



Flood Risk Assessment

Red House Farm, Prescot Road,
Cronton WA8 5PS

Report Ref:
9828-ADS-00-XX-RP-C-501

Prepared For:

John Ravenscroft

107 Mere Grange
Business
Park
St Helens
WA10 3TP

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Tel: 0151 5414000
E-mail: info@adsconsult.uk

DOCUMENT CONTROL SHEET

Issued by: ADS CONSULT
107 MERE GRANGE
BUSINESS PARK
LEASIDE
ST HELENS
WA10 3TP

Tel: 0151 5414000
E-mail: info@adsconsult.uk

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Foreword

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ADS Consult reserves the right to amend their conclusions and recommendations in the light of further information that may become available.

This flood risk assessment report is prepared in accordance with the requirements generally set out in the 'Technical Guidance to the National Planning Policy Framework', published in 2023 and following the standard section format and order of the GOV.UK – Flood risk and coastal change site specific flood risk assessment checklist.

1.0 Development Site and Location

1.1 Site Location

The development proposal is to demolish the bungalow and rebuild a new house in its place. This site is located east of Prescott Road in Widnes WA8 5PS.

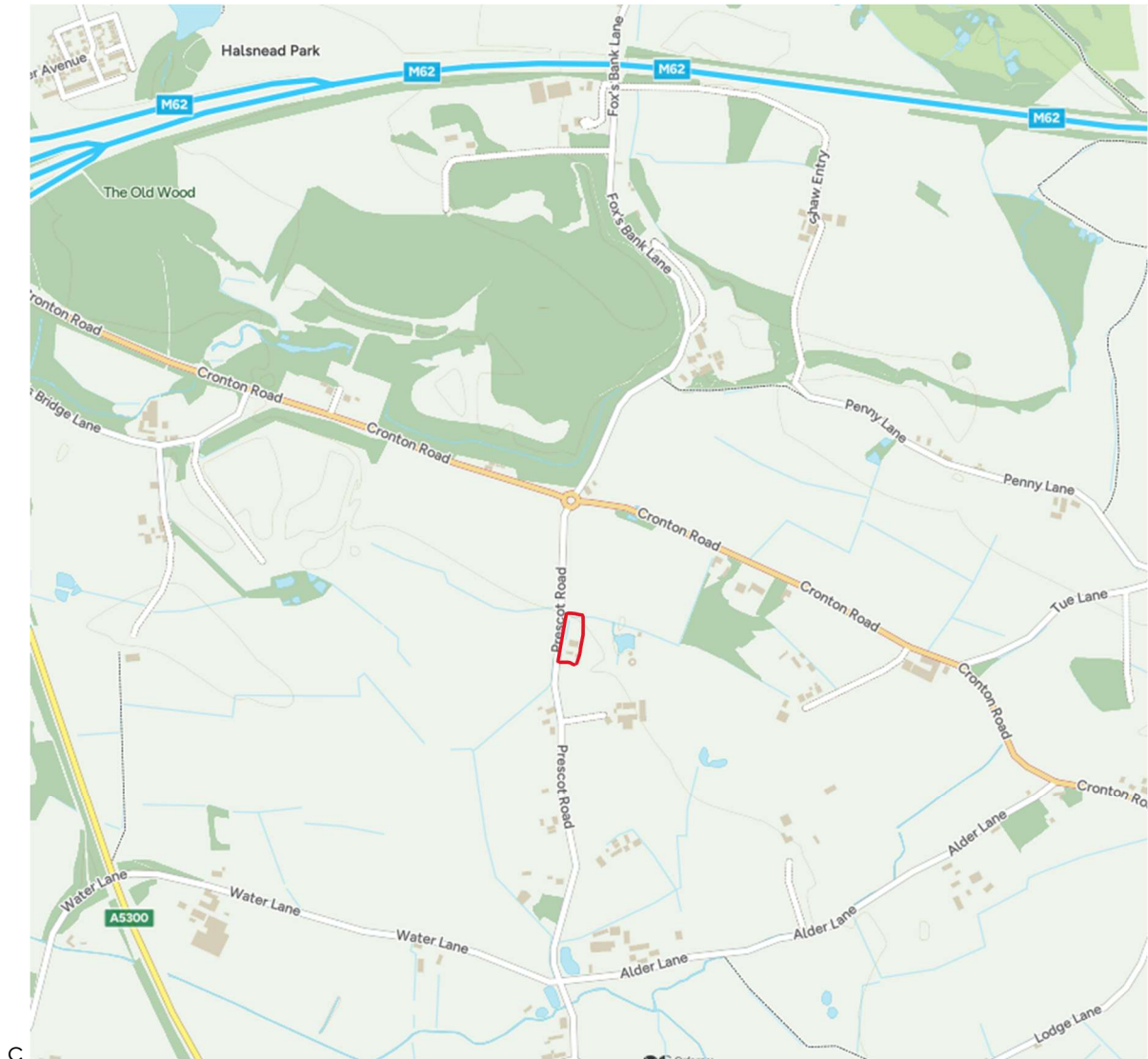


Figure 1: Site Location
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The site's location information is as follows:

- Grid Ref: SJ 47687 88535
- Lat and long: 53.391172, -2.788105
- Nearest Postcode: WA8 5PS

1.2 Current Use

The site is currently occupied by a bungalow. This building is to be demolished and build a new house.

