

FLOOD RISK ASSESSMENT

Proposed Outline submission for Outline Application - Erection of 4 no. commercial units

Brome Grange Hotel, Norwich Road, Brome, IP23 8AP

FINAL REPORT

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1.0 Introduction

TAB architecture on behalf of Brian Keane has submitted a planning application for Proposed Outline submission for Brome Grange Hotel consisting of; New 4 no. commercial units (B2) and 3 no. residential dwellings.

'The aims of planning policy on development and flood risk are to ensure that flood risk is taking into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in these areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, reducing flood risk overall'.

Strategic Flood Risk Assessment (SFRA) report was published by Mid Suffolk Council in March 2008. It provides further local guidance in respect of flood risk. This FRA has been prepared with reference to the SFRA.

2.0 Location/Site

The site is located on A140 and is approximately 10698m². The surrounding area and context are made up of a combination of countryside and small clusters of residential dwellings surrounding Brome Triangle.

Brome village is situated approximately 3.5 miles to the south of Diss. The A140 runs through the middle of Brome with roads branching off to small clusters of residential developments.

The site is currently occupied by a hotel with associated facilities. The residential properties will be provided with a new access from the A140 and the existing vehicle access for the hotel is to be retained and improved, providing access for the industrial units.

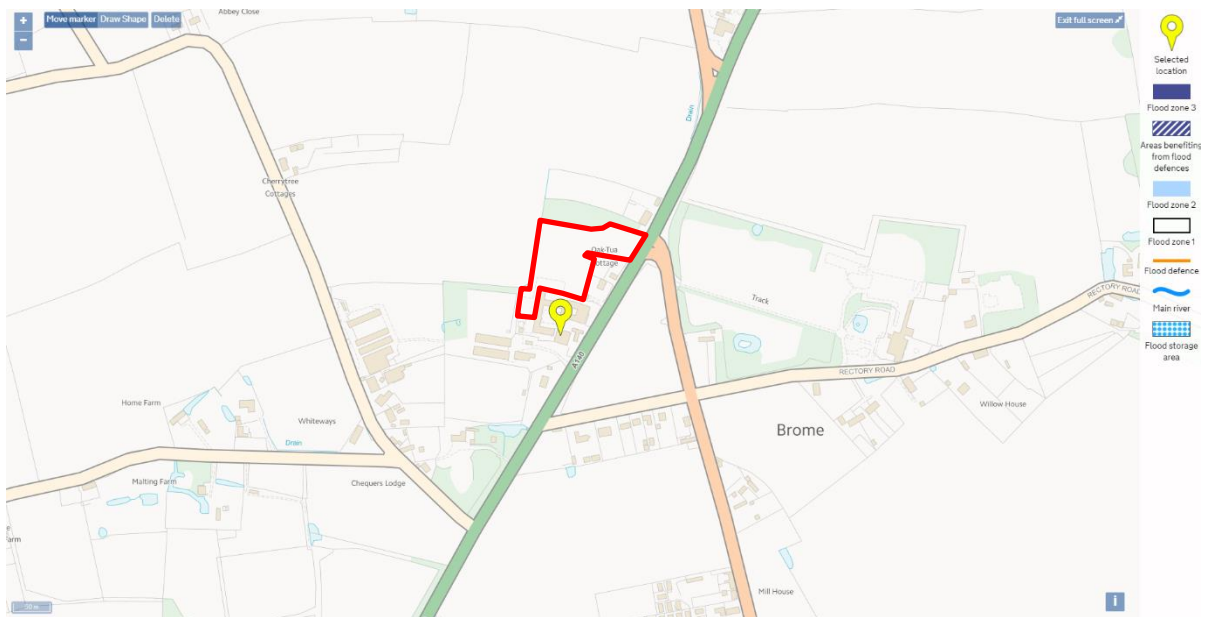
Public foul and surface water sewers are available within site to be connected into the mains drainage via Brome Grange. As a minimum, each public sewer will be protected by a 6m wide easement, therefore preventing building and restricting planting within 3m. Should it not be possible to accommodate the sewers within the proposed development layout, then they may require diversion under Section 185 of the Water Industry Act 1991, subject to the approval.

