

FloodSmart



Flood Risk Assessment

Site Address

Robert Clow & Co Ltd
Hartfield Place
40-44 High Street
Northwood
HA6 1BN

Date Updated

10/06/2026

Date Issued

19/03/2026

Grid Reference

509779, 190918

Report Status

FINAL

Report Prepared for

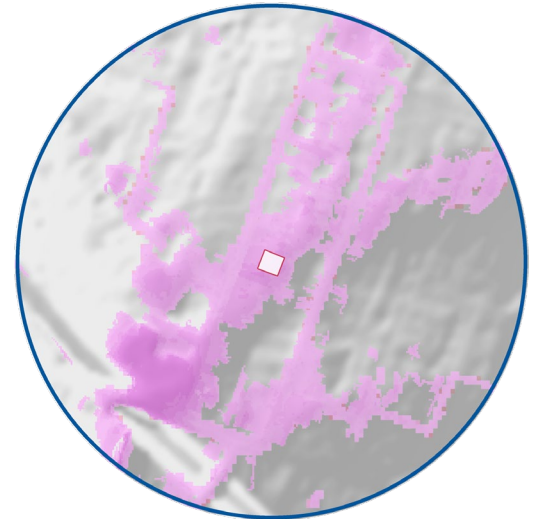
Robert Clow
The Shutters
Lycrome Road
Chesham
HP5 3LA

Site Area

550 m²

Report Reference

90719R2



RISK – Very Low to High

The Site is mapped within the EA's fluvial and tidal Flood Zone 1 (Low probability), which indicates there is a Low probability of fluvial and tidal flooding.

The risk of flooding from rivers and the sea is Very Low, taking flood defences into account.

Following analysis of the baseline data the Site is considered to be at a High risk of surface water flooding, a Negligible risk of groundwater flooding and a Low risk of flooding from artificial sources (reservoirs, canals and sewers).

Mitigation measures are recommended in this report to reduce the risks to an acceptable level over the lifetime of the development.

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Version Control

Report Version	Date	Report Author	Report Checker & Reviewer
90719R1	19/03/2026	Harriet Parker Consultant	Jessica Bayliff Principal Consultant
90719R2	10/06/2026	Harriet Parker Consultant	Nathan Montgomery Project Consultant

1. Executive summary



A review has been undertaken of national environmental data sets to assess the flood risk to the Site from all sources of flooding in accordance with the National Planning Policy Framework (NPPF) (2024) and National Planning Practice Guidance (NPPG) (published in 2014 and updated in September 2025). A site-specific flood risk assessment, to assess the flood risk to and from the development Site, is provided within this concise interpretative report written by an experienced GeoSmart consultant. Baseline flood risk and residual risks that remain after the flood risk management and mitigation measures are implemented are summarised in the table below.

Site analysis

Source of Flood Risk	Baseline ¹	After analysis ²	After Mitigation ³
River (fluvial) flooding	Very Low		N/A
Sea (coastal/tidal) flooding	Very Low		N/A
Surface water (pluvial) flooding	High		Low to Medium
Groundwater flooding	Negligible		Negligible
Other flood risk factors present	Yes (sewers)		Yes
Is any other further work recommended?	Yes (see below)		

1 BASELINE risks assigned for the whole Site, using national risk maps, including the benefit of EA flood defences and the impacts of climate change.

2 AFTER ANALYSIS modification of risk assessment based on detailed site specific analysis including some or all of the following: flood model data, high resolution mapping, building location, access routes, topographic and CCTV surveys. Reasons for the change in classification are provided in the text.

3 AFTER MITIGATION risks include risks to proposed development / asset and occupants if mitigation measures recommended in this report are implemented, including the impacts of climate change.

*N/A indicates where mitigation is not required.

Summary of existing and proposed development

The Site is currently used within a commercial capacity as a single storey office building with associated hardstanding used for car parking in the north west of the Site.

Development proposals comprise the demolition of the existing building and the construction of a two storey residential building with a loft level in its place. This is proposed to comprise of two one-bed units on the ground floor; one three bed unit on the second floor and loft level; and two two-bed units that stretch across all three levels. It is noted that sleeping accommodation on the ground floor is proposed to be raised on a mezzanine level to c. 1 m above the rest of the ground floor area. Associated bin and bike storage are proposed in the south west of the Site, alongside vehicle parking at the front of the building.

Summary of flood risks

The flood risks from all sources have been assessed as part of this report and are as follows:

River (fluvial) and Sea (Estuarine/Coastal) flooding

According to the Environment Agency's (EA) Flood Map for Planning Purposes, the Site is located within a fluvial and tidal Flood Zone 1 (Low Probability) and is not located within the 'flood zone plus climate change' extent.

According to the EA's Risk of Flooding from Rivers and Sea (RoFRS) map, which considers the type, condition and crest height of flood defences, the Site has a Very Low risk of fluvial and tidal flooding during both the present day and climate change (2036 to 2069) scenarios.

Surface Water (Pluvial) flooding

According to the EA's Surface Water Spatial Planning dataset included within the Flood Map for Planning, the Site has a High risk of pluvial flooding in both the present day and climate change (2070s) scenario.

Present day

- Flood depths on Site could be up to 0.60-0.90 m in the 1 in 100 year present day scenario event.

Future Climate Change

- Flood depths in the area proposed for development are generally up to 0.60-0.90 m in the 1 in 100 year plus climate change event, with minor areas anticipated to reach up to 0.90-1.20 m.

Groundwater flooding

Groundwater Flood Risk screening data indicates there is a Negligible potential risk of groundwater flooding at the surface in the vicinity of the Site during a 1 in 100 year event.

- The Site is underlain by potentially permeable bedrock. Groundwater levels may rise in the bedrock aquifer in a seasonal response to prolonged rainfall recharge which may cause an unusually high peak in groundwater levels during some years.

- Borehole ref: TQ09SE356 and TQ09SE355 did not encounter groundwater to their maximum depth of 5.70 m bgl in October 2009, subject to seasonal variations.

Artificial sources of flooding

The risk of flooding from artificial (man-made) sources such as reservoirs, sewers and canals has been assessed:

- The EA's Risk of Flooding from Reservoir map confirms the Site is not at risk of reservoir flooding.
- Ordnance Survey (OS) data confirms there are no canals near to the Site.
- The Strategic Flood Risk Assessment (SFRA) (METIS, 2024) has identified 21-40 incidences or modelled incidences of flooding as a result of surcharging sewers within the HA6 1 postcode. However, it is recognised that this four digit postcode covers a large area and instances of flooding are not specific to the Site.

The risk of flooding from artificial sources is considered to be Low.

The risk to the development has been assessed over its expected 100 year lifetime, including appropriate allowances for the impacts of climate change which could increase the flood risk to the Site. Risks identified include increased potential for surface water flooding, and appropriate mitigation measures are proposed.

Recommendations

Recommendations for flood mitigation are provided below, based upon the proposed development and the flood risk identified at the Site.

- There is a risk of flooding from pluvial (surface water) sources, where flood depths at the Site are generally up to 0.60-0.90 m, but could be up to 0.90-1.20 m in the proposed development area during the 1 in 100 year plus climate change event.
 - Finished Floor Levels (FFL) of the proposed development should be set to 1.35 m above surrounding ground levels.¹ Standard flood resilient design measures should be incorporated.
 - Ground levels should aim to slope away from buildings and should be designed to channel any overland flows from off-Site (to the south) away from the development and Site drainage systems.
 - Where feasible, and where FFLs cannot be raised to the recommended level, sleeping accommodation should not be located on the ground floor, and should be raised to a higher level of the building.
 - It is noted that, following conversations with the Client, the proposed ground floor bedrooms have been raised at the rear of the property on a mezzanine level to c.

¹ 0.15 m above the maximum 1 in 100 year plus climate change flood depths of 0.90-1.20 m.

1 m above the surrounding floor levels (Site plans and section drawings included in Appendix A) to reduce the risk to residents in the event of a flood.

- The ongoing management and maintenance of existing and any proposed drainage networks, under the riparian ownership of the developer, should be undertaken in perpetuity with the development.
- A Sustainable Drainage Strategy (SuDS) should be developed for the Site, for effective management of surface water runoff over the lifetime of the proposed development.

GeoSmart recommend the mitigation measures discussed within this report are considered as part of the proposed development where possible and evidence of this is provided to the Local Planning Authority as part of the planning application.

2. Introduction



Background and purpose

A site-specific flood risk assessment has been undertaken, to assess the flood risk to and from the development Site. This assessment has been undertaken by firstly compiling information concerning the Site and the surrounding area. The information gathered was then used to construct a 'conceptual site model', including an understanding of the appropriateness of the development as defined in the NPPF (2024) and the source(s) of any flood risk present, guided by the NPPG (Published in 2014 and updated in September 2025). Finally, a preliminary assessment of the steps that can be taken to manage flood risk to the development was undertaken.

This report has been prepared with reference to the NPPF (2024) and NPPG (2025).

"The National Planning Policy Framework set out the Government's planning policies for England and how these are expected to be applied" (NPPF, 2024).

The NPPF (2024) and NPPG (2025) promote a sequential, risk based approach to the location of development. This also applies to locating a development within a Site which has a variable risk of flooding.

"The approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas considering all sources of flooding including areas at risk of surface water flooding" (Paragraph: 023. NPPG, 2025).

The purpose of this report is to provide clear and pragmatic advice regarding the nature and potential significance of flood hazards which may be present at the Site.

Report scope

In accordance with the requirements set out within NPPG 2025 (Paragraph: 021 Reference ID: 7-021-20220825), a thorough review of publicly and commercially available flood risk data and EA supplied data indicating potential sources of flood risk to the Site from rivers and coastal sources, surface run-off (pluvial), groundwater and reservoirs, including historical flood information and modelled flood extent. Appropriate measures are recommended to manage and mitigate the flood risk to the property.

Information obtained from the EA and a review of the West London Strategic Flood Risk Assessment (SFRA) (METIS, 2024) and London Borough of Hillingdon Surface Water Management Plan (Capita Symonds and Scott Wilson, 2013) are used to ascertain local flooding issues and, where appropriate, identify information to support a Sequential and/or Exception test required as part of the NPPF (2024).

The existing and future flood risk to and from the Site from all flood sources is assessed in line with current best practice using the best available data. The risk to the development has been assessed over its expected lifetime, including appropriate allowances for the impacts of climate change. Residual risks that remain after the flood risk management and mitigation

measures are implemented, are considered with an explanation of how these risks can be managed to keep the users of the development safe over its lifetime.

An indication of whether the Site will potentially increase flood risk elsewhere is provided, including where the proposed development increases the building footprint at the Site. A drainage strategy to control runoff can be commissioned separately if identified as a requirement within this report.

Report limitations

It is noted that the findings presented in this report are based on a desk study of information supplied by third parties. Whilst we assume that all information is representative of past and present conditions, we can offer no guarantee as to its validity and a proportionate programme of site investigations would be required to fully verify these findings.

The basemap used is the OS Street View 1:10,000 scale, however the Site boundary has been drawn using BlueSky aerial imagery to ensure the correct extent and proportion of the Site is analysed.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

Datasets

The following table shows the sources of information that have been consulted as part of this report:

Table 1. Datasets consulted to obtain confirmation of sources of flooding and risk

Source of flooding	Datasets consulted				
	Commercial Flood Maps	Local Policy & Guidance Documents*	Environment Agency	Utility provider (Appendix B)	OS Data
Historical	X	X	X		
River (fluvial) / Sea (tidal/coastal)	X	X	X		

Source of flooding	Datasets consulted				
	Commercial Flood Maps	Local Policy & Guidance Documents*	Environment Agency	Utility provider (Appendix B)	OS Data
Surface water (pluvial)	X	X	X		
Groundwater	X	X			
Sewer		X		X	
Culvert/bridges		X			X
Reservoir		X	X		

*Local guidance and policy, referenced below, has been consulted to determine local flood conditions and requirements for flood mitigation measures.

Local policy and guidance

For this report, several documents have been consulted for local policy and guidance and relevant information is outlined below:

London Borough of Hillingdon Surface Water Management Plan (Capita Symonds and Scott Wilson, 2013):

- Past records of surface water flooding within Hillingdon have been gathered from sources such as the Environment Agency, London Underground as well as the LB of Hillingdon. These incidents have been mapped as part of the SWMP and are identified in Figure 5 (Appendix D). Table 3-2 provides a summary of the previous records of flooding attributed to surface water in the LB of Hillingdon. There are limited records of surface water flooding in the London Borough of Hillingdon that can be used to verify the modelling results, however discussions with Council staff at Hillingdon has provided anecdotal support for several of the locations identified as being susceptible.
- Pluvial flooding: runoff as a result of high intensity rainfall when water is ponding or flowing over the ground surface before it enters the underground drainage network or a watercourse. Figure 13 to 22 in Appendix D, present mapped results of the surface water modelling for all modelled rainfall events;

- Sewer flooding; flooding which occurs when the capacity of the underground drainage network is exceeded, resulting in flooding inside and outside of buildings. Normal discharge of sewers and drains through outfalls may be impeded by high water levels in receiving waters as a result of wet weather or tidal conditions;
- Flooding from Ordinary Watercourses: flooding which occurs as a result of the capacity of the watercourse being exceeded resulting in out of bank flow (water coming back out of rivers and streams); and
- Flooding from groundwater sources: occurs when the water level within the groundwater aquifer rises to the surface.

West London Strategic Flood Risk Assessment (METIS, 2024):

Site-Specific policies

Ensuring that land within development sites are safeguarded for potential flood mitigation use through the active consideration of predicted flood mapping from all sources at the master planning stage.

Developers must submit completed Flood Risk Assessments and Drainage Strategy (with supporting Checklists) to demonstrate compliance with requirements detailed in the SFRA for all Major development proposals.

