FLOOD RISK ASSESSMENT
FOR RESIDENTIAL DEVELOPMENT AT
DELPH ROAD, LONG SUTTON

FINAL REPORT

ECL1247b/GR MERCHANT

DATE NOVEMBER 2026

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1.0 INTRODUCTION

This Flood Risk Assessment has been prepared in accordance with National Planning Policy Framework (NPPF) and supporting planning practice guidance (PPG) on Flood Risk and Coastal Change.

In areas at risk of flooding or for sites of 1 hectare or more, developers are required to undertake a site-specific Flood Risk Assessment to accompany an application for planning permission. This Flood Risk Assessment has been produced on behalf of GR Merchant in respect of a development that comprises one dwelling at Delph Road, Long Sutton.

Approval for a dwelling at the site was granted in July 2024 under application H11-0288-24. The proposed development will supersede the approval granted and the mitigation measures proposed within this Flood Risk Assessment are the same as those proposed in 2024. A planning application for the development is to be submitted by GR Merchant.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at 11 Delph Road, Long Sutton, Spalding, PE12 9BX. The National Grid Reference of the site is 54244/32254.

The location of the site is shown in Figure 1.

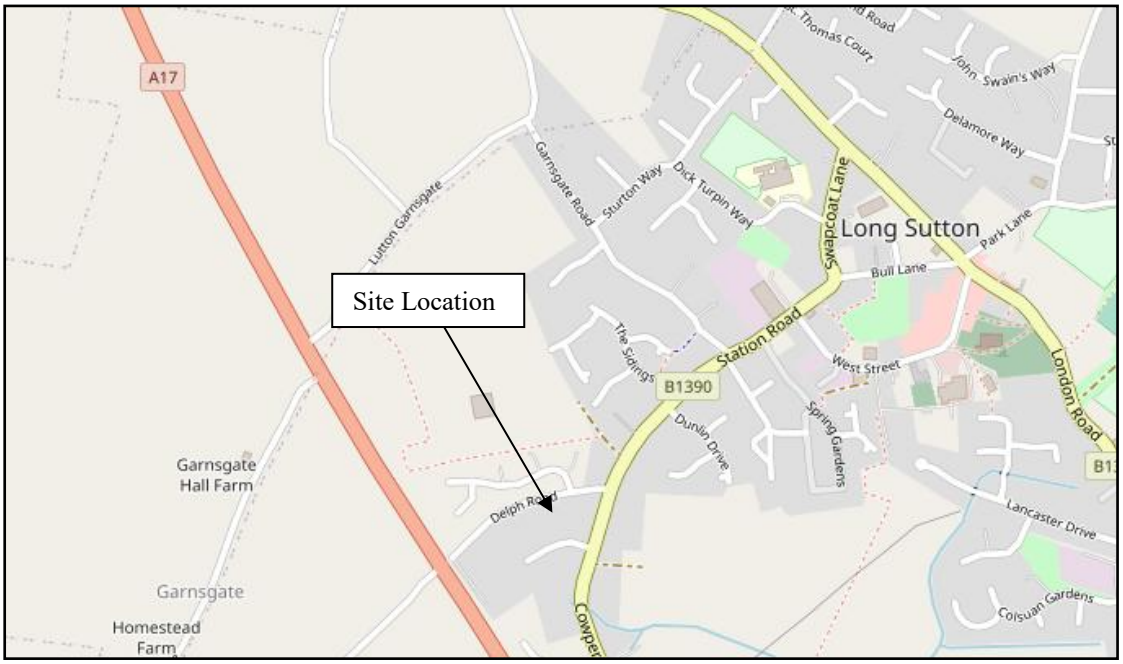


Figure 1 – Location Plan (© OpenStreetMap contributors)

2.2 Existing Site

The site is on the southern side of Delph Road. The site is within the curtilage of 9 Delph Road and consist of a single storey building with a glass house to the rear. The area of development is approximately 0.09 hectares.

Environment Agency LiDAR data shows that ground levels within the site are typically between +2.5m OD and +2.8m OD with the highest ground levels closest to Delph Road. The carriageway level of Delph Road alongside the site is +2.4m OD. Spot levels taken at the site corroborate these levels.