A topographical survey of the existing site has not been carried out yet, however one will be provided subject to outline planning approval.

3.0 Flood Risk

An extract of the Environment Agency's online flood mapping is shown in Figure 1 below. The dark blue areas represent Flood Zone 3, land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. The light blue areas represent Flood Zone 2, land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% - 0.1%) in any year. All remaining areas are classified as Flood Zone 1, land assessed as having a less than 1 in 1000 annual probability of river or sea flooding (<0.1%) in any year.

The application site boundary has been added to the flood mapping extract, below (outlined in red).



As you can see, the site lies outside the flood risk areas and therefore, not at risk of flooding up to the 1 in 100-year event.

Specific modelled flood data has therefore not been sourced from the Environment Agency.

We are not aware of any evidence to suggest that the site has historically been subject to flooding from river or sea.

We are not aware of any flooding problems associated with the existing public sewer network within the site or surrounding area.

There are no artificial sources of flooding identified within the vicinity that pose a flood risk to the site.

Surface Water Drainage

In accordance with PPS25, a surface water drainage strategy will be required that does not increase discharge levels and therefore does not increase the risk of flooding to other areas. Furthermore, the surface water drainage strategy should actively seek to reduce positive discharge levels via the use of SUDS (Sustainable Urban Drainage Systems) wherever possible.

The run-off rate associated with the application site suggests that infiltration SUDS techniques may be suitable to serve the proposed development. However, In the absence of any soil infiltration rates it is not possible to confirm their viability. At this stage, an industrial rainwater harvesting system would be suggested for the industrial units and Polystorm creates for the residential development.

Assessment of Flood Impact

As the proposed dwellings and industrial units will not be located within Flood Zone 2 or 3, there will be no increase in the risk of flooding to other areas via the displacement of floodwater. We are not aware of any evidence to suggest the site has been subject to fluvial/tidal flooding.

Groundwater

We are not aware of any records or anecdotal evidence to suggest that the site has been subject to groundwater flooding. The risk of groundwater flooding to the proposed dwelling is therefore considered to be low.

Overland Flows

We are not aware of any records or anecdotal evidence to suggest that the site has been subject to flooding from overland flows. The risk of overland flooding to the proposed dwelling is therefore considered to be low.

Existing Sewers

We are not aware of any records or anecdotal evidence to suggest that the site has been subject to flooding resulting from deficiencies with the existing public sewer network. The risk of flooding to the proposed dwellings/hotel from this source is therefore considered to be low.

There are no other artificial sources of flooding identified within the vicinity that pose a flood risk to the site. The risk of flooding to the proposed dwelling from this source is therefore considered to be low.

4.0 The Proposal

It is proposed to develop the site north of the hotel for four industrial units and three residential dwellings with access, where there is currently open grassland. The proposal will utilise permeable materials and utilise soft landscaping to maintain suitable permeability.

All proposed foul waste will be connected to existing drainage on site. All surface water from the roof shall be piped direct to an approved surface water system using sealed downpipes. Subject to soil infiltration testing, surface water drainage is suggested as follows:

- i) Rain water harvesting system to be installed for each industrial unit. Underground water tank size to be determined by manufacturer/designer. Tank to have one-way overflow system to prevent back flow of dirty water, all gutter to be sufficiently guarded from foliage and debris, downpipes to be fitted with high quality's filters. All systems should automatically substitute mains water when rainwater runs low. Full specification and design to be done by others subject to approval.
- ii) For the residential units, Polystorm crates to be dug into ground and lined with geotextile membrane top of create to be below the incoming storm invert, back filled to level for the residential dwellings. Size of crates required is subject to a percolation test. The crates are to be 5m min. distance from buildings following from a percolation test.

5.0 Conclusion

Based on the information available, including that contained within the SFRA, the overall risk of flooding to the proposed development and other areas from all sources is considered to be low.

Foul water drainage provision from the proposed industrial and residential development will be via mains drainage. Surface water drainage is to be via 'grey water' storage creates (residential) and a rainwater harvesting system(industrial).

We have identified that the proposed site fall outside any major flood risk boundaries and given that the information provided shows a low risk of flooding, we would be very grateful if this application can be supported.