Drainage Strategies with the supporting checklist must be provided for all Minor developments and for Change of Use proposals if they impact the proposed development's current drainage regime. Site-specific Flood Risk Assessments with the accompanying checklist must be provided for Minor developments and Change of Use proposals if they:

- Are outside of Flood Zone 1.
- Are inside an EA defined area with a critical drainage problem.
- Change the existing footprint of the building(s).
- Are at risk from any other sources of flooding.

As part of a submitted development proposal, developers must provide evidence to the LPA to demonstrate that the Sequential Test has been undertaken. Developers must also provide evidence that an on-site sequential approach has been taken to direct vulnerable uses to the lowest risk parts of the development site.

Where development is proposed for sites within Flood Zones 3a (surface water), evidence must be submitted to demonstrate that:

- There will be no increase of flood risk to properties outside of the development boundary.
- Consultation has been undertaken with the relevant LLFA to consider potential wider impacts or benefits the development could have on the local surface water catchment.
- Relevant strategic documents (such as the Thames CFMP, LFRMS and SWMP) have been reviewed.

- The LLFA has been consulted to determine if the development should contribute to any catchment wide flood alleviation schemes being considered by the LLFA (such as a S106 contribution to wider catchment flood risk management infrastructure).

Development should maximise the use of open spaces to ensure spaces for water to flow during times of flood.

Developments that seek to increase impermeable surfaces within a site, including small areas such as front gardens, will be resisted where appropriate.

Developers should aim to incorporate permeable paving in hardstanding areas to provide flood mitigation benefits in new and existing developments. In areas where the geology does not facilitate infiltration (e.g. areas underlain with clay), permeable paving should be underlain with gravel or feature an underground storage system.

Development proposed in 'dry islands' should be designed for safe access and egress in a flood event. Dry islands are considered as flood risk areas due to the potential loss of important local services during flood events and lack of safe access routes. They require safe access and egress routes to be developed for the lifetime of the property, factoring in the impacts of climate change.

Guidance

Strategic Flood Risk Assessments are carried out by local authorities, in consultation with the Environment Agency, to assess the flood risk to the area from all sources both now and in the future due to climate change. They are used to inform planning decisions to ensure inappropriate development is avoided (NPPF, 2024).

3. Site analysis



Site information

The Site is located in Northwood in a setting of commercial and residential land use at National Grid Reference TQ 09779 90918.

Figure 1. Aerial imagery of the Site (Bluesky, 2026)



Figure 2 indicates ground levels within 500 m of the Site rise to the north, east and west of the Site, with lower lying ground to the south west.

Figure 2. Site Location and Relative Elevations (GeoSmart, 2026)

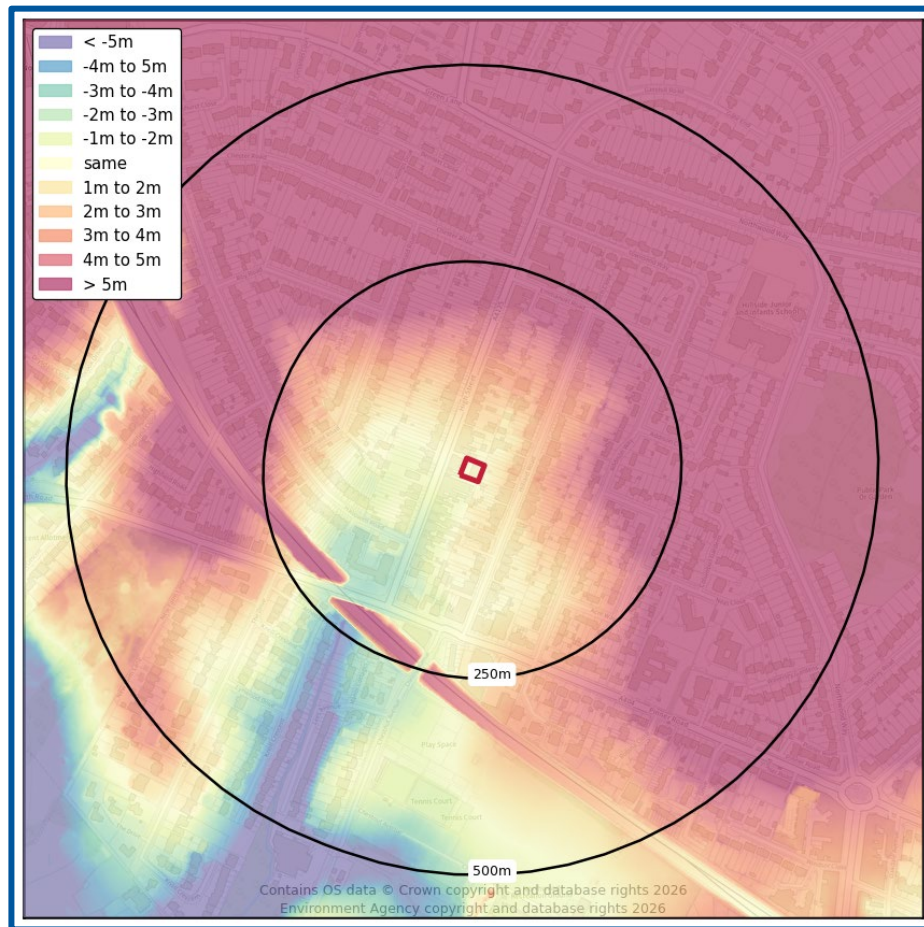
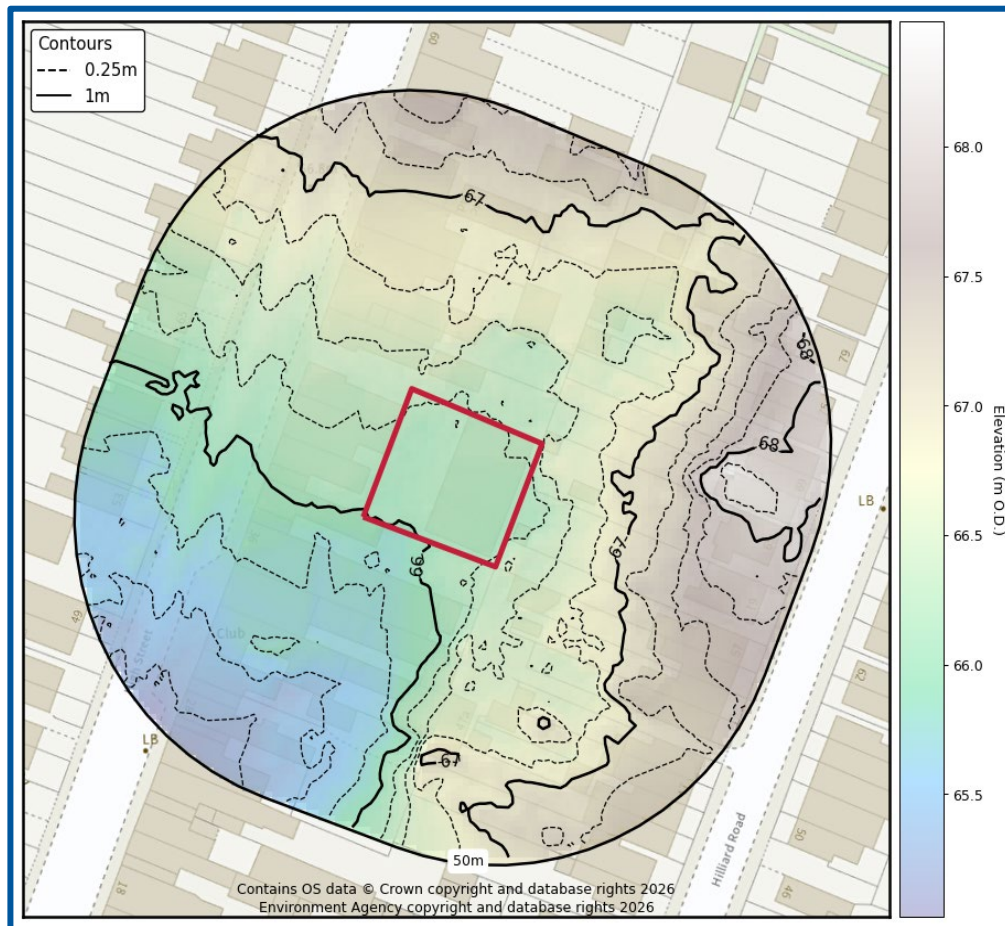


Figure 3 (overleaf) indicates that the general ground levels on the Site are between 65.90 and 66.37 mAOD with the Site falling gradually in a south western direction. This is based on EA elevation data obtained for the Site to a 1 m resolution with a vertical accuracy of ± 0.15 m.

Figure 3. Environment Agency LiDAR ground elevation data (GeoSmart, 2026)



Development

The Site is currently used within a commercial capacity as a single storey office building with associated hardstanding used for car parking in the north west of the Site.

Development proposals comprise the demolition of the existing building and the construction of a two storey residential building with a loft level. This is proposed to comprise of two one-bed units on the ground floor; one three bed unit on the second floor and loft level; and two two-bed units that stretch across all three levels. It is noted that sleeping accommodation on the ground floor is proposed to be raised on a mezzanine level to c. 1 m above the rest of the ground floor area. Associated bin and bike storage are proposed in the south west of the Site, alongside vehicle parking at the front of the building. Site plans are included within Appendix A.

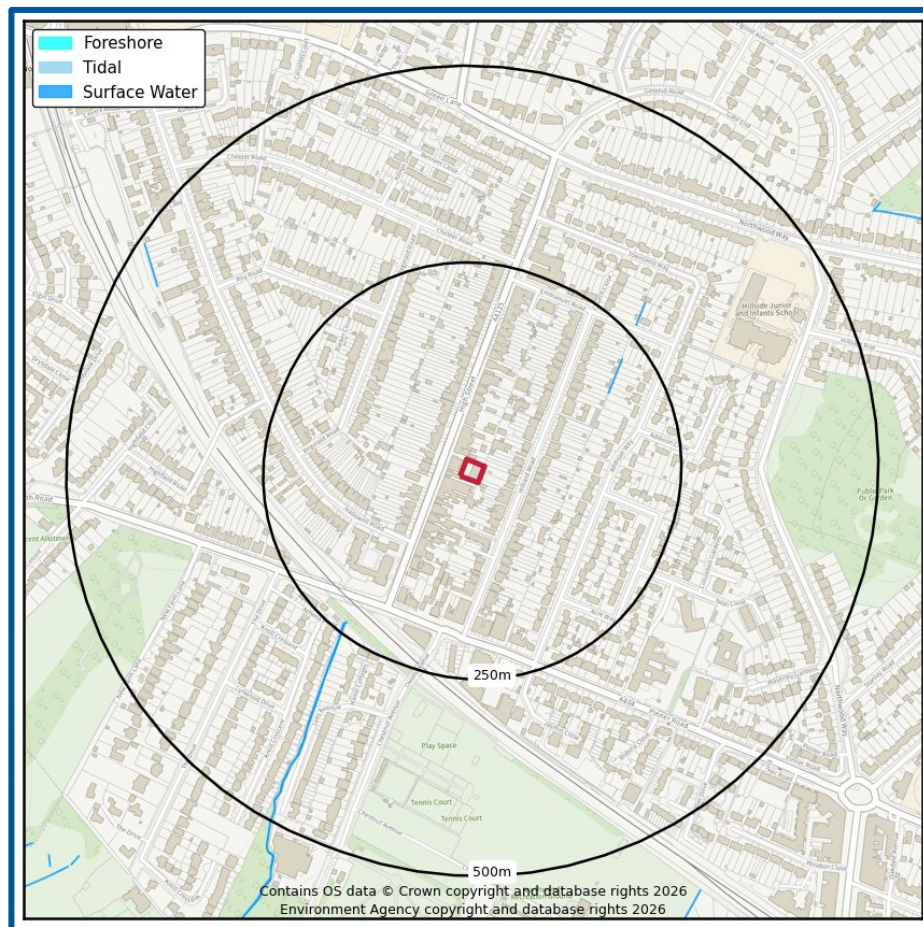
The effect of the overall development will result in an increase in number of occupants and/or users of the Site and will result in the change of use, nature or times of occupation. According to Annex 3 of the NPPF (2024), the vulnerability classification of the existing development is Less Vulnerable and proposed development is More Vulnerable. The estimated lifespan of the development is 100 years.

Hydrological features

According to Ordnance Survey (OS) mapping included in Figure 4, there are numerous surface water features within 500 m of the Site.

- Drainage ditches are located c. 185 m north east, c. 235 m south west and c. 455 m west of the Site.
 - It is assumed that these are culverted and flow within close proximity of the Site.

