

FLOOD RISK ASSESSMENT

To accompany a planning application for:

REPLACEMENT BUNGALOW
at
GREEN ACRES, MAIN STREET,
EALAND DN17 4JG

for

Mr R Sayles

DATE PREPARED: OCTOBER 2019
(Revised November 2019)

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FRA produced only for use by the above applicant in connection with planning application October 2019

Current planning policy 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 previously been obtained from North Lincolnshire's Strategic Flood Risk Assessment and from the Environment Agency with potential flood risk, levels and mitigation measures being considered when preparing this assessment.

GENERAL:

Full Planning Permission is being sought for the demolition of the existing property and the construction of a modern replacement bungalow.

THE AREA:

Ealand lies within an area defined by the SFRA as the Trent Valley. Much of the surrounding area was originally marshland, being reclaimed in the the 16th and 17th centuries and water levels in the area are kept low by a system of drains and rivers maintained either by and Internal Drainage Board or the Environment Agency which ultimately discharge into 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 Ealand which are below 2.0m 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 over-topping of the Trent's defences.

POTENTIAL SOURCES OF FLOODING:

These would be the Trent as mentioned above) approximately 4 miles to the east of Ealand), Stainforth and Keadby Canal, Warming Drain, the two soak drains and other minor drains and ditches which are maintained by IDB's and discharge 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.

THE SITE:

Information taken from Ordnance Survey data shows the area as being approximately 3.2m 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. As the application is for non-major development (more vulnerable use), the Environment Agency will be consulted.

The site has no known drainage issues.

SEQUENTIAL & EXCEPTIONS TESTS:

As the application is seeking approval to replace an existing dwelling, it is not proposed to detail how the application would meet the requirements of these tests.

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 caused by the development, the following are proposed:

1. Ground floor levels to be set at 525mm above existing ground levels (3.725m AOD).
2. All constructional elements below 4.4m AOD to be flood resilient (concrete floors, brick and block walls).
3. A drop-down ladder to be fitted giving access to a boarded area providing refuge within the roof space of the property (min. 6.2m AOD). A separate lighting & power supply to be provided within the refuge area which can be isolated from the ground floor circuits.
4. All surface water run-off to discharge to soakaways within the site.
5. An emergency evacuation procedure for times of flood will be prepared and retained by the occupiers of the property. In addition, the occupiers of the property will sign up to the Environment Agency Flood Line Warnings Direct and will call the Flood Line on 0845 988 1188 to facilitate evacuation in the event of an extreme flood.
6. Any further mitigation measures put forward following the LPA's consultation with the Environment Agency will be implemented.

SUMMARY:

As this is a replacement dwelling, no additional risk to life from flooding is being introduced to the site and the above measures provide significant betterment in flood risk terms over the current situation. The raised floor level is seen as a reasonable compromise between providing improved flood protection and external appearance and when combined with the additional measures proposed, provides greatly improved protection over that of the current dwelling.

Existing vehicular access/driveways are to be retained therefore no additional discharge of surface water will be introduced to the site.