PRE APP	FS	FS
DATE	REV	DESCRIPTION	CH'K	APP

PURPOSE OF ISSUE

PLANNING

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PROJECT

42 The Larches, Uxbridge
UB10 0DL

TITLE

EXTERNAL VIEW

CLIENT

Shoor Developments Ltd

DRAWN BY	CHECKED BY	DATE
FS	FS	22/08/24

SCALE (@ A3)

DRAWING NUMBER	REV
A114	B

Appendix B - Surface Water Drainage layout

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.
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IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE TO AN APPROVED METHOD STATEMENT.

LEGEND

- PROPOSED SURFACE WATER DRAIN
- FILTER DRAIN
- SURFACE WATER SEWER
- FOUL WATER SEWER
- WATER BUTT
- GEOCELLULAR SUBBASE
- SuDS PLANTER
- PERMEABLE PAVING
- CATCHMENT AREAS
- RWP RAINWATER DOWNPIPE
- PROPOSED INSPECTION CHAMBER
- FLOW DIRECTION ARROW
- CATCHMENT AREA EXCLUDED
- ORIFICE

CONNECTION TO THE SURFACE WATER SEWER SUBJECT TO CONFIRMATION FROM THAMES WATER.

CONFIRMATION OF THE INVERT LEVEL IS TO BE SOUGHT; HOWEVER, THE DRAINAGE IS DESIGN SHALLOW TO ENSURE A GRAVITY CONNECTION CAN BE MADE.

GEOCELLULAR SUBBASE

PLAN AREA: 16m²
DEPTH: 0.4m
POROSITY: 95%
TOTAL ATTENUATION: 6.08m³

OUTFLOWS DISCHARGED AT 0.9l/s VIA A 40mm ORIFICE.

70mm ORIFICE PLATE TO DISCHARGE INTO THE GEOCELLULAR SUBBASE.

SuDS PLANTERS LOCATED BENEATH DOWNPIPES. PLANTER AT THE FRONT TO DISCHARGE INTO A WATER BUTT FOR RAINWATER HARVESTING.

IC1
COVER LEVEL: 56.617
INVERT LEVEL: 56.317

100mm FILTER DRAIN TO RUN BENEATH THE PERMEABLE PAVING SUBBASE WITH A 1:100 GRADIENT.

PATIO PERMEABLE PAVING

COVER LEVEL: 56.573

PLAN AREA: 33.5m²

SUBBASE DEPTH: 250mm OF 6-2-mm CLEAN CRUSHED STONE

70mm ORIFICE AT THE OUTLET.

TOTAL ATTENUATION: 2.5m³

IN ACCORDANCE WITH BUILDING REGULATIONS PART H A 2.5m EASEMENT IS REQUIRED FROM INFILTRATION SuDS TO THE PLOT BOUNDARY.

THEREFORE, IT IS DETERMINED THAT INFILTRATION IS NOT FEASIBLE ON SITE.

0m 2 4 6 8 10
SCALE 1 : 100

Rev	Date	Description	By
A	28/11/2025	SURFACE WATER DRAINAGE LAYOUT	JA

Client
SMA STUDIO BARNET Ltd

Project
42 THE LARCHES, UXBRIDGE, HILLINGDON, UX10 0DL

Title
SURFACE WATER DRAINAGE LAYOUT

Project No.	Drawing No.	Revision
AEG9097	DR01	1.0

Drawn	Checked	Approved	Date	Scale @ A1
JA	JC	OH	28/11/2025	1:100@A1

Drawing Status
DISCHARGE OF CONDITION 8

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water, civils and environment

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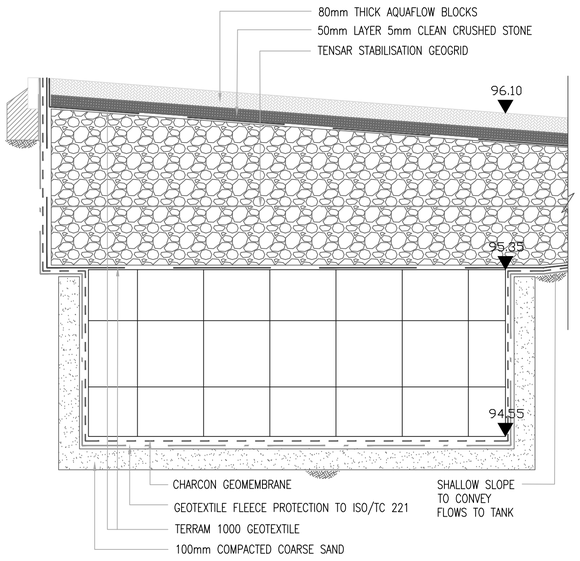
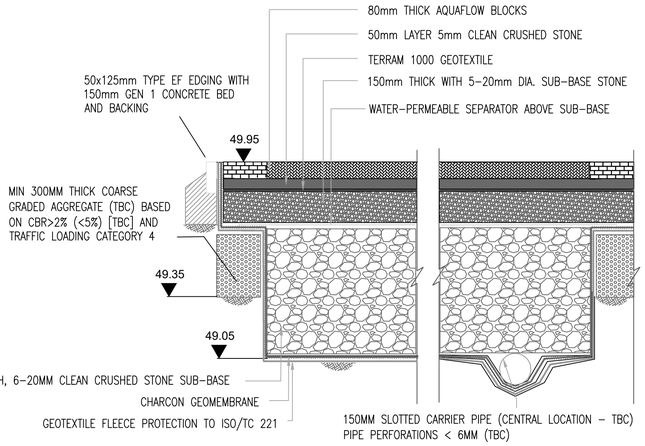
Appendix C - Construction Details

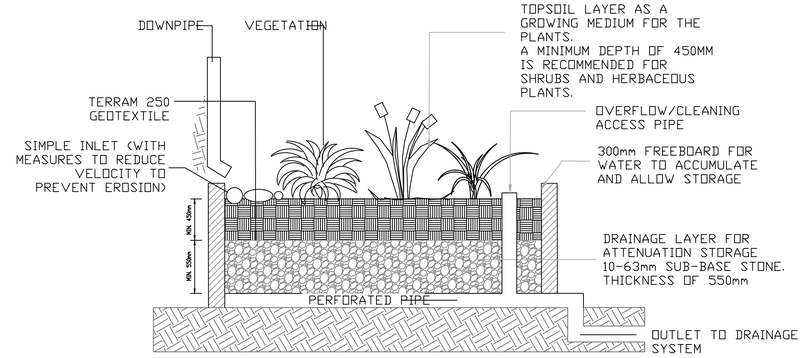


PERMEABLE PAVING WITH CRUSHED STONE AND GEOCELLULAR GRATES SUB-BASE STORAGE

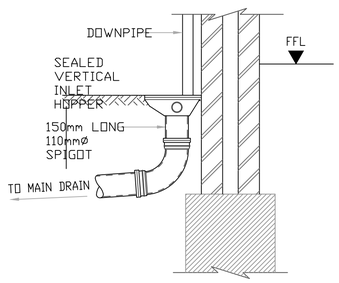
(1:20)



PROPOSED PERMEABLE PAVEMENT WITH SUB-BASE STORAGE

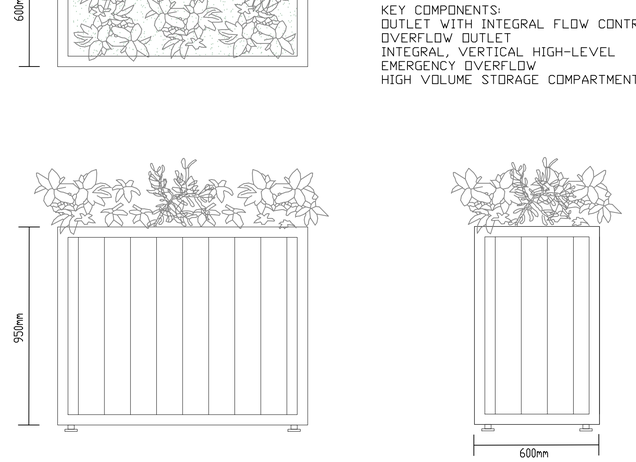


RAISED PLANTER (1:20)



RWP CONNECTION.