Figure 4. Surface water features (EA, 2026)



Proximity to relevant infrastructure

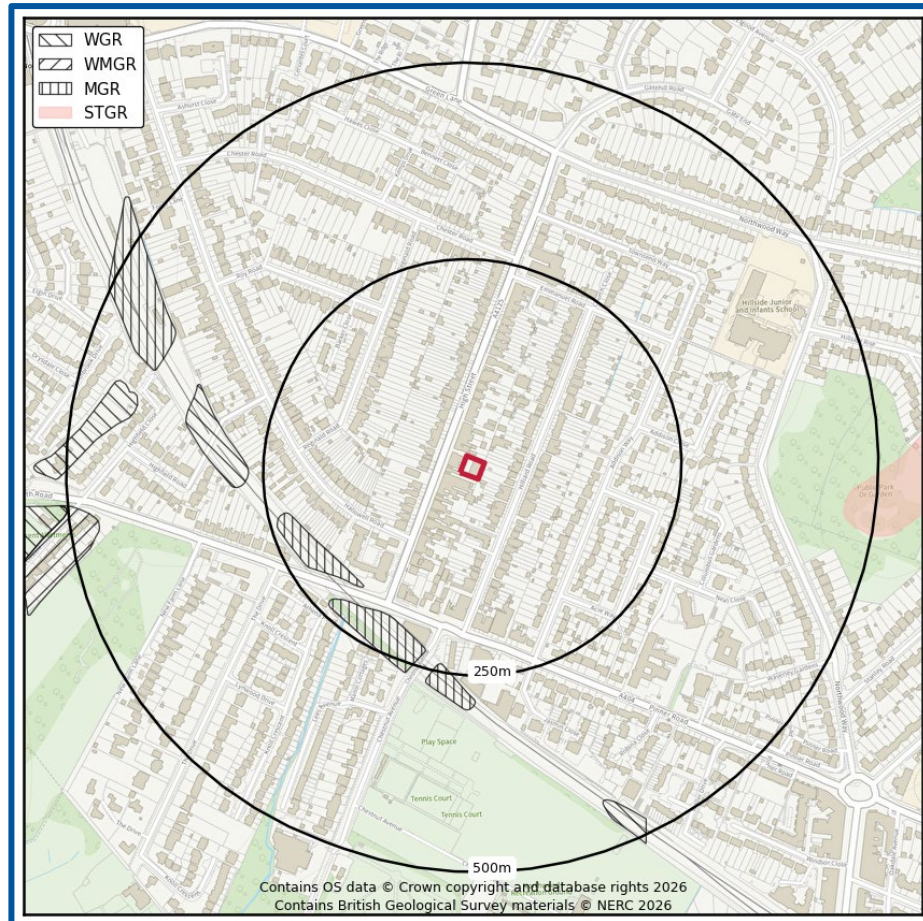
Infrastructure has been identified within proximity of the Site which could influence the risks of flooding to existing or future occupants. These include:

- It is assumed that the nearby drainage ditches are culverted, the closest of which is c. 185 m north east

Hydrogeological features

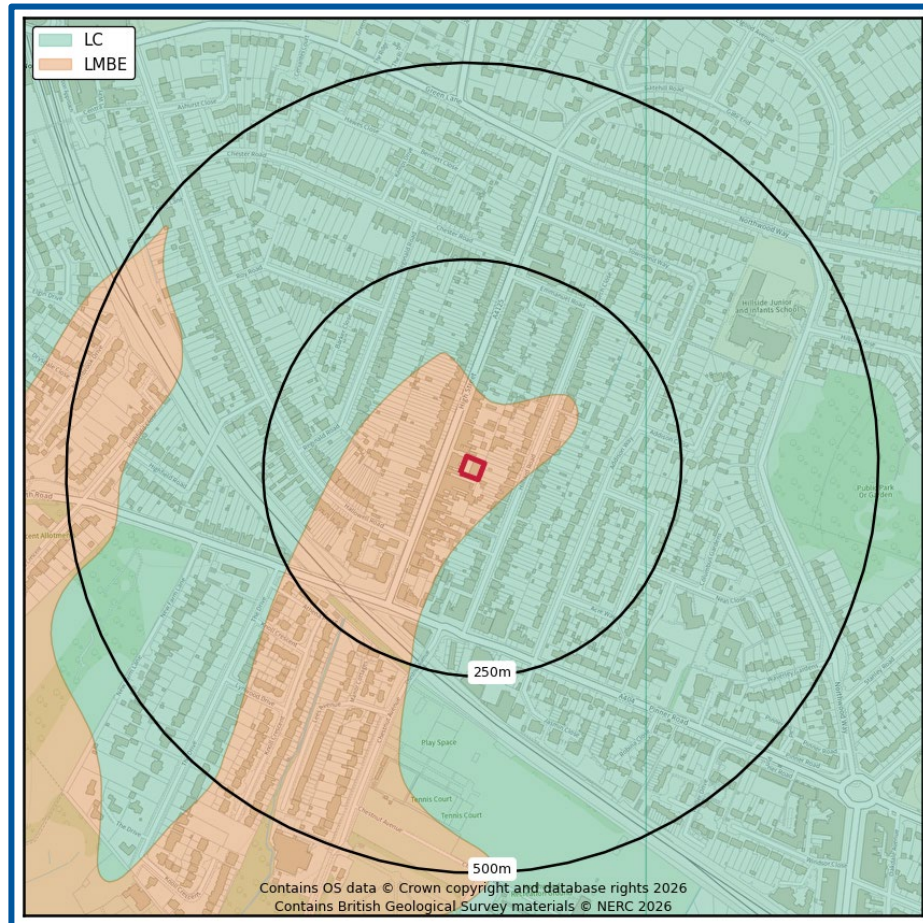
British Geological Survey (BGS) mapping indicates there is no underlying superficial geology at the Site (BGS, 2026) (Figure 5).

Figure 5. Superficial Geology and Artificial Deposits (BGS, 2026)



BGS mapping indicates the underlying bedrock geology (Figure 6) consists of the Lambeth Group (LMBE), which comprises clay, silt and sand (BGS, 2026). This bedrock geology is classified by the EA as a Secondary (A) Aquifer, which indicates it is likely to comprise permeable layers capable of supporting water supply at a local rather than strategic scale.

Figure 6. Bedrock Geology (BGS, 2026)



Geological conditions

A review of the BGS borehole database (BGS, 2026) indicates the nearest and most relevant borehole to the Site (ref: TQ09SE356) is located c. 210 m to the south of the Site boundary at an elevation of 63.70 mAOD (taken from the borehole record). An additional borehole (ref: TQ09SE355) is located c. 235 m to the south of the Site boundary at an elevation of 70.29 mAOD (taken from the borehole record). A summary of the geological strata encountered by the boreholes is provided within the table below.

It should be noted that the boreholes were drilled a reasonable distance (>200 m) from the Site within a railway embankment and therefore are unlikely to be fully representative of the underlying Site conditions; however, these have been included for completion in the absence of more relevant data.

Table 2. Summary of BGS borehole information

Strata encountered	BGS borehole TQ09SE356		BGS borehole TQ09SE355	
	Depth to base of stratum (m bgl)	Strata composition	Depth to base of stratum (m bgl)	Strata composition
Made Ground (embankment fill)	0.50	Dark brown silty very sandy gravel with occasional roots and rootlets. Sand is fine to coarse. Gravel is angular to subrounded granite rail ballast glass flint and red brick.	2.20	Dark brown silty sandy gravel with occasional roots and rootlets Sand is fine to coarse. Gravel is angular to well rounded flint glass red brick fragments pottery and clinker slag undifferentiated.
	1.70	Very stiff dark brown mottled orangish brown slightly sandy slightly gravelly clay with occasional roots and rootlets. Gravel is subangular to subrounded fine to coarse chalk and flint. Sand is fine to medium.		
Lambeth Group	2.10	Very stiff brown mottled orangish brown and grey silty clay.	>4.00 (base of borehole)	Stiff to very stiff light brown mottled grey and orange slightly sandy clay with occasional fine pockets of yellow silt and some rootlets. Sand is fine.
	>5.70 (base of borehole)	Stiff greenish grey mottled orange clay with frequent pockets of white silt.		

Groundwater

Borehole refs: TQ09SE356 and TQ09SE355 did not encounter groundwater to their maximum depth of 5.70 m bgl in October 2009, subject to seasonal variations.

4. Flood risk to the development

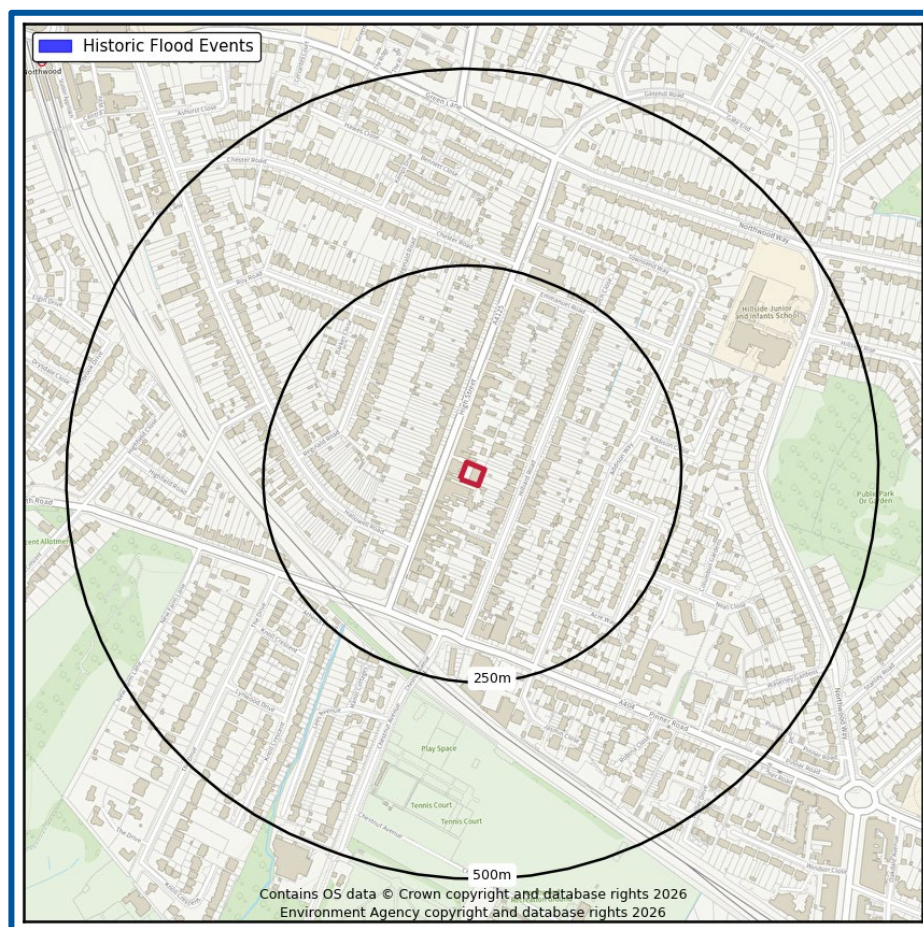


Historical flood events

According to the EA's Historical Flood Map (Figure 7) and interactive mapping of the SFRA (METIS, 2024), no flooding events have historically affected the Site.

The purpose of historical flood data is to provide information on where and why flooding may have occurred in the past. The absence of any recorded events does not mean flooding has never occurred on-Site or that flooding will never occur at the Site.

Figure 7. EA Historic Flood Map (EA, 2026)

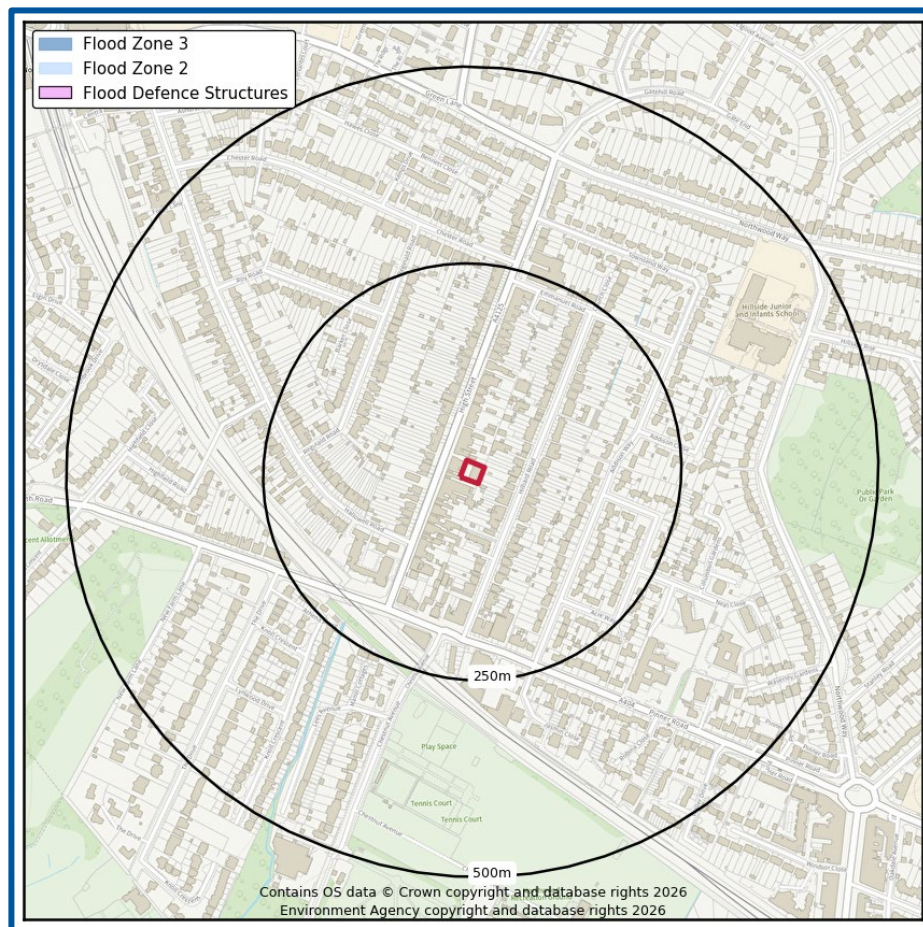


Rivers (fluvial) / Sea (coastal) / Estuarine (tidal) flooding

According to the EA's Flood Map for Planning Purposes (Figure 8), the Site is located within fluvial and tidal Flood Zone 1 and is therefore classified as having a Low probability of fluvial and tidal (coastal) flooding.

The Flood Map for Planning also confirms the Site is not located within the 'flood zone plus climate change' extent.

Figure 8. EA Flood Map for Planning Purposes (EA, 2026)



Guidance

As defined in the NPPF (2024):

Ignoring the presence of any defences, land located in a Flood Zone 1 is considered to have a Low probability of flooding, with less than a 1 in 1000 annual probability of fluvial or coastal flooding in any one year.