The site is in the South Holland Internal Drainage Board (IDB) District. Surface water at the site would naturally drain through soakaway and hence to the IDB drain system. There is a riparian drain on the northern side of Delph Road and the nearest IDB Watercourse is a High Priority Pipeline located approximately 100m south of the site.

The online British Geological Survey maps indicate that the site is likely to be underlain by Ampthill Clay Formation mudstone. The bedrock is shown to be overlain with superficial deposits of clay and silt.

2.3 Proposed Development

The proposed development consists of a new dwelling. The dwelling will have two storeys. A Site Plan is provided in Attachment 1.

2.4 Local Development Documents

The South East Lincolnshire Local Plan 2011 – 2036, adopted in March 2019, is the Local Plan for the district. Policy 4: Approach to Flood Risk states the requirements for flood risk reduction.

The South East Lincolnshire Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) was prepared in June 2017.

The Joint Lincolnshire Flood Risk and Drainage Management Strategy has been prepared by Lincolnshire County Council as the Lead Local Flood Authority. The purpose of the Strategy is to increase the safety of people across Lincolnshire by reducing the number of people at risk of flooding, increasing the resilience of local communities, and reducing the impact of flooding

2.5 Flood Zones

An extract from the Environment Agency Flood Map for Planning is shown in Figure 2. The site is within Flood Zone 3, an area with a high probability of flooding.

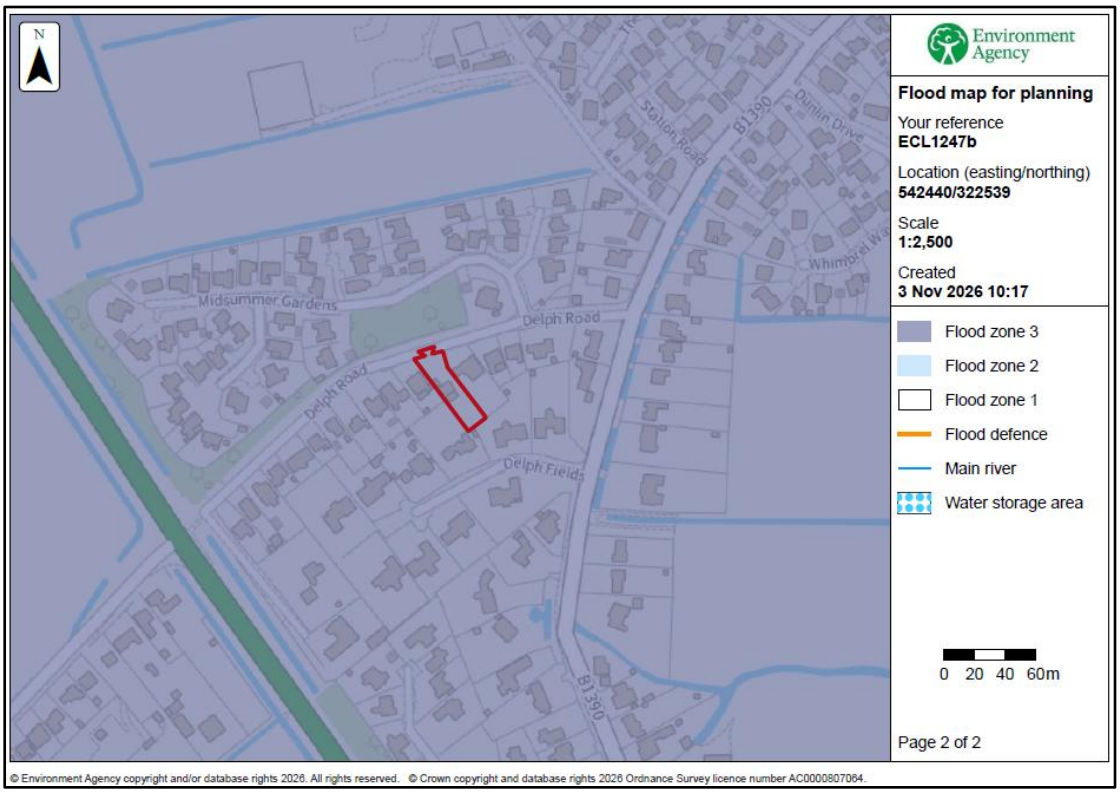


Figure 2 – Environment Agency Flood Map for Planning

The Flood Map for Planning shows that during the event with a 1 in 100 annual likelihood the site is not at risk of surface water flooding. When climate change is considered during this return period event the site is not at risk.

