

FloodSmart



Flood Risk Assessment

Site Address

Land rear of Langley Common
and south of School Road
Barkham
RG41 4TN

Date

01/10/2025

Report Status

DRAFT

Site Area

47879 m²

Report Reference

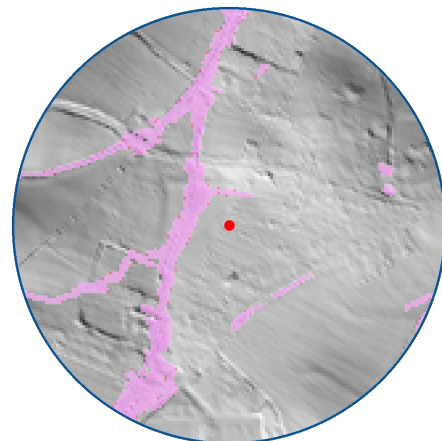
84748.01R3

Grid Reference

476949, 166727

Report Prepared for

Mr Wenman
East Paddock
Drayton Mill
Milton Road, Abingdon
OX14 4EF



RISK - Very Low to Low

The Site is located in Flood Zone 1, this equates to a Very Low risk of flooding from rivers and the sea.

Surface water (pluvial) flood risks are Very Low to Low, groundwater flood risks are Negligible and flooding risks from artificial sources (i.e. canals, reservoirs and sewers) are Low.

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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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	Very Low to High	Very Low to Low	Very Low
Groundwater flooding	Negligible		N/A
Other flood risk factors present	Yes (sewers)		Yes (sewers)
Is any other further work recommended?	Yes		Yes (see below)

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

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 occupied by a grassed field used for horse grazing; a small dilapidated brick building is positioned in the southeast of the Site.

Development proposals comprise the development of 27 dwellings (including self build plots facing School Road), including new access onto School Road, landscaping, infrastructure and overflow parking for The Coombes C of E Primary School. Site plans are included within Appendix A.

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 Flood Zone 1 (Low Probability).
- 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 flooding from rivers in the present day and climate change scenarios.

Surface water (pluvial) flooding

- According to the EA's Risk of Flooding from Surface Water (pluvial) flood mapping, the Site has a risk of pluvial flooding ranging from Very Low to High.
- Flooding would not affect the area proposed for development in the 1 in 100 year present day scenario event.
- Flooding would not affect the area proposed for development in the 1 in 100 year plus climate change event. Only amenity areas such as paths and landscaping are at risk of pluvial flooding in the 1 in 30 year and 1 in 100 year event, with the majority of the area proposed for development, including the building footprint of residential dwellings, only modelled to flood in the 1 in 1000 year event.
- Aspects of the development, namely amenity areas such as paths and landscaping, are located within an area which would be impacted by a 1 in 100 year plus climate change surface water flood event. As a result of there being no increase in the building footprint within these areas, there would be no displacement of flood water and compensatory flood storage is not required.
- Baseline mapping indicates a Very Low to High risk, however a review of the Site plans provided by the client indicates the risk is likely to be lower due to the layout of the development. Flood depths of 0.20 m are still modelled to impact Plots 1 to 10, 16 and 20 during the Low risk event.

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. This is due to the low permeability of the underlying bedrock and the lack of an identified high groundwater table.

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. The potential for a breach of a reservoir to occur and flooding affecting the Site is low.
- Ordnance Survey (OS) data confirms there are no canals near to the Site.
- Table 5-3 of the SFRA has identified 9 incidences or modelled incidences of flooding as a result of surcharging sewers within the RG41 4 postcode. However, it is recognised that this five digit postcode covers a large area and instances of flooding are not specific to the Site (JBA, 2023).

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 and appropriate mitigation measures are proposed.

In accordance with paragraphs 167, 174 and footnote 60 of the NPPF (2024) and paragraph 027 of the NPPG (2025), as the development proposals are comprised of new buildings within Flood Zone 1 and sufficient mitigation measures have been recommended in both the flood risk assessment and sustainable drainage report (ref: 84748.02) for the present day and climate change surface water flood risk, the Sequential Test is not required.

Recommendations

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

- Plots 1 to 10, 16 and 20 are modelled to be at a Low risk of pluvial flooding, where flood depths may be up to 0.20 m. Finished Floor Levels (FFL) of these dwellings should be set at least 300 mm above surrounding ground levels, additional mitigation should be considered (see Section 7) and ground levels should aim to slope away from buildings. Ground levels should be designed to channel any overland flows from off-Site (to the west) away from the development and Site drainage systems.

- 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. Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures like flood defences, flood warnings and property level resilience features. Application of the sequential approach in the plan-making and decision-making process will help to ensure that development is steered to the lowest risk areas, where it is compatible with sustainable development objectives to do so, and developers do not waste resources promoting proposals which would fail to satisfy the test. Other forms of flooding need to be treated consistently with river and tidal flooding in mapping probability and assessing vulnerability, so that the sequential approach can be applied across all areas of flood risk" (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 Wokingham Borough Council Level 1 Strategic Flood Risk Assessment (JBA, 2023) and the Wokingham Borough Development Plan (Wokingham Borough Council, 2014) 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	OS Data
Historical	X	X	X	
River (fluvial) / Sea (tidal/coastal)	X	X	X	
Surface water (pluvial)	X	X	X	
Groundwater	X	X		
Sewer		X		
Culvert/bridges		X		X
Reservoir		X	X	

*Local guidance and policy, referenced in Section 6, has been consulted to determine local flood conditions and requirements for flood mitigation measures.

Local policy and guidance

Wokingham Borough Development Plan (Wokingham Borough Council, 2014):

Policy CC09: Development and Flood Risk (from all sources)

1. All sources of flood risk, including historic flooding, must be taken into account at all stages and to the appropriate degree at all levels in the planning application process to avoid inappropriate development in areas at risk of flooding. Proposals must be consistent with the guidance in paragraphs 99-104 of the National Planning Policy Framework (NPPF); the Technical Guidance to the NPPF and demonstrate how they have used the Strategic Flood Risk Assessment (SFRA) to determine the suitability of the proposal.

2. Development proposals in Flood Zones 2 or 3 must take into account the vulnerability of proposed development.
3. Development must be guided to areas of lowest flood risk by applying the sequential approach taking into account flooding from all sources and shall ensure flood risk is not worsened for the application site and elsewhere, and ideally that betterment of existing conditions is achieved. The sequential test will not be required if at least one of the following applies:
 - a) Replacement of an existing single residential property. However, the replacement property should, where possible, be located on the part of the site at lowest risk
 - b) Conversions and change of use unless it involves a change to a more vulnerable class
 - c) Minor development, as defined in footnote 10 of the Technical Guidance Note to the NPPF.
4. In exceptional circumstances, new development in areas of flood risk will be supported where it can be demonstrated that:
 - a) The development provides wider sustainability benefits to the community that outweigh flood risk
 - b) The development will:
 - i. Be safe for its lifetime, taking account of the vulnerability of its users
 - ii. Not increase flood risk in any form elsewhere and, where possible, will reduce flood risk overall
 - iii. Incorporate flood resilient and resistant measures into the design
 - c) Appropriate evacuation and flood response procedures are in place to manage the residual risk associated with an extreme flood event.
5. Where required, suitable and appropriately detailed flood risk information will need to accompany a planning application. A Flood Risk Assessment (FRA) is required for:
 - a) All proposals in areas of known historic flooding from all sources
 - b) Where there is evidence of a risk from all sources of flooding identified in the Strategic Flood Risk Assessment
 - c) Those proposals set out in footnote 20 to paragraph 103 of the NPPF.

Wokingham Borough Council Strategic Flood Risk Assessment (JBA Consulting, 2023):

5.5 Surface water flooding

Surface water runoff is most likely to be caused by intense downpours e.g. thunderstorms. At times, the amount of water falling can completely overwhelm the drainage network, which is not designed to cope with extreme storms. The flooding can also be complicated by blockages to drainage networks, sewers being at capacity and/ or high-water levels in watercourses that cause local drainage networks to back up.

The EA Risk of Flooding from Surface Water mapping (RoFSW) shows that several communities are at risk of surface water flooding. The mapping shows that surface water predominantly follows topographical flow paths of existing watercourses or dry valleys and can pond in low-lying areas. Whilst in the majority of cases the risk is confined to roads, there are notable prominent run-off flow routes around properties, e.g. properties situated at the foot of surrounding hills. The RoFSW mapping for the Wokingham Borough can be found on the Geo-PDF mapping in Appendix A of the SFRA.

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

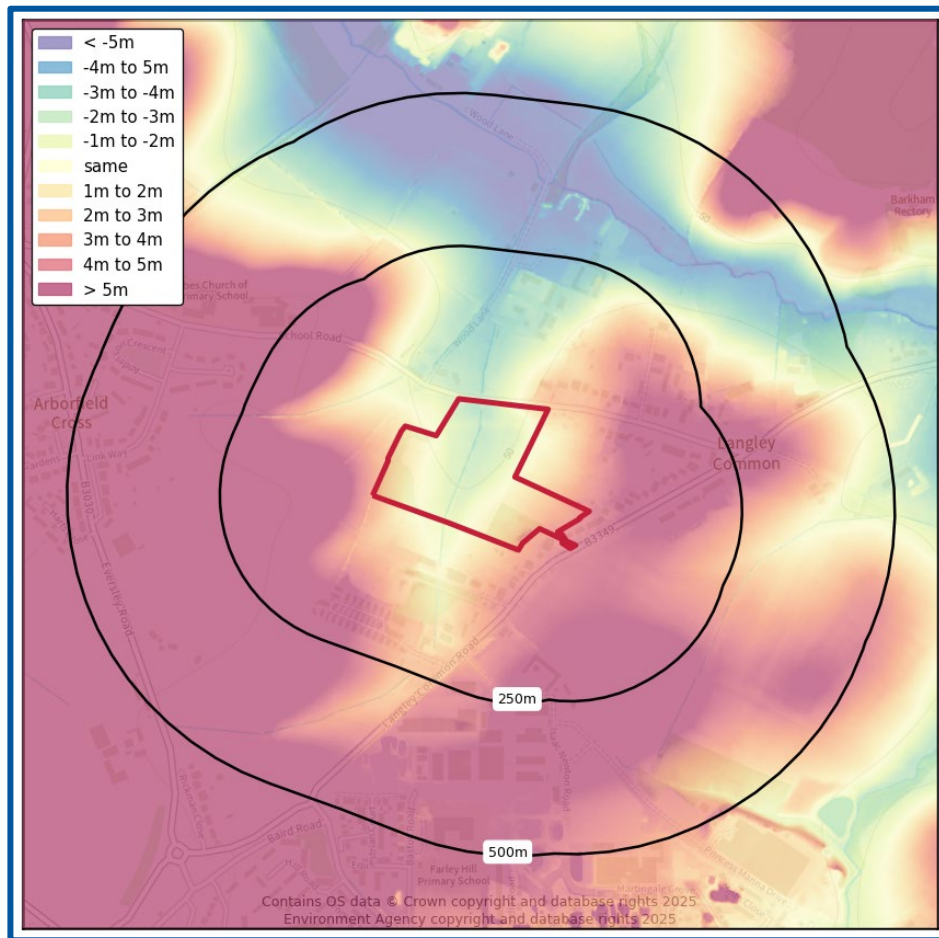
The Site is located in Barkham in a setting of residential land use at National Grid Reference SU 76949 66727.