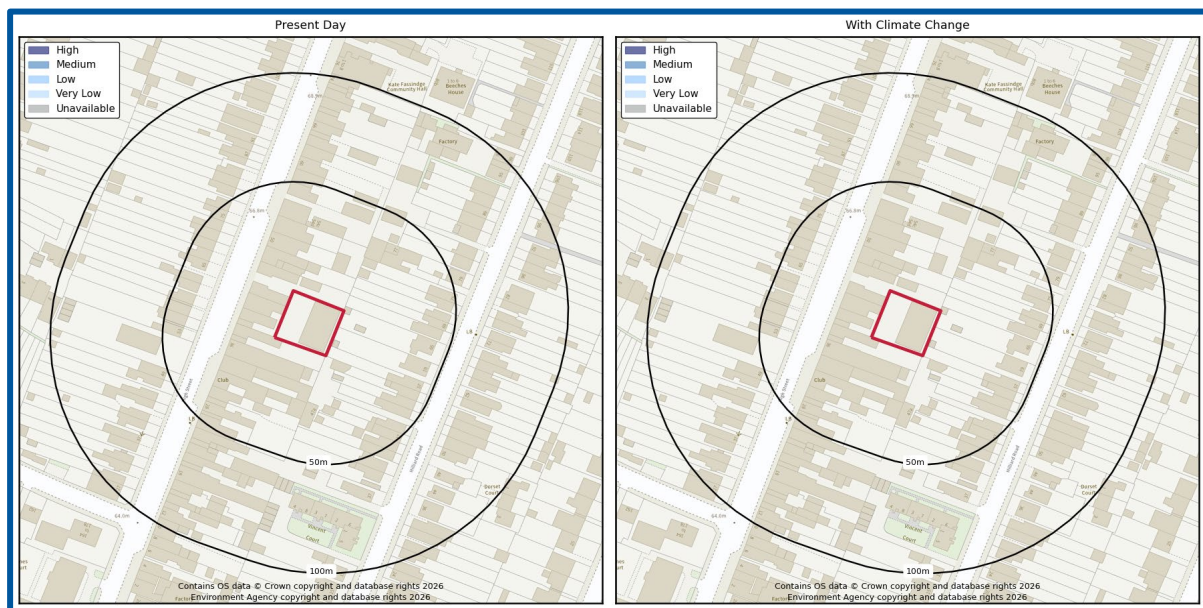
Development of all uses of land is appropriate in this zone (see glossary for terminology).

Flood risk including the benefit of defences

The type and condition of existing flood defences influence the 'actual' risk of fluvial flooding to the Site, albeit the long-term residual risk of flooding (ignoring the defences) should be considered when proposing new development.

According to the EA's RoFRS map (Figure 9), the Site has a Very Low risk of fluvial and tidal flooding during both the present day and climate change (2036 to 2069) scenarios.

Figure 9. Risk of Flooding from Rivers and Sea map present day and future (2036 to 2069) (EA, 2026)



Surface water (pluvial) flooding

Surface water flooding occurs when intense rainfall exceeds the infiltration capacity of the ground and overwhelms the drainage systems. It can occur in most locations even at higher elevations and at significant distances from river and coastal floodplains.

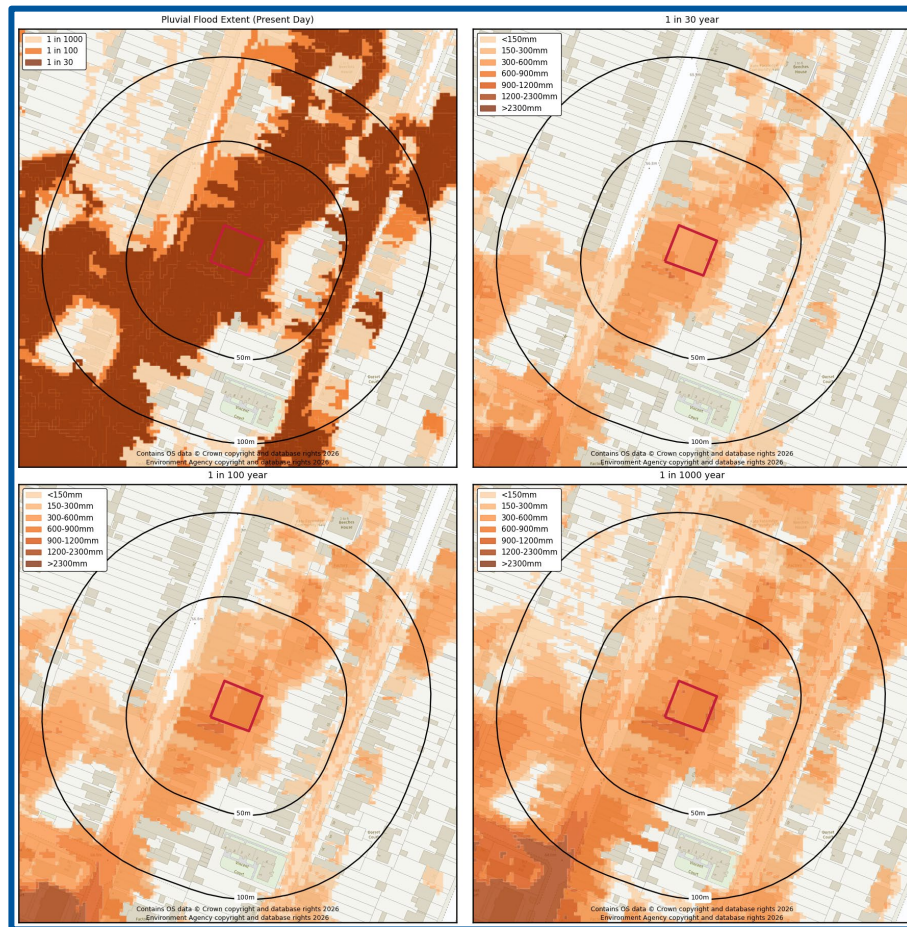
According to the EA's Surface Water Spatial Planning dataset included within the Flood Map for Planning, the Site has a High risk of pluvial flooding.

Figure 10 (overleaf) confirms the extent and depth of flooding in multiple modelled flood scenarios in the present day. This shows that the entire Site is anticipated to flood during all three modelled events, with the following depths:

- During the High risk event (>3.3% AEP), flooding of generally up to 0.30-0.60 m would impact the entire Site, with depths rising to 0.60-0.90 m on the east and south west boundaries.
- During the Medium risk event (3.3 - 1% AEP), flood depths of up to 0.60-0.90 m are anticipated across the Site.
- During the Low risk event (1 - 0.1% AEP), flooding is generally up to 0.60-0.90 m, with minor areas on the east and south west boundaries reaching up to 0.90-1.20 m.

Pluvial flooding is likely to impact access and egress during all three modelled events, with modelled flood depths of up to 0.30-0.60 m in the adjacent highway.

Figure 10. EA present day surface water flood extent and depth map (EA, 2026)



Guidance

According to EA's surface water flood risk map the following advisory guidance applies to the Site:

Flood Depth

- 0.15 to 0.3 m - Flooding would: typically exceed kerb height, likely exceed the level of a damp-proof course, cause property flooding in some areas
- 0.3 to 0.9 m - Flooding is likely to exceed average property threshold levels and cause internal flooding. Resilience measures are typically effective up to a water depth of 0.6 m above floor level.
- >0.9 m Very likely to exceed the maximum flood depth where property-level flood resilience measures are still effective.

The SFRA does not confirm whether any incidents of historical surface water flooding have occurred within 50 m of the Site, but does confirm the Site is not located within a Critical

Drainage Area (CDA) (METIS, 2024). Interactive mapping of the SFRA also indicates that the Site is located within Surface Water Flood Zone 3a (METIS, 2024).

Surface water flooding flow routes

Analysis of OS mapping, ground elevation data and the EA's pluvial flow route mapping in the 1 in 1000 year (Low probability) event and Overland Flow Pathways mapping confirms the Site is located on a potential overland flow route.

During a 1 in 30 year event flows could potentially affect the buildings and/or access routes to the Site.

Climate change factors

Paragraph 002 of the National Planning Practice Guidance (2025) requires consideration of the 1% AP (1 in 100 year) event, including an appropriate allowance for climate change.

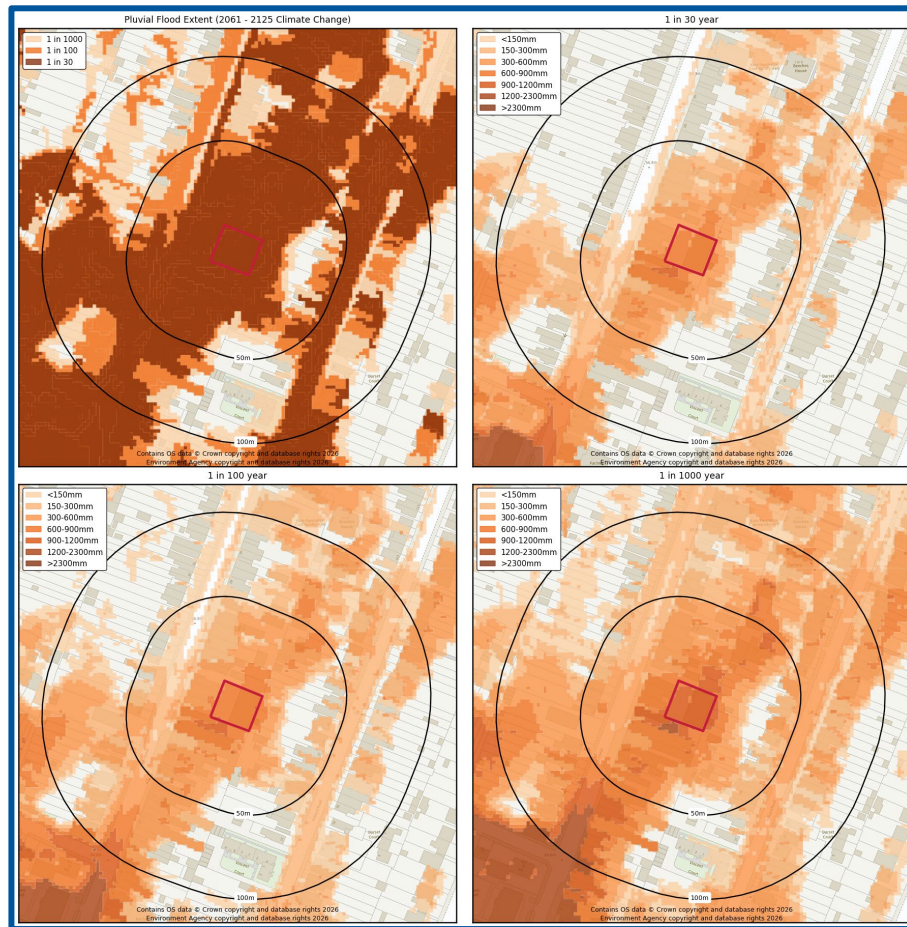
As the Site is located within the Colne Management Catchment and the proposed development is classed as More Vulnerable, where the proposed lifespan is approximately 100 years, the Upper End 40%) allowance is required to determine a suitable climate change factor to apply to rainfall data.

As part of the EA's Surface Water Spatial Planning dataset, climate change scenarios have been produced to indicate the predicted impacts of climate change on future surface water flood risk. The upper end allowance for the 2070s epoch (2061-2125) has been used for the climate change scenarios which is considered suitable to assess the risk of flooding over the lifetime of the proposed development.

According to the climate change modelling (Figure 11, overleaf), the Site remains at High risk, with flooding again anticipated across the entire Site area during all three modelled events:

- During the High risk event (>3.3% AEP), flood depths are generally up to 0.60-0.90 m across the Site.
- During the Medium risk event (3.3 - 1% AEP), flood depths are generally up to 0.60-0.90 m across the Site, with minor areas on the east and southeast boundaries reaching up to 0.90-1.20 m.
- During the Low risk event (1 - 0.1% AEP), flooding of up to 0.90-1.20 m is mapped across the Site, with a minor area on the southeast boundary (outside of the proposed building footprint) anticipated to encroach into the 1.20-2.30 m depth category.

Figure 11. EA future (2070s) surface water flood extent and depth map (EA, 2026)



Guidance

According to EA's surface water flood risk map, areas of the Site are at:

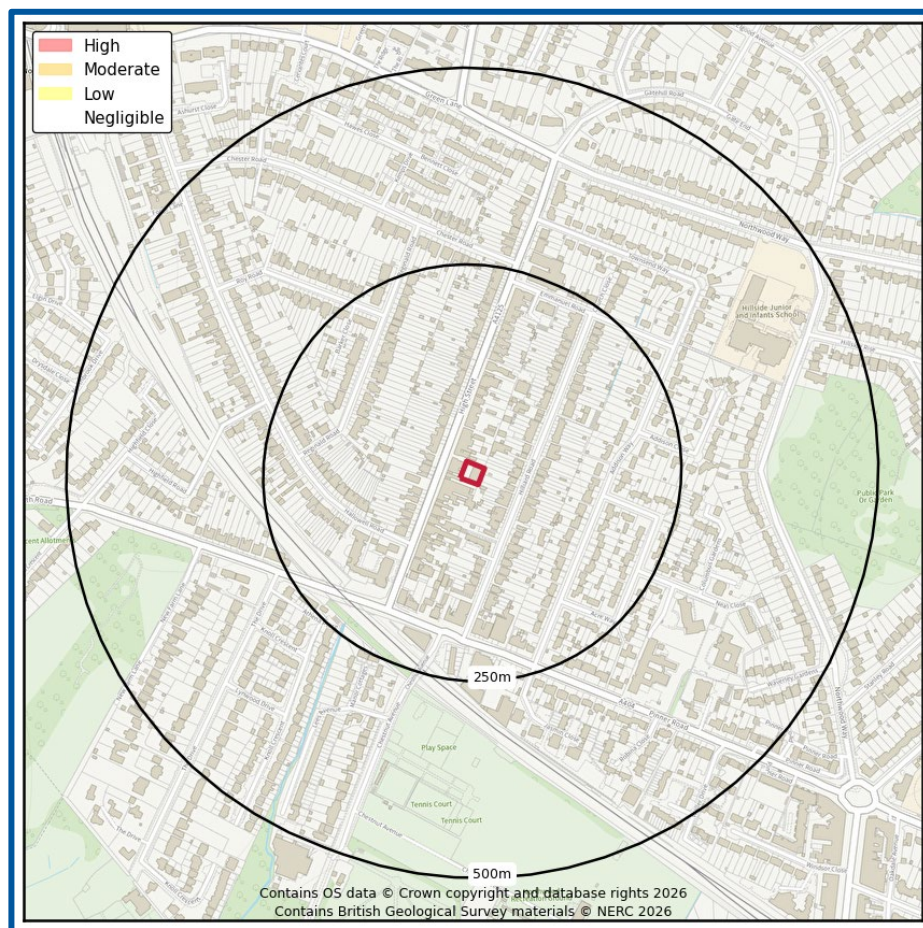
- Very Low risk - chance of flooding of less than 1 in 1000 (0.1%).
- Low risk - chance of flooding of between 1 in 1000 & 1 in 100 (0.1% and 1%).
- Medium risk - chance of flooding of between 1 in 100 and 1 in 30 (1% and 3.3%).
- High risk - chance of flooding of greater than 1 in 30 (3.3%).