The Environment Agency Long Term Flood Risk maps provide an indication of the risk from the primary sources of flooding. The map shows that the site is outside of the area at risk of reservoir flooding.

Table 1 shows the level of risk at the site within the South East Lincolnshire SFRA.

SFRA Map	Present Day	2116
Residual Flood Hazard Map for the 1% fluvial and 0.5% tidal event	The site is outside the 'Low Hazard' area	The site is in the 'Danger for Most' area
Residual Peak Depth Map for the 1% fluvial and 0.5% tidal	The site is outside the area at risk	The peak flood depth is between 0.5m and 1.0m.

Table 1 – Flood Risk within SFRA Maps

3.0 FLOOD RISK VULNERABILITY

3.1 The Sequential and Exception Test

The NPPF requires the application of a Sequential Test to ensure that new development is in areas with the lowest probability of flooding.

The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

3.2 Vulnerability Classification

Annex F (Table 2) of NPPF categorises different types of uses and development according to their vulnerability to flood risk. The proposed development is covered by the description of buildings used for dwellings and is classified as 'More Vulnerable'.

Annex F (Table 3) of NPPF sets out Flood Risk Vulnerability and flood zone 'compatibility'. The site is in Flood Zone 3 and the development is 'More Vulnerable' therefore it is necessary to complete the Exception Test.

PPG Flood Risk and Coastal Change defines that the lifetime of the development in terms of flood risk and coastal change is 100 years.

3.3 Application of the Sequential and Exception Test

It is for the Local Planning Authority, using the evidence provided and taking advice from the Environment Agency as appropriate, to consider whether an application passes the Sequential Test.

The site has permission for the construction of one dwelling. It is considered that this permission has established the principle of a dwelling at the site. It is proposed that the dwelling that forms this application will replace the existing permission. The development is considered to pass the Sequential Test.

The Exception Test requires consideration of the wider sustainability benefits of a development and that the development would be safe and residual risks managed.

The Local Plan has a target of a net increase of at least 11,681 dwellings in South Holland over the 25-year local plan period. The Plan considers this new housing is required to ensure the sustainability of the Local Plan area. The proposed development will contribute to this target.

Section 5 of this Flood Risk Assessment describes the flood mitigation measures and the management of the residual risks, demonstrating that this development will be safe and not increase flood risk elsewhere. The development is considered to pass the Exception Test.

4.0 SITE SPECIFIC FLOOD RISK

4.1 Local Flood Assets

The site is 5.8 km west of the tidal River Nene. The site is protected by the River Nene tidal defences between Wisbech and Sutton Bridge. The River Nene is the responsibility of the Environment Agency.

There is a long-term strategy for the maintenance of the Environment Agency defences which is reviewed and updated periodically.

There is an extensive local drainage network managed by South Holland IDB. There is an IDB High Priority Pipeline 100m south of the site. The site and the surrounding land are within the Free Discharge catchment and drain to the South Holland Main Drain and discharge to the tidal River Nene at the Sutton Bridge Outfall Sluice. The site is 2.9km north of the South Holland Main Drain.

During the operation and maintenance of its pumping stations, associated structures, and channel systems, the IDB seeks to maintain a general standard capable of providing flood protection to its district. A routine maintenance programme is in place to ensure that the Boards assets are commensurate with the standard of protection that is sought.

Current maintenance standards of the South Holland Internal Drainage Board and the Environment Agency are generally good.

4.2 Sources of Flooding

A summary of the sources of flooding is provided in Table 2.

Source of Flooding	Level of Risk
Drainage Network Flooding	The risk is assessed in Section 4.3.
Surface Water Flooding	Based upon the EA maps the risk is very low.
Fluvial Flooding	The risk is assessed in Section 4.3 and 4.5
Tidal Flooding	The risk is assessed in Section 4.3, 4.5 and 4.6.
Reservoir Flooding	Based upon the EA maps the site is not at risk of flooding from reservoirs.
Groundwater Flooding	There is no evidence to suggest the site is at risk of groundwater flooding.