Figure 1. Aerial imagery of the Site (Bluesky, 2025)



Figure 2 (overleaf) indicates ground levels within 500m of the Site fall in a northerly direction. The general ground levels on the Site are between 54.84 and 48.45 mAOD with the Site falling gradually in a northerly direction. This is based upon a Site specific topographic survey undertaken by Terrain Surveys in February 2025 (Appendix B).

Figure 2. Site Location and Relative Elevations (GeoSmart, 2025)



Development

The Site is currently occupied by a grassed field used for horse grazing; a small dilapidated brick building is positioned in the southeast of the Site.

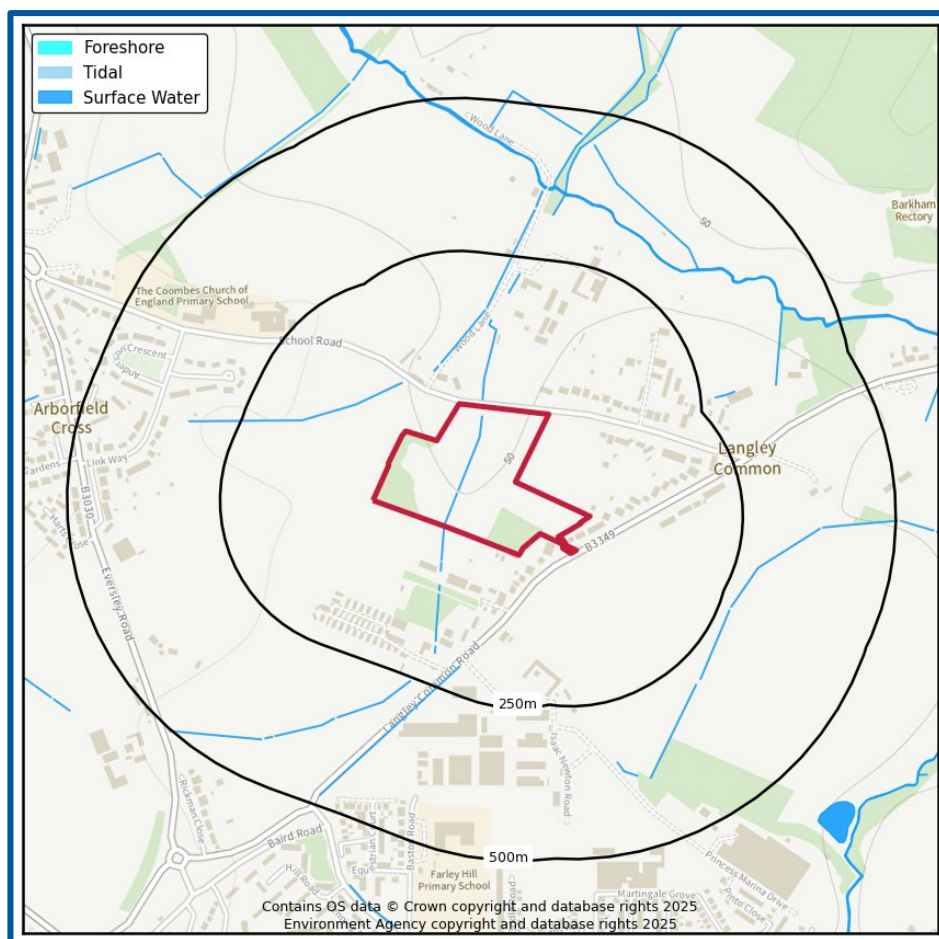
Development proposals comprise the development of 27 dwellings (including self build plots facing School Road), including new access onto School Road, landscaping, infrastructure and overflow parking for The Coombes C of E Primary School. Site plans are included within Appendix A.

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 NPPG (2025), the vulnerability classification of the 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 3, there are numerous surface water features within 500 m of the Site.

Figure 3. Surface water features (EA, 2025)



Multiple drainage ditches are located in the vicinity of the Site, with one also mapped in the centre of the Site.

Barkham Brook is located approximately 370 m north of the Site.

Proximity to relevant infrastructure

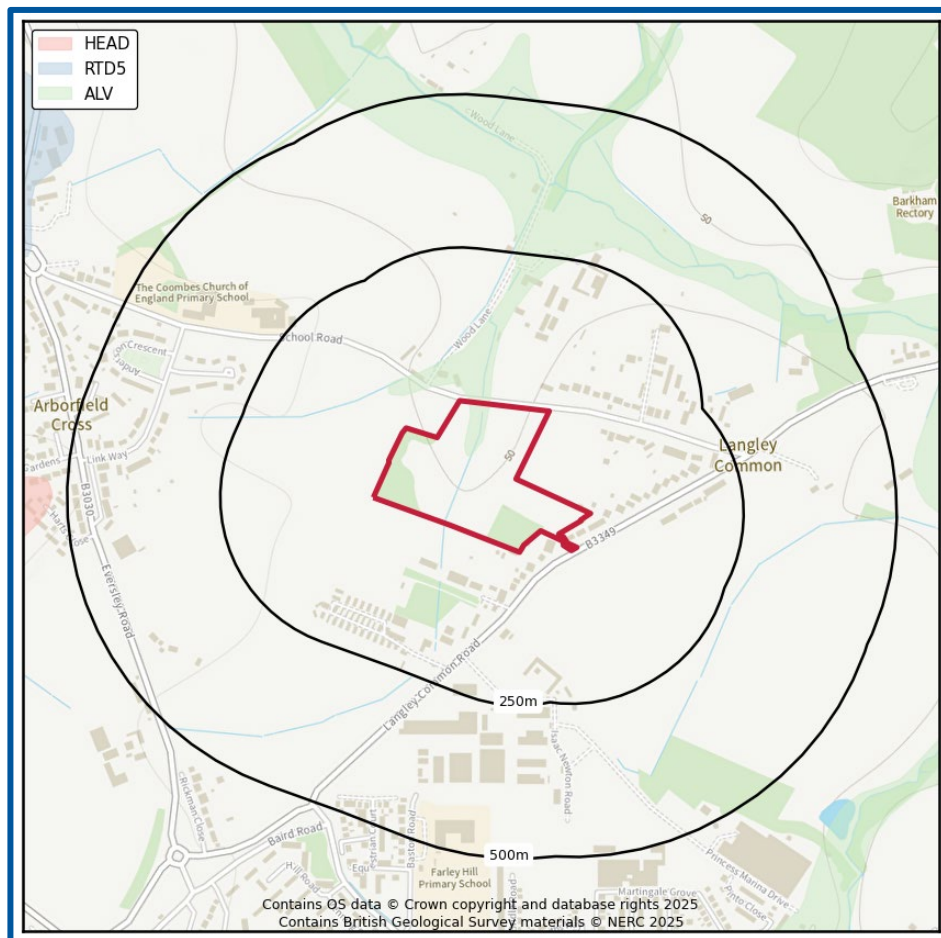
The drainage ditch within the Site boundary is partially culverted in the north of the Site. Ownership of this culvert is unknown.

Hydrogeological features

British Geological Survey (BGS) mapping (Figure 4) indicates a lack of superficial deposits beneath the majority of the Site (BGS, 2025). A small section of the Site to the north-west (<10%) is underlain by Alluvium – clay, silt, sand and gravel (ALV) (BGS, 2025) and is classified as a Secondary (A) Aquifer (EA, 2025).

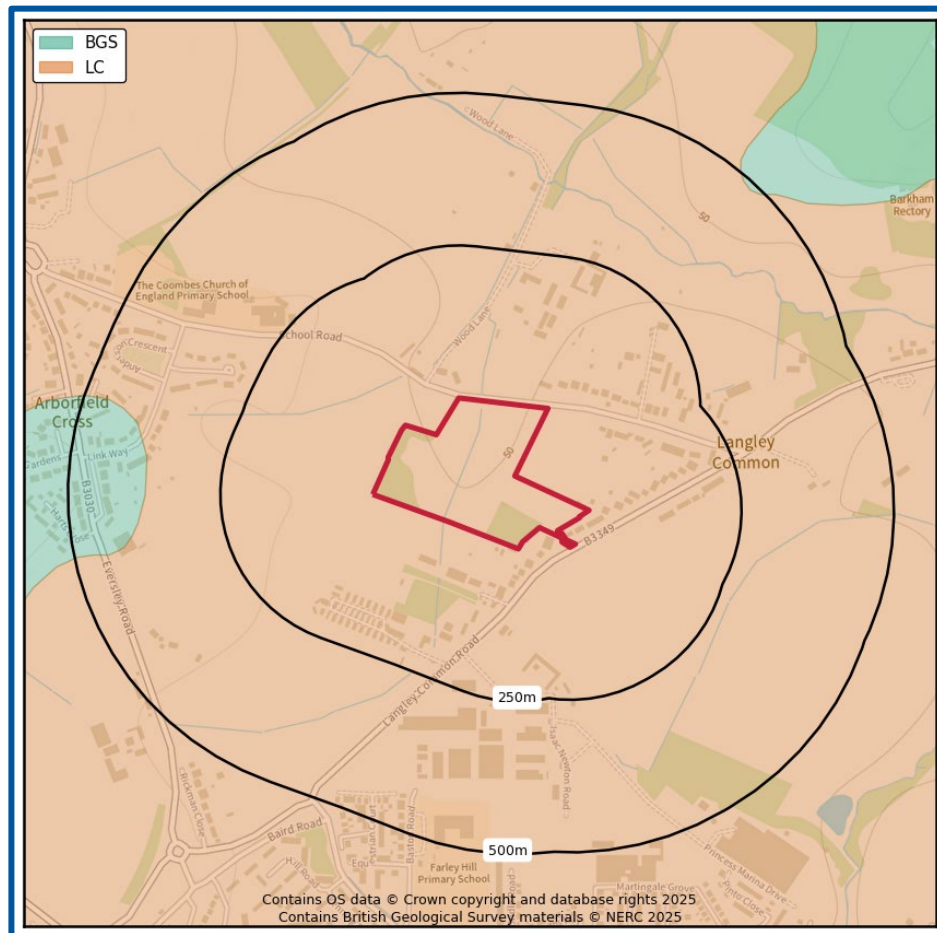
It should be noted that the green areas to the south-east and south-west of the Site are wooded areas and not Alluvium.