Groundwater flooding

Groundwater flooding occurs when sub-surface water emerges from the ground at the surface or into Made Ground and structures. This may be as a result of persistent rainfall that recharges aquifers until they are full; or may be as a result of high river levels, or tides, driving water through near-surface deposits. Flooding may last a long time compared to surface water flooding, from weeks to months. Hence the amount of damage that is caused to property may be substantially higher.

Groundwater Flood Risk screening data (Figure 12) indicates there is a Negligible risk of groundwater flooding at the surface in the vicinity from the potentially permeable bedrock aquifer during a 1 in 100 year event.

Figure 12. GeoSmart GW5 Groundwater Flood Risk Map (GeoSmart, 2026)



Mapped classes within the screening map combine likelihood, possible severity and the uncertainty associated with predicting the subsurface system. The map is a national scale screening tool to prompt site-specific assessment where the impact of groundwater flooding would have significant adverse consequences. Mapping limitations and a number of local factors may reduce groundwater flood risk to land and property even where it lies within mapped groundwater flood risk zones, which do not mean that groundwater floods will occur across the whole of the risk area.

A site-specific assessment has been undertaken to refine the groundwater risk screening information on the basis of site-specific datasets (see Section 3), including BGS borehole data, to develop a conceptual groundwater model. The risk rating is refined further using the vulnerability of receptors including occupants and the existing and proposed Site layout, including the presence of basements and buried infrastructure. The presence of any nearby or on-Site surface water features such as drainage ditches, which could intercept groundwater, have also been considered.

- It is understood there are no existing basements, and a basement is not proposed as part of the development. *Note: the risks are higher for basements, buried infrastructure and soakaway systems which may be affected by high groundwater levels.*
- According to a review of the hydrogeology (Section 3), the Site is underlain by potentially permeable bedrock. Groundwater levels may rise in the bedrock aquifer in a seasonal response to prolonged rainfall recharge which may cause an unusually high peak in groundwater levels during some years.
- However, despite the presence of an aquifer, the Site would only be at risk of groundwater flooding if the water table reaches the base of the Site development or the ground surface, when groundwater seepage could lead to overland flow and ponding. The surrounding topography suggests that groundwater seepage is more likely to occur downgradient of the Site.
- Borehole refs: TQ09SE356 and TQ09SE355 did not encounter groundwater to their maximum depth of 5.70 m bgl in October 2009, subject to seasonal variations.
- Interactive mapping of the SFRA (METIS, 2024) includes the EA's Areas Susceptible to Groundwater Flooding mapping, which was developed as a screening tool for Local Authorities at a strategic scale. This mapping indicates that the Site is located at the edge of a 1 km square where less than 25% of the land is susceptible to groundwater emergence.
- According to interactive mapping of the SFRA, the Site is not located within an area with increase potential for elevated groundwater (METIS, 2024).
- Spring lines have not been identified in close proximity to the Site.

The hydrogeological characteristics suggest there is unlikely to be a shallow groundwater table beneath the Site.

The baseline groundwater flood risk rating is Negligible, and further analysis confirms that this would be appropriate for the Site.

Guidance

Negligible Risk - There will be a remote possibility that incidence of groundwater flooding could lead to damage to property or harm to other sensitive receptors at, or near, this location.

Climate change predictions suggest an increase in the frequency and intensity of extremes in groundwater levels.

- Rainfall recharge patterns will vary regionally resulting in changes to average groundwater levels.

The impact of climate change on groundwater levels beneath the Site is linked to the variation in rainfall recharge, which is uncertain.

Flooding from artificial sources

Artificial sources of flood risk include waterbodies or watercourses that have been amended by means of human intervention rather than natural processes. Examples include reservoirs (and associated water supply infrastructure), docks, sewers and canals. The flooding mechanism associated with flood risk from artificial sources is primarily related to breach or failure of structures (reservoir, lake, sewer, canal, flood storage areas, etc.)

Sewer flooding

Flooding from the sewer network can occur when flow entering the system exceeds its available discharge capacity, the system becomes blocked or it cannot discharge due to a high water level in the receiving watercourse. Water then begins to back up through the sewers and surcharge through manholes, potentially flooding highways, and properties.

Interactive mapping of the SFRA has identified 21-40 incidences or modelled incidences of flooding as a result of surcharging sewers within the HA6 1 postcode. However, it is recognised that this four digit postcode covers a large area and instances of flooding are not specific to the Site (METIS, 2024).

Records held by Thames Water indicate that there have been no incidences of flooding related to the surcharging of public sewers at the Site (Thames Water, 2026; Appendix B).

Guidance

Properties classified as “at risk” are those 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 either once or twice in the ten year reference period. Records held by the sewage utility company provide information relating to reported incidents, the absence of any records does not mean that the Site is not at risk of flooding.

Canal failure

Canals typically present a residual risk to Site rather than a direct flood risk due to the water levels being highly managed within an operating zone. Flooding can still occur from canals as a result of overtopping due to prolonged rainfall or embankment failure.

According to Ordnance Survey (OS) mapping, there are no canals within 500 m of the Site and therefore the risk is considered to be Negligible.

Water supply infrastructure

Water supply infrastructure is comprised of a piped network to distribute water to private houses or industrial, commercial or institution establishments and other usage points. In urban areas, this represents a particular risk of flooding due to the large amount of water supply infrastructure, its condition and the density of buildings.

The risks of flooding to properties from burst water mains cannot be readily assessed.

If more information regarding the condition and history of the water supply infrastructure within the vicinity of the Site is required, then it is advisable to contact the local water supplier (Affinity Water).

Culverts and bridges

The blockage of watercourses or structures by debris (that is, any material moved by a flowing stream including vegetation, sediment and man-made materials or refuse) reduces flow capacity and raises water levels, potentially increasing the risk of flooding. High water levels can cause saturation, seepage and percolation leading to failure of earth embankments or other structures. Debris accumulations can change flow patterns, leading to scour, sedimentation or structural failure.

Culverts and bridges have been identified within the vicinity of the Site. However, these structures are a significant distance from the Site and are therefore deemed unlikely to represent a flood risk to the Site in the event of a blockage.

The SFRA has not discussed any historic drainage issues within the Site area (METIS, 2024).

Reservoir flooding

According to the EA's Risk of Flooding from Reservoir mapping the Site is not at risk of flooding from reservoirs (Figure 13) (EA, 2026).

5. Flood risk from the development



Floodplain storage

Where flood storage from any source of flooding is to be lost as a result of development, on-Site level-for-level compensatory storage, accounting for the predicted impacts of climate change over the lifetime of the development, should be provided. Where it is not possible to provide compensatory storage on-Site, it may be acceptable to provide it off-Site if it is hydraulically and hydrologically linked.

The loss of floodplain storage is less likely to be a concern in areas benefitting from appropriate flood risk management infrastructure or where the source of flood risk is solely tidal.

The development is located within an area which would be impacted by a 1 in 100 year plus climate change surface water flood event and involves a minor increase in building footprint. As the development could displace flood waters, compensatory flood storage may be required for the losses in storage. Any losses in flood storage may displace flooding and could potentially alter flood flow routes, increasing flood risk elsewhere.

Drainage and run-off

Based on the topography and surface water flood risk in the vicinity, interference or interaction with overland flow paths and inflows from off-Site is considered possible. It is recommended that steps are taken to manage these potential inflows within the Site drainage system.

The potential surface water run-off generated from the Site during a 1 in 100 year return period should be calculated, using FEH 2022 rainfall data from the online Flood Estimation Handbook (FEH), developed by NERC (2009) and CEH (2016).

The NPPF (2024) recommends the effects of climate change are incorporated into FRA's. As per the NPPG (2025) the applicable climate change factor for the 1 in 30 ($\geq 3.3\%$ AEP) and 1 in 100 (< 3.3 to 1% AEP) year event to apply to surface water flooding is dependent upon the management catchment.

As the proposed development is being changed to residential, the lifespan of the development and requirements for climate change should allow up to the 1% AEP upper end allowance. As the Site is located within the Colne Management Catchment the following peak rainfall allowances are to be applied.

Table 3. Climate change rainfall allowances

Colne Management Catchment	3.3% Annual exceedance rainfall event		1% Annual exceedance rainfall event	
	2050s	2070s	2050s	2070s
Upper end	35%	35%	40%	40%
Central	20%	25%	20%	25%

6. Suitability of the proposed development



The information below outlines the suitability of proposed development in relation to national and local planning policy.

National policy and guidance

The aims of the national planning policies are achieved through application of the Sequential Test and in some cases the Exception Test.

	Guidance
	Sequential test: The aim of this test is to steer new development towards areas with the lowest risk of flooding (NPPF, 2024). Reasonably available sites located in Flood Zone 1 should be considered before those in Flood Zone 2 and only when there are no reasonably available sites in Flood Zones 1 and 2 should development in Flood Zone 3 be considered. Exception test: In some cases, this may need to be applied once the Sequential Test has been considered. For the exception test to be passed it must be demonstrated that the development would provide wider sustainability benefits to the community that outweigh flood risk and a site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Suitability of the proposed development, and whether the Sequential and Exception Tests are required, is based on the Flood Zone the Site is located within and the flood risk vulnerability classification of the existing and proposed development. Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

This report has been produced to assess all development types, prior to any development. The vulnerability classification and Flood Zones are compared within the table overleaf (Table 2 of the NPPG (2025)).

As the Site is located within Flood Zone 1, all types of development listed within the Table overleaf are acceptable according to National Policy.

Table 4. Flood risk vulnerability and flood zone ‘incompatibility’ (taken from NPPG, 2025)

Flood risk vulnerability classification		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood Zone	Zone 1 – low probability	✓	✓	✓	✓	✓
	Zone 2 – medium probability	✓	✓	Exception test required	✓	✓
	Zone 3a - high probability	Exception test required	✓	X	Exception test required	✓
	Zone 3b – functional flood plain	Exception test required	✓	X	X	X

7. Resilience and mitigation



Based on the flood risk identified at the Site, the national and local policies and guidance and proposed development, the mitigation measures outlined within this section of the report are likely to help protect the development from flooding.

Sea (coastal/tidal) flood mitigation measures

As the Site is not identified as being at risk of flooding from sea (coastal/tidal) sources, mitigation measures are not required.

Rivers (fluvial) flood mitigation measures

As the Site is not identified as being at risk of flooding from fluvial sources, mitigation measures are not required.

Surface water (pluvial) flood mitigation measures

A High surface water (pluvial) flooding risk has been identified at the Site. In order to ensure the development includes sufficient flood mitigation measures to reduce the risk of pluvial flooding over its lifetime, the flood depths, levels and appropriate mitigation measures have been assessed.

Flood depths could be up to 0.90-1.20 m in the proposed development area during the 1 in 100 year plus climate change event. Finished Floor Levels (FFL) of the proposed development should be set 0.15 m above anticipated flood depths to 1.35 m above surrounding ground levels.

Where feasible, and where FFLs cannot be raised to the recommended level, sleeping accommodation should not be located on the ground floor, and should be raised to a higher level of the building.

It is noted that, following conversations with the Client, the proposed ground floor bedrooms have been raised at the rear of the property on a mezzanine level to c. 1 m above the surrounding floor levels (Site plans and section drawings included in Appendix A) to reduce the risk to residents in the event of a flood.

Where finished floor levels cannot be set at the recommended elevation, the floor levels should be set as high as possible and flood resilience measures included:

Additional mitigation

Where it is not possible to raise the minimum finished floor levels to the recommended elevation, these should be raised as high as possible. It may be appropriate to adopt a water exclusion strategy for flood depths up to 600 mm in line with the EA's Standing Advice. A water exclusion strategy, using avoidance and resistance measures, is appropriate where floods are expected to last for short durations (but a structural engineer should be consulted). Potential water exclusion strategies include:

- Passive flood door systems;
- Air brick covers (manual or automatic closing);
- Non-return flap valves on sewer outfalls;
- Landscaping to divert water away from the property;
- Sustainable Drainage Systems (SuDS) to store/intercept flood water; and
- Boundary walls/fencing.

Avoidance and resistance measures are unlikely to completely prevent floodwater entering a property, particularly during longer duration flood events. Therefore, it is recommended that the following flood resilience measures are also considered.

- Flood resilient materials and designs:
 - Use of low permeability building materials up to 0.6 m such as engineering bricks (Classes A and B) or facing bricks;
 - Hard flooring and flood resilient metal staircases;
 - The use of internal lime plaster/render or where plasterboards are used these should be fitted horizontally instead of vertically and/or using moisture resistant plasterboard at lower levels;
 - Water, electricity and gas meters and electrical sockets should be located 600 mm above the predicted flood level;
 - Communications wiring: wiring for telephone, TV, Internet and other services should be protected by suitable insulation in the distribution ducts to prevent damage.

In addition, the regular maintenance of any drains and culverts surrounding/on the Site under the riparian ownership of the developer should be undertaken to reduce the flood risk.

A Sustainable Drainage Strategy (SuDS) should be developed for the Site, for effective management of surface water runoff from the proposed development.

If these mitigation measures are implemented this would reduce the flood risk to the development from High to Low - Medium.

Groundwater flood mitigation measures

As the Site is not identified as being at risk of groundwater flooding, mitigation measures are not required.