Table 2 – Sources of Flooding

4.3 Probability of Flooding

The probability of flooding associated with blockages in the South Holland IDB drainage system is low due to the maintenance standards achieved and managed by the IDB.

Through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 years and 1 in 100 years, respectively. The risk associated with flood events that exceed the standard of protection provided is lowered due to the South Holland IDB main drains incorporating freeboard. This freeboard provides storage during the exceedance events.

The site benefits from defences on the River Nene that provide protection during a 0.5% annual probability (1 in 200 chance each year) tidal event and a 1% annual probability (1 in 100 chance each year) fluvial event.

4.4 Historic Flooding

During the preparation of this assessment, no evidence was discovered of the site being flooded.

4.5 Climate Change

Climate change is likely to impact the site through increased rainfall intensity and duration affecting the local drainage network and increased flood levels in the River Nene.

The River Nene tidal defences have been designed to include an allowance for climate change.

In summary the existing systems and defences are appropriate for the design life of the development (i.e. 100 years).

4.6 Residual Risk

There is a residual risk of flooding at the site should a breach occur. The South East Lincolnshire SFRA includes maps demonstrating the residual peak depth in 2116. When climate change allowances are applied to the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 100 chance each year) tidal event the peak depth at the site from direct overtopping together with breach failure is between 0.5m and 1.0m. An extract from this map is shown in Figure 3 below.

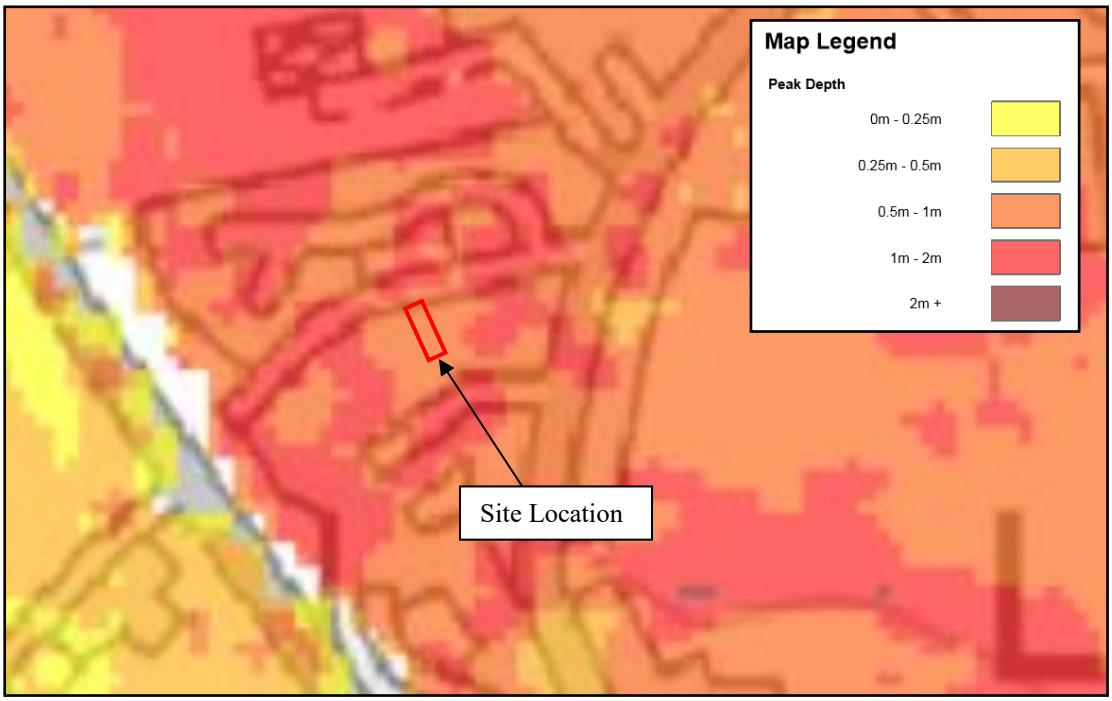


Figure 3 – SFRA 2116 Residual Peak Depth Map

5.0 FLOOD RISK MITIGATION

5.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Sutton Bridge Outfall Sluice could lead to an increased level of risk within the IDB catchment.

