

FLOOD RISK ASSESSMENT

Proposed 2 no. dwellings

West End, Hogsthorpe



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DOCUMENT HISTORY

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1 INTRODUCTION

- 1.1 This Flood Risk Assessment (FRA) accompanies a planning application for the redevelopment of a commercial/brownfield site on West End (Hogsthorpe) to provide 2 no. detached dwellings.
- 1.2 The objective of this FRA is to identify, appraise, manage, and reduce the flood risk to life and property at the proposed site and has been produced in accordance with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance.

2 THE SITE & SURROUNDINGS

- 2.1 The site is located on the northern side of West End (A52 Skegness to Mablethorpe road), on the western side of Hogsthorpe (Figures 1 & 2). It is within the 30mph speed limit and there is an illuminated roadside path the entire frontage leading into and throughout the village. The ELDC Local Plan categorises Hogsthorpe as a 'Large Village' due to its wide range of facilities including a primary school, village hall, public houses, shop, playing fields etc.
- 2.2 The site currently comprises of a prefabricated building which is used as a performing arts studio (Figure 3). The remaining land is largely finished in road planings and used as a car park. A shipping container and earth mound are located to the rear/north.
- 2.2 The field immediately to east of the site is allocated in the Local Plan for residential development and currently benefits from outline planning permission for the erection of up to 89 no. dwellings under application reference N/084/00809/19. The permission was granted in September 2019 and a subsequent reserved matters application was submitted in September 2022. The submitted layout for this undetermined application is included at Figure 4. The land immediately to the west is an unused grass paddock which was granted outline planning in 2016 for the erection of 2 no. blocks of 4 no. storage/industrial units. Although it is understood this permission has expired, it is still a material consideration and copy of the approved plan is included at Figure 5. Dwellings are located on the adjacent/southern side of West End. There are further dwellings and caravan sites to the northwest on Bracken Lane. The main body of the village is to the east.
- 2.4 The site is within the 'Coastal Zone' defined by the East Lindsey District Council (ELDC) 2018 Local Plan. It is also just within the Lincolnshire Coastal Country Park. The Flood Map for Planning shows that the site is in Flood Zone 3 (Figure 5). The detailed hazard maps provided by the Environment Agency show that the site could be affected by a breach in the tidal defences during a present day or future event (see Section 4).



Figure 1: The location and extent of the site in relation to Hogsthorpe.



Figure 2: The site viewed from West End looking to the northeast.



Figure 3: The proposed site layout for the neighbouring residential development granted outline permission, with reserved matters currently under consideration (proposed site outlined red).