Reservoir flood mitigation measures

The Site is not at risk of flooding from reservoirs; therefore, mitigation measures are not required.

Other flood risk mitigation measures

As the Site is not identified as at risk from other sources, mitigation measures are not required.

Residual flood risk mitigation measures

The risk to the Site has been assessed from all sources of flooding and appropriate mitigation and management measures proposed to keep the users of the development safe over its lifetime. There is, however, a residual risk of flooding associated with the potential for failure of mitigation measures if regular maintenance and upkeep are not undertaken. If mitigation measures are not implemented or maintained, the risk to the development will remain as the baseline risk.

Further flood mitigation information

More information on flood resistance, resilience and water entry can be found here: http://www.planningportal.gov.uk/uploads/br/flood_performance.pdf

Emergency evacuation - safe access / egress and safe refuge

Emergency evacuation to land outside of the floodplain should be provided if feasible. Where this is not possible, More Vulnerable developments and, where possible, development in general (including basements), should have internal stair access to an area of safe refuge within the building to a level higher than the maximum likely water level. An area of safe refuge should be sufficient in size for all potential users and be reasonably accessible to the emergency services.

Emergency evacuation from the development and the Site should only be undertaken in strict accordance with any evacuation plans produced for the Site, with an understanding of the flood risks at the Site including available mitigation, the vulnerability of occupants and preferred evacuation routes.

Flood warnings

The EA operates a flood warning service in all areas at risk of flooding; this is available on their website: <https://www.gov.uk/check-flood-risk>. However, as the Site is not at risk of fluvial or tidal flooding, the Site is not located within an EA Flood Alerts or Warning coverage area so is unable to receive alerts and warnings.

As the Site is located within an area likely to be impacted by surface water flooding, consideration should be made for occupants to sign up to the MET Office extreme weather warnings. Weather warnings are issued when the weather is deemed to have a potential impact on people categorised as: Yellow (consideration of taking steps to minimise impacts), Amber (change plans to protect persons and property) and Red (take direct action to keep

yourself and others safe). Occupants should take the appropriate action, subject to the severity of the warning.

Other relevant information

Occupants should be signed up to receive MET Office extreme weather warnings.

It is recommended that main communication lines required for contacting the emergency services, electricity sockets/meters, water supply and first aid stations and supplies are not compromised by flood waters. Where possible these should all be raised above the extreme flood level.

8. Conclusions and recommendations



Source of Flood Risk	Baseline ¹	After analysis ²	After Mitigation ³
River (fluvial) flooding	Very Low		N/A
Sea (coastal/tidal) flooding	Very Low		N/A
Surface water (pluvial) flooding	High		Low to Medium
Groundwater flooding	Negligible		Negligible
Other flood risk factors present	Yes (sewers)		Yes
Is any other further work recommended?	Yes (see below)		

1 BASELINE risks assigned for the whole Site, using national risk maps, including the benefit of EA flood defences and the impacts of climate change.

2 AFTER ANALYSIS modification of risk assessment based on detailed site specific analysis including some or all of the following: flood model data, high resolution mapping, building location, access routes, topographic and CCTV surveys. Reasons for the change in classification are provided in the text.

3 AFTER MITIGATION risks include risks to proposed development / asset and occupants if mitigation measures recommended in this report are implemented, including the impacts of climate change.

*N/A indicates where mitigation is not required.

The table overleaf provides a summary of where the responses to key questions are discussed in this report.

More vulnerable developments in a Flood Zone 1 are acceptable according to the NPPF and providing the recommended mitigation measures are put in place (see previous sections) it is likely that flood risk to this Site will be reduced to an acceptable level.

Table 5. Summary of responses to key questions in the report

Key sources of flood risks identified	Pluvial (see Section 4).
Are standard mitigation measures likely to provide protection from flooding to/from the Site?	Yes (see Section 7).
Is any further work recommended?	Yes (See exec summary and Section 7).

9. Further information



The following table includes a list of additional products by GeoSmart:

Additional GeoSmart Products			
✓	Additional assessment: SuDSmart Report		The SuDSmart Report range assesses which drainage options are available for a Site. They build on technical detail starting from simple infiltration screening and work up to more complex SuDS Assessments detailing alternative options and designs. Please contact info@geosmartinfo.co.uk for further information.
✓	Additional assessment: EnviroSmart Report		Provides a robust desk-based assessment of potential contaminated land issues, taking into account the regulatory perspective. Our EnviroSmart reports are designed to be the most cost effective solution for planning conditions. Each report is individually prepared by a highly experienced consultant conversant with Local Authority requirements. Ideal for pre-planning or for addressing planning conditions for small developments. Can also be used for land transactions. Please contact info@geosmartinfo.co.uk for further information.

10. References and glossary



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Glossary

General terms

BGS	British Geological Survey
EA	Environment Agency
GeoSmart groundwater flood risk model	GeoSmart's national groundwater flood risk model takes advantage of all the available data and provides a preliminary indication of groundwater flood risk on a 50 m grid covering England and Wales. The model indicates the risk of the water table coming within 1 m of the ground surface for an indicative 1 in 100 year return period scenario.
Dry-Island	An area considered at low risk of flooding (e.g. In a Flood Zone 1) that is entirely surrounded by areas at higher risk of flooding (e.g. Flood Zone 2 and 3)
Flood resilience	Flood resilience or wet-proofing accepts that water will enter the building, but through careful design will minimise damage and allow the re-occupancy of the building quickly. Mitigation measures that reduce the damage to a property caused by flooding can include water entry strategies, raising electrical sockets off the floor, hard flooring.
Flood resistance	Flood resistance, or dry-proofing, stops water entering a building. Mitigation measures that prevent or reduce the likelihood of water entering a property can include raising flood levels or installation of sandbags.
Flood Zone 1	This zone has less than a 0.1% annual probability of river flooding
Flood Zone 2	This zone has between 0.1 and 1% annual probability of river flooding and between 0.1% and 0.5 % annual probability sea flooding
Flood Zone 3	This zone has more than a 1% annual probability of river flooding and 0.5% annual probability of sea flooding
Functional Flood Plain	An area of land where water has to flow or be stored in times of flood.
Hydrologic model	A computer model that simulates surface run-off or fluvial flow. The typical accuracy of hydrologic models such as this is ± 0.25 m for estimating flood levels at particular locations.
OS	Ordnance Survey
Residual Flood Risk	The flood risk remaining after taking mitigating actions.
SFRA	Strategic Flood Risk Assessment. This is a brief flood risk assessment provided by the local council

SuDS

A Sustainable drainage system (SuDS) is designed to replicate, as closely as possible, the natural drainage from the Site (before development) to ensure that the flood risk downstream of the Site does not increase as a result of the land being developed. SuDS also significantly improve the quality of water leaving the Site and can also improve the amenity and biodiversity that a Site has to offer. There are a range of SuDS options available to provide effective surface water management that intercept and store excess run-off. Sites over 1 Ha will usually require a sustainable drainage assessment if planning permission is required. The current proposal is that from April 2014 for more than a single dwelling the drainage system will require approval from the SuDS Approval Board (SABs).

Aquifer Types

Principal aquifer

These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

Secondary A aquifer

Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Secondary B aquifer

Predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Secondary undifferentiated

Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type due to the variable characteristics of the rock type.

Unproductive Strata

These are rock layers or drift deposits with low permeability that has negligible significance for water supply or river base flow.

NPPF (2024) terms

Exception test

Applied once the sequential test has been passed. For the exception test to be passed it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk and a site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Sequential test

Aims to steer new development to areas with the lowest probability of flooding.

Essential infrastructure

Essential infrastructure includes essential transport infrastructure, essential utility infrastructure and wind turbines.

Water compatible	Water compatible land uses include flood control infrastructure, water-based recreation and lifeguard/coastal stations.
Less vulnerable	Less vulnerable land uses include police/ambulance/fire stations which are not required to be operational during flooding and buildings used for shops/financial/professional/other services.
More vulnerable	More vulnerable land uses include hospitals, residential institutions, buildings used for dwelling houses/student halls/drinking establishments/hotels and sites used for holiday or short-let caravans and camping.
Highly vulnerable	Highly vulnerable land uses include police/ambulance/fire stations which are required to be operational during flooding, basement dwellings and caravans/mobile homes/park homes intended for permanent residential use.

Data sources

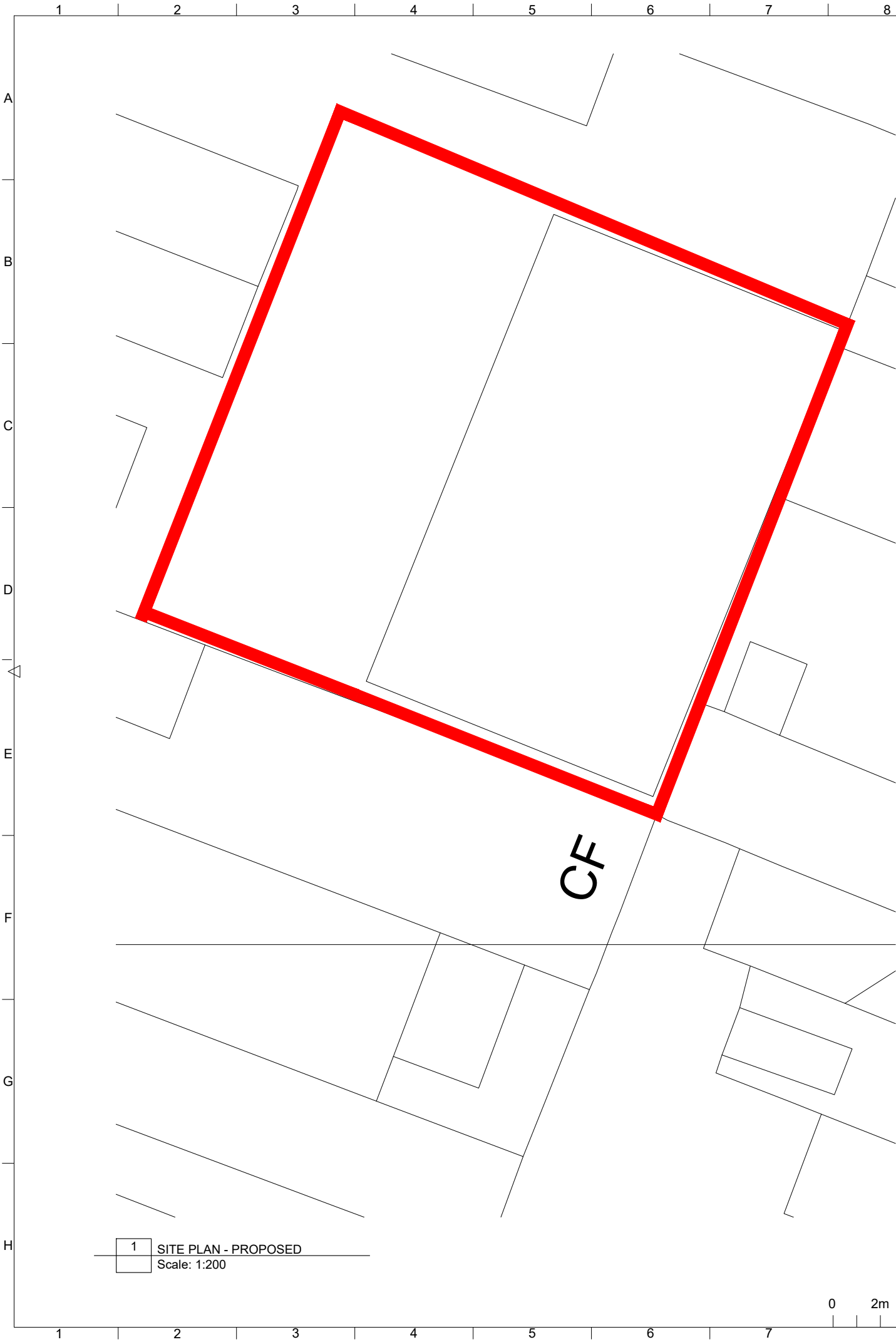
Aerial Photography	Contains Ordnance Survey data © Crown copyright and database right 2026 BlueSky copyright and database rights 2026
Bedrock & Superficial Geology	Contains British Geological Survey materials © NERC 2026 Ordnance Survey data © Crown copyright and database right 2026
Flood Risk (Flood Zone/RoFRS/Historic Flooding/Pluvial/Surface Water Features/Reservoir/ Flood Alert & Warning)	Environment Agency copyright and database rights 2026 Ordnance Survey data © Crown copyright and database right 2026
Flood Risk (Groundwater)	GeoSmart, BGS & OS GW5 (v2.4) Map (GeoSmart, 2026) Contains British Geological Survey materials © NERC 2026 Ordnance Survey data © Crown copyright and database right 2026
Location Plan	Contains Ordnance Survey data © Crown copyright and database right 2026
Topographic Data	OS LiDAR/EA Contains Ordnance Survey data © Crown copyright and database right 2026 Environment Agency copyright and database rights 2026

