

FLOOD RISK ASSESSMENT

PROPOSED EXTENSION AND QUADRUPLE GARAGE

**The Gleanings
Martin South Drove
Martin Dales
LN10 6XP**

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INTRODUCTION

This Flood Risk Assessment has been prepared in support of an application for a single storey extension and erection of a quadruple garage with a first floor room over at The Gleanings, Martin South Drove, Martin Dales LN10 6XP.

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.

SITE DESCRIPTION

The site is in Flood Zone 3 as per Environment Agency's flood risk map and has a flood hazard rating 'danger for most' under North Kesteven District Council Strategic Flood Risk Assessment (SFRA) November 2009 (see fig.1 NKDC Flood Hazard Map 2010 below).

The Gleanings is located directly off Martin South Drove to the west of Woodhall Spa and west of the river Witham. The site is east of Car Dyke and has two drains nearby being Timberland Delph to the south and Dales Header Dyke to the east. The site lies within an area known as the Lower Witham Fens. (see fig.2)

Fig.1

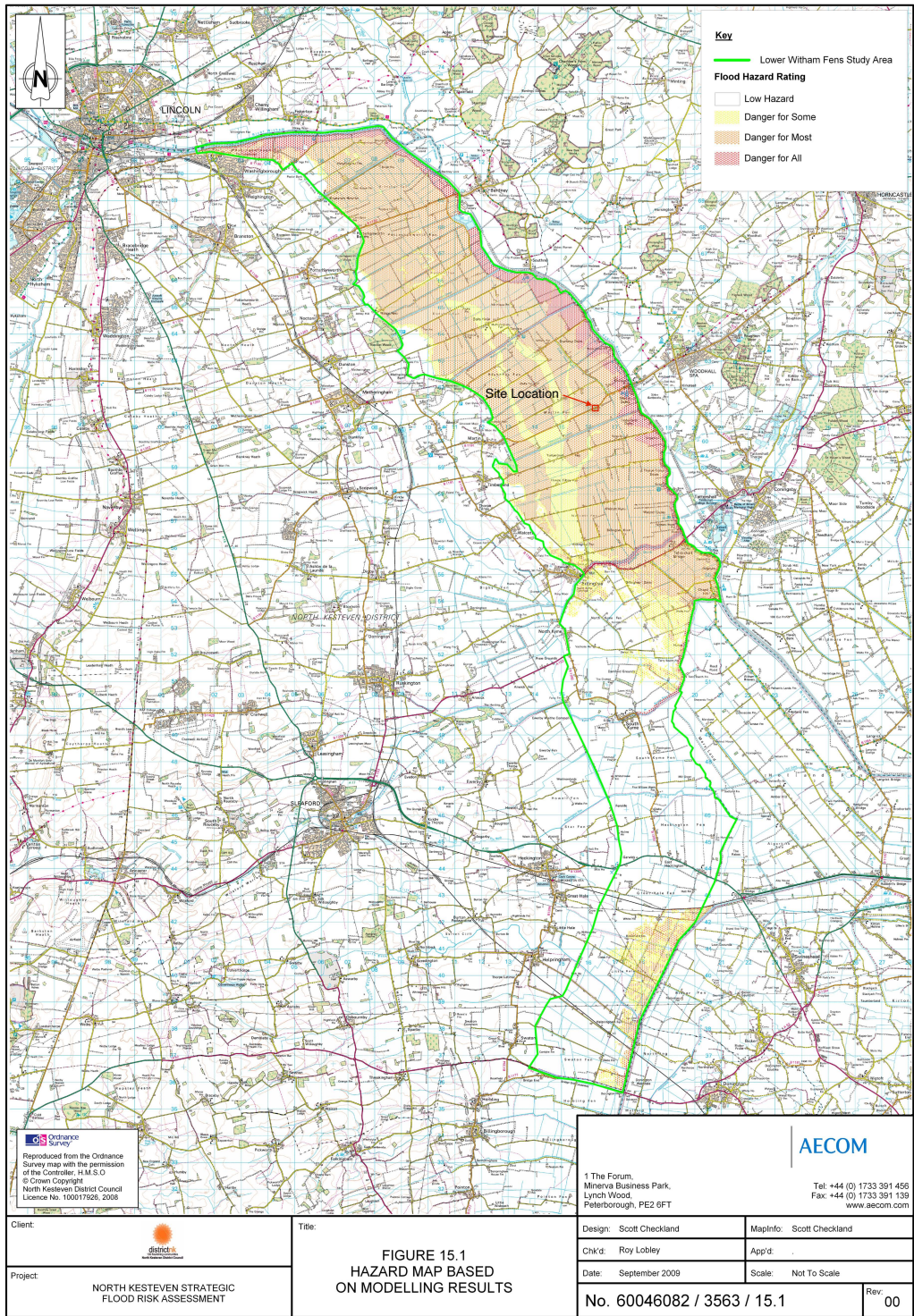
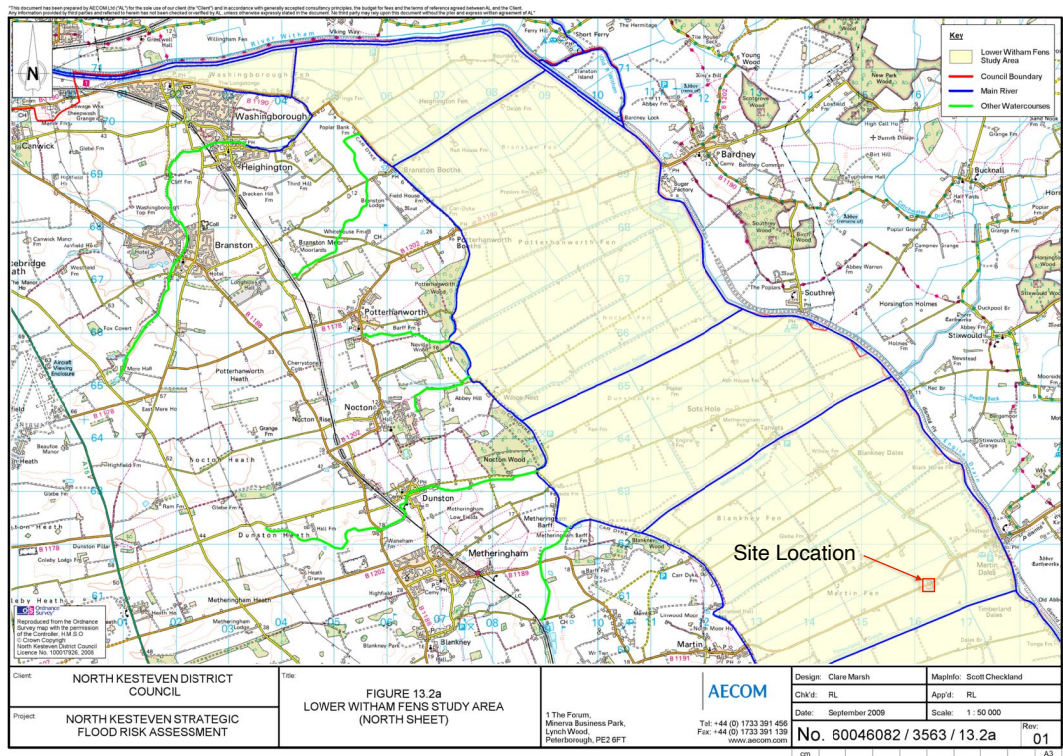