(1:20)



UNIT DIMENSIONS (mm):
SMALL - 1200 (l) x 600 (w) x 950 (d)
STORAGE CAPACITY: 0.3m³

KEY COMPONENTS:
OUTLET WITH INTEGRAL FLOW CONTROL
OVERFLOW OUTLET
INTEGRAL, VERTICAL HIGH-LEVEL EMERGENCY OVERFLOW
HIGH VOLUME STORAGE COMPARTMENT

SUDS PLANTER? - SMALL

(1:20)

0m 2 4 6 8 10

SCALE

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water, civils and environment

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DISCHARGE OF CONDITION

Drawing Status: DISCHARGE OF CONDITION 8

Client: SMA STUDIO BARNET Ltd

Project: 42 THE LARCHES, UXBRIDGE, HILLINGDON, UX10 0DL

Title: CONSTRUCTION DETAILS

Project No.	Dwg Id.	
AEG9097	DR02	
Scale @ A1	Date	Revision
-	28/11/2025	1.0
Drawn	Checked	Approved
JA	JC	OH

Rev	Date	Description	By
1.0	28/11/2025	FIRST ISSUE	JA

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Appendix D – Thames Water Asset Plan

CON29DW Residential

Property Searches

Aegaea

SEVENTH FLOOR, 15-18
WEST STRE
BRIGHTON
BN1 2RL

Search address supplied	42, The Larches, Uxbridge, UB10 0DL
Your reference	9097
Our reference	DWS/DWS Standard/2025_5253947
Received date	17 November 2025
Search date	18 November 2025

Keeping you up-to-date

Notification of price changes

We're changing our report prices from 4th June 2025. The price will increase by 3.5% based on Retail Price index (RPI).

Find our new prices on our website thameswater.co.uk/property-searches

Any Questions? We're happy to talk through the changes with you – give our Property Searches team a call on 0800 009 4540.

Thames Water Utilities Ltd
Property Searches,
Clearwater Court, Vastern Road, Reading RG1 8DB

property.searches@thameswater.co.uk
thameswater.co.uk/propertysearches

0800 009 4540

CON29DW RESIDENTIAL DRAINAGE & WATER SEARCH

DRAINAGE + WATER SEARCHES NETWORK DWSN

The Property Ombudsman

CON29DW Residential

Property Searches

Question		Summary Answer
Maps		
1.1	Where relevant, please include a copy of an extract from the public sewer map.	Map Provided
1.2	Where relevant, please include a copy of an extract from the map of waterworks.	Map Provided
Drainage		
2.1	Does foul water from the property drain to a public sewer?	Connected
2.2	Does surface water from the property drain to a public sewer?	Connected
2.3	Is a surface water drainage charge payable?	Charge Payable
2.4	Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?	No
2.4.1	Does the public sewer map indicate any public pumping station or ancillary apparatus within the boundaries of the property?	No
2.5	Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?	Yes
2.5.1	Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres (164.04 feet) of any buildings within the property?	No
2.6	Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?	No
2.7	Has a Sewerage Undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?	No
2.8	Is any building which is, or forms part of the property, at risk of internal flooding due to overloaded public sewers?	Not At Risk
2.9	Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.	4.044 Kilometres
Water		
3.1	Is the property connected to mains water supply?	Connected
3.2	Are there any water mains, resource mains or discharge pipes within the boundaries of the property?	No
3.3	Is any water main or service pipe serving, or which is proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?	No
3.4	Is this property at risk of receiving low water pressure or flow?	No
3.5	What is the classification of the water supply for the property?	Hard
3.6	Please include details of the location of any water meter serving the property.	No Meter

CON29DW Residential

Property Searches

Question		Summary Answer
Charging		
4.1.1	Who is responsible for providing the sewerage services for the property?	Thames Water
4.1.2	Who is responsible for providing the water services for the property?	Affinity Water
4.2	Who bills the property for sewerage services?	Affinity Water
4.3	Who bills the property for water services?	Affinity Water
4.4	What is the current basis for charging for sewerage and/or water services at the property?	See Details
4.5	Will the basis for charging for sewerage and water services at the property change as a consequence of a change of occupation?	No

Search address supplied: 42, The Larches, Uxbridge, UB10 0DL

Any new owner or occupier will need to contact Thames Water on 0800 316 9800 or log onto our website www.thameswater.co.uk and complete our online form to change the water and drainage services bills to their name.

The following records were searched in compiling this report: - the Map of Public Sewers, the Map of Waterworks, Water and Sewer billing records, Adoption of Public Sewer records, Building Over Public Sewer records, the Register of Properties subject to Internal Foul Flooding, the Register of Properties subject to Poor Water Pressure and the Drinking Water Register. Thames Water Utilities Ltd (TWUL), Clearwater Court, Vastern Road, Reading RG1 8DB, holds all of these.

TWUL are responsible in respect of the following:-

(i) any negligent or incorrect entry in the records searched;

(ii) any negligent or incorrect interpretation of the records searched;

(iii) any negligent or incorrect recording of that interpretation in the search report;

(iv) and compensation payments

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information.

Interpretation of CON29DW Drainage and Water Search

Appendix 1 contains definitions of terms and expressions used in this report.

For your guidance:

- **Thames Water Property Searches Complaints Procedure**:
  - Thames Water Property Searches offers a robust complaints procedure. Complaints can be made by telephone, in writing, by email (property.searches@thameswater.co.uk) or through our website (thameswater.co.uk/propertysearches).
  - A complaint should be acknowledged within 5 working days from receipt.

As a minimum standard Thames Water Property Searches will:

- Endeavour to resolve any contact or complaint at the time of receipt. If this is not possible, we will advise of timescales;
- Investigate and research the matter in detail to identify the issue raised (in some cases third party consultation will be required);
- Provide a response to the customer within 10 working days of receipt of the complaint;
- Provide compensation if no response or acknowledgment that we are investigating the case is given within 10 working days of receipt of the complaint;
- Keep you informed of the progress and, depending on the scale of investigation required, update with new timescales as necessary;
- Provide an amended search, free of charge, if required;
- Provide a refund if we find your complaint to be justified; take the necessary action within our power to put things right.

If you want us to liaise with a third party on your behalf, just let us know.

If you are still not satisfied with the outcome provided we will refer the matter to a Senior Manager for resolution who will respond again within 5 working days.

If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

Maps

1.1 – Where relevant, please include a copy of an extract from the public sewer map.

A copy of an extract of the public sewer map is included, showing the public sewers, disposal mains and lateral drains in the vicinity of the property.

For your guidance:

- The Water Industry Act 1991 defines Public Sewers as those which Thames Water have responsibility for. Other assets and rivers, watercourses, ponds, culverts or highway drains may be shown for information purposes only.
- The company is not generally responsible for SuDS (sustainable urban drainage system), rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract, they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.
- Assets other than public sewers may be shown on the copy extract, for information.

1.2 – Where relevant, please include a copy of an extract from the map of waterworks.

A copy of an extract from the map of waterworks is included in which the location of the property is identified.

For your guidance:

- The "water mains" in this context are those, which are vested in and maintainable by the water company under statute.
- Assets other than public water mains may be shown on the plan, for information only.
- Water companies are not responsible for private supply pipes connecting the property to the public water main and do not hold details of these. These may pass through land outside of the control of the seller or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the length and route of any private water supply pipe connecting the property to the public water network.

Drainage

2.1 – Does foul water from the property drain to a public sewer?

Records indicate that foul water from the property drains to a public sewer.