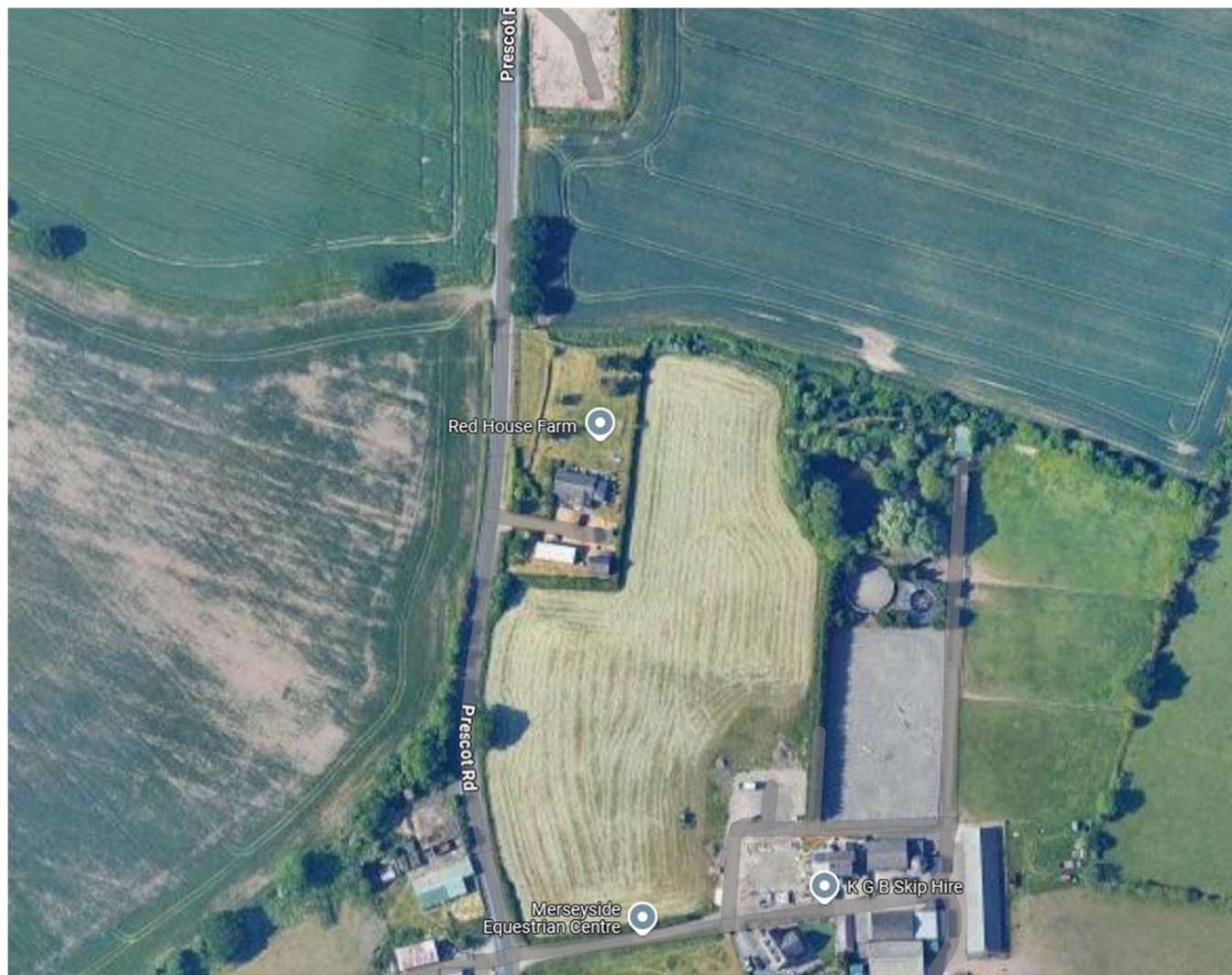


Figure 2: Arial Photo of Existing Site

1.3 Access

The site is fenced. Access to the site via a junction with Prescot Road.

1.4 Surrounding Areas

The site is surrounded by farms.

1.5 Nearest Watercourse / Body of Water

An unnamed watercourse runs through the site from northwest to southwest.

1.6 Flood Zone

Initial observation of the Environment Agency's Flood Map for Planning shows a small area on the north of boundary is classified as Flood Zone 2.

Land within Flood Zone 2 is classified as having a probability of flooding of 1 in 1000 to 1:100 from river or 1 in 1000 to 1:200 sea sources.

Further flood risk information from the EA has been included within Appendix A.

2.0 Development Proposals

2.1 Proposals

This flood risk assessment has been prepared on behalf of John Ravenscroft to support the proposed development consisting of the demolition of an existing bungalow and building a new house.

2.2 Vulnerability

In accordance with Table 2 of the NPPG: Flood Risk and Coastal Change, residential development is classified as 'more vulnerable'.

2.3 Estimated Lifecycle of Development

A 60-year lifecycle is assumed for this development.

2.4 Change to Local Flood Risk Following Completion of the development

As the site is currently occupied by a bungalow, there is not predicted to be an increase in the number of users on site following the completion of the development.

There is therefore a comparable or lower risk of harm posed by flooding depending on the footfall of the current and proposed residential unit.

3.0 Sequential Test

Initial observation of the Environment Agency's Flood Map for Planning has shown that majority of the proposed area to be developed lies is out of Flood. A small area near the north boundary is in Flood Zone 2.

A full review of flood risk is carried out in Section 5 to demonstrate this low risk to the developable area of the site. On this basis it is considered that there is no requirement for Sequential Testing.

4.0 Climate Change

The impacts of climate change will be considered within each of the following report sections on site specific flood risk assessment.