The probability of the site flooding from any Environment Agency system is less than 1% annual probability (1 in 100 chance each year) because of the standards of the existing flood defences. Over time there will be a gradual increase in risk to the site due to climate change. During the design life of the development it is not anticipated that the site would flood.

The SFRA considers the residual risk associated with overtopping and a breach in the defences in 2116. The maps show that the peak flood depth at the site is between 0.5m and 1.0m.

The development increases the impermeable area and therefore has the potential to increase the rate of surface water runoff from the site.

5.2 Mitigation Measures

The site has a low 'actual risk' of flooding. The recommended mitigation against the remote risk of flooding has considered the maximum height to which floor levels can be raised. The development is within a residential area and raising finished floor levels to 1m above ground level would have an unacceptable impact on neighbouring properties. It is recommended that:

- the finished floor level of the dwelling is 0.4m above surrounding ground level;
- there is 0.6m of flood resistant construction above finished floor level; and
- there is 0.9m of flood resilient construction above finished floor level.

The risk of flooding is lowered as the proposed dwelling has 2 storeys with all sleeping accommodation on the first floor.

The developer should ensure that the eventual occupier of the dwelling is sufficiently aware of the risk of flooding, and the standard of the existing defences. The Environment Agency operates a flood warning system for properties at risk of flooding to enable householders to protect life or take actions to manage the effect of flooding on property. Floodline Warnings Service is a national system run by the Environment Agency for broadcasting flooding warnings. The occupier of the dwelling should register to receive flood warnings.

During an exceedance event it is anticipated that sufficient time would be available to take precautionary actions to limit the potential impact of flooding.

Should there be a failure of Sutton Bridge Outfall Sluice and conditions were such to put properties and land at risk of flooding, the Internal Drainage Board would take emergency action to maintain the drainage level of service by using temporary pumping equipment.

It is recommended that surface water run-off is managed so that stormwater from the development will not affect any adjoining properties or increase the flood risk elsewhere.

6.0 CONCLUSIONS

As a result of the assessment, the following conclusions have been reached.

- The proposed development comprises a two storey residential dwelling at Delph Road, Long Sutton.

- The site is located within an Internal Drainage Board catchment and through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 and 1 in 100 years, respectively.

- The proposed development is in Flood Zone 3. The site benefits from defences on the tidal River Nene and provide protection during the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 200) tidal event including climate change.

- There is a residual risk to the site associated with a breach of the tidal defences with depths up to 1.0m.

- Based upon the constraints of the site it is proposed that the floor level is 0.4m above surrounding ground level, there is 0.6m of flood resistant construction above finished floor level, and there is 0.9m of flood resilient construction above finished floor level.

- The development passes the Sequential Test and Exception Test and is therefore suitable for the proposed location.

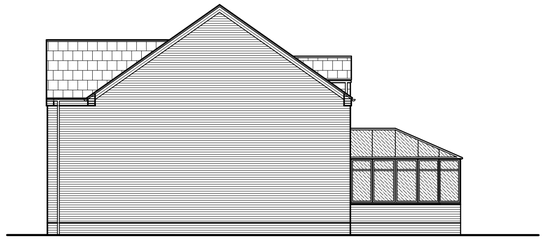
ATTACHMENT 1

FLOOR PLANS & ELEVATIONS
(DWG 4530-26-01E)

SITE AND LOCATION PLANS
(DWG 4530-26-02D)