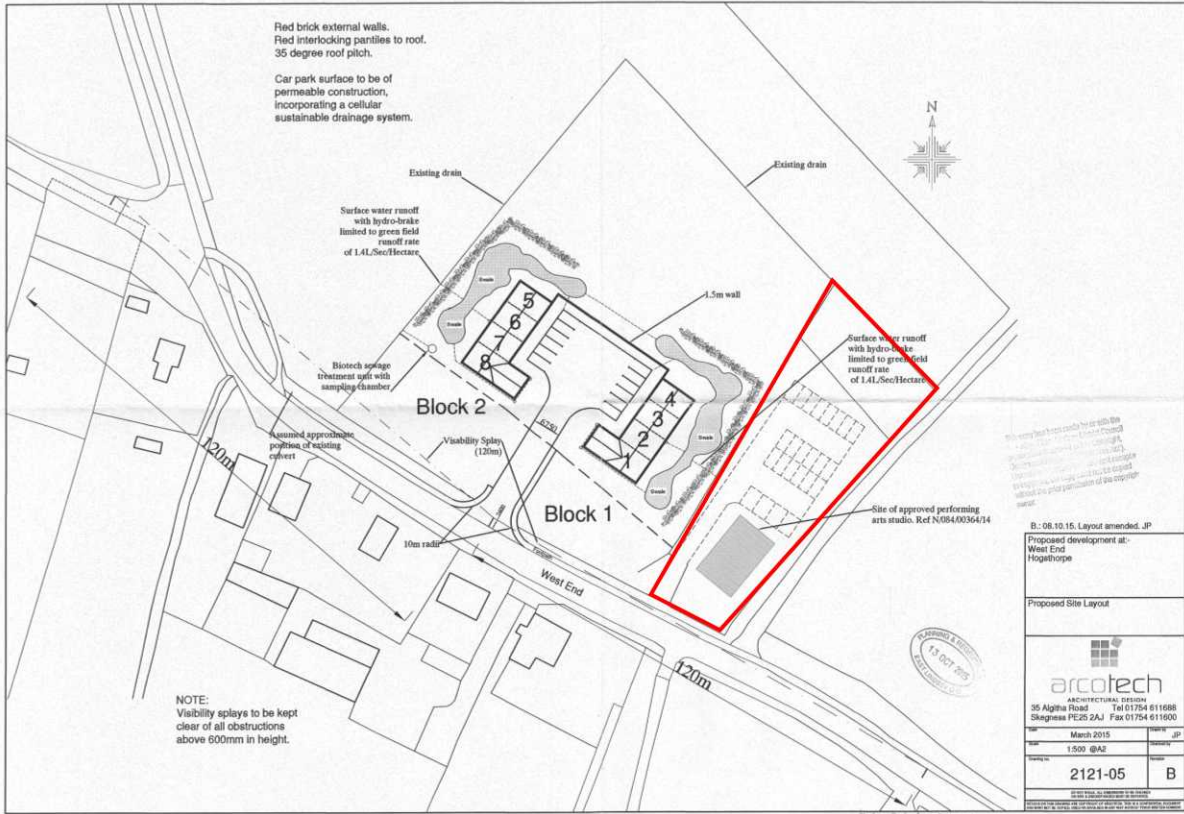
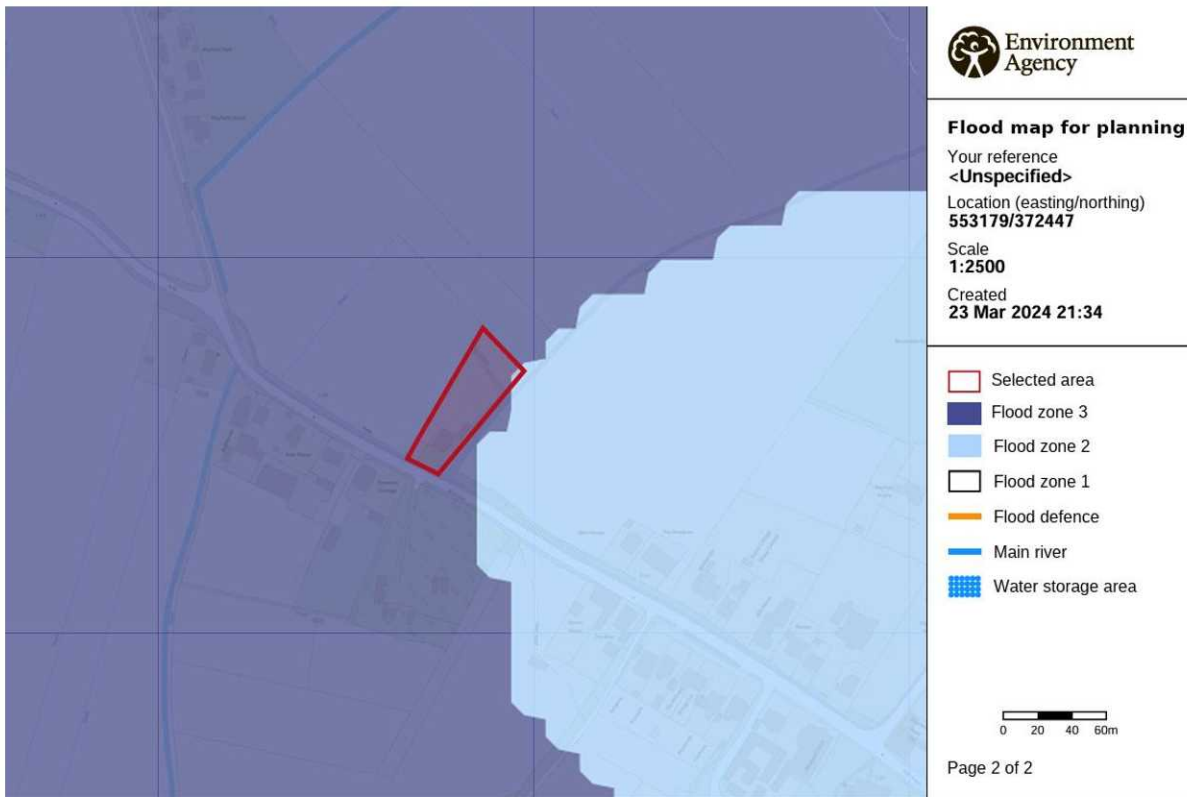


Figure 4: Permission for industrial units previously granted on the land to the west (proposed site outlined red).



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Figure 5: Environment Agency flood map with the site outlined red.

- 2.5 Average ground levels within the site are approximately 2.50mODN. This is comparable to the southwestern corner of the adjoining field (the approved residential site) where it is shown to be within Flood Zone 2 and outside of the area affected by the detailed hazard maps.