Figure 4. Superficial Geology (BGS, 2025)



BGS mapping indicates the underlying bedrock geology (Figure 5) consists of the London Clay Formation (LC) (BGS, 2025) and is classified as Unproductive Strata (EA, 2025).

Figure 5. Bedrock Geology (BGS, 2025)



Geological conditions

A review of the BGS borehole database (BGS, 2025) indicates the most relevant borehole to the Site (ref: SU76NE87) is located approximately 160 m to the south of the Site boundary at an elevation of 55.40 mAOD, and indicates the underlying geology to consist of made ground to a depth of 0.50 m below ground level (bgl) overlying silty sandy clay (presumably London Clay Formation) to a depth of 3.00 m bgl, where the borehole record ends.

Another relevant borehole (ref: SU76NE60) is located approximately 235 m to the south of the Site boundary at an elevation of 54.90 mAOD, and indicates the underlying geology to consist of topsoil to a depth of 0.40 m below ground level (bgl) overlying stiff clay (presumably London Clay Formation) to a depth of 10.00 m bgl, where the borehole record ends.

Groundwater

Groundwater was not encountered in the above boreholes (ref: SU76NE87 and SU76NE60) on 19/12/1973, subject to seasonal variation.

4. Flood risk to the development

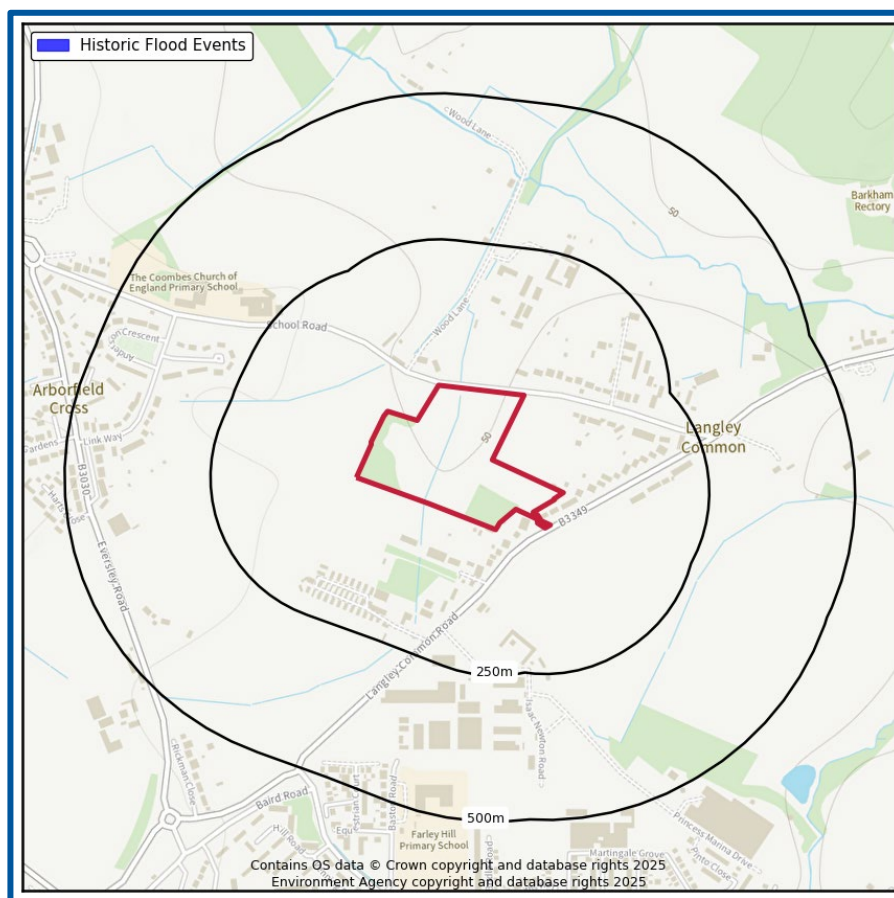


Historical flood events

According to the EA's Historical Flood Map (Figure 6) and the SFRA (JBA, 2023), there have been no flooding events affecting 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.

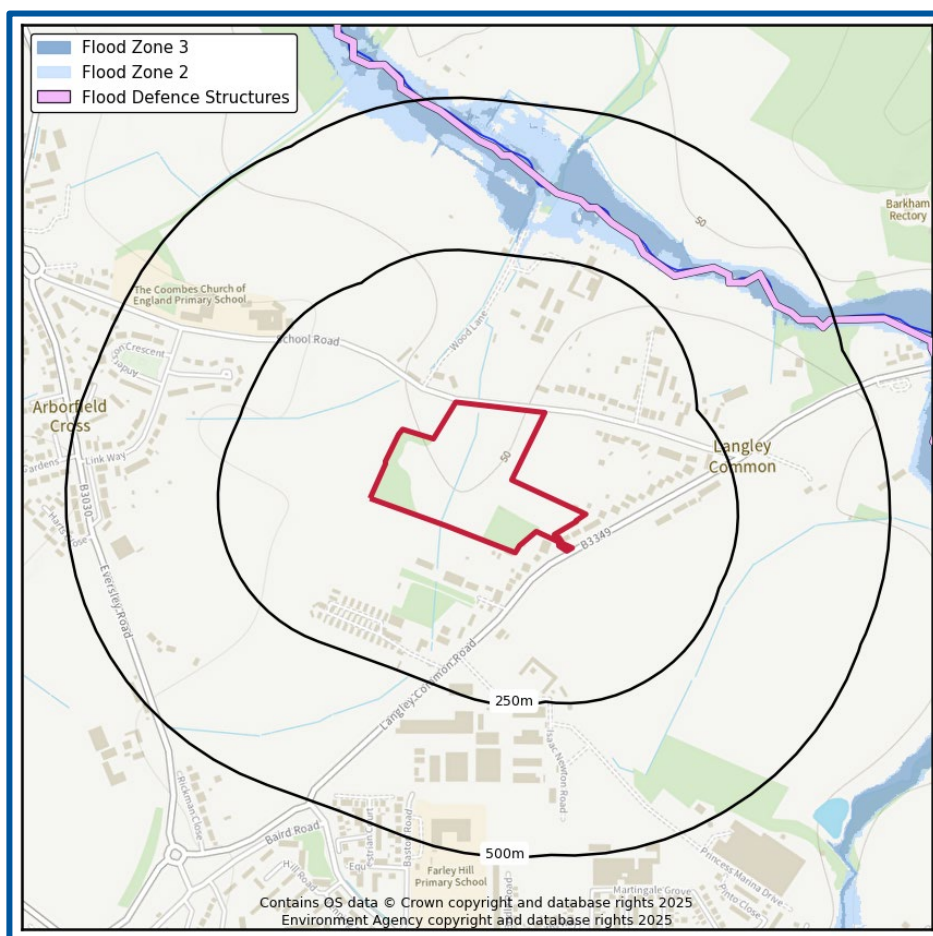
Figure 6. EA Historic Flood Map (EA, 2025)



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

According to the EA's Flood Map for Planning Purposes (Figure 7), the Site is located within fluvial Flood Zone 1 and is therefore classified as having a Low probability of fluvial flooding from rivers.

Figure 7. EA Flood Map for Planning Purposes (EA, 2025)



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.

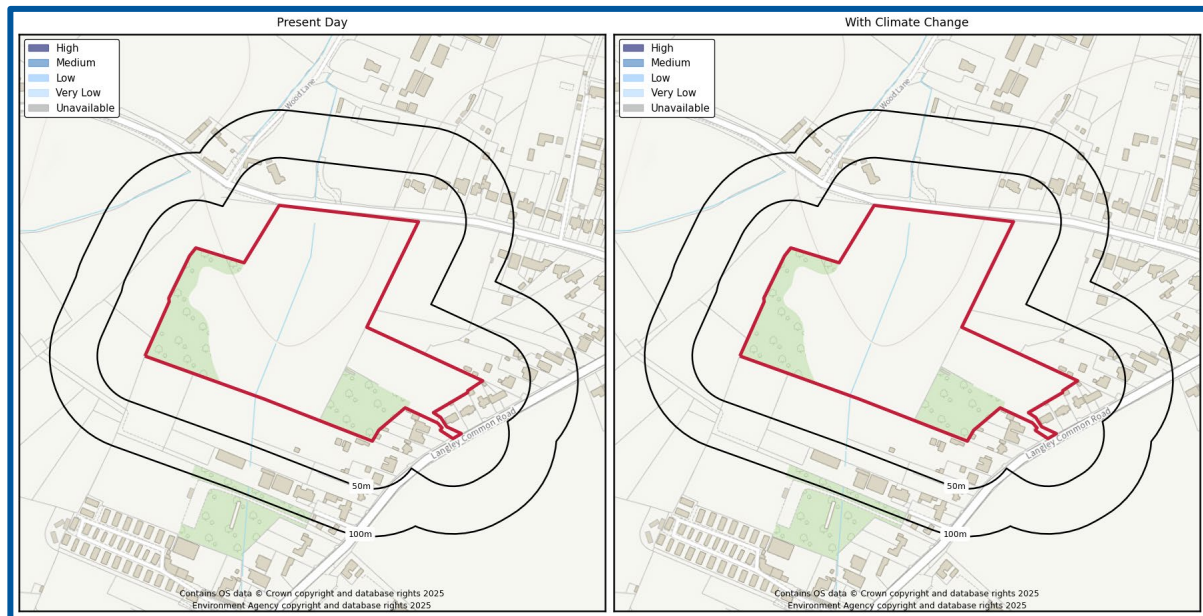
Development of all uses of land is appropriate in this zone (see glossary for terminology).

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 Risk of Flooding from Rivers and Sea (RoFRS) map (Figure 8), which considers the type, condition and crest height of flood defences, the Site has a Very Low risk of flooding from rivers. According to the RoFRS climate change modelling, the risk rating is considered to remain Very Low.