FRONT ELEVATION



SIDE ELEVATION



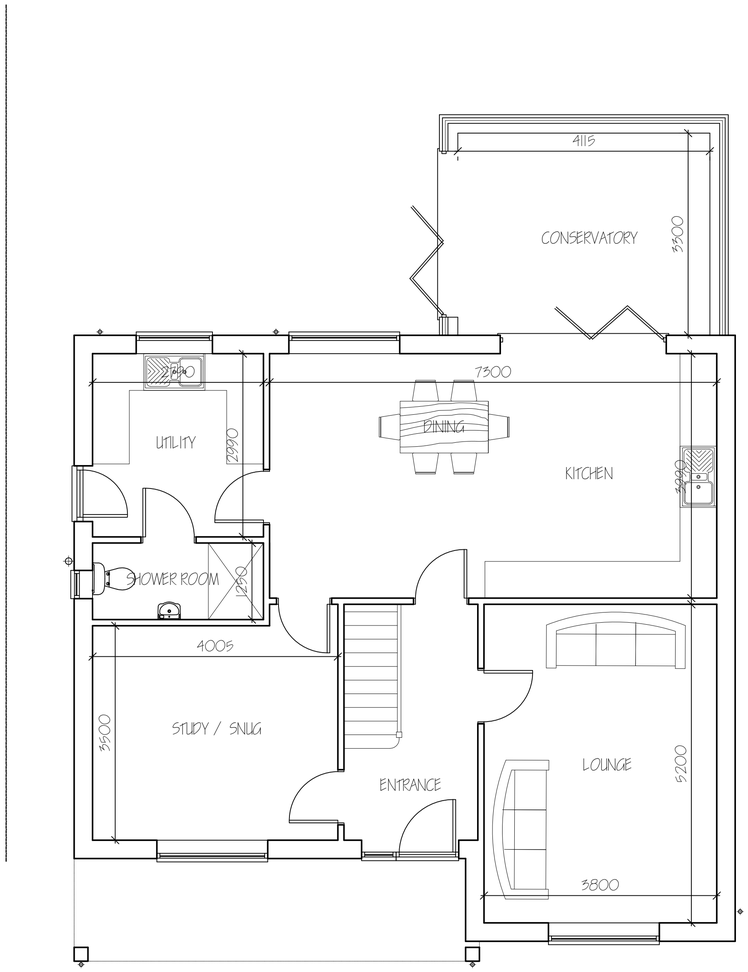
SIDE ELEVATION



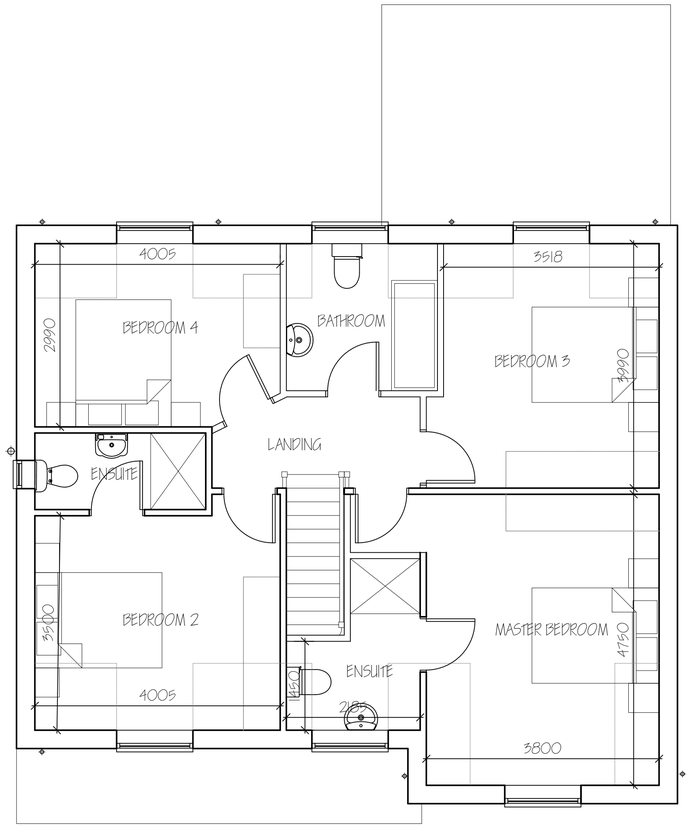
REAR ELEVATION

MATERIALS SCHEDULE:

Walls: TBS Old Fulford Blend Bricks
Roof: Marley Riven Tile - Anthracite Grey
Front Door: Composite - Anthracite Grey
Doors & Windows: UPVC - Cream
Rainwater Goods: UPVC - Black
Cladding & Fascia : UPVC - Mushroom



GROUND FLOOR PLAN



FIRST FLOOR PLAN

ref:	revision	date
E	PLANNING APPLICATION	OCT '2026
D	CLIENTS AMENDMENTS	OCT '2026
C	CLIENTS AMENDMENTS	SEPT '2026
B	CLIENTS AMENDMENTS	SEPT '2026
A	CLIENTS AMENDMENTS	SEPT '2026

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Project

PROPOSED DWELLING
ADJ: 9 DELPHS ROAD
LONG SUTTON
SPALDING, LINCS. PE12 9BX.