3 THE PROPOSAL

- 3.1 The proposal is to redevelop the site to provide 2 no. detached dwellings. The first dwelling will be located towards the front of the site in a similar location to the existing prefabricated building and will face West End. This dwelling will be two storeys in height and will have four first floor bedrooms. The existing access off West End will be utilised and a drive will run alongside the western boundary, leading to the second dwelling towards the rear of the site. This will also be two storeys in height and have four first floor bedrooms. This property will have a detached garage with storage space above. The dwellings will be traditional in appearance and will be raised to mitigate against any potential risk from flooding.

4 FLOOD RISK PLANNING POLICY

- 4.1 The National Planning Policy Framework (NPPF) sets out the Governments national policies on different aspects of land use planning and in relation to flood risk. The NPPF is also supported by web-based Planning Practice Guidance (PPG)
- 4.2 The PPG uses Flood Zones to characterise flood risk, and these refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency’s Flood Map and are as indicated in the Table 1 (page 6). As previously seen in Figure 5, the application site is located within Flood Zone 3a.

TABLE 1: FLOOD ZONES

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as ‘clear’ on the Flood Map – all land outside Zones 2 & 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a 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. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency.

4.3 The NPPF requires the application of a Sequential Test to steer new development to areas with the lowest probability of flooding. The Flood Zones provide the basis for applying the test. The aim is to steer new development to Flood Zone 1 (areas with a low probability of river or sea flooding). Where there are no reasonably available sites in Flood Zone 1, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses (as shown in Table 2) and consider reasonably available sites in Flood Zone 2 (medium probability of river or sea flooding), applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zones 1 or 2 should the suitability of sites in Flood Zone 3 (high probability of river or sea flooding) be considered, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

TABLE 2: FLOOD RISK VULNERABILITY CLASSIFICATION	
Essential infrastructure	<ul style="list-style-type: none"> • Transport infrastructure • Essential utility infrastructure • Wind turbines.
Highly vulnerable	<ul style="list-style-type: none"> • Emergency Service which are required in times of flood • Basement Dwellings • Mobile Home parks • Installations requiring hazardous substances consent
More vulnerable	<ul style="list-style-type: none"> • Hospitals • Residential institutions (i.e., care homes, hostels, prisons) • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs, and hotels • Non-residential uses for health services, nurseries and educational establishments • Landfill and hazardous waste management facilities • Site used for holiday short-let caravans and camping
Less vulnerable	<ul style="list-style-type: none"> • Emergency services which are not required to be operational during flooding • Buildings used for commercial establishments (i.e., shops, restaurants) • Land and buildings used for agriculture and forestry

4.4 As the proposed scheme involves the redevelopment of a brownfield site immediately adjacent the developed footprint of Hogsthorpe (taking into account the large adjoining allocated site which has planning permission for 89 no. dwellings) it is considered that a sequential study of alternative sites should only be carried out within the village itself.

4.5 The site is located in Flood Zone 3 and there is an area immediately to the east which is in the risk Flood Zone 2. However, as previously discussed, this area has already been allocated for housing and benefits from outline permission. Given that the only remaining area land within Zone 2 is protected for sport and recreation it is considered that there are no remaining sites available for development within a lower risk area than Zone 3.

- 4.6 Considering undeveloped land, particularly greenfield sites, in Zone 3 is inappropriate in this case as the redevelopment of brownfield or previously developed land should be considered first. As such, utilising this brownfield site in Zone 3 is sequentially the best use of land.
- 4.7 It is also a material consideration that the existing building would be suitable for conversion under Class MA of the Town and Country Planning General Permitted Development Order. This allows the conversion of buildings falling within Use Class E to dwellings subject to certain conditions and limitations, which from the 5th March 2024 no longer includes a limit to the floor space that can be converted and there is no requirement for the building to be vacant for 3 months. Activities such as a dance studio under indoor sports and recreation and therefore Use Class E as opposed to a dance hall which is a more formal setting in sui generis. Whilst a full assessment of the conditions has not been carried out, it is considered that the existing building could realistically be converted into two dwellings using this permitted development right. As such the site could be put into residential use without the need for planning permission, although prior approval is still required. The fact that the existing building could be converted to 2 no. dwellings under Class MA further strengthens why it is not essential to search for alternative sites for the two new dwellings being proposed.
- 4.8 Although the 2018 Local Plan predates the more up to date Class MA, it is still important to note that it does provide support for housing on brownfield sites within the flood zone. In this case, Hogsthorpe is not listed as a settlement within 'Coastal East Lindsey' and is therefore covered by Policy SP16 (Inland Flood Risk). Paragraph 9.12 of the supporting text to this policy states:

Whilst housing development will normally be guided away from areas of flood risk, the Council has to take into account that there will be occasions when sites within the areas of inland flood risk (zones 2 and 3) will require regeneration. It is important that these areas do not become blighted and cause amenity issues in settlements. These are brownfield sites that have become empty, buildings that have become disused and run down or a combination of both. On those occasions, the Council will expect developers to evidence that they have tried to develop/market sites for a business, leisure or commercial use. This is because alternative uses to housing in areas of high flood risk will always be preferred. Brownfield sites in towns, large villages, medium and small villages that are only partly in areas of flood risk will be supported for housing, providing that the development only takes place on the area of low flood risk and does not conflict with any other policies for town centre development in this plan.

