
Flood Risk Assessment for Minor Development (Garage Conversion into new living space)

25 Lightoaks Drive, Halewood, L26 6BJ

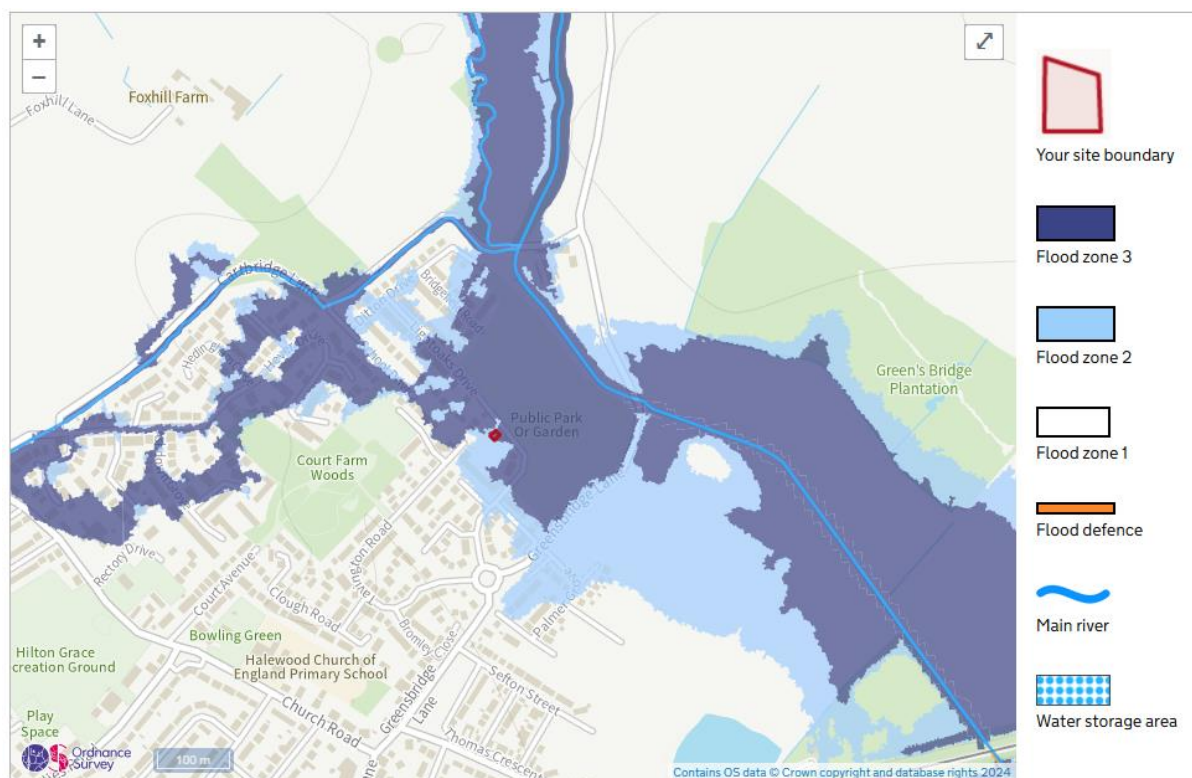
1. Introduction

1.1 Purpose of the Flood Risk Assessment

This FRA evaluates the potential flood risks associated with the proposed garage conversion at 25 Lightoaks Drive. It ensures compliance with planning regulations and demonstrates how the development will manage and mitigate flood risks.

1.2 Project Description

- **Existing Use:** Garage.
- **Proposed Use:** living space and home office
- **Site Area:** 5.3m x 2.8m (within existing building)
- **Flood Zone:** Flood Zone 3 (3a)



2. Site Description

- Address: 25 Lightoaks Drive, Halewood, L26 6BJ
- OS Grid Reference: SJ 45524 86384
- Topography: Flat.
- Current drainage systems:
 - Surface water drainage
 - Rainwater gutters on property
- History of flooding to property: Since construction in 2016, no flooding has occurred or affected the property.