11. Appendices





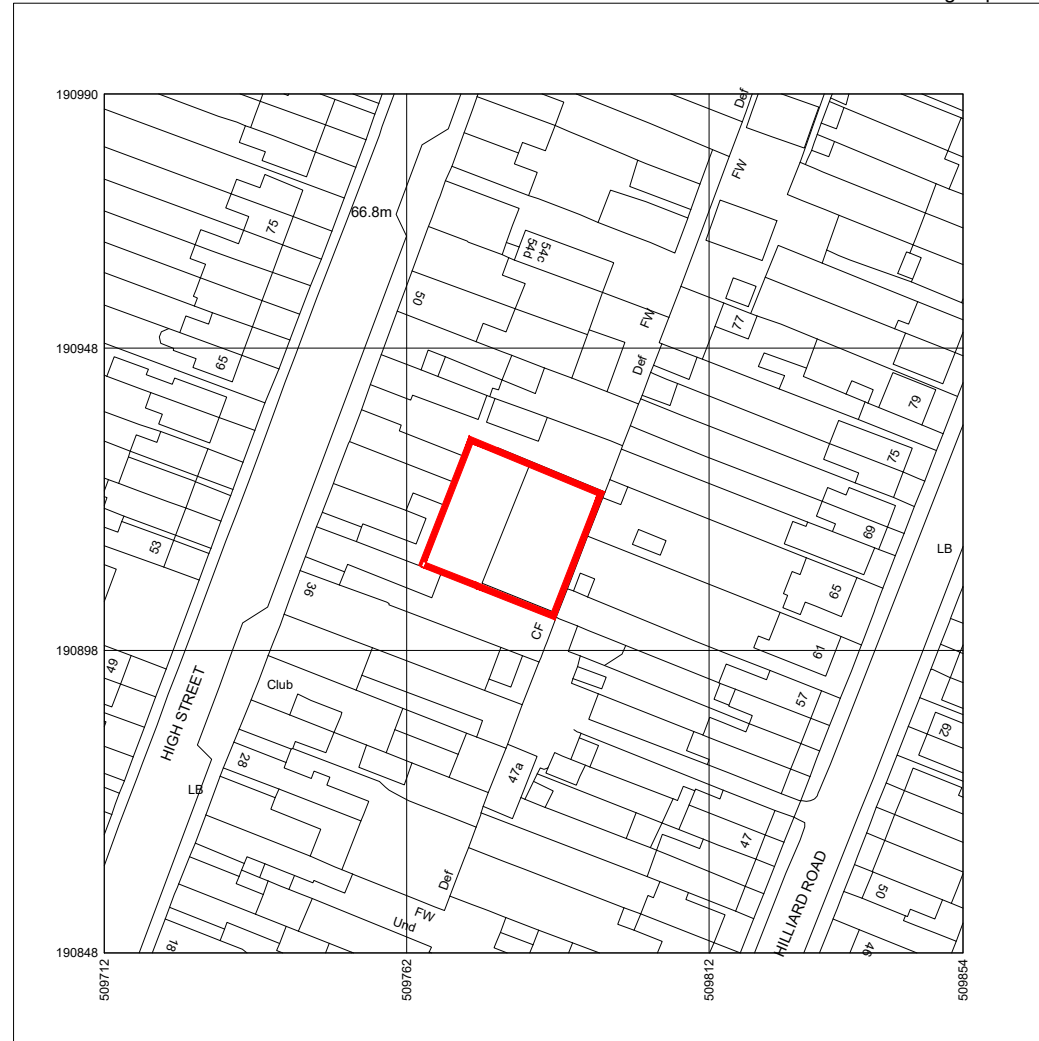
Site plans



1 SITE PLAN - PROPOSED
Scale: 1:200

2 LOCATION PLAN - PROPOSED
Scale: 1:1250

Produced on 15 May 2025 from the Ordnance Survey National Geographic Database and incorporating surveyed revision available at this date.
This map shows the area bounded by 509712 190848,509854 190848,509854 190990,509712 190990,509712 190848
Crown copyright and database rights 2025 OS 100054135. Supplied by copla ltd trading as UKPlanningMaps.com a licensed Ordnance Survey partner (OS 100054135).
Data licence expires 15 May 2026. Unique plan reference: v2///1255569/1684950



www.UKPlanningMaps.com

PLANNING
29.04.2026

ES ARCHITECTURE ©
TEL 07545278526

DESCRIPTION OF WORKS TO ROAD, TOWN POSTCODE		
PROPOSED SITE / LOCATION PLAN		
Scale: 1:200 /1250@ A3	APRIL 2026	Dwg. 25/024_P0



1 GROUND FLOOR PLAN - PROPOSED
Scale: 1:100

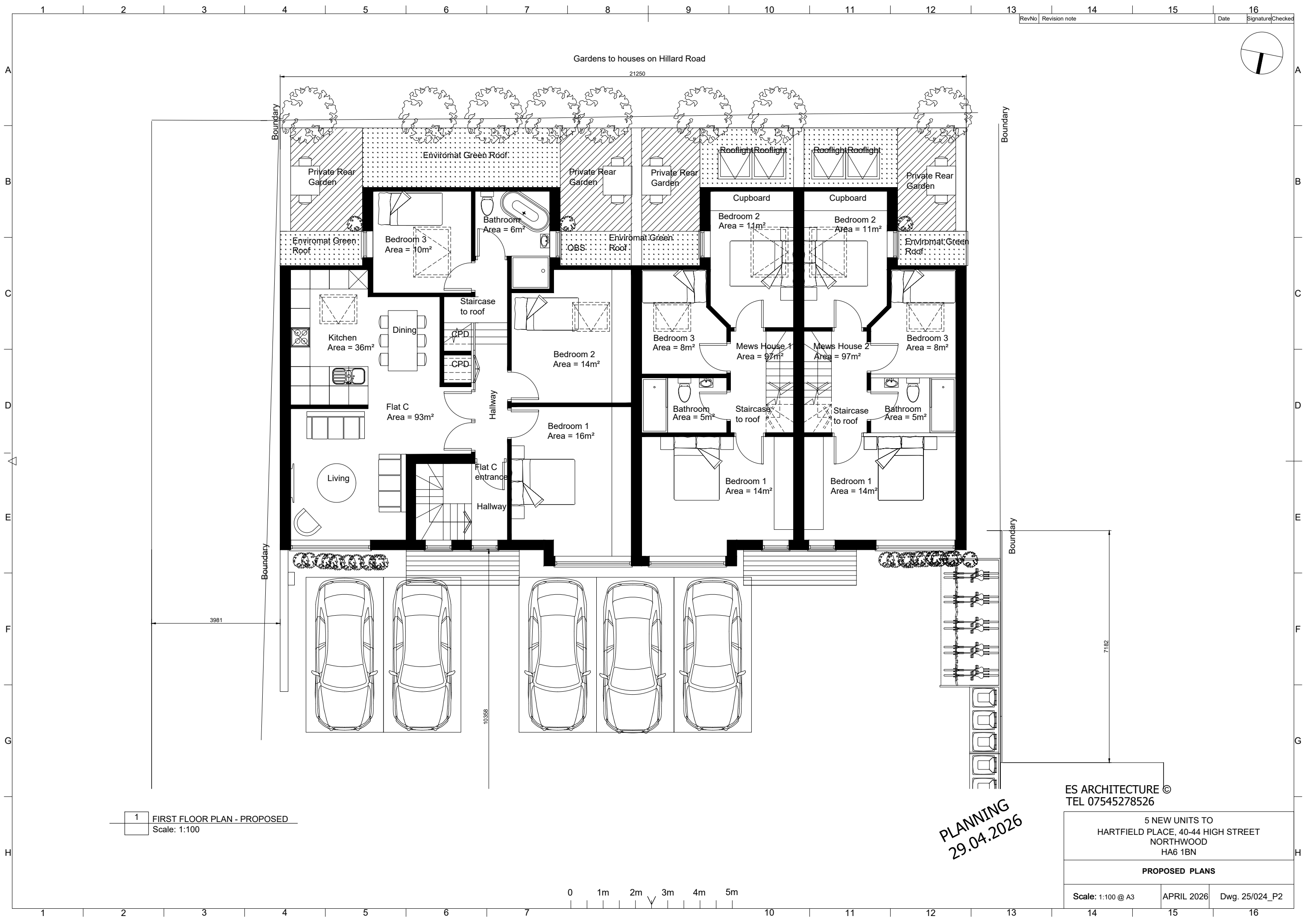
PLANNING
29.04.2026

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TEL 07545278526

5 NEW UNITS TO
HARTFIELD PLACE, 40-44 HIGH STREET
NORTHWOOD
HA6 1BN

PROPOSED PLANS

Scale: 1:100 @ A3 APRIL 2026 Dwg. 25/024_P1



1 FIRST FLOOR PLAN - PROPOSED
Scale: 1:100

PLANNING
29.04.2026

ES ARCHITECTURE ©
TEL 07545278526

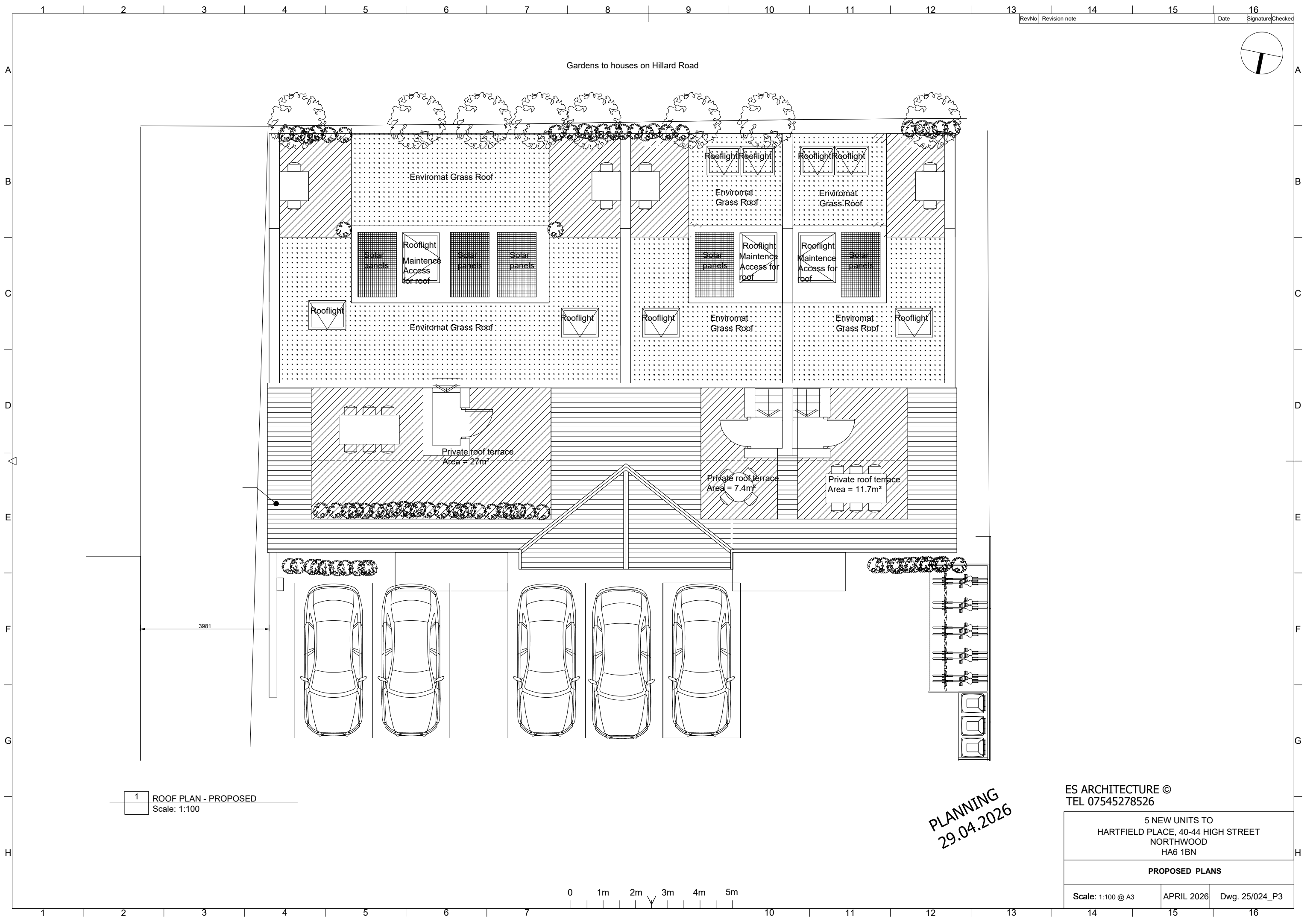
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HARTFIELD PLACE, 40-44 HIGH STREET
NORTHWOOD
HA6 1BN

