

Morton & Hall Consulting Limited

Consulting Structural Engineers & Building Design

Email: info@mortonandhall.co.uk Website: www.mortonandhall.co.uk

Your ref:

Our ref: H9384/MH/mh

Date: 15 January 2024

PRELIMINARY FLOOD RISK ASSESSMENT
FOR PROPOSED RESIDENTIAL DEVELOPMENT,

115B WEST END, MARCH,

CAMBS, PE15 8DH

1 Gordon Avenue
March
Cambridgeshire
PE15 8AJ

Tel: 01354 655454

1.0 INTRODUCTION

It is proposed to submit an Outline Planning Application to Fenland District Council for the demolition of the existing dwelling at the above site and replace this with further residential development as shown on the design drawings.

A further proposal is to widen out West End along this section to create community benefit for the benefit of pedestrians and limited vehicular access.

2.0 FLOOD MAP

On reviewing the Environment Agencies Flood Map this shows the site to be located in Flood Zone 3, Flood Zone 2 and Flood Zone 1.

All of the southern rear section of the site is located within Flood Zone 3, adjacent the River Nene.

The Flood Zone 3 area on the Environment Agencies Flood Map is in an area of high probability of Flooding.

3.0 ENVIRONMENT AGENCY LONG TERM FLOOD RISK MAP

The Environment Agencies long term flood risk map showed that this site is within a medium risk of flooding from flooding from rivers and seas between 1-3.3% annually.

There is no flooding shown over the site on the flood map from reservoirs.

On further reviewing the Environment Agency Flood Map there is no extent of flooding shown from surface water.

4.0 LOCATION OF SITE

The site is located approximately 5.9km from Whittlesey Washes and 11.9 km from Ouse Washes.

The site is in the Middle Level Drainage Catchment Area.

V.A.T 876 0014 34
Reg: 5525923

The site is within the highland catchment area of March West and White Fen Internal Drainage Board, which is the internal drainage board for this district.

Surface water from the site would generally discharge into the internal drainage board main drain.

There are numerous drains/ditches in the area of March West.

The rear of the site to the south abutts the River Nene, which would eventually flow to St Germans Pumping Station and to the tidal river of The Great Ouse.

These drainage networks are generally the responsibility of the Middle Level Commissioners.

5.0 PROBABILITY OF FLOODING

The internal drainage board have a maintenance standard which allows the probability of any blockages to be classed as low due to regular maintenance.

Generally, the March West and White Fen Internal Drainage Board is assessed at 1 in 50 chance of potential flooding each year.

The Middle Level Commissioners generally have a 0.9m approximate free board above the maximum designed water level.

The rear of this site where the River Nene runs parallel is approximately 3.5m below the level of the proposed floor levels to this dwelling following taking levels on site.

This does allow some mitigation against the possibility of flooding/over topping of the River Nene.

The River Nene is maintained by the Middle Level Commissioners.

There is not known recorded evidence of this site flooding from the river or internal drainage board system.

When considering climate change, the Middle Level Commissioners water courses generally allow for 1 in 100 probability of flooding each year, which includes allowance for climate change.

6.0 MITIGATION MEASURES

The proposed floor levels of the dwellings are to be set 0.3m above the existing ground level, which provides further mitigation against localised flooding and would be above the level of majority of the dwellings along this side of West End.

On taking levels at the site, this indicates that the dwelling floor level would be approximately 3.5m above the level of the River Nene.

There is already a foul drainage network down West End, which would be connected on to.

The proposed dwellings would also have further flood resilience construction to 0.3m above floor level in accordance with the Environment Agencies Guidelines.

7.0 RECOMMENDATIONS/CONCLUSIONS

1. The proposed floor level of the dwellings would be set 0.3m above the existing ground levels to allow for additional protection against localised flooding.
2. Flood resilient measures would be incorporated into each dwelling to a further 0.3m above the proposed floor levels.
3. The proposed finished floor level of the dwelling would still be approximately 3.5m above the level of the River Nene, as recorded at the time of the site visit.
4. The proposed dwellings would be set on a piled foundation, due to ground conditions, the proximity of the River Nene and the embankment.
5. There would be a requirement to seek approval from the Middle Level Commissioners for works within the 9m bi law strip.
6. Once detailed design drawings have been prepared a full Topographical Survey should be carried out and a final flood risk assessment prepared giving exact levels for floor height, flood resilient heights and it can then all be confirmed.
7. Limitations. These recommendations are based on the findings of our site investigation. We point out that other conditions may exist elsewhere on the site of which we have no knowledge and accept no responsibility. The site has not been tested for contamination. The final foundation design will be dictated by the proposed type of superstructure and performance specification of the building.