It is worth noting that extensive work has been carried out in Goddard Green Park, adjacent from the property, for the purpose of containing water in the park when water levels are higher. These engineered flood defences greatly reduce risk of flooding to properties in the surrounding area. Both are connected to Netherly Brook

- Sink way area. Sunken area in the park approximately 1,250m², designed to hold excess water
- Water easement area. Goddard Green park was designed and implemented around 2016, then later improved further in 2022, with details shown in the appendix

Details and photos of these can be seen in the appendix

3. Sources of Flood Risk (Source: gov.co.uk)

3.1 Fluvial Flooding (Rivers)

Yearly chance of flooding: Medium

The nearby park features engineered flood defences, which reduces flood risk to surrounding properties when river water levels are high

3.2 Pluvial Flooding (Surface Water)

Yearly chance of flooding: Low

The nearby park features a lower floor level and acts as water level easement, containing water to the park when water levels are higher

3.3 Groundwater Flooding

Flooding from groundwater is unlikely in this area

3.4 Predicted flood level

According to the Environment Agency data, the predicted flood level for the 1 in 100 year event plus 44% climate change at this site is **9.03** meters above Ordnance Datum (AOD). The table of data can be found in the supporting data (*GMMC387813LB Table.pdf* & *GMMC387813LB Table.pdf*)

4. Mitigation Measures

- **Finished Floor Levels (FFL):** The converted floor will be raised a further 150mm above the existing garage floor level, to match the level of the rest of the property. The current ground level at the property is **9.298** meters AOD, therefore the new raised floor will be at **9.448** meters AOD (**418mm** higher than the predicted flood level for the 1 in 100 year event plus 44% climate change)

The flood model data can be seen in the appendix section and the supporting documents

- **Flood-Resilient Construction:** The existing garage door and aperture will be replaced by brickwork and damp proof membrane and sealed PVC window.

Raised air bricks will be fitted, in line with existing. Raised electrical outlets will be fitted in line with existing outlets in the property

- **Drainage:** Existing drainage systems in place (rainwater and surface drainage) shall be retained in their current position and are suitable and sufficient for the proposed building changes. Drainage is shown in the photo below