For your guidance:

- Water companies are not responsible for any private drains that connect the property to the public sewerage system and do not hold details of these. The property owner will normally have sole responsibility for private drains serving the property. These may pass through land outside the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair, or renewal.
- If foul water does not drain to the public sewerage system, the property may have private facilities in the form of a cesspit, septic tank, or other type of treatment plant.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property, and it should be possible to estimate the length and route of any private drains and/or sewers connecting the property to the public sewerage system.

2.2 – Does surface water from the property drain to a public sewer?

Records indicate that surface water from the property drains to a public sewer.

For your guidance:

- Sewerage Undertakers are not responsible for any private drains that connect the property to the public sewerage system, and do not hold details of these.
- The property owner will normally have sole responsibility for private drains serving the property. These private drains may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair, or renewal.
- In some cases, 'Sewerage Undertakers' records do not distinguish between foul and surface water connections to the public sewerage system.
- At the time of privatisation in 1989, Sewerage Undertakers were sold with poorly kept records of sewerage infrastructure. The records did not always show which properties were connected for surface water drainage purposes. Accordingly, billing records have been used to provide an answer for this element of the drainage and water search.
- Due to the potential inadequacy of 'Sewerage Undertakers' infrastructure records with respect to surface water drainage, it is the customer's responsibility to inform the Sewerage Undertaker that they do not receive the surface water drainage service. If on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. For further information, please contact Thames Water on Tel: 0800 316 9800, or refer to the website at www.thameswater.co.uk.
- If surface water from the property does not drain to the public sewerage system, the property may have private facilities in the form of a soakaway, private connection to a watercourse or there may be a sustainable urban drainage system (SuDS). Sustainable drainage systems are a collection of water management practices that aim to align modern drainage systems with natural water processes and are part of a larger green infrastructure strategy.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property, and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

2.3 – Is a surface water drainage charge payable?

Records confirm that a surface water drainage charge is payable for the property and the charge is £50.16 for the current financial year.

For your guidance:

- If surface water from the property drains to a public sewer, then a surface water drainage charge is payable.
- Where a surface water drainage charge is currently included in the property's water and sewerage bill but, on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. For further information, please contact Thames Water on Tel: 0800 316 9800 or refer to the website www.thameswater.co.uk.

2.4 – Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?

The public sewer map indicates that there are no public sewers, disposal mains or lateral drains within the boundaries of the property. However, from the 1st October 2011 there may be lateral drains and/or public sewers which are not recorded on the public sewer map but which may prevent or restrict development of the property.

For your guidance:

- Thames Water has a statutory right of access to carry out work on its assets. Employees of Thames Water or its contractors may, therefore, need to enter the property to carry out work. Please note if the property was constructed after 1st July 2011 any sewers and/or lateral drain within the boundary of the property are the responsibility of the householder.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public sewer running within the boundary of the property may restrict further development. The company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the company, or its contractors, needing to enter the property to carry out work.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

2.4.1 – Does the public sewer map indicate any public pumping station or ancillary apparatus within the boundaries of the property?

The public sewer map included indicates that there is no public pumping station within the boundaries of the property. Any other ancillary apparatus is shown on the public sewer map and referenced on the legend.

For your guidance:

- Private pumping stations installed before 1 July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public Pumping station running within the boundary of the property may restrict further development. The company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the company, or its contractors, needing to enter the property to carry out work.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

2.5 – Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?

The public sewer map included indicates that there is a public sewer within 30.48 metres (100 feet) of a building within the property.

For your guidance:

- From the 1st October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property. The presence of a public foul sewer within 30.48 metres (100 feet) of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public foul sewer.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

2.5.1- Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres (164.04 feet) of any buildings within the property?

The public sewer map included indicates that there is no public pumping station within 50 metres of any buildings within the property. Any other ancillary apparatus is shown on the public sewer map and referenced on the legend.

For your guidance:

- Private pumping stations installed before 1 July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The presence of a public pumping station within 50 metres of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.

2.6 – Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?

Records confirm that Foul sewers serving the development, of which the property forms part are not the subject of an existing adoption agreement or an application for such an agreement.

The Surface Water sewer(s) and/or Surface Water lateral drain(s) are not the subject of an adoption agreement.

For your guidance:

- Any sewers and/or lateral drains within the boundary of the property are not the subject of an adoption agreement and remain the responsibility of the householder. Adoptable sewers are normally those situated in the public highway.
- This enquiry is of interest to purchasers of new homes who will want to know whether or not the property will be linked to a public sewer.
- Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.
- Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991 and meeting the requirements of 'Sewers for Adoption' 7th Edition.
- For further information on any buildover and/or adoption agreements please contact our developer services team by sending an email to developer.services@thameswater.co.uk or by telephone on 0800 009 3921.

2.7 - Has a Sewerage Undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?

There are no records in relation to any approval or consultation about plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain. However, the sewerage undertaker might not be aware of a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain.

For your guidance:

- Buildings or extensions erected over a sewer in contravention of building controls may have to be removed or altered
- For further information on any buildover and/or adoption agreements please contact our developer services team by sending an email to developer.services@thameswater.co.uk or by telephone on 0800 009 3921.

2.8 – Is any building which is, or forms part of the property, at risk of internal flooding due to overloaded public sewers?

The property is not recorded as being at risk of internal flooding due to overloaded public sewers.
From the 1st October 2011 most private sewers, disposal mains and lateral drains were transferred into public ownership It is therefore possible that a property may be at risk of internal flooding due to an overloaded public sewer which the sewerage undertaker is not aware of. For further information it is recommended that enquiries are made of the vendor.

For your guidance:

- For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business, or industrial purposes.
- A sewer is “overloaded” when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding because of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.
- “Internal flooding” from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business, or industrial purposes.
- “At Risk” properties are those that the water company is required to include in the Regulatory Register that is presented annually to the Director General of Water Services. These are defined as properties that have suffered, or are likely to suffer, internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Company’s reporting procedure.
- Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included on the At-Risk Register.
- Properties may be at risk of flooding but not included on the Register where flooding incidents have not been reported to the Company.

- Public Sewers are defined as those for which the Company holds statutory responsibility under the Water Industry Act 1991.
- It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Company. This report excludes flooding from private sewers and drains and the Company makes no comment upon this matter.
- For further information please contact Thames Water on Tel: 0800 316 9800 or website www.thameswater.co.uk

2.9 – Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.

The nearest sewage treatment works is Iver (North) STW which is 4.044 kilometres to the south west of the property.

For your guidance:

- The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated.
- The sewerage undertaker's records were inspected to determine the nearest sewage treatment works.
- It should be noted that there may be a private sewage treatment works closer than the one detailed above that has not been identified.
- As a responsible utility operator, Thames Water Utilities Ltd seeks to manage the impact of odour from operational sewage works on the surrounding area. This is done in accordance with the Code of Practice on Odour Nuisance from Sewage Treatment Works issued via the Department of Environment, Food and Rural Affairs (DEFRA). This Code recognises that odour from sewage treatment works can have a detrimental impact on the quality of the local environment for those living close to works. However DEFRA also recognises that sewage treatment works provide important services to communities and are essential for maintaining standards in water quality and protecting aquatic-based environments. For more information visit www.thameswater.co.uk

Water

3.1 – Is the property connected to mains water supply?

Records indicate that the property is connected to mains water supply.

For your guidance:

- The Company does not keep details of private supplies. The situation should be checked with the current owner of the property.

3.2 – Are there any water mains, resource mains or discharge pipes within the boundaries of the property?

The map of waterworks does not indicate any water mains, resource mains or discharge pipes within the boundaries of the property.

For your guidance:

- The boundary of the property has been determined by reference to the plan supplied. Where a plan was not supplied the Ordnance Survey Record was used. If the Water company mentioned in 4.1.2 is not Thames Water Utilities Ltd the boundary of the property has been determined by Ordnance Survey data.
- The presence of a public water main within the boundary of the property may restrict further development within it. Water companies have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the company, or its contractors, needing to enter the property to carry out work.

