

Flood Risk Assessment (FRA)

Site Address: 2 Halmer Gardens, Spalding, Lincolnshire, PE11 2EF

Flood Zone: Zone 3 (High Probability)

Local Planning Authority: South Holland District Council

Lead Local Flood Authority (LLFA): Lincolnshire County Council

Environment Agency Reference: EA Flood Map for Planning

1. Site Description

- Current Use: Residential dwelling with garden and driveway
- Proposed Development: single-storey rear extension
- Topography: Flat terrain, approx. 3.5m AOD
- Surface Cover: Predominantly impermeable (roof, paving), with some soft landscaping

2. Sources of Flood Risk

Source	Risk Level	Notes
Fluvial (River Welland)	High	Within EA Flood Zone 3 – 1 in 100 or greater annual probability
Tidal	None	Not applicable inland
Surface Water	Medium	EA mapping shows potential ponding in rear garden
Groundwater	Low	No known issues in BGS data
Sewer	Low	No history of surcharge or flooding reported
Reservoir	Very Low	No mapped risk from reservoir breach

3. Flood Risk Data

- Design Flood Level (1% AEP + climate change): Approx. 4.3m AOD
- Existing Ground Level: ~3.5m AOD
- Flood Depth Estimate: Up to 0.8m in extreme event

4. Flood Mitigation Measures

- Finished Floor Levels: Raised to 4.5m AOD (200mm above design flood level)
- Flood Resilience:
 - Flood-resistant doors and airbrick covers
 - Electrical sockets raised >450mm above floor
 - Non-return valves on drainage
 - Water-resistant insulation and plasterboard
- Safe Access/Egress:
 - Dry route via Halmer Gardens to higher ground (subject to LPA confirmation)

- Flood Evacuation Plan to be provided to occupants

5. Supporting Documentation

- EA Flood Map for Planning
- Topographic Survey (if available)
- Site Layout Plan
- Proposed Floor Plans and Elevations

6. Conclusion

The proposed development at 2 Halmer Gardens lies within Flood Zone 3 and is therefore at high risk of fluvial flooding. However, with the implementation of the mitigation measures outlined above, the development can be made safe for its lifetime without increasing flood risk elsewhere.