Figure 8. Risk of Flooding from Rivers and Sea map (EA, 2025)



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 Risk of Flooding from Surface Water (pluvial) flood mapping, the Site is at a variable risk of pluvial flooding ranging from Very Low to High¹.

Figure 9 (overleaf) confirms the extent and depth of flooding in multiple modelled flood scenarios:

- During the Medium risk event (3.3 - 1% AEP) and High risk event (>3.3% AEP), flooding of up to 0.60 m would impact the central area of the Site.
- During the Low risk event (1 - 0.1% AEP), flooding of up to 0.60 m would impact the central area of the Site.
- It should be noted that pluvial flooding is modelled to be mostly confined to the two areas adjacent to the drain in all scenarios.

The Site plans (Appendix A) suggest only amenity areas such as paths and landscaping are at a Medium to High risk of pluvial flooding, with the majority of the area proposed for development, including the building footprint of residential dwellings, being at a Very Low to Low risk.

During the Low risk event flood depths up to 0.20 m are modelled to impact Plots 1 to 10, 16 and 20 (see Site plans in Appendix A).

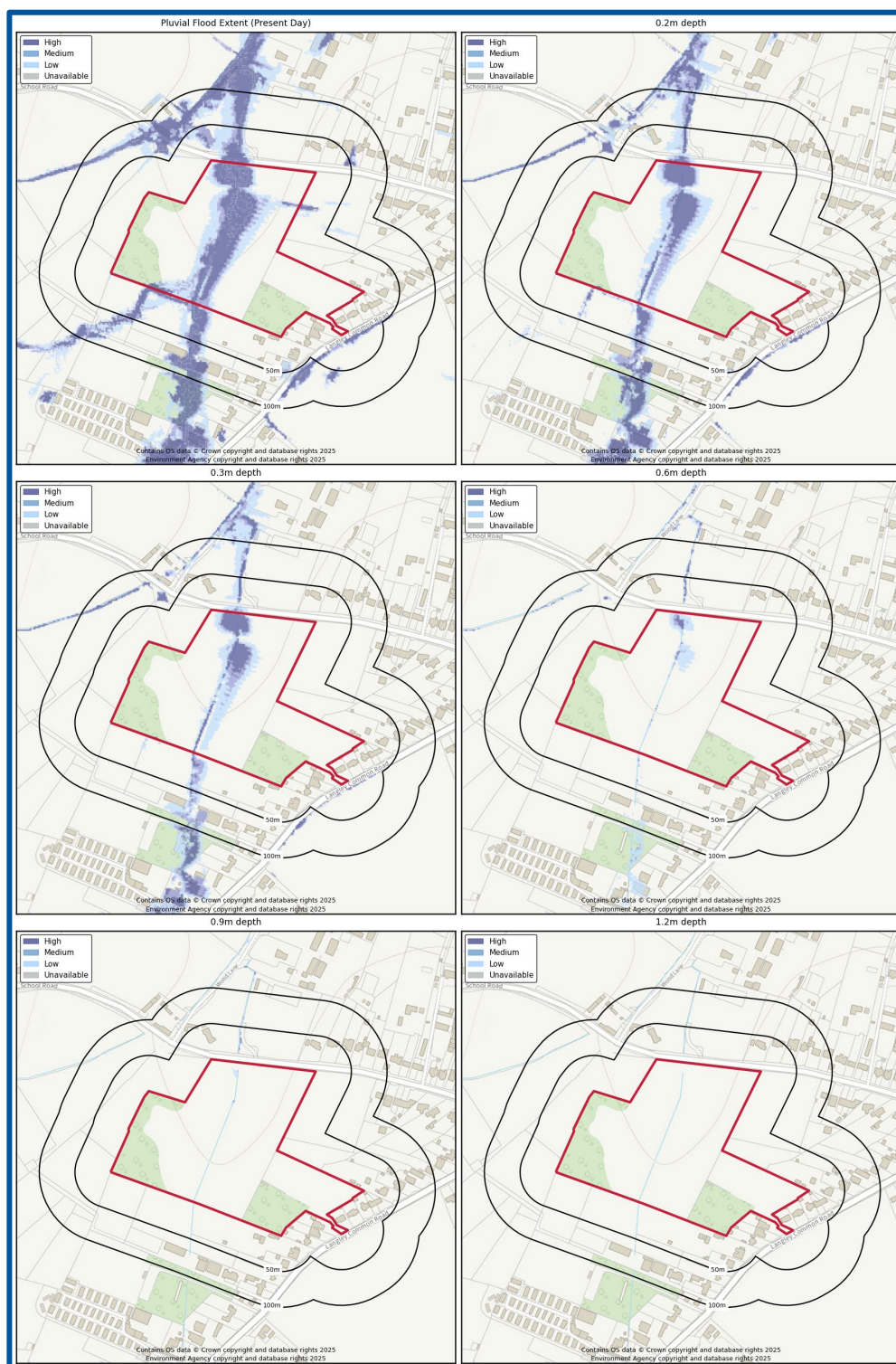
Flood depths less than 0.20 m are modelled to impact access and egress at the Site, with flood depths up to 0.30 m modelled within Langley Common Road to the south-east.

The SFRA does not confirm whether the Site is located within a Critical Drainage Area (CDA) (JBA, 2023).

As the area proposed for the residential dwellings is not modelled to be impacted by pluvial flooding during the Medium and High risk event, the risk of pluvial flooding has been lowered to Very Low to Low after analysis.

¹ Environment Agency. January 2025. Risk of Flooding from Surface Water - Product Description. Accessed from: <https://www.data.gov.uk/dataset/d28b166a-2624-408f-93ba-e7257aa0c26a/risk-of-flooding-from-surface-water-direction-25m-1-percent-annual-chance>

Figure 9. EA surface water flood extent and depth map (EA, 2025)



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 100 year event flows could potentially affect the access routes to the Site.

Climate change factors

Paragraph 002 of the National Planning Practice Guidance (September, 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 Loddon and tributaries 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.

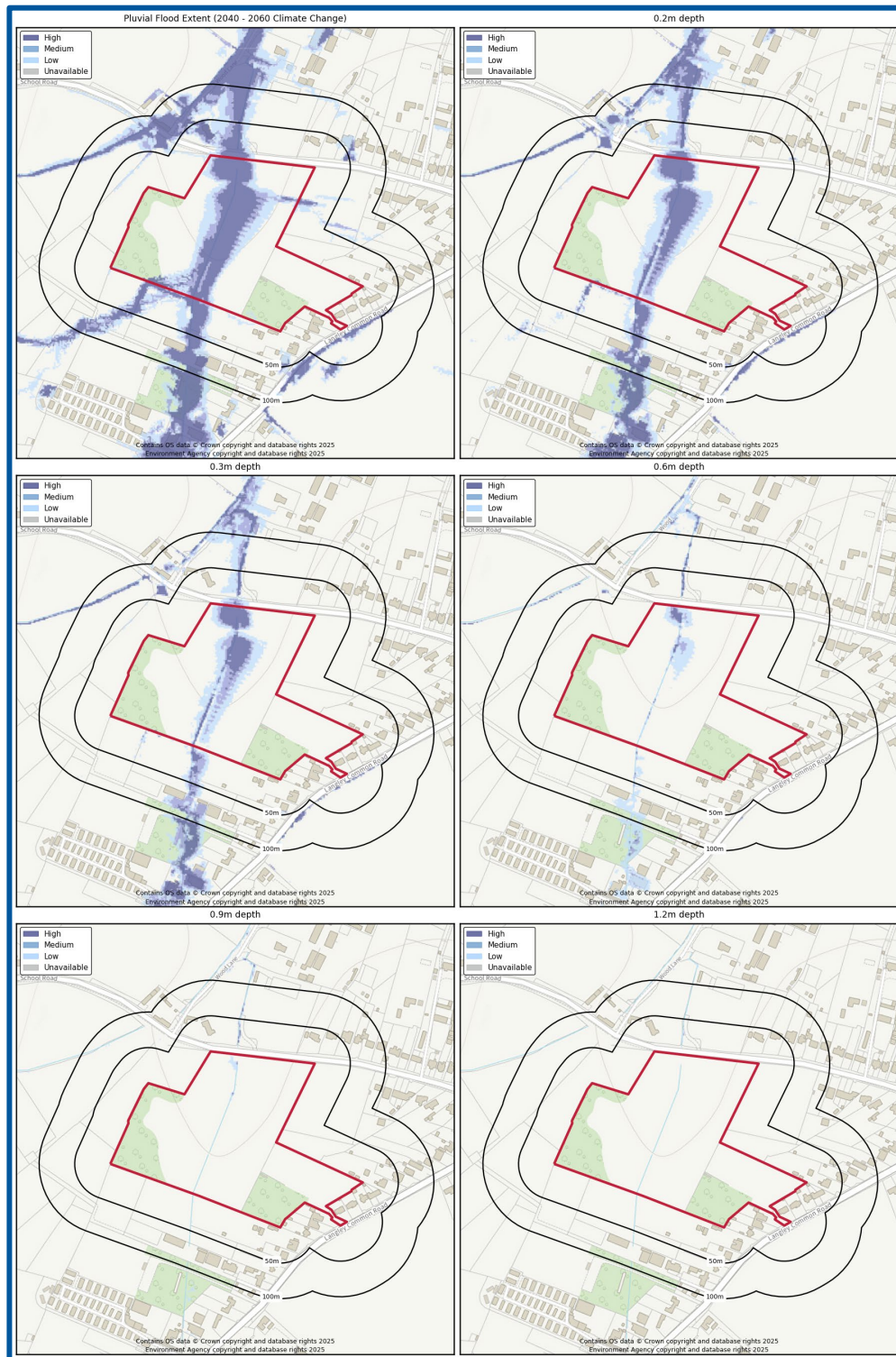
As part of RoFSW mapping, climate change modelling has been applied exclusively for the central allowance up to the 2050s epoch. Whilst it should be noted that the risk of pluvial flooding is likely to be greater than this dataset indicates for the lifetime of the development, in the absence of more extensive modelling scenarios this data is considered the best resource at the time of writing.

According to the RoFSW climate change modelling:

- During the Medium risk event (3.3 - 1% AEP) and High risk event (>3.3% AEP), flooding of up to 0.60 m would impact the central area of the Site.
- During the Low risk event (1 - 0.1% AEP), flooding of up to 0.60 m would impact the central area of the Site.