3.3 – Is any water main or service pipe serving, or which is proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?

Records confirm that water mains or service pipes serving the property are not the subject of an existing adoption agreement or an application for such an agreement.

For your guidance:

- This enquiry is of interest to purchasers of new homes who will want to know whether the property will be linked to the mains water supply.

3.4 – Is this property at risk of receiving low water pressure or flow?

Records confirm that the property is not recorded on a register kept by the water undertaker as being at risk of receiving low water pressure or flow.

For your guidance:

- The boundary of the property has been determined by reference to the plan supplied. Where a plan was not supplied the Ordnance Survey Record was used.
- "Low water pressure" means water pressure below the regulatory reference level, which is the minimum pressure when demand on the system is not abnormal.
- Water Companies are required to include in the Regulatory Register that is presented annually to Ofwat, properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level) and a solution has not yet been implemented.
- The reference level of service is a flow of 9 litres/minute at a pressure of 10metres / head on the customer's side of the outside stop valve (osv). The reference level of service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap. The reference level applies to a single property. Where more than one property is served by a common service pipe (shared supply), the flow assumed in the reference level must be appropriately increased to take account of the total number of properties served.
    - For two properties, a flow of 13.5 litres/min at a pressure of 10m head on the customers' side of the OSV is appropriate.
    - For three or more properties the appropriate flow should be calculated from the standard loadings provided in Service Pipe Manual 1993.
- **Allowable exclusions** The Company is required to include in the Regulatory Register properties receiving pressure below the reference level, provided that allowable exclusions listed below do not apply.
- **Abnormal demand:** This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand, which are normally expected. Companies should exclude from the reported figures properties which are affected by low pressure only on those days with the highest peak demands. During the report year companies may exclude, for each property, up to five days of low pressure caused by peak demand.
- **Planned maintenance:** Companies should not report low pressures caused by planned maintenance. It is not intended that companies identify the number of properties affected in each instance. However, companies must maintain sufficiently accurate records to verify that low-pressure incidents that are excluded because of planned maintenance are actually caused by maintenance.
- **One-off incidents:** This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as pressure reducing valves or booster pumps); firefighting; and action by a third party. However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded
- **Low-pressure incidents of short duration:** Properties affected by low pressures, which only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the year, may be excluded from the reported figures.
- Please contact your water company mentioned in Question 4.1.2 if you require further information on water pressure.

3.5 – What is the classification of the water supply for the property?

The water supplied to the property has an average water hardness of 104mg/l calcium which is defined as Hard by Affinity Water.

For your guidance:

- Water hardness can be expressed in various indices for example the hardness settings for dishwashers are commonly expressed in Clark's degrees, however check with the manufacturer as there are also other units. The following table shows the normal ranges of hardness.
- Sample table for information only:

Hardness Category	Calcium (mg/l)	Calcium Carbonate (mg/l)	English Clarke degrees	French degrees	General/ German degrees
Soft	0 to 20	0 to 50	0 to 3.5	0 to 5	0 to 2.8
Moderately Soft	21 to 40	51 to 100	3.6 to 7	6 to 10	2.9 to 5.6
Slightly hard	41 to 60	101 to 150	8 to 10.5	11 to 15	5.7 to 8.4
Moderately hard	61 to 80	151 to 200	10.6 to 14	16 to 20	8.5 to 11.2
Hard	81 to 120	201 to 300	15 to 21	21 to 30	11.3 to 16.8
Very hard	Over 120	Over 300	Over 21	Over 30	Over 16.8

- Please contact your water undertaker mentioned in Question 4.1.2 if you require further information on water hardness.

3.6 – Please include details of the location of any water meter serving the property.

Records indicate that the property is not served by a water meter.

For your guidance:

- Where a meter does not serve the property and the customer wishes to consider this method of charging, they should contact the water undertakers mentioned in Question 4.1.2.

Charging

4.1.1 – Who is responsible for providing the sewerage services for the property?

Thames Water Utilities Limited, Clearwater Court, Reading, RG1 8DB is the sewerage undertaker for the area.

4.1.2 – Who is responsible for providing the water services for the property?

Affinity Water Ltd, Tamblin Way, Hatfield, AL10 9EZ, is the water undertaker for the area.

4.2 – Who bills the property for sewerage services?

The property is billed for sewerage services on behalf of Thames Water by:

Affinity Water Ltd
Tamblin Way
Hatfield
AL10 9EZ

Tel: 0345 3572401

4.3 – Who bills the property for water services?

The property is billed for water services by:

Affinity Water Ltd
Tamblin Way
Hatfield
AL10 9EZ

Tel: 0345 3572401

4.4 – What is the current basis for charging for sewerage and/or water services at the property?

The charges are based on the rateable value of the property which has a rateable value of £236.00, and the charge for the current financial year of £710.46.

For your guidance:

- Water and sewerage companies' full charges are set out in their charges schemes which are available from the company free of charge upon request.
- The Water Industry Act 1991 Section 150, The Water Resale Order 2001 provides protection for people who buy their water or sewerage services from a person or company instead of directly from a water or sewerage company. Details are available from the Office of Water Services (OFWAT) website is www.ofwat.gov.uk.
- It is policy to meter all new water connections. This would result in charges being levied according to the measured tariff.
- Where charges are given, these are based on the data available at the time of the report.
- The Company may install a meter at the premises where a buyer makes a change of use of the property or where the buyer uses water for:
    - Watering the garden other than by hand (this includes the use of sprinklers).
    - Automatically replenishing a pond or swimming pool with a capacity greater than 10,000 litres.
    - A bath with a capacity more than 230 litres.
    - A reverse osmosis unit.

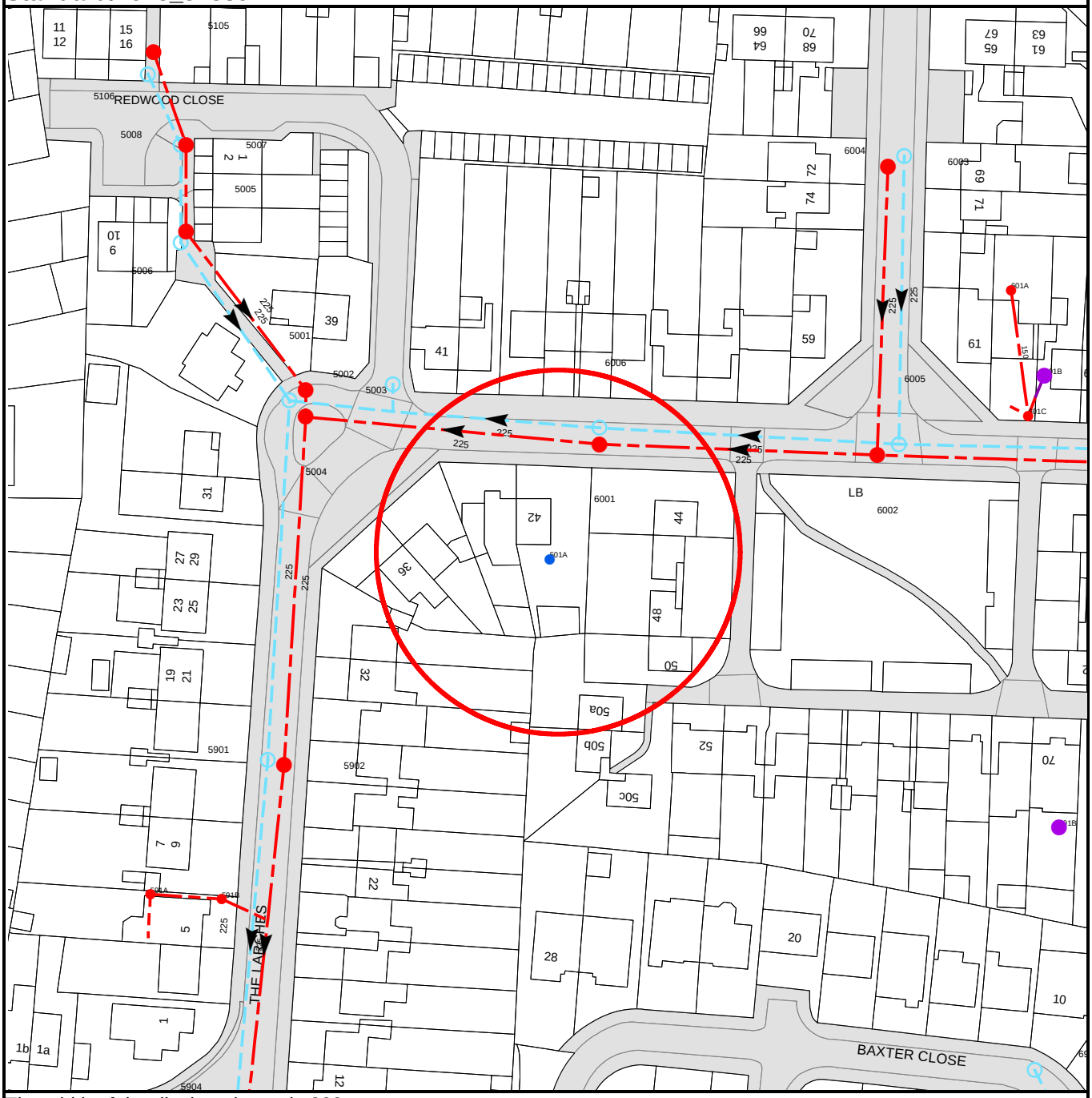
4.5 – Will the basis for charging for sewerage and water services at the property change as a consequence of a change of occupation?