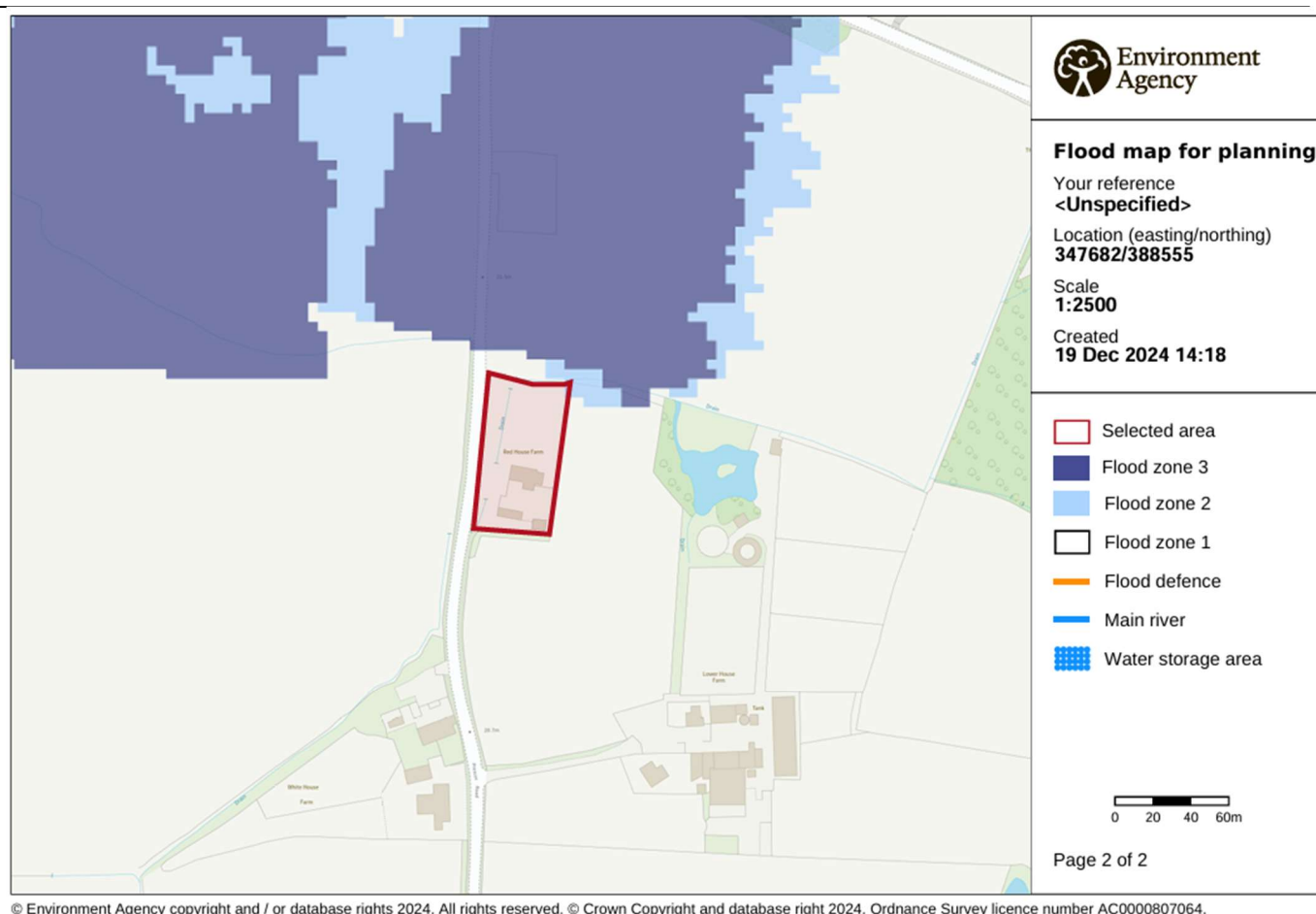
This will take into consideration current national climate change guidance published by the Government in February 2016 and last updated January 2022.

The requirements for climate change impacts are considered in Section 5 and impacts on surface water drainage (where required) are considered in Section 6 Surface Water Management.

5.0 Site Specific Flood Risk

5.1 Environment Agency Online Planning Flood Map

The environment Agency's website provides on-line mapping to identify flood zoning for planning purposes. Figure 3 shows the application site area outlined red in relation to the EA's flood map for planning.



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Figure 3: EA Flood Map for Planning Showing Site Boundary

The mapping shows the majority of the application site location to be in flood zone 1 - low probability. Just a small area in the corner of boundary is classified as flood zone 2.

With reference to National Planning Guidance Table 1: Flood Zones:

- Flood Zone 1 Low Probability comprises land having a less than 1 in 1000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3).
- Flood Zone 2 Medium Probability comprises land having between a 1 in 100 and 1 in 1000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1000 annual probability of sea flooding. (Shown in light blue on the Flood Map).
- Flood Zone 3a High Probability comprises land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Shown in dark blue on the Flood Map).

Figure 4 shows the long-term flood risk mapping which defines the extent of fluvial flooding.