While the majority of pluvial flooding is modelled to be contained within the central area of the Site, mostly comprised of paths and landscaping, flood depths of 0.20 m are modelled to impact Plots 1 to 10, 16 and 20 (see Site plans in Appendix A).

Figure 10. EA surface water flood extent and depth map (EA, 2025)

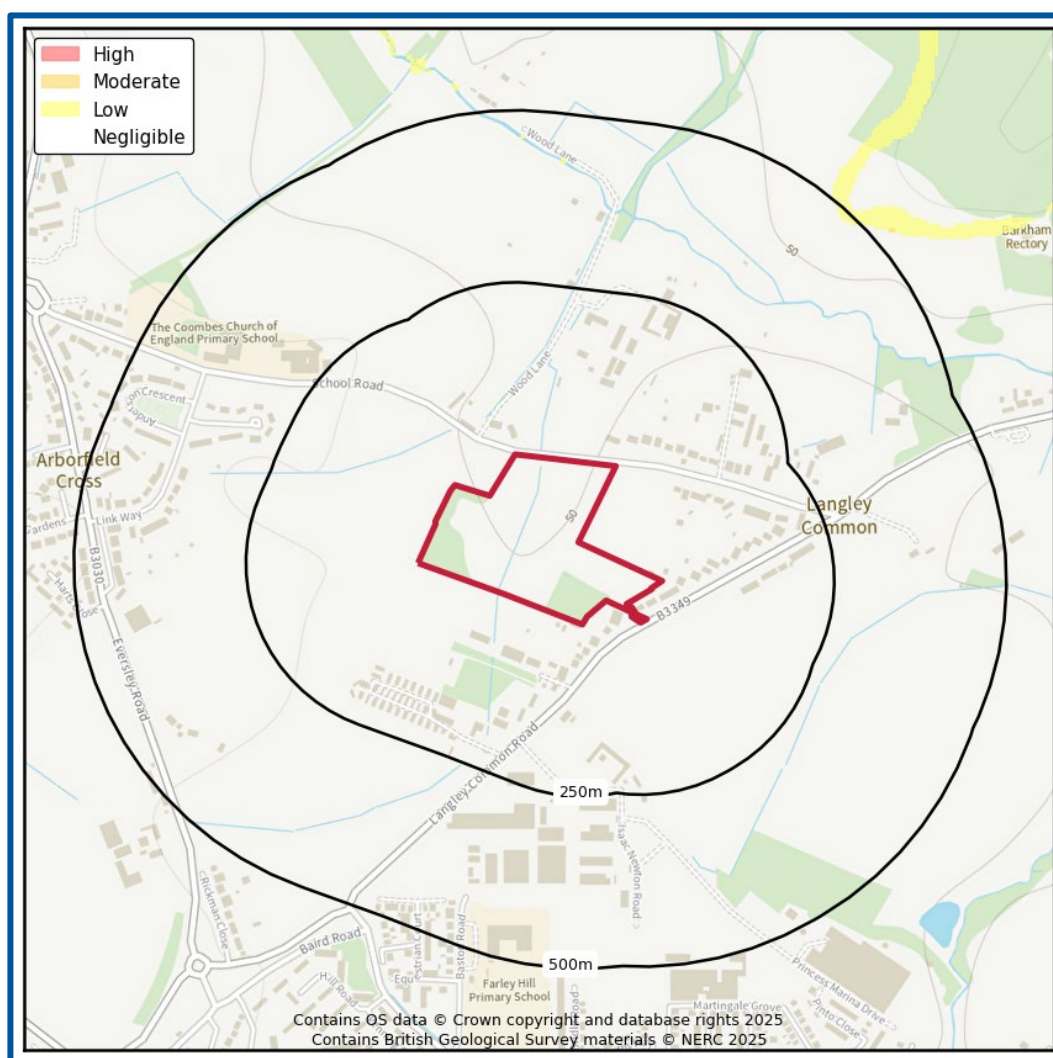


Groundwater flooding

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 11) indicates there is a Negligible risk of groundwater flooding at surface during a 1 in 100 year event.

Figure 11. GeoSmart GW5 Groundwater Flood Risk Map (GeoSmart, 2025)



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 and the EA's fluvial and tidal floodplain data (where available) 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.

According to a review of the hydrogeology (Section 3), the majority of the Site is underlain by low permeability bedrock, with a small section (<10%) of the northwest of the Site also underlain by potentially permeable superficial geology. There is therefore unlikely to be a significant aquifer beneath the Site and there is unlikely to be a mechanism for groundwater flooding at the Site. A shallow groundwater table could potentially exist above the contact between the permeable superficial (Alluvium) and impermeable bedrock (London Clay Formation) layers in the northwest of the Site, resulting in a 'perched' groundwater table. Groundwater levels may rise in the superficial aquifer in a seasonal response to prolonged rainfall recharge which may cause an unusually high peak in groundwater levels during some years.

The on-Site aquifer is associated with the drainage ditch and is therefore unlikely to impact the area proposed for development.

According to a review of the hydrogeology (Section 3), the nearby borehole did not encounter groundwater.

Permeable material has been identified overlying low permeability material in the northwest which could give rise to a perched water table. Groundwater seepage, overland flow and the formation of a spring line may occur at the outcrop of the contact with underlying low permeability material.

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.

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. A rise in peak river levels will lead to a response of increased groundwater levels in adjacent aquifers subject to the predicted climate change increases in peak river level for the local catchment. Sea level rises of between 0.4m and 1m are predicted by 2100, leading to a rise in average groundwater levels in the adjacent coastal aquifer systems, and potential increases in water levels in the associated drainage systems. The 'backing up' of groundwater levels from both coast and tidal estuary locations may extend a significant distance inland and affect infrastructure previously constructed above 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

Table 5-3 of the SFRA has identified 9 incidences or modelled incidences of flooding as a result of surcharging sewers within the RG41 4 postcode. However, it is recognised that this five digit postcode covers a large area and instances of flooding are not specific to the Site (JBA, 2023).

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

According to Ordnance Survey (OS) mapping, there are no canals within 500 m of the Site.

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 (Thames 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.

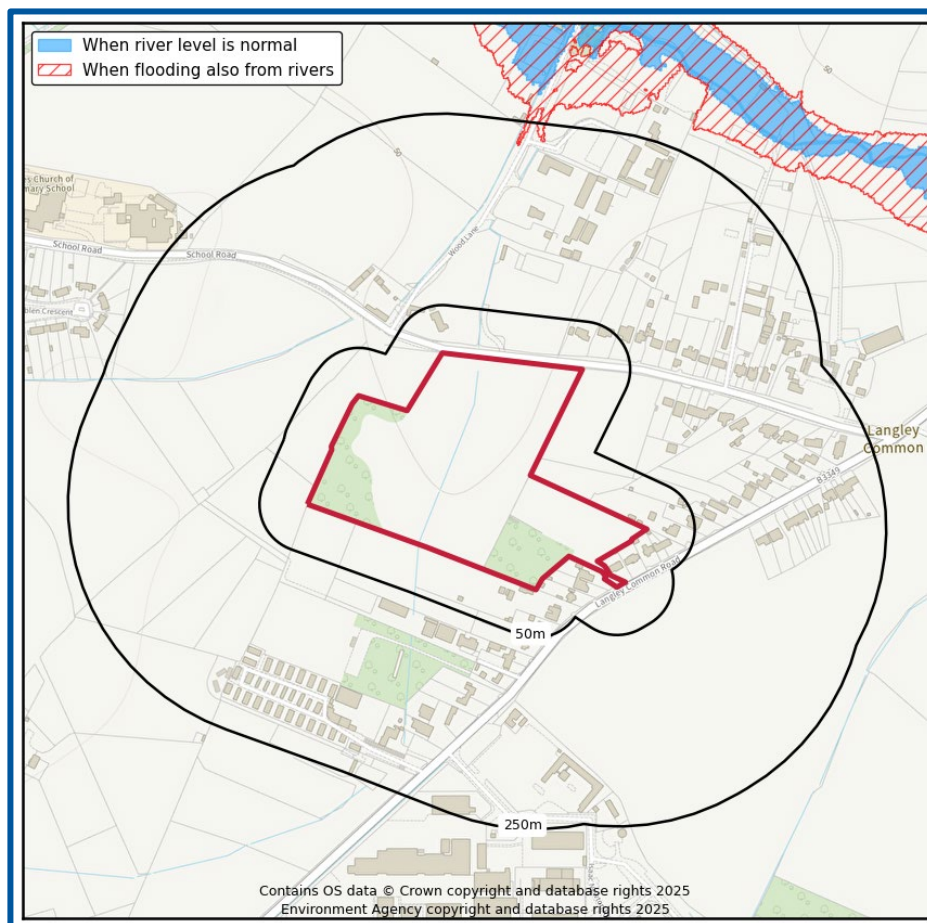
Culverts have been identified within the Site. These structures may pose a flood risk to the Site should they become blocked or damaged.

The SFRA has not identified any historic drainage issues within the Site area (JBA, 2023).

Reservoir flooding

According to the EA's Risk of Flooding from Reservoir mapping the Site is not at risk of flooding from reservoirs (Figure 12) (EA, 2025).

Figure 12. EA Risk of Reservoir Flooding (EA, 2025)



Guidance

The risk of reservoir flooding is related to the failure of a large reservoir (holding over 25,000 m³ of water) and is based on the worst-case scenario. Reservoir flooding is extremely unlikely to occur (EA, 2025).

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.

Aspects of the development, namely amenity areas such as paths and landscaping, are located within an area which would be impacted by a 1 in 100 year plus climate change surface water flood event. As a result of there being no increase in the building footprint within these areas, there would be no displacement of flood water and compensatory flood storage is not required.

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 2013 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 most recent update to the NPPG (September 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 Loddon and tributaries Management Catchment the following peak rainfall allowances are to be applied.

Table 2. Climate change rainfall allowances

Loddon and tributaries 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%

Sustainable Drainage System (SuDS)

It is recommended that attenuation of run-off is undertaken on-Site to compensate for proposed increases in impermeable surface areas. Attenuation may comprise the provision of storage within a Sustainable Drainage System (SuDS). SuDS can deliver benefits from improving the management of water quantity, water quality, biodiversity and amenity. Potential SuDS options are presented in the table below, subject to further investigation:

Table 3. SuDS features which may be feasible for the Site

Option	Description
Rainwater harvesting	Rainwater harvesting can collect run-off from the roofs for use in non-potable situations, using water butts for example.
Permeable paving	Permeable pavements can be used for driveways, footpaths and parking areas to increase the amount of permeable land cover. Suitable aggregate materials (angular gravels with suitable grading as per CIRIA, 2007) will improve water quality due to their filtration capacity. Plastic geocellular systems beneath these surfaces can increase the void space and therefore storage but do not allow filtration unless they are combined with aggregate material and/or permeable geotextiles.
Swales	Shallow, wide and vegetated channels that can store excess run-off whilst removing any pollutants.
Soakaways	An excavation filled with gravel within the Site. Surface water run-off is piped to the soakaway.
Attenuation basins/pond	Dry basin or a permanent pond that is designed to hold excess water during a rainfall event.