There will be no change in the current charging arrangements as a consequence of a change of occupation.

For your guidance:

- Water and sewerage companies' full charges are set out in their charges schemes which are available from the company free of charge upon request.
- The Water Industry Act 1991 Section 150, The Water Resale Order 2001 provides protection for people who buy their water or sewerage services from a person or company instead of directly from a water or sewerage company. Details are available from the Office of Water Services (OFWAT) website is www.ofwat.gov.uk.
- It is policy to meter all new water connections. This would result in charges being levied according to the measured tariff.
- The Company may install a meter at the premises where a buyer makes a change of use of the property or where the buyer uses water for:
    - Watering the garden other than by hand (this includes the use of sprinklers).
    - Automatically replenishing a pond or swimming pool with a capacity greater than 10,000 litres.
    - A bath with a capacity in excess of 230 litres.
    - A reverse osmosis unit.

CON29DW Residential Drainage & Water Search Sewer Map-DWS/DWS Standard/2025_5253947



The width of the displayed area is 200m

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.

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Con29DW Residential Drainage and Water 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.

Trunk Sewer: A strategic sewer which collects either foul or surface water flow from a number of subsidiary catchments and transfers this flow to a pumping station, river outfall or treatment works.

Storm Overflow Sewer: A sewer designed to convey excess rainfall to rivers or watercourses so that the flow does not exceed the capacity of normal sewers (which could cause flooding).

Sludge Sewer: A sewer designed to convey sludge from one treatment works to another.

Vent Pipe: A section of sewer pipe connected between the top of a sewer and vent column, used to prevent the accumulation of gas in a sewer and thus allowing the system to operate properly.

Rising Main: A pipe carrying pumped flow under pressure from a low point to a high point on the sewerage network. The direction of the fleck indicates the direction of flow within the pipe.

Vacuum: A foul sewer designed to remove foul sewage under pressure (vacuum sewers cannot accept direct new connections).

Thames Water Proposed Sewer

Other Sewer Types (Not Operated or Maintained by Thames Water)

Foul Sewer: Any foul sewer that is not owned by Thames Water.

Gulley: A sewer designed to convey surface water from large roads, motorways, etc. to watercourses or to public surface water sewers. These sewers are generally maintained by the relevant highway authority.

Culverted Watercourse: A watercourse running through a culvert or pipe which is the responsibility of the property owner or the Environment Agency.

Decommissioned Sewer: A disused sewer. Usually filled with cement mixture or removed from the ground.

Content of this drainage network is currently unknown.

Ownership of this drainage network is currently unknown.

Other Symbols

Undefined Ends: These symbols represent the point at which a pipe continues but no records of its position are currently held by Thames Water. These symbols are rare but may be found on any of the public sewer types.

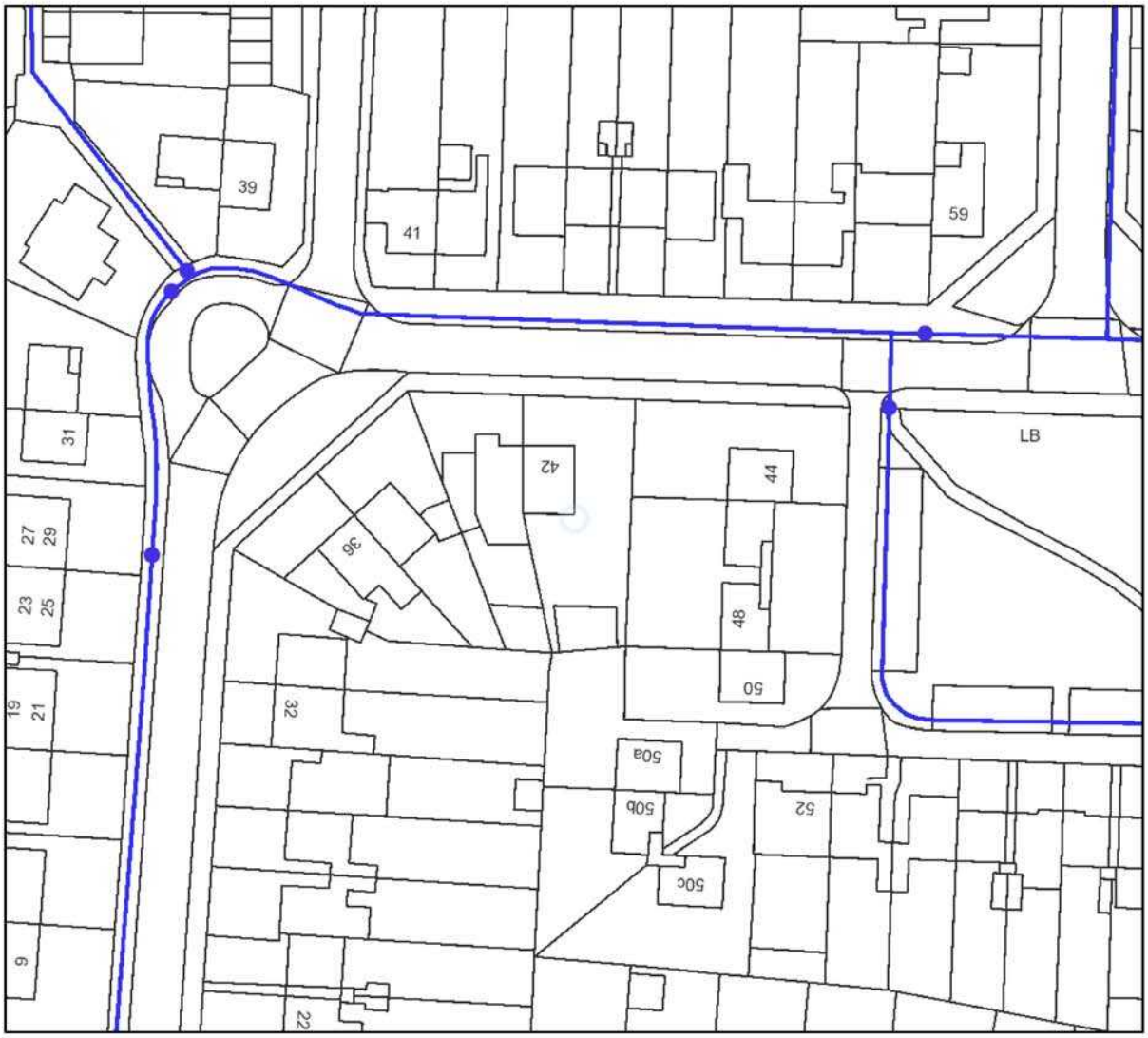
Public / Private Pumping Station: Foul or Surface Water pumping station.