Client

BRICK NEST HOMES

Drawing

FLOOR PLANS & ELEVATIONS

Job Ref.	Drawing No.
4530-26	01E
Date	**Drawn**
AUGUST 2026	SLD

Scales

1:50, 1:100

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LCC SPECIFICATIONS :-
The new access to be constructed to the LCC Highways Specifcations.



PROPOSED SITE PLAN 1:200

LANDSCAPING, TREE PLANTING & FENCING SCHEME.

A - MIXED HEDGE
- (a) Common Hawthorn (Crataegus Monogyna)
- (b) Hazel (Corylus avellana)
- (c) Dogwood (Cornus Florida)
- (d) Field Maple (Acer Campestre)
- (e) Holly (Ilex Aquifolium)
- (f) Guelder Rose (Viburnum Opulus)
- (g) Privet (Liquistrum Ovalifolium)

B - EXISTING 1.8m HIGH CLOSE BOARDED FENCE

C - PROPOSED 1.8m HIGH CLOSE BOARDED FENCE

D - PROPOSED 1.2m HIGH CLOSE BOARDED FENCE

E - SILVER BIRCH (BETULA PENDULA) FEATHERED - 1.5m to 1.8m WITH A TERMINAL SHOOT AND LATERAL SHOOTS

F - WILD CHERRY (PRUNUS AVIUM) FEATHERED - 1.5m to 1.8m WITH A TERMINAL SHOOT AND LATERAL SHOOTS

G - ROWAN (SORBUS ACUPARIA) FEATHERED - 1.5m to 1.8m WITH A TERMINAL SHOOT AND LATERAL SHOOTS

H - FLOWERING LAWNS - Seeded EL -1 Mix From Emorsgate Seeds

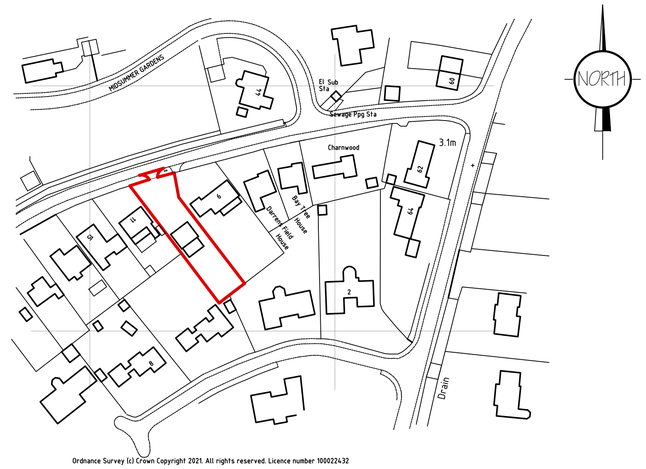
J - GRAVEL DRIVE & TURNING AREA

K - SLABBED PATIO & FOOTPATHS

Planting of Hedge to be double row staggered. Distance between plants to be 300mm. Distance between rows to be 450mm. All as specified by The Woodland Trust.

All planting to be in accordance with BS 4428:1989 and amendment No. 1 (1991)
All trees to be planted with minimum 0.6m plastic mulch mat and to be staked, tied and tubed.
1/ 5 to ½ bags of peat free tree and shrub planting compost to be incorporated into backfill for each tree hole.

Once all the external building works have been completed and all plant and machinery have been removed from site, all indicated planting will be completed within the next planting season (March - September)



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LOCATION PLAN 1:1250



EXISTING SITE PLAN 1:250

ref:	revision	date
D	CLIENTS AMENDS & PLANNING APP	OCT '2026
C	CLIENTS AMENDMENTS	SEPT '2026
B	CLIENTS AMENDMENTS	SEPT '2026
A	CLIENTS AMENDMENTS	SEPT '2026

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Project
PROPOSED DWELLING
ADJ: 9 DELPHS ROAD
LONG SUTTON
SPALDING, LINCS. PE12 9BX.

Client
BRICK NEST HOMES

Drawing
SITE & LOCATION PLANS

Job Ref.	Drawing No.
4530-26	020
Date	**Drawn**
AUGUST 2026	SLD

Scales
(AS STATED)

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