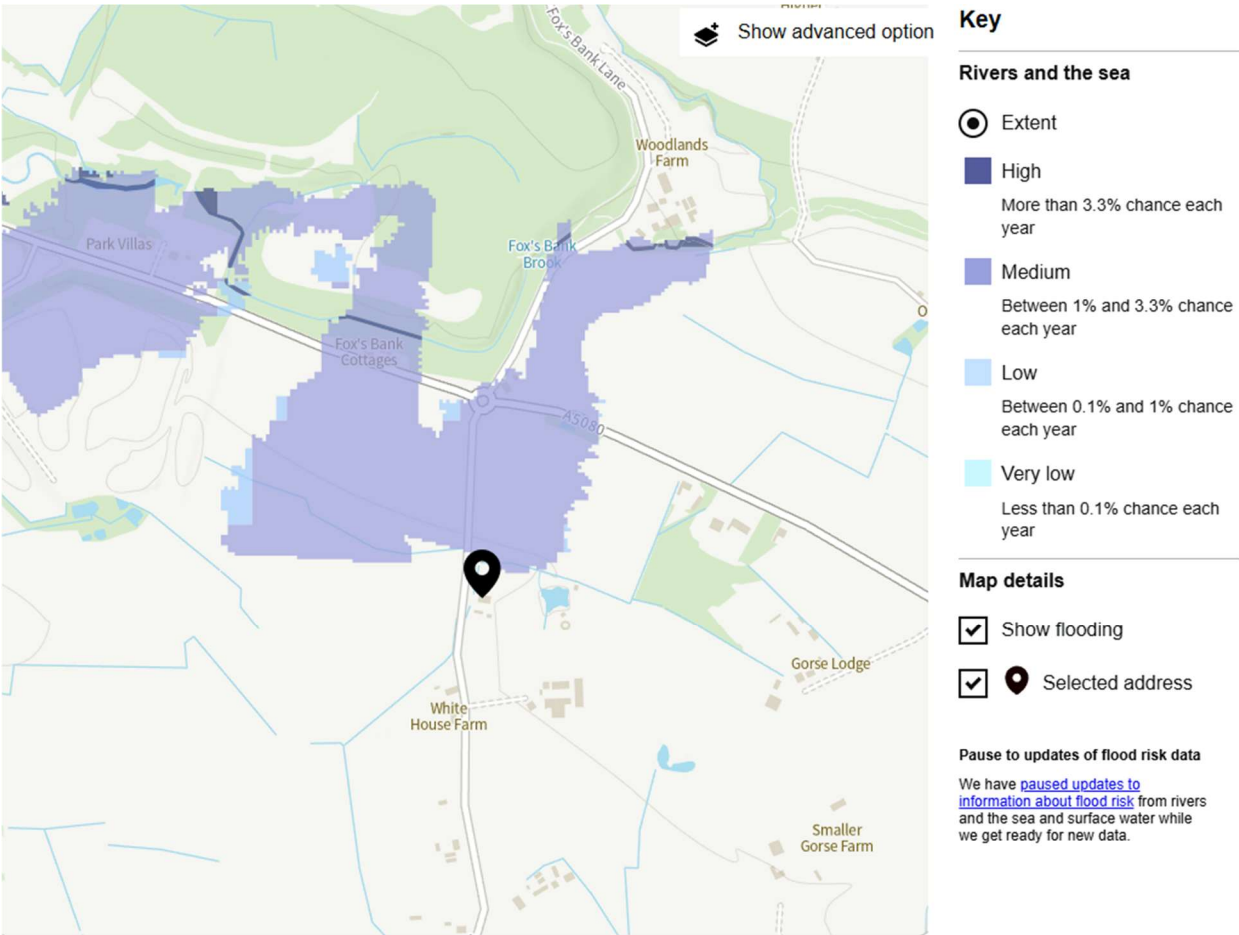


Figure 4: Long Term Fluvial Flood Risk Mapping – Showing Site

The long-term flood risk mapping matches the information published by the EA Flood Map for Planning service. This mapping places the area of the site in low flood risk area.

5.2 Environment Agency Surface Water Flood Risk Mapping

Figure 5 shows the 'Flood Risk from Surface Water' mapping for the development area.