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 Very Low to High surface water (pluvial) flooding risk has been identified at the Site, with this risk dropping to Very Low to Low for the area proposed for the residential dwellings. 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.

As Plots 1 to 10, 16 and 20 are modelled to be impacted by the present day 1 in 1000 year event but not the 1 in 100 year event with an allowance for climate change, their finished floor levels should be set at least 300mm above surrounding ground levels.

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 600mm 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;
- Temporary flood barriers;
- Air brick covers (manual or automatic closing);
- Non-return flap valves on sewer outfalls.
- Construction of local bunds;

- Landscaping to divert water away from the property;
- Sustainable Drainage Systems (SuDS) to store/intercept flood water;
- 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 600mm 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 Very Low - Low to Very Low.

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 a 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 isn't undertaken. If mitigation measures are not implemented or maintained, the risk to the development will remain as the baseline risk.

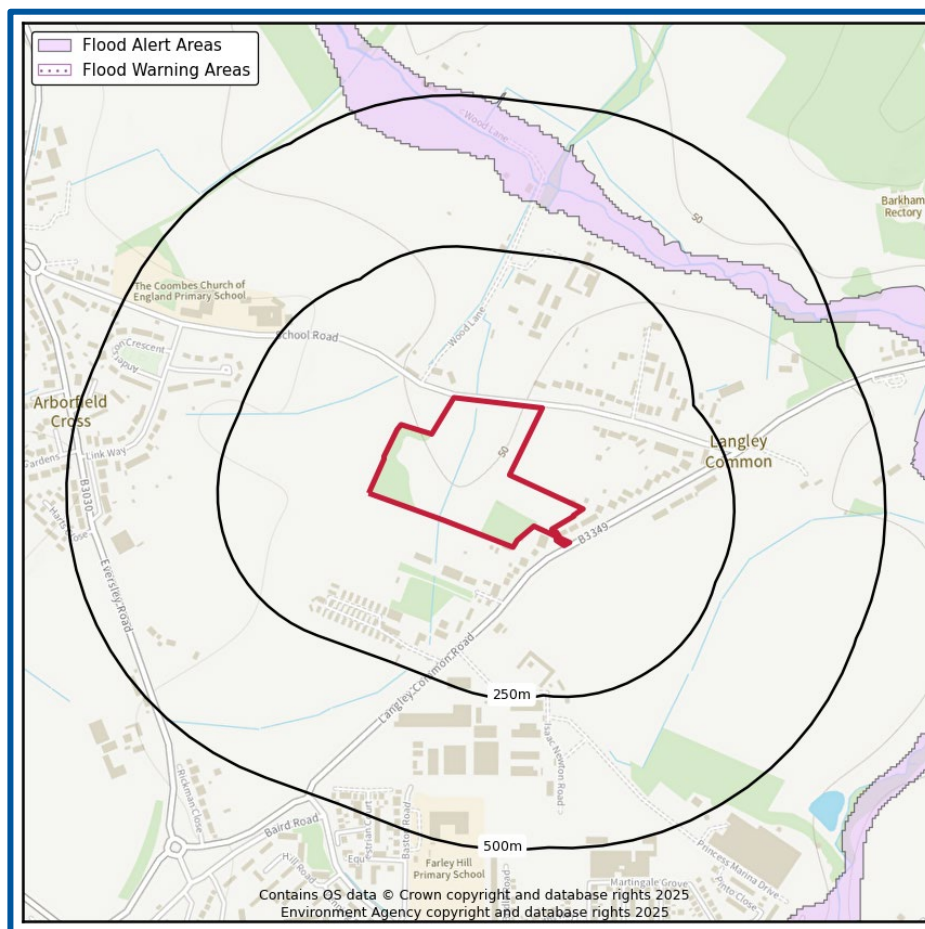
Further flood mitigation information

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

Flood warnings

The EA aims to issue Flood Warnings 2 hours in advance of a flood event. Flood Warnings can provide adequate time to enable protection of property and evacuation from a Site, reducing risk to life and property. The Site is not located within a tidal or fluvial floodplain; therefore, as can be seen in Figure 13 (overleaf), the Site is not located within an EA Flood Alerts/Warning coverage area and cannot receive either.

Figure 13. EA Flood Warning Coverage for the local area (EA, 2025)



Other relevant information

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



Table 5. Risk ratings following 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	Very Low to High	Very Low to Low	Very Low
Groundwater flooding	Negligible		N/A
Other flood risk factors present	Yes (sewers)		Yes (sewers)
Is any other further work recommended?	Yes		Yes (see below)

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

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 below provides a summary of where the responses to key questions are discussed in this report. Providing the recommended mitigation measures are put in place it is likely that flood risk to this Site will be reduced to an acceptable level.

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.

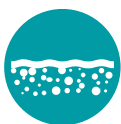
Table 6. Summary of responses to key questions in the report

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.

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 50m 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 $\pm 0.25\text{m}$ 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).
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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 2025 BlueSky copyright and database rights 2025
Bedrock & Superficial Geology	Contains British Geological Survey materials © NERC 2025 Ordnance Survey data © Crown copyright and database right 2025
Flood Risk (Flood Zone/RoFRS/Historic Flooding/Pluvial/Surface Water Features/Reservoir/ Flood Alert & Warning)	Environment Agency copyright and database rights 2025 Ordnance Survey data © Crown copyright and database right 2025
Flood Risk (Groundwater)	GeoSmart, BGS & OS GW5 (v2.4) Map (GeoSmart, 2025) Contains British Geological Survey materials © NERC 2025 Ordnance Survey data © Crown copyright and database right 2025
Location Plan	Contains Ordnance Survey data © Crown copyright and database right 2025
Topographic Data	OS LiDAR/EA Contains Ordnance Survey data © Crown copyright and database right 2025 Environment Agency copyright and database rights 2025

11. Appendices



Appendix A



Site plans

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AREAS SHOWN ARE APPROXIMATE, AND SUBJECT TO DETAILED DESIGN. NOT FOR CONSTRUCTION

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Job title

Land Rear of Langley Common and South of School Road, Barkham

Client

Mr Wenman

Revision

04/04/2025 FOR COORDINATION

Drawing Title

LOCATION PLAN

Scale

1:1250 @A2

Drawn

CH

Checked

HW

Project Status

OUTLINE PLANNING

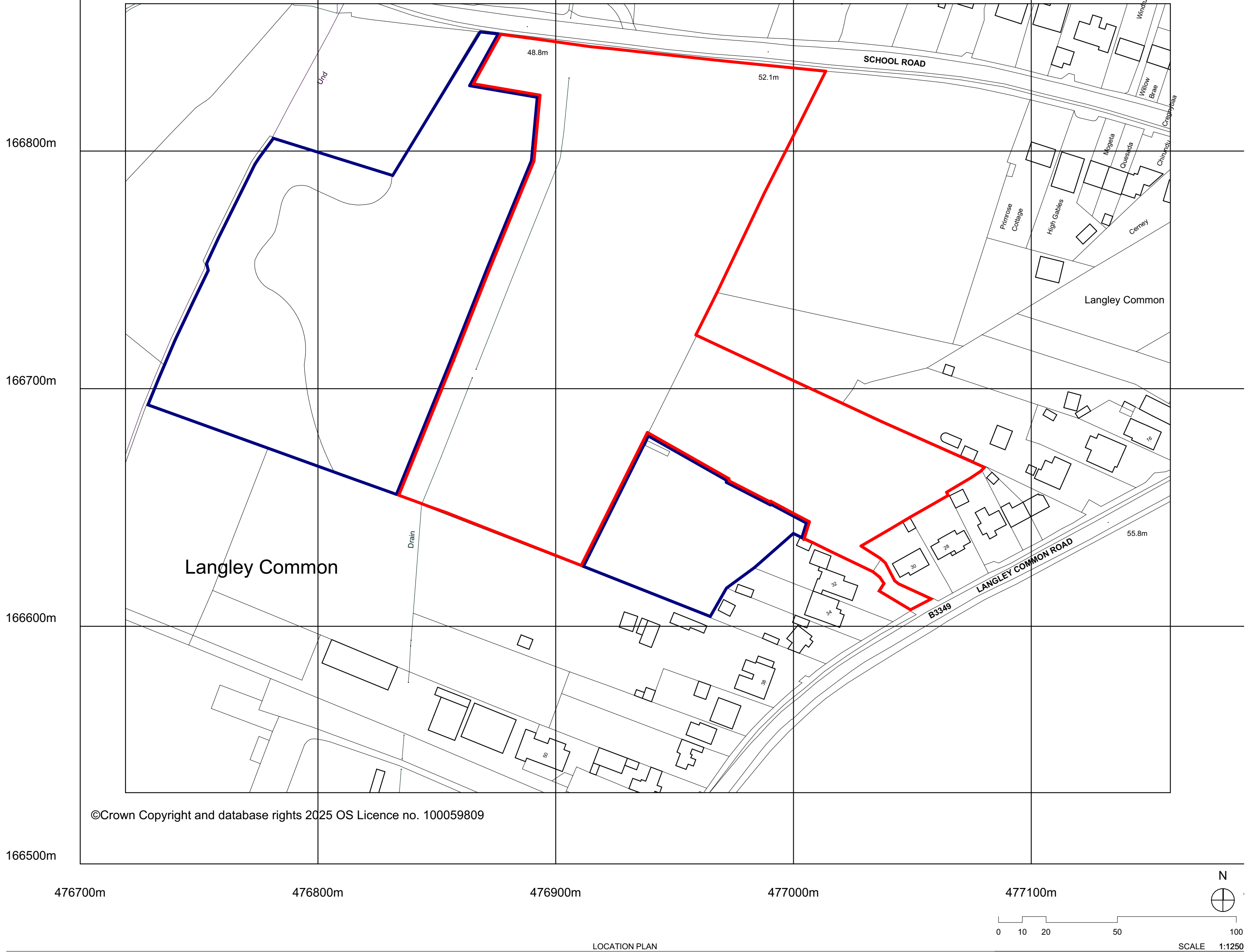
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0118 958 7331, info@hivesarchitects.co.uk