Casement: Ducts may contain high voltage cables. Please check with Thames Water.

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.
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.

Reference No. 2025_5253947



This map is centred upon Ordnance Survey grid reference 507,599,183,019

Water Main
Abandoned Water Main
Hydrants, Valves, etc
Borehole, Pumping Facility, etc

1:750
11/18/2025

Copyright Affinity Water Ltd.
© Crown Copyright and database rights 2023 Ordnance Survey 100025261.
It shows water mains and associated apparatus but should not be relied upon as evidence of ownership or evidence of responsibility for maintenance. Privately owned service pipes (which may serve one or more properties) are unlikely to be shown.

The position of Company apparatus shown on this plan is provided for guidance only and the Company accepts no responsibility in the event of Inaccuracy

For further information about the contents of this plan, please contact Affinity Water at the address below

Affinity Water, Tamblin Way, Hatfield, Hertfordshire, AL10 9EZ. www.affinitywater.co.uk/central
(c) Affinity Water Limited
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Appendix 1 - terms and expressions in this report

“the 1991 Act” means the Water Industry Act 1991**(1)**;

“the 2000 Regulations” means the Water Supply (Water Quality) Regulations 2000**(2)**;

“the 2001 Regulations” means the Water Supply (Water Quality) Regulations 2001**(3)**;

“adoption agreement” means an agreement made or to be made under section 51A(1) or 104(1) of the 1991 Act**(4)**;

“bond” means a surety granted by a developer who is a party to an adoption agreement;

“bond waiver” means an agreement with a developer for the provision of a form of financial security as a substitute for a bond;

“calendar year” means the twelve months ending with 31st December;

“discharge pipe” means a pipe from which discharges are made or are to be made under section 165(1) of the 1991 Act;

“disposal main” means (subject to section 219(2) of the 1991 Act) any outfall pipe or other pipe which—

(a) is a pipe for the conveyance of effluent to or from any sewage disposal works, whether of a sewerage undertaker or of any other person; and

(b) is not a public sewer;

“drain” means (subject to section 219(2) of the 1991 Act) a drain used for the drainage of one building or of any buildings or yards appurtenant to buildings within the same curtilage;

“effluent” means any liquid, including particles of matter and other substances in suspension in the liquid;

“financial year” means the twelve months ending with 31st March;

“lateral drain” means—

(a) that part of a drain which runs from the curtilage of a building (or buildings or yards within the same curtilage) to the sewer with which the drain communicates or is to communicate; or

(b) (if different and the context so requires) the part of a drain identified in a declaration of vesting made under section 102 of the 1991 Act or in an agreement made under section 104 of that Act**(5)**;

“licensed water supplier” means a company which is the holder for the time being of a water supply licence under section 17A(1) of the 1991 Act**(6)**;

“maintenance period” means the period so specified in an adoption agreement as a period of time—

(a) from the date of issue of a certificate by a sewerage undertaker to the effect that a developer has built (or substantially built) a private sewer or lateral drain to that undertaker’s satisfaction; and

(b) until the date that private sewer or lateral drain is vested in the sewerage undertaker;

“map of waterworks” means the map made available under section 198(3) of the 1991 Act**(7)** in relation to the information specified in subsection (1A);

“private sewer” means a pipe or pipes which drain foul or surface water, or both, from premises, and are not vested in a sewerage undertaker;

“public sewer” means, subject to section 106(1A) of the 1991 Act**(8)**, a sewer for the time being vested in a sewerage undertaker in its capacity as such, whether vested in that undertaker—

(a) by virtue of a scheme under Schedule 2 to the Water Act 1989**(9)**;

(b) by virtue of a scheme under Schedule 2 to the 1991 Act**(10)**;

(c) under section 179 of the 1991 Act**(11)**; or

(d) otherwise;

“public sewer map” means the map made available under section 199(5) of the 1991 Act**(12)**;

“resource main” means (subject to section 219(2) of the 1991 Act) any pipe, not being a trunk main, which is or is to be used for the purpose of—

(a) conveying water from one source of supply to another, from a source of supply to a regulating reservoir or from a regulating reservoir to a source of supply; or

(b) giving or taking a supply of water in bulk;

“sewerage services” includes the collection and disposal of foul and surface water and any other services which are required to be provided by a sewerage undertaker for the purpose of carrying out its functions;

“sewerage undertaker” means the company appointed to be the sewerage undertaker under section 6(1) of the 1991 Act for the area in which the property is or will be situated;

“surface water” includes water from roofs and other impermeable surfaces within the curtilage of the property;

“water main” means (subject to section 219(2) of the 1991 Act) any pipe, not being a pipe for the time being vested in a person other than the water undertaker, which is used or to be used by a water undertaker or licensed water supplier for the purpose of making a general supply of water available to customers or potential customers of the undertaker or supplier, as distinct from for the purpose of providing a supply to particular customers;

“water meter” means any apparatus for measuring or showing the volume of water supplied to, or of effluent discharged from any premises;

“water supplier” means the company supplying water in the water supply zone, whether a water undertaker or licensed water supplier;

“water supply zones” in relation to a calendar year means the names and areas designated by a water undertaker within its area of supply that are to be its water supply zones for that year; and

“water undertaker” means the company appointed to be the water undertaker under section 6(1) of the 1991 Act for the area in which the property is or will be situated.

In this report, references to a pipe, including references to a main, a drain or a sewer, shall include references to a tunnel or conduit which serves or is to serve as the pipe in question and to any accessories for the pipe.

(**1**) 1991 c. 56.

(**2**) S.I. 2000/3184. These Regulations apply in relation to England.

(**3**) S.I. 2001/3911. These Regulations apply in relation to Wales.

(**4**) Section 51A is inserted by section 92(2) of the Water Act 2003 (c. 37). Section 104(1) is amended by section 96(4) of that Act.

(**5**) To which there are various amendments made by sections 102 and 104 by section 96 of the Water Act 2003.

(**6**) Inserted by section 56 of and Schedule 4 to the Water Act 2003.

(**7**) Subsection (1A) is inserted by section 92(5) of the Water Act 2003.

(**8**) Section 106(1A) is inserted by section 99 of the Water Act 2003.

(**9**) 1989 c. 15.

(**10**) To which there are various amendments made by section 101(1) of and Schedule 8 to the Water Act 2003.

(**11**) To which there are various amendments made by section 101(1) of and Schedule 8 to the Water Act 2003.

(**12**) Section 199 is amended by section 97(1) and (8) of the Water Act 2003.

CON29DW Residential Drainage & Water Enquiry Terms and Conditions

The Customer and the Client are asked to note these terms, which govern the basis on which the drainage and water report is supplied.

Definitions

"Apparatus" means the public assets shown on the Company's map keys relevant to the Report.
"Client" means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.
"Company" means the company who produces the Report, being Thames Water Utilities Limited, a company registered in England and Wales with company number 02366661 and whose registered office is at Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB.
"Customer" means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.
"Order" means any request completed by the Customer requesting the Report from the Company.
"Property" means the address or location supplied by the Customer in the Order.
"Report" means the drainage and/or water report prepared by the Company in respect of the Property, including any maps provided as part of such reports.

1. Agreement

1.1 The Company agrees to supply the Report to the Customer and the Client subject to these terms and conditions of this Agreement. The scope and limitations of the Report are described in clause 2 of this Agreement. Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing these terms and conditions to the attention of the Client.

1.2 The Customer and the Client agree that the placing of an Order for a Report and the subsequent provision of a copy of the Report to the Client indicates their acceptance of these terms and conditions.