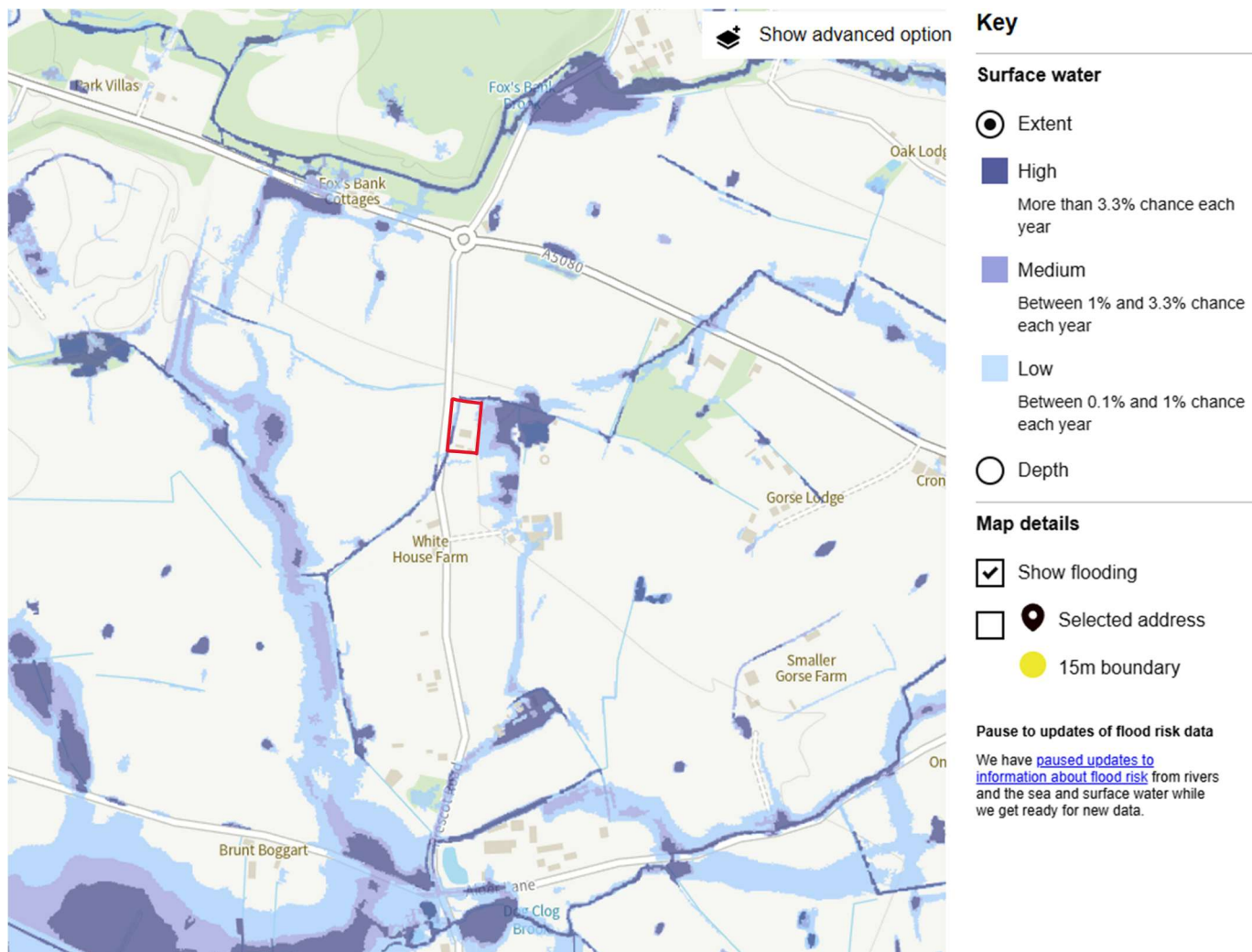


Figure 5: Long Term Surface Water Flood Risk Mapping – Showing Site

The majority of the site is not identified as at risk of surface water flooding.

A small area in the northeast of the development boundary is classified as at a low risk of surface water flooding. A low-risk classification means that this area has an annual probability of flooding between 0.1% and 1.0%.

Some parts of the watercourse through site are classified as medium risk. A medium-risk classification means that this area has an annual probability of flooding between 1% to 3.3%..

Some parts of the watercourse through site are classified as high risk. A high-risk classification means that this area has an annual probability of flooding more than 3.3%.

5.3 Flooding from Reservoirs

Flooding from reservoirs is unlikely in this area.

5.4 Flooding from Other Sources

Flooding from new drainage can present a risk of flooding. New drainage will have to be designed to modern British Standards, Building Regulations and in accordance with local SuDS legislation standards. There will also need to be full liaison with United Utilities and Knowsley's Flood Risk Management/Lead Local Flood Authority team and considerations of climate change, therefore this risk is considered to be low.

5.5 Flood Risk Summary

Following the review of available flood information, the following can therefore be summarised in terms of flood risk:

Primary River Flood Risk	LOW TO MEDIUM
Surface Water Flood Risk	LOW TO HIGH
Existing Drainage/Culvert Flood Risk	LOW
New Drainage Flood Risk	LOW
Groundwater Flood Risk	LOW
Reservoir & Artificial Waterbody Flood Risk	LOW
Risk from Climate Change	LOW
Residual (Lifecycle) Primary River Flood Risk	LOW
Tidal Flood Risk	N/A

6.0 Mechanisms of Flooding and Historical Records

6.1 Fluvial Flooding

EA flood mapping places majority of the site within Flood Zone 1. A very small area within Flood Zone 2 would be the garden in the proposed development.

So it is very unlikely that the finished development will suffer flooding from this source. The development proposals have been included within Appendix A.