Project Drawing Revision

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KEY

- 50 m² PLANNING SITE BOUNDARY
- 50 m² OTHER SITE AREA WITHIN APPLICANT OWNERSHIP
- ROAD
- CROSSING / PRIVATE ROAD
- FOOTPATH
- 50 m² PUBLIC OPEN SPACE
- 24 50 m² PRIVATE DWELLING PLOT NUMBER / SIZE
- 25 50 m² PRIVATE SELF/CUSTOM BUILT DWELLING PLOT NUMBER / SIZE
- PRIVATE PARKING SPACE
- ACCESSIBLE SPACE
- VISITOR SPACE
- DWELLING
- PITCHED ROOFS
- FLAT ROOF / DORMER
- EXISTING TREES: EXISTING TREES (SITE SURVEY)
- FOLIAGE
- ARBORICULTURAL DETAIL: TREE CANOPY
- TREE RPA (CAT A, B)
- CATA, B, C, U TRUNK
- PROPOSED: TREE CANOPY
- TREE TRUNK
- FOLIAGE / HEDGEROW

28/04/2025 ISSUE FOR DESIGN TEAM COORDINATION

Rev

Client

Mr Wenman

Site

Land Rear of Langley Common and South of School Road, Barkham

Drawing title

INDICATIVE SITE PLAN

Scale @ Drawing Size

1:500 @A1

Drawn

CH

Checked

HW

Status

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Hives Architects LLP
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Project

Drawing

Revision

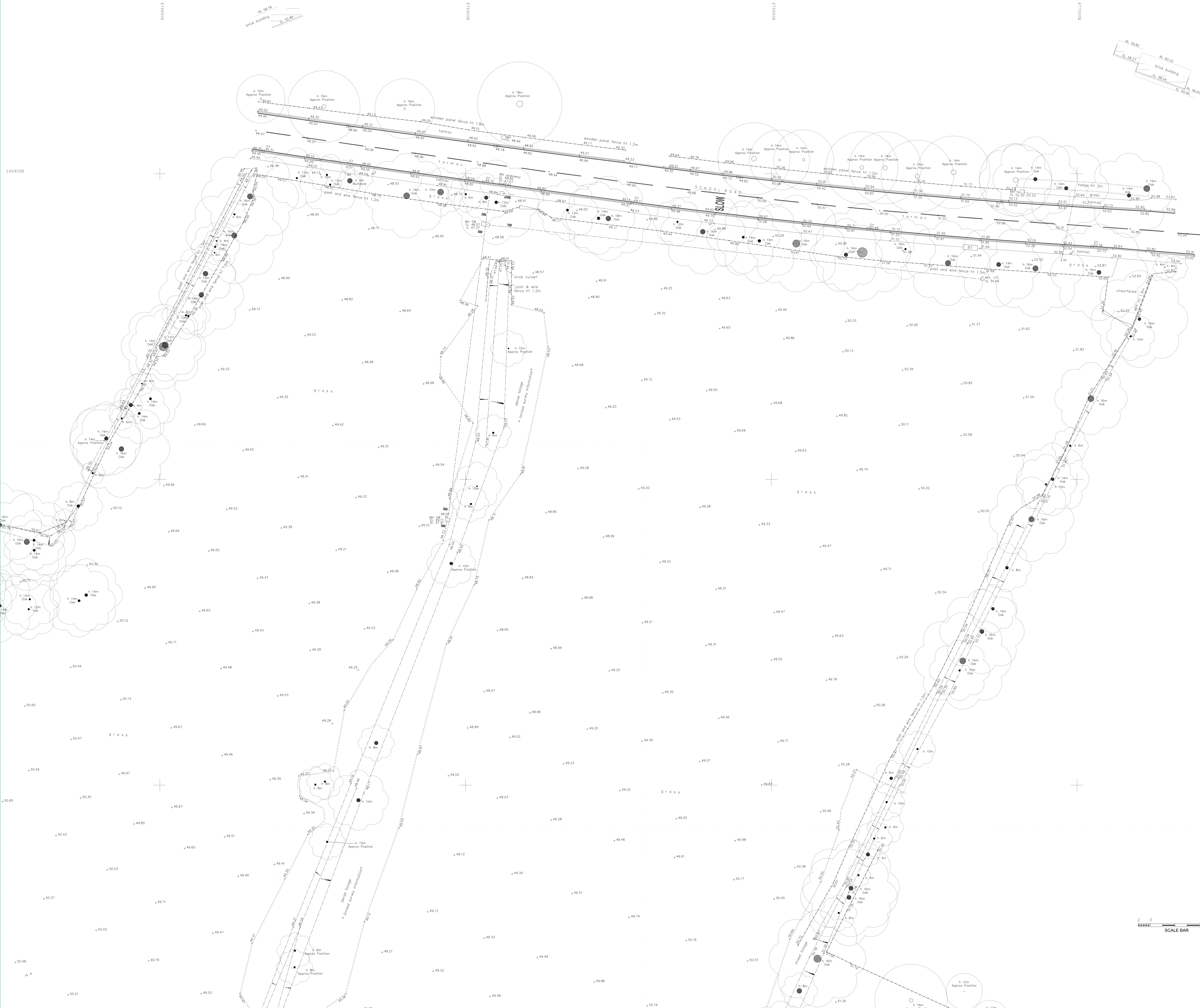
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Appendix B

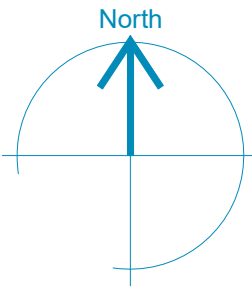


Topographic survey



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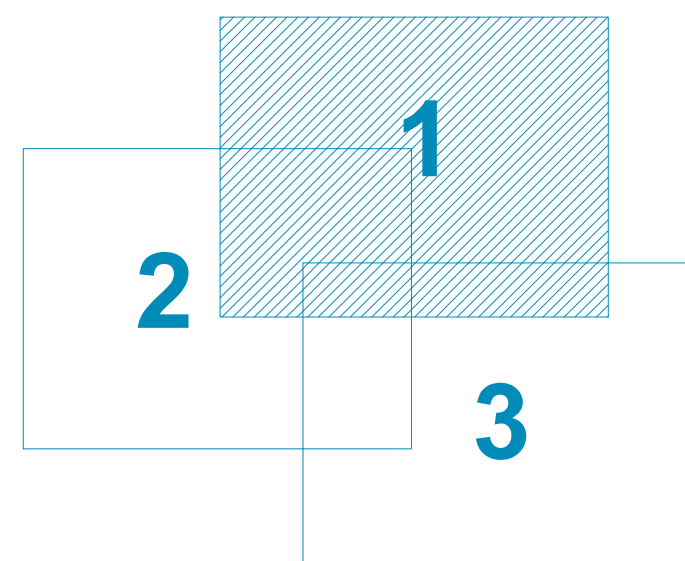
This survey is related to OSGB36(15) coordinate system by
h 16.82GPS rapid static method. No scale factor has been
applied to the survey information. All horizontal distances
taken from this drawing are ground distances.



Co-ordinate Table			
Station	Easting	Northing	Level
1	476917.304	166691.832	50.458
2	476999.955	166836.954	52.426
3	476894.837	166850.016	49.037
4	476828.209	166718.891	50.546

All levels related to Ordnance Survey active GPS network, at
survey station 4.

SHEET LOCATION DIAGRAM

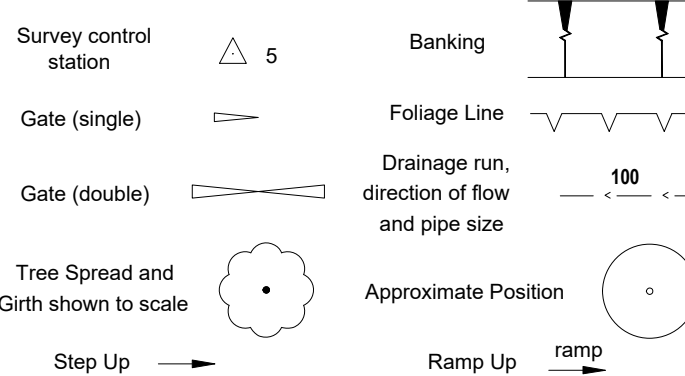


DISCLAIMERS

Every effort has been made to confirm these species on
site, yet it is advised to confirm these details with an
arborist before proceeding with any design.

Every effort has been made to confirm drainage run, type and size on
site, yet it is advised to check these details against statutory authority
authority records before proceeding with any design.

KEY



ABBREVIATIONS

Air Handling Unit	AKU	Water Meter	WM
Beltline Beacon	BB	Electric Level	EL
Bolton	BO	Ridge Level	RL
Borehole	BOH	Road Level	RL
BT Inspection Cover	BT	Soil Level	SFL
Cable Television Cover	CTV	Threshold Level	THL
Change Channel	CC	Parapet Wall Level	PWL
Electricity Cover	EC	Finished Floor Level	FFL
Electricity Pole	EP	Head Level	HL
Earth Road	ER	Soil Level	SL
Fire Hydrant	FH	Cover Level	CL
Gas Valve	GV	Inset Level	IL
Gate Post	GP	No Visible Pipes	NVP
Gully	GY	Unable to Lift	UTL
Inspection Cover	IC	Foot Water	FW
Junction Box	JB	Sump Level	SUL
Kerb Outlet	KO	Surface Water	SW
Lamp Post	LP	Brick Pavement	BP
Manhole	MH	Concrete	CON
Marker Post	MP	Concrete Paving Slabs	CPS
Post	P	Power Bed	PB
Post Box	PB	Shrub Bed	SB
Pipe	PE	Tactile Paving	TAC
Road Sign	RS	Unsurfaced	US
Roading Eye	RE	Brick Wall	BW
Marker Post	MP	Retaining Wall	RW
Sign Post	SP	Chainlink Fence	CLF
Stop Valve	SV	Chestnut Paling Fence	CPF
Stop Tap	ST	Iron Rolling Fence	IRF
Telegraph Pole	TP	Metal Security Fence	MSF
Traffic Light	TL	Post and Chain Fence	PCF
Vent Pipe	VP	Post and Wire Fence	PWF
Post and Rail Fence	PRF	Rain Water Pipe	RWP
Wooden Panel Fence	WPF	Sol Vent Pipe	SVP