2. The Report

Whilst the Company will use reasonable care and skill in producing the Report, it is provided to the Customer and the Client on the basis that they acknowledge and agree to the following:-

2.1 The information contained in the Report can change on a regular basis so the Company cannot be responsible to the Customer or the Client for any change in the information contained in the Report after the date on which the Report was produced.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as a substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy, completeness and legibility of the address and other information supplied by the Customer or Client when placing the Order.

2.4 The Report provides information as to the indicative location and connection of existing services and other information in relation to drainage and water enquiries and should not be relied on for any other purpose.

2.5 The Report is produced only for use in relation to individual domestic property transactions which require the provision of drainage and water information and cannot be used for commercial development of domestic properties, development of land or commercial properties for intended occupation by third parties. Where a Report is required for commercial development of domestic properties, development of land or commercial properties for intended occupation by parties, the Customer can order a different report, and different terms and conditions shall apply.

2.6 The customer shall only use the Report for the purpose set out above in clause 2.5 for which it is supplied in accordance with these terms and conditions.

3. Disclaimers

3.1 Without prejudice to any other terms and conditions set out herein, the Company accepts responsibility for any inaccuracy in the location of Apparatus, or missing Apparatus contained in the maps within the Report only where such inaccuracies or errors arise as a direct result of the negligence of the Company and the existence of which the Company should reasonably have been aware.

3.2 For the purposes of the Report, the Company will not seek to rely on any statements and/or disclaimer shown on any maps which seeks to limit its liability in relation to the accuracy and/or location of Apparatus where any inaccuracies or errors arise as a direct result of the negligence of the Company and the existence of which the Company should reasonably have been aware.

4. Liability

4.1 The Company shall not be liable to the Customer or Client in contract, tort, negligence, breach of statutory duty, misrepresentation or otherwise for any inaccuracies, mistakes or omissions in the Report unless any such liability arises as a direct consequence of the Company's negligence and the existence of which the Company should reasonably have been aware.

4.2 Where the Customer sells this report to a Client (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) the Company shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss or damage whatsoever and the Customer shall indemnify the Company in respect of any claim by the Client.

4.3 Notwithstanding clause 4.1 above, the Company does not exclude liability for (a) death or personal injury arising from its negligence, (b) fraud or fraudulent misrepresentation, and (c) any other liability which cannot be excluded or limited by law.

4.4 Subject to clause 4.3 above, the Company's total liability to the Customer or Client, whether for breach of contract, tort, negligence, breach of statutory duty, misrepresentation or otherwise, arising under or in connection with these terms and conditions and/or the provision of a Report shall be limited to £10 million in aggregate.

5. Copyright and Confidentiality

5.1 The Customer and the Client acknowledge that the Report is confidential and is intended for the personal use of the Client. The copyright and any other intellectual property rights in the Report shall remain the property of the Company and/or its licensors. No intellectual or other property rights are transferred or licensed to the Customer or the Client except to the extent expressly provided in these terms and conditions.

5.2 The Customer or Client is entitled to make copies of the Report for their own internal purposes but may only copy Ordnance Survey mapping or data contained in or attached to the Report if they have an appropriate licence from the originating source of that mapping or data.

5.3 The Customer and the Client agree (in respect of both the original and any copies made) to respect and not to alter any trademark, copyright notice or other property marking which appears on the Report.

5.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

5.5 The enquiries in the Report are protected by copyright by the Law Society of 113 Chancery Lane, London WC2A 1PL and must not be used for any purpose outside the context of the Report.

5.6 The Customer and the Client agree to indemnify the Company against any losses, costs, claims and damage suffered by the Company because of any breach by either of them of clauses 5.1 to 5.5 inclusive.

6. Payment

6.1 Unless otherwise stated, all prices are inclusive of VAT. The Customer shall pay for the price of the Report specified by the Company, without any set off, deduction or counterclaim. Unless otherwise agreed in writing between the parties, the Company must receive full payment for the Report in advance of the Report being produced. Where the parties agree that payment is not required in advance, the Customer must pay for the Report in full within 14 days of the date of the invoice, unless otherwise agreed in writing between the parties.

7. Cancellation Rights

As a consumer

7.1 Where the Customer is an individual consumer (and not acting for purposes wholly or mainly relating to his or her trade, business, craft or profession), the Customer has specific legal rights relating to cancellation of any Order the Customer may place. The Customer may cancel his or her Order at any time within 14 days after the day on which the Order is entered into ("**Cancellation Period**").

7.2 To exercise the right to cancel, the Customer must inform the Company in writing of his or her decision to cancel this Order.

7.3 Where the Customer is ordering a Report as a consumer, due to the Customer's cancellation rights, the Company will not process the Order or provide the Report to the Customer before the end of the Cancellation Period unless the Customer provides his or her express consent and acknowledges that he or she will lose the right to cancel the contract under regulation 29(1) of the Consumer Contracts (Information, Cancellation, and Additional Charges) Regulations 2013.

7.4 Notwithstanding above clauses 7.1 to 7.3 (cancellation rights), should the Customer wish to cancel the Order beyond the Cancellation Period and/ or despite its consent to waiver the Cancellation Period, the Company may still consider a Customer's cancellation request of any Order and any such cancellation shall be in accordance with its cancellation policy, which can be found on the Company's website.

As a business

7.5 The Cancellation Period does not apply to the Customer's Order if the Customer is placing the Order wholly or mainly for purposes relating to their trade, business, craft or profession.

7.6 If the Customer cancels the Order other than in accordance with this clause the Customer may be liable for fees as detailed in the Company's cancellation policy which can be found on the Company's website.

8. Complaints

8.1 The Company's complaints procedure is available on the Company's website.

8.2 The Company should acknowledge a complaint within 5 working days from receipt.

8.3 If the Customer follows the Company's complaints procedure but is dissatisfied with the response, the Customer may refer the complaint for consideration under The Property Ombudsman Scheme (TPOs) who can award compensation up to £25,000. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

8.4 In addition to TPO redress scheme covering consumers, TPO will also provide redress to small businesses (including Charities and Trusts) that meet the following criteria:

- A small business (or group of companies) with an annual turnover of less than £3 million;
- A charity with an annual income of less than £3 million;
- A trust with a net asset value of less than £3 million.

9. General

9.1 We are a member of the Drainage and Water Searches Network (DWSN), a membership organisation for companies who are responsible for compiling full and complete responses to the Law Society's CON29DW Residential and CON29DW Commercial products. For more information please visit www.con29dw.co.uk. The DWSN Standards are: -

- Promotion of best practice and quality.
- Maintain adequate insurance.
- Display the appropriate logos to signify high standards.
- Respond to complaints in a timely fashion and provide an appropriate escalation procedure.
- Comply with all applicable UK legislation, regulations and industry standards.
- Act in a professional and honest manner and provide a service with due care and skill.

9.2 These terms and conditions are the only terms and conditions that shall apply to any Order and the provision of a Report by the Company to the Customer and shall constitute the entire agreement between the Customer and the Company and supersede, replace and extinguish any previous arrangement, understanding or agreement between the parties relating to such Report.

9.3 In the event of any conflict of inconsistency between any information on the Company's website describing the features of the Report and these terms and conditions, then these terms and conditions shall prevail.

9.4 Where the Customer is acting wholly or mainly in the normal course of his or her trade, business, craft or profession, the Client is entitled to the benefit of these terms and conditions. Save as provided in this clause 9.4, it is not intended that any other person who is not a party to these terms and conditions has any right to enforce any term of these terms and conditions under the Contracts (Rights of Third Parties) Act 1999.

9.5 If any provision of these terms and conditions is or becomes invalid or unenforceable, it will be taken to be removed from the rest of these terms and conditions to the extent that it is invalid or unenforceable. No other provision of these terms and conditions shall be affected.

9.6 These terms and conditions shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

9.7 Nothing in these terms and conditions shall in any way restrict the Customer or the Client's statutory or any other rights of access to the information contained in the Report.