Fig.2



POLICY ASSESSMENT

The Planning Practice Guidance categorises different types of uses & development according to their vulnerability to flood risk. Buildings used for dwelling houses are categorised as 'more vulnerable' and they would constitute appropriate development if falls within Flood Zone 2 and subject to a site-specific flood risk assessment with Sequential and Exception Tests. This is the case for the proposed development hereby assessed.

The National Planning Policy Framework (2012) defines Zone 3 as High Probability 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.

The policy framework 2012 states that local planning authorities should apply the Sequential Test and Exception test when determining planning application.

SEQUENTIAL TEST

As per Paragraph 101 of NPPF, "the aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding" as long as "there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding"

The proposal is for a householder application and minor development being a residential house extension is less than 250 sq. metres therefore the sequential test does not apply.

EXCEPTION TEST

Paragraph 102 of NPPF states the Exception Test should also apply if it is not possible, following application of the Sequential Test, for the development to be located in zones with a lower probability of flooding. The aim of this test is to demonstrate that the proposal is consistent with wider sustainability objectives to such extent that outweigh flood risk.

The most significant potential source of flooding must be seen as the river Witham. The various other drains and ditches around the site are maintained by the Environment Agency and discharge by pumped system or gravity further down stream to the Witham where there are substantial flood defences.