6.2 Surface Water Flooding

As previously mentioned, the development area is at a varying risk of surface water flooding. This risk varies from low to high. The location at medium and high risk are small areas adjacent to the watercourse through the site. These small areas would be garden of new house. The proposed buildings, parking and access will be actively drained to ensure that surface water does not pose a flooding risk to the development and infrastructure located off site.

So it is assumed that the finished development is unlikely to suffer from surface water flooding.

6.3 Ground Water Return Flow

Long term Flood Risk data identifies the development area as "Unlikely" to suffer from groundwater return flow. There is no known instance of groundwater flooding affecting the development area.

6.4 Sewer and Culvert Surcharging

There are no known public surface water sewers, however, there does appear to be a culverted watercourse running through the site.

6.5 Reservoirs

There are no known reservoirs within proximity to the development and Government Long Term Flood Risk data places the site within an area "unlikely" to suffer from reservoir related flooding.

6.6 Tidal

The site is situated such that flooding from tidal sources is not possible over the lifetime of the development.

7.0 Surface Water Management

In accordance with National Planning Policy Framework (NPPF) and Building Regulations Approved Document H, options for disposal of surface water from new developments should follow the hierarchy below:

1. Discharge to ground via infiltration
2. Discharge to watercourse
3. Discharge to surface water sewer
4. Discharge to combined sewer

Soil information from Soilscales suggests the near surface ground conditions to be Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, which would not lend itself to infiltration.

There is an unnamed watercourse runs through the site. It's assumed that existing surface water system is discharged to the watercourse.

As the development involves only a change from bungalow to house and it's a small site, it is proposed that the unit and car parking will continue to be drained in line with the current arrangements. There will be no alterations to the existing surface water network as a result of the proposals. There will therefore be no change to the volumes and flow rates discharging from site.

Management of surface water generated on site will ensure that runoff and discharge volumes from site are not increased from their current levels. Flood risk will not be increased on or offsite as a result of this development.

8.0 Occupants and Users of the Development (Access & Egress)

The location of the development is such that a residential unit and it's car parks and access are within Flood Zone 1. As the site lies within the low-risk Flood Zone 1, access and egress are not considered to be impacted by flood risk.

9.0 Exceptions Test

The proposed house is to be within Flood Zone 1 as per the existing building.

Table 1: Flood Risk Vulnerability and Flood Zone 'Compatibility'

Flood Risk Vulnerability Classification		Essential Infrastructure	Water compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓	✓
	Zone 3a	Exception Test required	✓	X	Exception Test required	✓
	Zone 3b*	Exception Test required*	✓	X	X	X

✓ Development is appropriate

X Development should not be permitted

In accordance with the vulnerability table above the type of development proposed is appropriate and does not require an exception test.

10.0 Residual Risk

A flood risk assessment should consider the residual risk to a proposed development for its intended lifecycle. In this case, with the development proposals consisting of residential development, a 60-year lifecycle is assumed.

The intended use and lifecycle have been considered throughout the assessment of various flood risk sources and it is considered that climate change will not impact on flood risk to the site over its intended lifecycle. Therefore, the residual risk is considered low.

11.0 Flood Risk Assessment Credentials

This Flood Risk Assessment has been carried out by ADS Consult Ltd who have over 20 years' experience of civil engineering and flood risk assessment preparation. This Flood Risk Assessment has been carried out following the general requirements of the Nation Planning Policy Framework (2023), considering recently updated national climate change considerations.

12.0 Conclusion & Recommendations

12.1 Conclusion

This Flood Risk Assessment has been conducted to assess flood risk to support the planning application for replace a bungalow to a new house in Prescot Road and has been conducted in general accordance with the requirements of the National Planning Policy Framework (2023) to provide a sufficient level of detail on flood risk for the application.

The Environment Agency Flood Map for Planning shows the area of the site to be developed in a Flood

Zone 1 Low Risk area. With the development proposals being residential units, the NPPF (2023) considers the development type of more vulnerable as appropriate development. Surface water flood risk will be mitigated by the raising of levels on site and the use of active drainage. Following completion of the development it is anticipated that Other secondary flood risks including groundwater, reservoir and sewer flooding have also been assessed and the site is at low flood risk from all sources.

Risk from Climate Change and Residual Risk is considered low.

APPENDIX A EA PRODUCT 4 DATA