These Terms & Conditions are available in larger print for those with impaired vision.

Appendix E - InfoDrainage Results

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Inflows Storm Phase: Phase	Company Address: Aegaea		

42A Roof

Type : Catchment Area

Area (ha)	0.003

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

42A Patio

Type : Catchment Area

Area (ha)	0.003

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

42A Driveway

Type : Catchment Area

Area (ha)	0.005

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

42A Roof (1)

Type : Catchment Area

Area (ha)	0.003

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Aegaea		

Patio PP

Type : Porous Paving

Dimensions

Exceedance Level (m)	56.573
Depth (m)	0.300
Base Level (m)	56.273
Paving Layer Depth (mm)	50
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.920
Long. Slope (1:X)	1000.00
Width (m)	2.406
Total Volume (m³)	2.511

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	42A Patio
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Orifice

Diameter (m)	0.070
Coefficient of Discharge	0.600
Invert Level (m)	56.273

Advanced

Conductivity (m/hr)	500.0

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by:	Checked by:	Approved By:
	JA	JC	OH
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Aegaea		

Driveway PP

Type : Porous Paving

Dimensions

Exceedance Level (m)	56.569
Depth (m)	0.450
Base Level (m)	56.119
Paving Layer Depth (mm)	50
Membrane Percolation (m/hr)	3.0
Porosity (%)	95
Length (m)	4.000
Long. Slope (1:X)	1000.00
Width (m)	4.000
Total Volume (m³)	6.080

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	42A Driveway
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Pipe Pipe (1) 42A Roof
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Orifice
Diameter (m)	0.040
Coefficient of Discharge	0.600
Invert Level (m)	56.119

Advanced

Conductivity (m/hr)	500.0

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Storm Phase: Phase	Company Address: Aegaea		

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
Pipe	3.085	Pipe	20.674		0.6	100	56.639	56.273
Pipe (1)	12.282	Pipe	63.391		0.6	100	56.617	56.317

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Culvert Type	Culvert Entrance
Pipe	56.640	56.123		None	4.7	(None)	(None)
Pipe (1)	56.640	56.123		None		(None)	(None)

Project:	Date:			
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025			
	Designed by: JA	Checked by: JC	Approved By: OH	
Report Details: Type: Manhole Schedule Storm Phase: Phase	Company Address: Aegaea			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
IC1	56.617 56.317	Diameter / Length: 0.450					Manhole
E:507606.695 N:183019.342	0.300		{a} Pipe (1)	Pipe	56.317	Diam/Width:100	Not Applicable

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Inflow Summary Storm Phase: Phase	Company Address: Aegaea		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
42A Driveway	Driveway PP		Time of Concentration	0.005	100	0	100	0.005
42A Patio	Patio PP		Time of Concentration	0.003	100	0	100	0.003
42A Roof	Driveway PP		Time of Concentration	0.003	100	10	110	0.003
42A Roof (1)	IC1		Time of Concentration	0.003	100	10	110	0.003
TOTAL		**0.0**		**0.014**				**0.014**

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by:	Checked by:	Approved By:
	JA	JC	OH
Report Details: Type: Network Design Criteria Storm Phase: Phase	Company Address: Aegaea		

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

Manhole Options

Apply Offset	☐

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FEH

Type: FEH

Site Location	GB 507602 183022 TQ 07602 83022
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	0.000
30.0	35.000
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.014
SAAR (mm)	678.0
Soil	0.3
Region	Region 6
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 6	0.0	0.0	0.0	0.1	0.1

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
IC1	FEH: 2 years: +0 %: 15 mins: Summer	56.617	56.317	56.335	0.018	0.6	0.003	0.000	0.6	0.251	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
IC1	FEH: 30 years: +0 %: 15 mins: Summer	56.617	56.317	56.345	0.028	1.4	0.004	0.000	1.4	0.617	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
IC1	FEH: 100 years: +0 %: 120 mins: Summer	56.617	56.317	56.383	0.066	0.8	0.011	0.000	0.8	1.623	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
IC1	FEH: 30 years: +35 %: 120 mins: Summer	56.617	56.317	56.393	0.076	0.8	0.012	0.000	0.8	1.695	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
IC1	FEH: 100 years: +40 %: 120 mins: Summer	56.617	56.317	56.475	0.158	1.1	0.025	0.000	0.9	2.283	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Patio PP	FEH: 2 years: +0 %: 360 mins: Summer	56.353	56.292	0.067	0.020	0.2	0.482	0.000	0.1	0.000	0.798	80.821	OK
Driveway PP	FEH: 2 years: +0 %: 120 mins: Summer	56.230	56.198	0.107	0.078	1.1	1.391	0.000	0.4	0.000	2.287	77.119	OK

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Patio PP	FEH: 30 years: +0 %: 120 mins: Summer	56.406	56.334	0.120	0.061	0.7	0.965	0.000	0.2	0.000	1.021	61.578	OK
Driveway PP	FEH: 30 years: +0 %: 120 mins: Summer	56.332	56.310	0.209	0.191	2.4	3.038	0.000	0.7	0.000	5.352	50.027	OK

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Patio PP	FEH: 100 years: +0 %: 120 mins: Summer	56.442	56.386	0.156	0.114	0.9	1.379	0.000	0.2	0.000	1.362	45.089	OK
Driveway PP	FEH: 100 years: +0 %: 120 mins: Summer	56.384	56.364	0.260	0.245	2.9	3.838	0.000	0.8	0.000	6.897	36.878	OK

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Patio PP	FEH: 30 years: +35 %: 120 mins: Summer	56.449	56.395	0.163	0.123	1.0	1.460	0.000	0.2	0.000	1.429	41.858	OK
Driveway PP	FEH: 30 years: +35 %: 120 mins: Summer	56.393	56.374	0.270	0.254	3.0	3.981	0.000	0.8	0.000	7.156	34.522	OK

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Patio PP	FEH: 100 years: +40 %: 120 mins: Summer	56.514	56.477	0.227	0.205	1.4	2.169	0.000	0.2	0.000	1.961	13.644	OK
Driveway PP	FEH: 100 years: +40 %: 120 mins: Summer	56.475	56.458	0.352	0.339	3.9	5.246	0.000	0.9	0.000	9.153	13.711	OK

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 2 years: +0 %: 120 mins: Summer	Pipe	Patio PP	Driveway PP	56.639	56.315	0.056	0.381	0.0	0.01	0.1	OK
Pipe (1)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC1	Driveway PP	56.617	56.335	0.044	0.251	0.4	0.07	0.6	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	Patio PP	Driveway PP	56.639	56.332	0.093	0.189	0.0	0.02	0.3	OK
Pipe (1)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC1	Driveway PP	56.617	56.345	0.092	0.617	0.4	0.18	1.4	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	Patio PP	Driveway PP	56.639	56.354	0.100	0.193	0.0	0.02	0.3	OK
Pipe (1)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC1	Driveway PP	56.617	56.349	0.100	0.805	0.4	0.24	1.8	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	Patio PP	Driveway PP	56.639	56.358	0.100	0.181	0.0	0.02	0.3	OK
Pipe (1)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC1	Driveway PP	56.617	56.350	0.100	0.842	0.4	0.25	1.9	Flood Risk

Project:	Date:		
SMA Studio Barnet Ltd 42 The Larches, Uxbridge, Hillingdon, UX10 0DL	28/11/2025		
	Designed by: JA	Checked by: JC	Approved By: OH
Report Details: Type: Connections Summary Storm Phase: Phase	Company Address: Aegaea		

FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 100 years: +40 %: 120 mins: Summer	Pipe	Patio PP	Driveway PP	56.639	56.488	0.100	1.887	0.0	0.02	0.3	Surcharged
Pipe (1)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC1	Driveway PP	56.617	56.390	0.100	1.094	0.4	0.33	2.5	Flood Risk