Floodbank defences have been raised along the Lower Witham to improve the flood defence standard of the 1 in 10 year flood level everywhere along the river for approximately 30km of the river bank. In many places the defence standard exceeds this standard by a considerable margin.

Flooding of the site in question from fluvial sources whilst being the most likely source would be considered low probability due to the defences in place. Furthermore due to the vast expanse of sparsely populated fenland any flooding would likely be shallow anyhow. There is no memorable event or record of the site flooding previously.

Water levels of all nearby watercourses are ultimately controlled by the pumped system and the level of the Witham. The Witham has excellent maintained flood defences providing a standard of tidal protection and fluvial. A series of four high-level embanked channels (Delphs) run from

west to east across the Lower Witham fens connecting the Car Dyke with the Lower Witham which all serve to maintain the drainage of the fenland.

The proposal is for an extension to an existing residential property and it is not practical or reasonable to raise floor levels to 300mm above ground level but to maintain the existing floor level. For previous applications in North Kesteven where finished floor levels cannot be set above critical flood levels for practical reasons, an agreement has been reached between the applicant, Planning and the Environment Agency. This generally consists of the adoption of a reasonable finished floor level, the use of flood resilient building materials to clear potential flood levels and the occupants having an evacuation plan in place and/or being part of the Environment Agency's early warning scheme.

The proposal is under 250 sq. metres increase and is therefore a minor development. Surface water catchment from the additional roofs will be managed using designed soakaways within the site boundaries. The proposal will result in a sustainable development and not increase the flood risk to the site or locality.

Environmental

There is no severe and regular risk of flooding on this site even given the impacts of climate change. The development of the site will make efficient use of land within the curtilage of the main dwelling. The risk of surface water flooding whilst marginally increased for the site by the erection of an extension and garage will be of no consequence to the locality. The site will benefit from surface water will being managed by a designed new drainage scheme.

FLOOD RISK ASSESSMENT

The North Kesteven Strategic Flood Risk Assessment (SFRA) includes the site within Flood Zone 2/3a Fluvial and the flood risk is therefore fluvial in a 1 in 100 return period and tidal in a 1 in 200 return period with allowances for climate change.

The River Witham Catchment Flood Management Pland (CFMP) as cited in the NKDC SFRA item 4.69-4.71 **Policy Unit 8 – The Fens** recommends

adoption of **CFMP Policy 4 Take further action to sustain the current level of flood risk into the future.**

The National Grid Reference is TF 16519 61309, Easting 516273, Northing 361189.

Ordnance Survey data shows local ground level to be 3m ODN. A local Bench Mark Datum (cut mark) at National Grid References TF 1750 6245 1.7kn to the North East (2.993m ODN) is set at 0.5m above the ground.

No other potential sources of flood risk have been identified.

Surface water flood risk is negligible.

MITIGATION

The proposal is for a single storey extension overall footprint does not exceed 250 sq. metres being approximately 80 sq. metres. The proposal does not introduce significant new risk to flooding. The main directive for this planning application is to extend the current usage of the site within the curtilage of the main dwelling for purposes ancillary to the main dwelling.

It is not reasonable or necessary to raise floor levels to 300mm above ground level. The first floor room over the garage being proposed provides a significant betterment to the site. The proposed development will have the following resilient measures incorporated in the construction in accordance with "Improving the flood performance of new buildings" CLG (2007).

- Floor levels (extension) will be set 150mm above ground level to give a finished floor level to match existing.
- Arrange for all service circuits to be routed at high level, where practical socket outlets, boilers etc. to be a minimum of 0.5m above the raised ground floor level. Electrical circuits to be wired to allow isolation from remaining floors.
- Avoid use of absorbent cavity insulation to the ground floor level
- A non-return valve should be fitted to foul drain runs.
- The owner of the property will contact the Environment Agency's Floodline on 0845 988 1188 to register the property to receive

advance warning of flooding by telephone, mobile, fax, SMS text email or pager.

SUMMARY:

Depending on the severity of the flood and the timing of any warning received, the occupiers would have the choice of either seeking refuge upstairs in the new room created over the garage and awaiting rescue or vacating the property and taking refuge at a suitable safe location.

Floods are not 'all or nothing' events and as such would not automatically result in flood water levels at the worst case level. Protection of the occupants to a level that is equivalent to the existing dwelling should be seen as adequate in this case especially with the addition of first floor refuge space.

The risk of flooding from surface water is zero.

The surface water will be drained into a new soakaway to the rear of the property.