PROPOSED PLANS

Scale: 1:100 @ A3

APRIL 2026

Dwg. 25/024_P2



1 ROOF PLAN - PROPOSED
Scale: 1:100

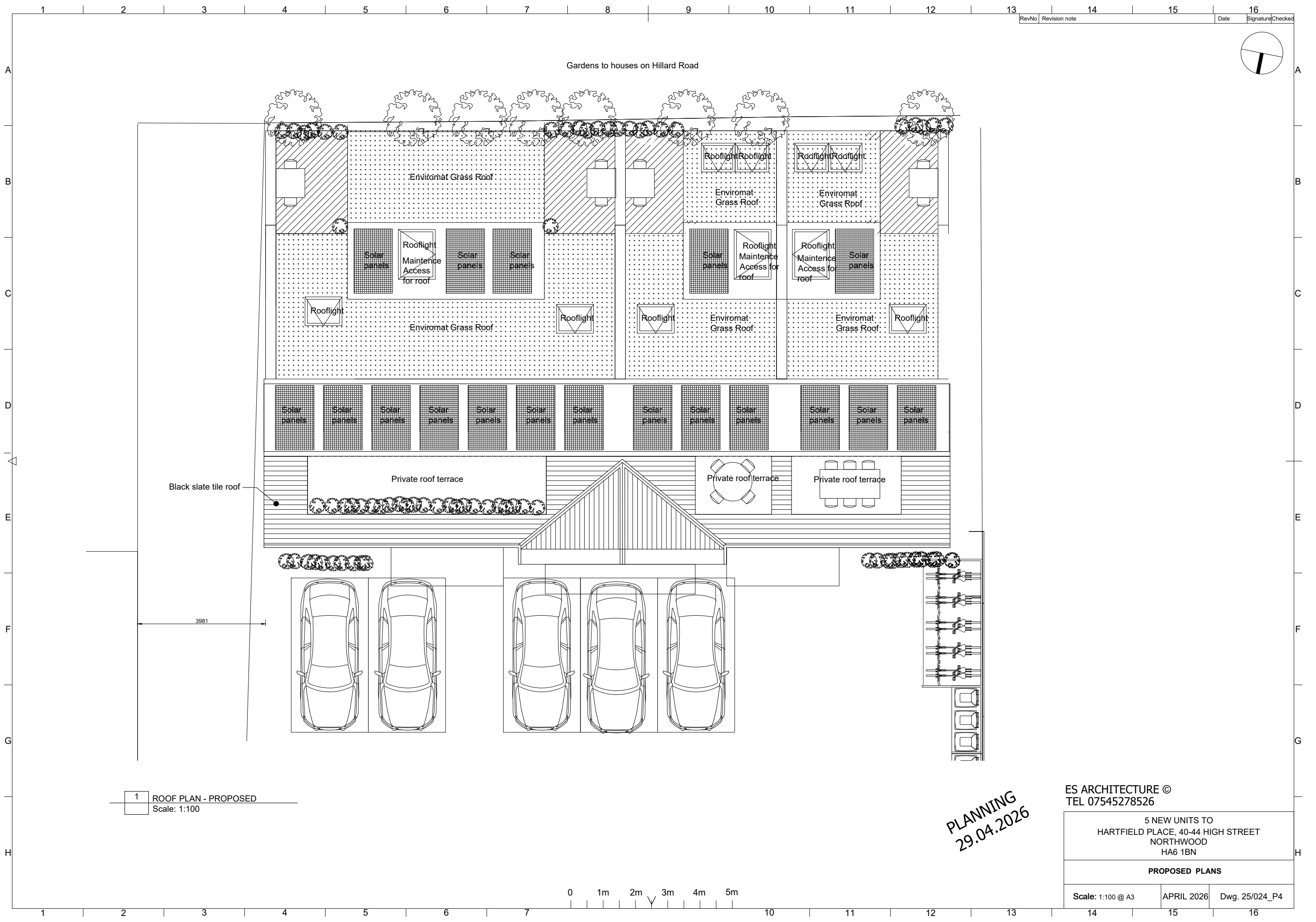
PLANNING
29.04.2026

ES ARCHITECTURE ©
TEL 07545278526

5 NEW UNITS TO
HARTFIELD PLACE, 40-44 HIGH STREET
NORTHWOOD
HA6 1BN

PROPOSED PLANS

Scale: 1:100 @ A3 APRIL 2026 Dwg. 25/024_P3



1 ROOF PLAN - PROPOSED
Scale: 1:100

PLANNING
29.04.2026

ES ARCHITECTURE ©
TEL 07545278526

5 NEW UNITS TO
HARTFIELD PLACE, 40-44 HIGH STREET
NORTHWOOD
HA6 1BN

PROPOSED PLANS

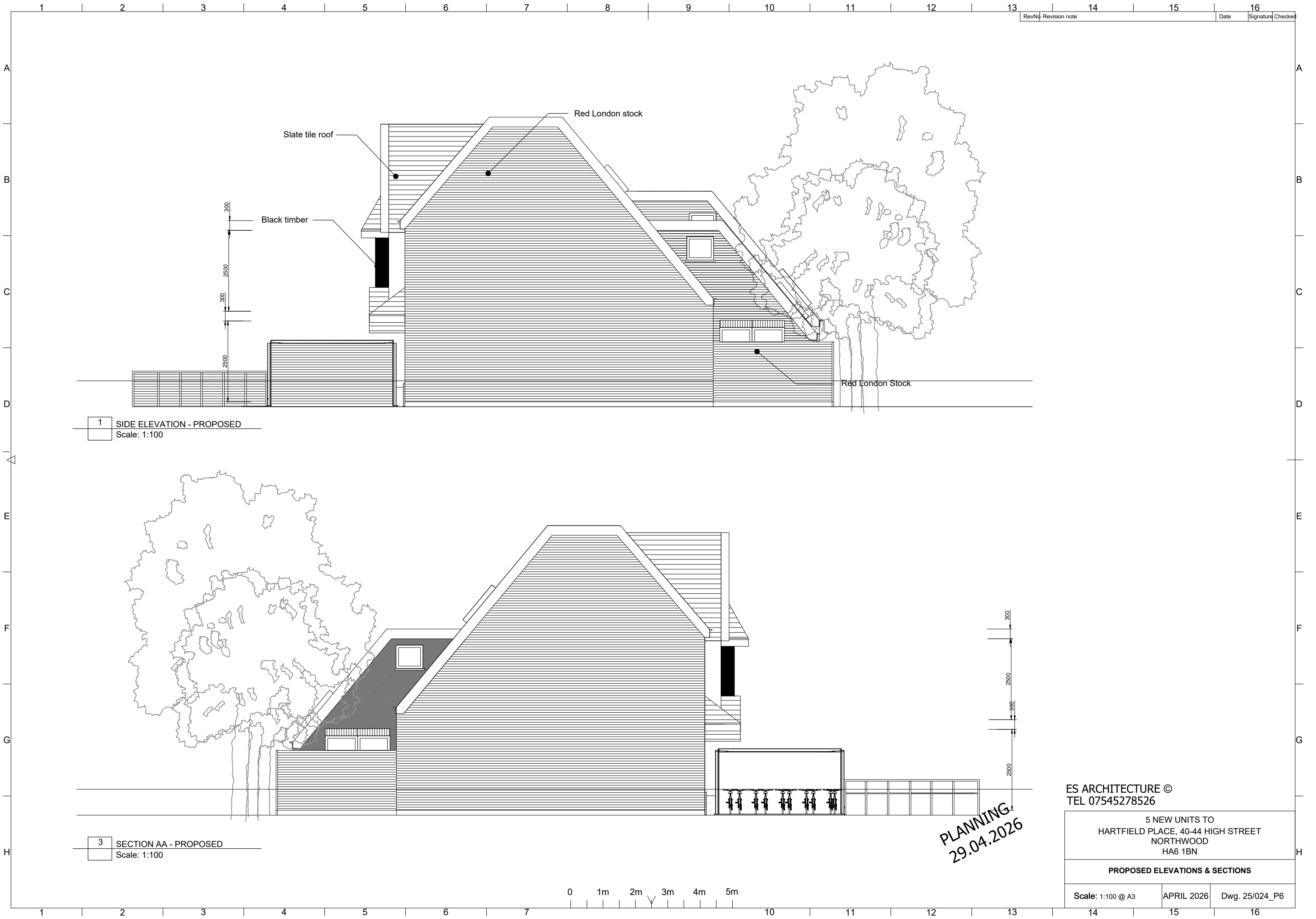
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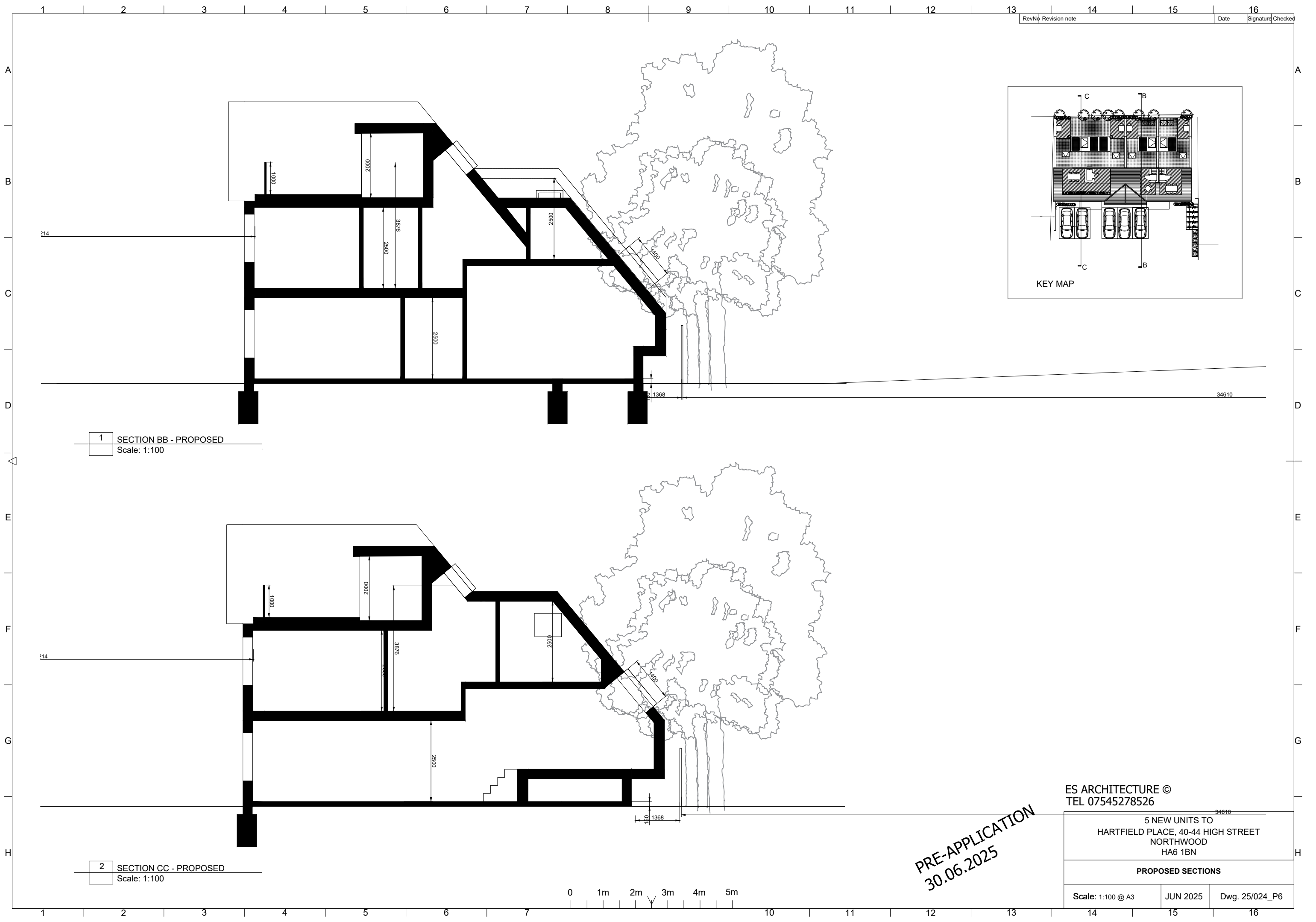


RevNo	Revision note	Date	Signature	Checked
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PLANNING
29.04.2026

ES ARCHITECTURE © TEL 07545278526		
5 NEW UNITS TO HARTFIELD PLACE, 40-44 HIGH STREET NORTHWOOD HA6 1BN		
PROPOSED ELEVATIONS		
Scale: 1:100 @ A3	APRIL 2026	Dwg. 25/024_P5







Thames Water sewer flooding history

Sewer Flooding

History Enquiry



Property
Searches

Geosmart Information Ltd

Suite 9-11
1st Floor
Old Bank

Search address supplied Sage & Co
40
High Street
Northwood
HA6 1BN

Your reference 90719

Our reference SFH/SFH Standard/2026_5303828

Received date 18 March 2026

Search date 18 March 2026



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

Search address supplied: Sage & Co,40,High Street,Northwood,HA6 1BN

This search is recommended to check for any sewer flooding at a specific address or area

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) and any negligent or incorrect recording of that interpretation in the search report
- (iv) compensation payments



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

History of Sewer Flooding

Is the requested address or area at risk of flooding due to overloaded public sewers?

The flooding records held by Thames Water indicate that there have been no incidents of flooding in the requested area as a result of surcharging public sewers.

For your guidance:

- 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 as a result 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



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

Disclaimer

This report has been prepared by GeoSmart in its professional capacity as soil, groundwater, flood risk and drainage specialists, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client and is provided by GeoSmart solely for the internal use of its client.

The advice and opinions in this report should be read and relied on only in the context of the report as a whole, taking account of the terms of reference agreed with the client. The findings are based on the information made available to GeoSmart at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

This report is confidential to the client. The client may submit the report to regulatory bodies, where appropriate. Should the client wish to release this report to any other third party for that party's reliance, GeoSmart may, by prior written agreement, agree to such release, provided that it is acknowledged that GeoSmart accepts no responsibility of any nature to any third party to whom this report or any part thereof is made known. GeoSmart accepts no responsibility for any loss or damage incurred as a result, and the third party does not acquire any rights whatsoever, contractual or otherwise, against GeoSmart except as expressly agreed with GeoSmart in writing.

For full T&Cs see <http://geosmartinfo.co.uk/terms-conditions>

Important consumer protection information

This search has been produced by GeoSmart Information Limited, Suite 9-11, 1st Floor, Old Bank Buildings, Bellstone, Shrewsbury, SY1 1HU.

Tel: 01743 298 100

Email: info@geosmartinfo.co.uk

GeoSmart Information Limited is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code:

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom.
- sets out minimum standards which firms compiling and selling search reports have to meet.
- promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals.
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.
- By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports.
- act with integrity and carry out work with due skill, care and diligence.
- at all times maintain adequate and appropriate insurance to protect consumers.
- conduct business in an honest, fair and professional manner.
- handle complaints speedily and fairly.
- ensure that products and services comply with industry registration rules and standards and relevant laws.
- monitor their compliance with the Code.

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

TPOs contact details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk. Please ask your search provider if you would like a copy of the search code

Complaints procedure

GeoSmart Information Limited is registered with the Property Codes Compliance Board as a subscriber to the Search Code. A key commitment under the Code is that firms will handle any complaints both speedily and fairly. If you want to make a complaint, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk.

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision. Complaints should be sent to:

Liz Lloyd

Finance Manager

GeoSmart Information Limited

Suite 9-11, 1st Floor,

Old Bank Buildings,

Bellstone, Shrewsbury, SY1 1HU

Tel: 01743 298 100

support@geosmartinfo.co.uk

12. Terms and conditions, CDM regulations and data limitations



Terms and conditions can be found on our website:

<http://geosmartinfo.co.uk/terms-conditions/>

CDM regulations can be found on our website:

<http://geosmartinfo.co.uk/knowledge-hub/cdm-2015/>

Data use and limitations can be found on our website:

<http://geosmartinfo.co.uk/data-limitations/>