5. Conclusion

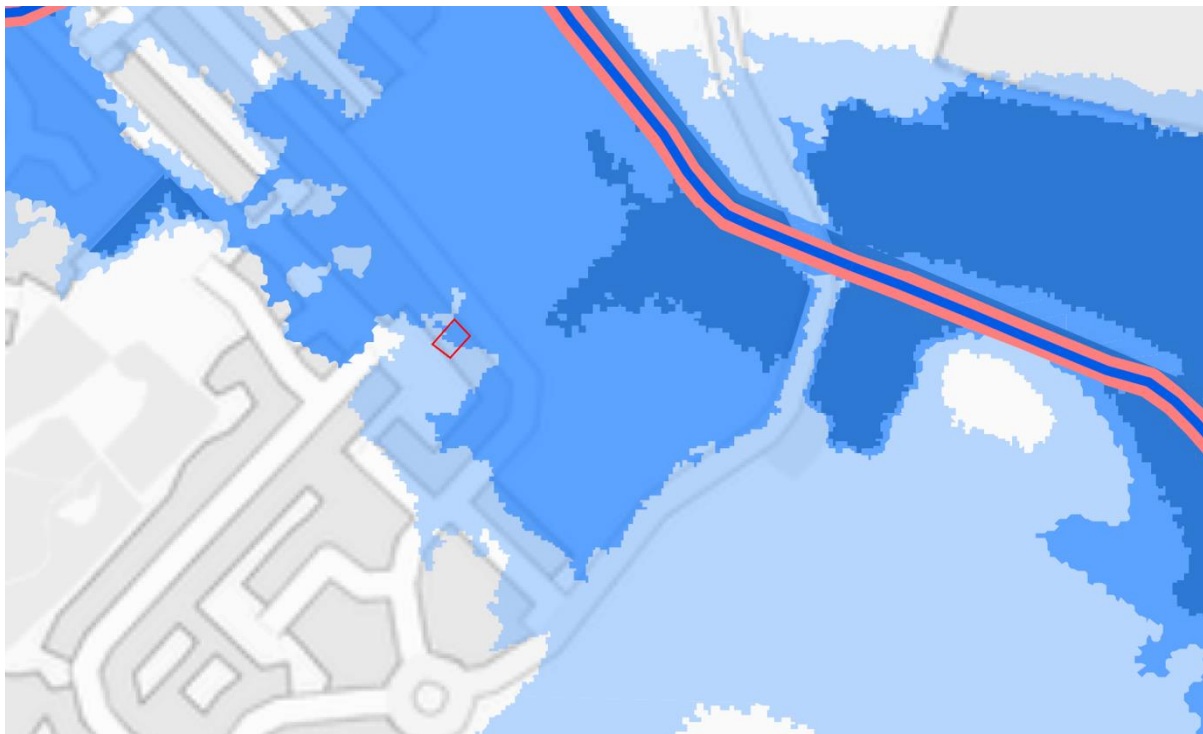
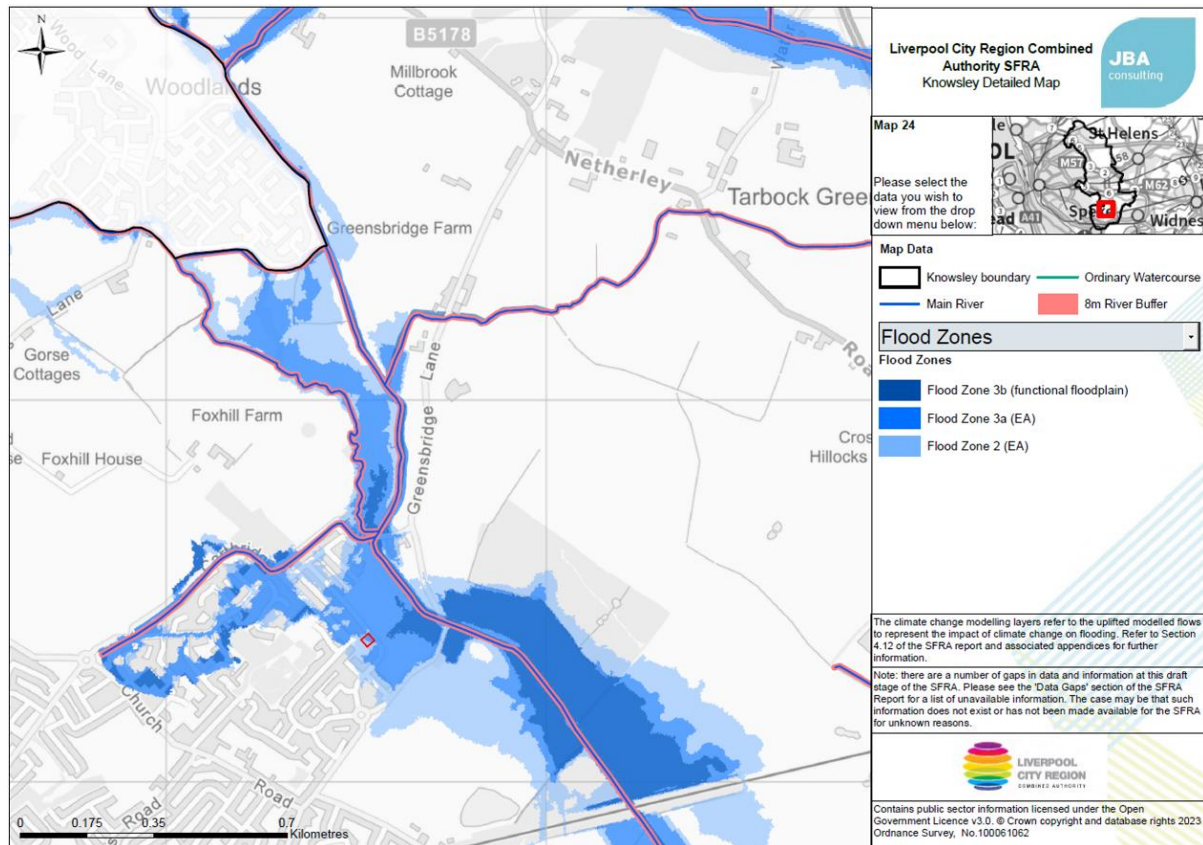
This Flood Risk Assessment has demonstrated that the proposed garage conversion at 25 Lightoaks Drive complies with flood risk management requirements.