Client

ET PLANNING

Project

**REAR OF LANGLEY COMMON
AND SOUTH OF SCHOOL ROAD
BARKHAM**

Title

TOPOGRAPHICAL SURVEY

Drawing Number

TS25-085-1

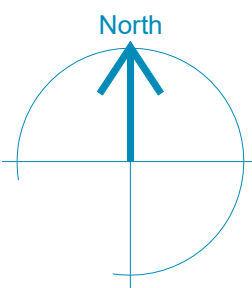
Revision	Description	Rev. By	Date

Scale	1:200@A0	Sheet	1 of 3
Drawn by	DG	Checked by	JS
Date of Survey	FEB 2025		





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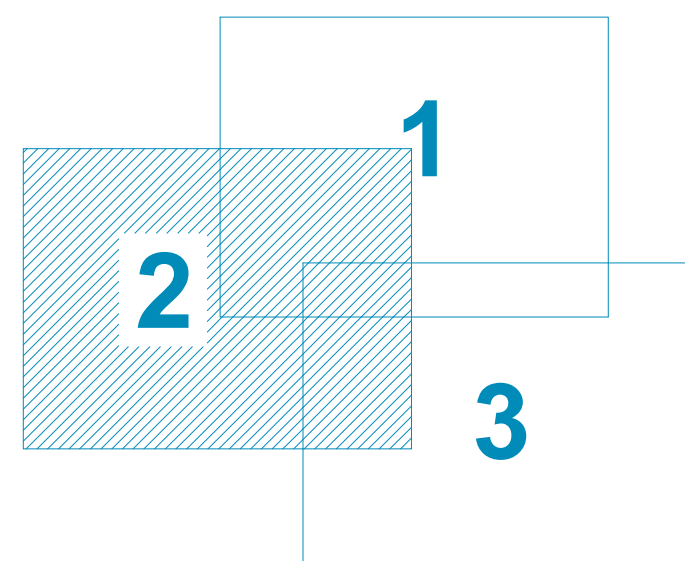


This survey is related to OSGB36(15) coordinate system by
GPS rapid static methods. No scale factor (padding
applied to the survey information. All horizontal distances
taken from this drawing are ground distances.

Co-ordinate Table			
Station	Easting	Northing	Level
1	476917.304	166691.832	50.458
2	476999.955	166836.924	52.426
3	476894.837	166850.016	49.037
4	476828.209	166718.891	50.546

All levels related to Ordnance Survey active GPS network, at
survey station 4.

SHEET LOCATION DIAGRAM

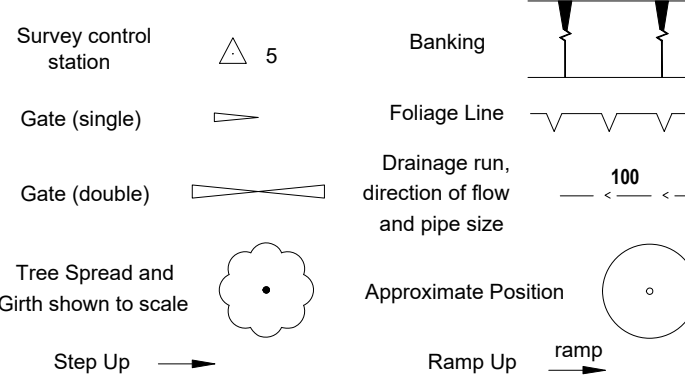


DISCLAIMERS

Every effort has been made to confirm the species on
site, yet it is advised to confirm these details with an
arborist before proceeding with any design.

Every effort has been made to confirm the species on
site, yet it is advised to confirm these details with an
arborist before proceeding with any design.

KEY



ABBREVIATIONS

AKU	Water Meter	WM
BB	Basin	EL
BD	Ridge Level	RL
BN	Rail Level	RL
BT	Soil Level	SFL
CTV	Threshold Level	THL
DC	Drainage Channel	DC
EC	Finished Floor Level	FFL
EP	Head Level	HL
ER	Soil Level	SL
FH	Cover Level	CL
GV	Invert Level	IL
GP	No Visible Pipes	NVP
GY	Unable to Lift	UTL
IC	Foul Water	FW
JB	Sump Level	SUL
KO	Surface Water	SW
LP	Block Paving	BP
MH	Concrete	CON
MK	Concrete Paving Slabs	CPS
P	Power Bed	PB
PB	Shrub Bed	SB
PE	Tactile Paving	TAC
RS	Unsurfaced	US
RE	Block Wall	BW
ME	Retaining Wall	RW
SP	Chainlink Fence	CLF
SV	Chestnut Paling Fence	CPF
ST	Iron Rolling Fence	IRF
TP	Metal Security Fence	MSF
TL	Post and Chain Fence	PCF
VP	Post and Wire Fence	PWF
PRF	Rain Water Pipe	RWP
WPF	Soil Vent Pipe	SVP

Client

ET PLANNING

Project
**REAR OF LANGLEY COMMON
AND SOUTH OF SCHOOL ROAD
BARKHAM**

Title
TOPOGRAPHICAL SURVEY

Drawing Number
TS25-085-2

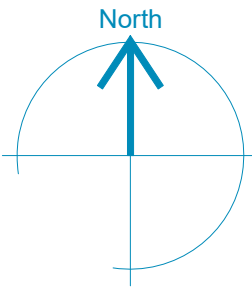
Revision	Description	Rev. By	Date

Scale 1:200@A0	Sheet 2 of 3
Drawn by DG	Checked by JS
Date of Survey FEB 2025	





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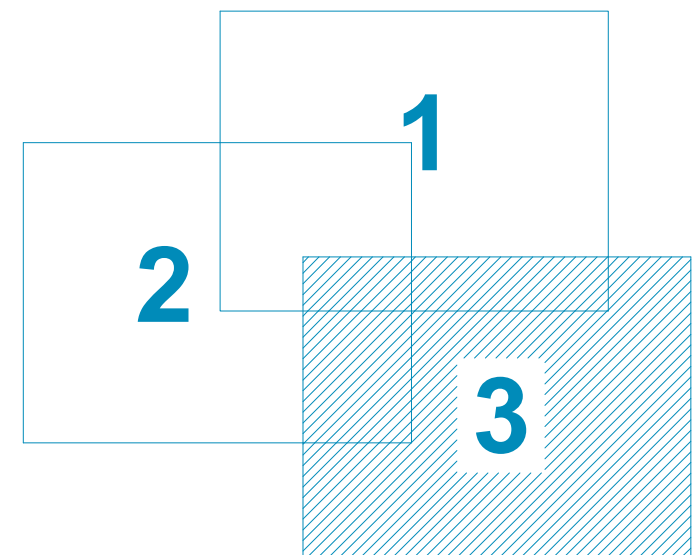


This survey is related to OSGB36(15) coordinate system by
GPS rapid static method. No scale factor has been
applied to the survey information. All horizontal distances
taken from this drawing are ground distances.

Co-ordinate Table			
Station	Easting	Northing	Level
1	476917.304	166691.832	50.458
2	476999.955	166836.924	52.426
3	476894.837	166850.016	49.037
4	476828.209	166718.891	50.546

All levels related to Ordnance Survey active GPS network, at
survey station 4.

SHEET LOCATION DIAGRAM

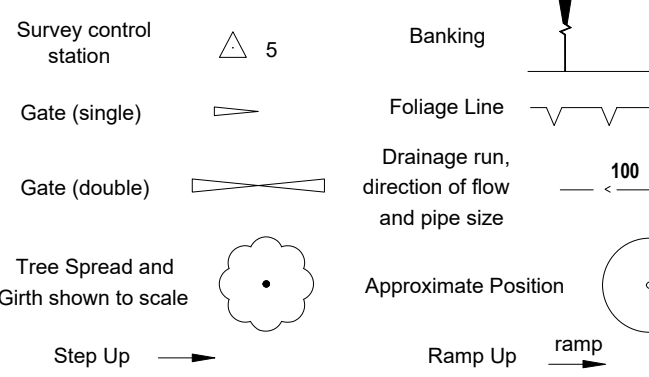


DISCLAIMERS

Every effort has been made to confirm these species on
site, yet it is advised to confirm these details with an
arborist before proceeding with any design.

Every effort has been made to confirm drainage run, type and size on
site, yet it is advised to check these details against statutory authority
authority records before proceeding with any design.

KEY



ABBREVIATIONS

Air Handling Unit	AWU	Water Meter	WM
Belted Basin	BB	Water Level	EL
Bolted	BO	Ridge Level	RL
Borehole	BOH	Road Level	RRL
BT Inspection Cover	BT	Soft Level	SFL
Cable Television Cover	CTV	Threshold Level	THL
Change Channel	CC	Parapet Wall Level	PWL
Electricity Cover	EC	Finished Floor Level	FFL
Electricity Pole	EP	Head Level	HL
Earth Road	ER	Still Level	SL
Fire Hydrant	FH	Cover Level	CL
Gas Valve	GV	Inset Level	IL
Gate Post	GP	No Visible Pipes	NVP
Gully	GY	Unable to Lift	UTL
Inspection Cover	IC	Foot Water	FW
Junction Box	JB	Sump Level	SUL
Kerb Outlet	KO	Surface Water	SW
Lamp Post	LP	Brick Paving	BP
Manhole	MH	Concrete	CON
Marker Post	MP	Concrete Paving Slabs	CPS
Post Box	PB	Power Bed	PB
Post	PE	Shrub Bed	SB
Road Sign	RS	Tactile Paving	TAC
Rodding Eye	RE	Unsurfaced	US
Marker Post	ME	Brick Wall	BW
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Wooden Panel Fence	WPF	Rain Water Pipe	RWP
		Sol Vent Pipe	SVP

Client

ET PLANNING

Project
**REAR OF LANGLEY COMMON
AND SOUTH OF SCHOOL ROAD
BARKHAM**

TOPOGRAPHICAL SURVEY

Drawing Number
TS25-085-3

Revision	Description	Rev. By	Date
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Scale 1:200@A0 Sheet 3 of 3

Drawn by	Checked by	Date of Survey
DG	JS	FEB 2025



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Email: info@geosmartinfo.co.uk

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- 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.
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- handle complaints speedily and fairly.
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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.

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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

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- 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

Financial Manager

GeoSmart Information Limited

Suite 9-11, 1st Floor,

Old Bank Buildings,

Bellstone, Shrewsbury, SY1 1HU

Tel: 01743 298 100

liz.lloyd@geosmartinfo.co.uk

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