

FLOOD RISK ASSESSMENT

TO ACCOMPANY AN APPLICATION FOR

OUTLINE PLANNING PERMISSION FOR ONE DETACHED
DWELLING

AT

WESLEY HOUSE,
3 COMMONSIDE
CROWLE
NORTH LINCOLNSHIRE
DN17 4EX

BY

MR & MRS I. FLETCHER

DATE PREPARED: JULY 2014

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*FRA produced only for use by the above applicant in
connection with outline planning application July 2014.*

Current planning policy (PPS 25) requires that an assessment of flood risk (specific to the application site) is undertaken and that it be demonstrated that consideration has been given to:

- a) potential flood risk to the proposed property and its occupants
- b) potential increased flood risk to others as a result of the development.

Information has been obtained from North Lincolnshire's Strategic Flood Risk Assessment with potential flood risk, levels and mitigation measures contained therein being used and adopted in this assessment.

THE AREA:

Crowle lies within an area defined by the SFRA as the Trent Valley. Potential water levels in the event of flooding and accounting for climate change are given as 4.1 AOD.

Much of the surrounding area was originally marshland, being reclaimed in the 16th and 17th centuries and water levels in the area are kept low by a system of drains and rivers maintained by either an I.D.B. or the E.A. and ultimately discharging to the Trent either by pump or gravity.

While some areas of the Isle of Axholme are located on high spots, there are large areas between the Trent and Crowle which are below 2.0 m AOD and it is these low-lying areas which would help by holding vast quantities of flood water in the event of a serious breach or overtopping of the Trent's defences.

POTENTIAL SOURCES OF FLOODING:

These would be the Trent as mentioned above (approximately 4 miles to the east of Crowle), Stainforth and Keadby Canal, Warping Drain, the two Soak Drains and other minor drains and ditches which are maintained by IDB's and discharge by pumped system to the Trent.

Water levels of all nearby watercourses are ultimately controlled by the pumped system and the level of the Trent. The Trent has excellent maintained flood defences providing a standard of tidal protection better than 0.5% annual probability while its fluvial defences are designed to provide a standard of 1.0% annual probability against fluvial events.

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THE APPLICATION & SITE:

The application seeks approval for a single detached two-storey dwelling on land adjacent to the applicants' home. The site lies between existing properties and can be considered an infill plot.

Information taken from Ordnance Survey data shows the site as being approximately 2.4 m AOD.

Though the site has no recent history of flooding, North Lincs. SFRA places it within Flood Zone 2/3(a) - medium to high probability of flooding. As the application is for non-major development (more vulnerable use), the Environment Agency will be consulted.

The site has no known existing drainage problems.

SEQUENTIAL & EXCEPTIONS TESTS:

Following guidance contained within the National Planning Policy Framework, Table 3 shows the development (classified as 'more vulnerable') to be acceptable if taking place within Flood Zone 2. Subject to satisfying the Exceptions Test, it would also be acceptable within Flood Zone 3a.

Considering the possibility of steering the development to a more suitable site outside flood zones 2/3 (within Flood Zone 1), enquiries revealed that only one alternative individual plot was being marketed in Crowle, the dimensions and location of which are unsuitable for the applicants' purposes.

Development of the plot would benefit the local community both during construction by providing employment for local tradesmen and suppliers and on completion by providing a quality new family home on a well proportioned plot.

MITIGATION MEASURES:

Guidance available from the SFRA suggests a number of options to be considered when providing protection from flooding. In addition to seeking opportunities to reduce the overall level of flood risk through the layout and form of the development, the following are proposed:

1. As ground floor levels cannot realistically be raised clear of critical flood levels, occupants will be able to seek refuge upstairs in the event of a flood. First floor levels will be at least 4.3m AOD and maximum use of the ground floor will be used for non-habitable areas such as kitchen, utility room etc.
2. Flood resistant construction techniques will be used for all parts of the building below critical flood levels:

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- a). waterproof materials for walls and floors below flood level (no timber).
- b). one-way valves or temporary bungs to sewage pipes and service ducts.
- c). the provision of temporary flood boards (stop logs) for all points of entry
- d). boiler to be located above flood levels
- e). walls sand/cement rendered internally
- f). split electrical circuits to allow safe isolation of ground floor outlets.

3. In addition to ensuring the building is appropriately flood resistant and resilient, the occupiers will subscribe to any early flood warning system in place.

Any further mitigation measures put forward following the LPA's consultation with the Environment Agency will be implemented.

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