- The **finished floor level (FFL)** will be raised to **9.448 m AODN**, which is **418 mm above the predicted flood level of 9.03 m AODN**, exceeding the required 300 mm freeboard.
- Flood-resilient measures, including sealed brickwork, a damp-proof membrane, raised air bricks, and elevated electrical outlets, will mitigate flood risks effectively.
- Existing drainage systems remain adequate, and nearby flood mitigation features in Goddard Green Park provide additional protection.

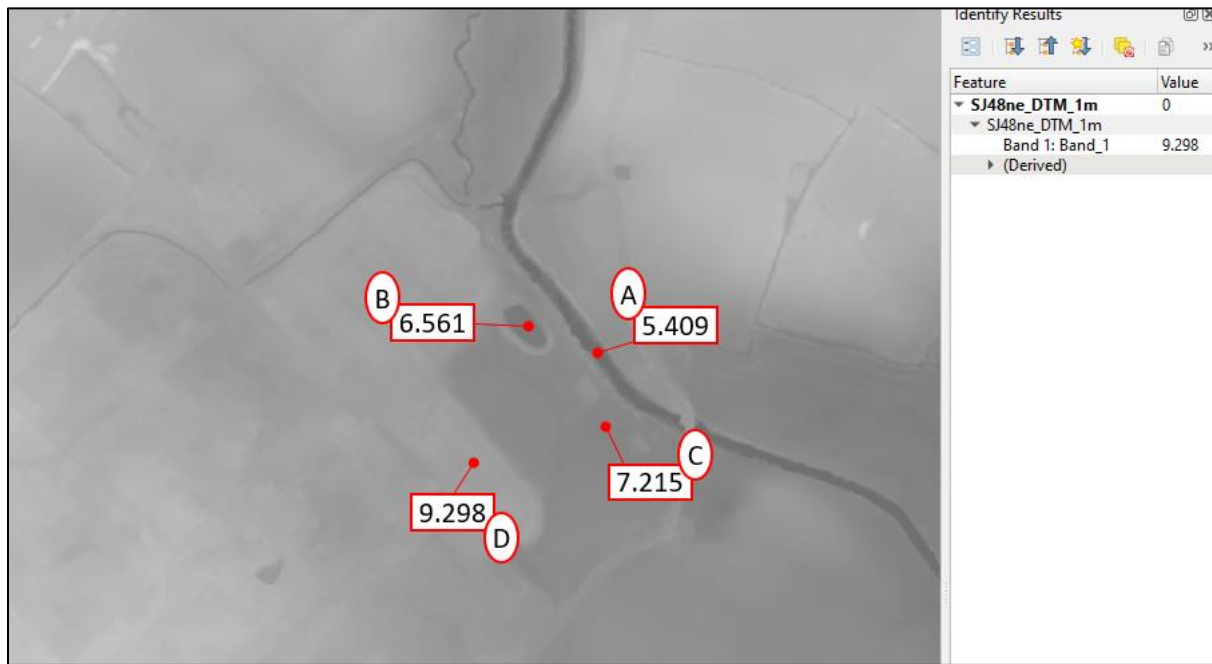
The development will be safe for its lifetime, will not increase flood risks elsewhere, and complies with **National Planning Policy Framework (NPPF)** guidance.

6. APPENDIX

6.1. Grid Tile Knowsley Boundary Main River Flood Zone 3



6.1. LiDAR (Light Detection and Ranging) data



A: Netherly Brook

B: Goddard Green sink way

C: Goddard Green water easement

D: 25 Lightoaks Drive

6.2. Water Easement area in park

Further water easement work that was carried out 2022. Digging a further 0.5m down in the area shown below:



6.3. Supporting area photos – Taken January 2025

A: Sink way

B: Water easement area