Clause 2 of SP16 states that the Council will support housing in areas of inland flood risk, providing all the following criteria are complied with:

- A site needs regeneration and is not suitable for a business, leisure and commercial use.
- The site is brownfield and has become empty, buildings have become disused and run down or a combination of both.
- Applications should evidence that they have tried to develop/market sites for a business, leisure, or commercial use, this includes active marketing for a minimum of 12 months.

4.9 In this context the site is brownfield as its current planning use as dance studio and car park and its previous use being for commercial storage yard. As one of the first sites seen on the northern side of West End and taking into consideration the neighbouring permission for a substantial residential development, it is considered that the site needs to be regenerated to provide a more acceptable setting to the village. Using the site for an alternative business, leisure or commercial use is not considered appropriate given the strong residential context that the site is now within. In addition, the Local Plans requirement for marketing to ensure that there are no alternative uses other than residential is outdated and has been superseded by more recent legislation such as Class MA.

4.10 Overall, in terms of the sequential test, it is considered that a search for alternative sites at a lower risk of flooding is not only possible within the village but also unnecessary for the reasons set out above.

4.11 Based on the vulnerability of a development the PPG states what Flood Zone(s) the development is appropriate in. This is demonstrated by Table 3 (below). This Table confirms that the proposed dwellings, classified as ‘more vulnerable’ in Table 2, are appropriate within Flood Zone 3 but are subject to the Exception Test.

TABLE 3: FLOOD RISK VULNERABILITY AND FLOOD ZONE ‘COMPATIBILITY’					
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	✗	Exception Test required	✓	✓
Zone 3b	Exception Test required	✗	✗	✗	✓*

KEY: ✓ Development is appropriate ✗ Development should not be permitted

4.12 The NPPF states that for this Test to be passed it should be demonstrated that:

a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and
b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

4.13 Utilising this brownfield site to provide two traditionally designed and high-quality dwellings would clearly meet the sustainable development needs of the area in terms of economic, community or environmental benefits. Looking at these issues in turn:

ECONOMIC BENEFITS

The construction of two new dwellings on the site would bring some benefit to the local economy both during the construction phase and afterwards through the increased use of local facilities and from the additional Council Tax receipts.

COMMUNITY BENEFITS

The proposal will provide community benefits in that it would provide two family homes which have good access to services and facilities. The enhancement of the site is also a benefit to the wider community. As the dwellings are within walking distance of the wide range of village facilities, the occupants are highly likely to use, ensuring that they remain viable. This is a benefit to the community of Hogsthorpe and the surrounding communities who rely on its facilities.

ENVIRONMENTAL BENEFITS

The existing site is considered to be relatively low in biodiversity value. As shown on the submitted plans, redeveloping the site provides the opportunity for a significant range of environmental benefits which include:

- Bat and bird boxes incorporated into the design
- Native tree species
- Native hedge species
- Flower borders
- Wild flower margins
- Flowering lawns
- Mechanical Ventilation Heat Recovery System
- Solar Photovoltaic panels
- Air source heat pumps
- Electric vehicle charging points

The above environmental benefits are to both the dwellings and the surrounding curtilage. Although not a mandatory requirement at the time of submission, a

significant net gain in biodiversity will be achieved by the number of benefits proposed.

- 4.14 Overall, development of this site will provide the economic, social, and environmental benefits required to meet the NPPF's aims for sustainable development and to pass the Exception test.
- 4.15 With respect to the second requirement, it is proposed to provide two storey dwellings with raised finished ground floor levels and all bedrooms on the first-floor level. This FRA demonstrates that the proposed development will be safe for its lifetime, taking in to account the vulnerability of its users, with residual flood risk able to be safely managed. It also demonstrates that there will be no increase in flood risk to other areas.
- 4.16 Overall the requirements of the Sequential and Exception Tests have been passed.

5 FLOOD RISK SOURCES

- 5.1 The following sources of flood risk have been identified. Where mitigation is required to reduce the risk from flooding this is discussed in Section 6.

HISTORIC FLOODING

- 5.2 The Environment Agency recently advised that they have no records of flooding in the area of the application site.

FLUVIAL

- 5.3 The Environment Agency have confirmed that the site is not at risk of flooding from main rivers. Maps showing available modelled flood extents, taking into account flood defences, show that the site would not be affected by the maintained Willoughby High Drain which is located over 650m to the south (Figure 6).
- 5.4 Available fluvial flood levels and flows for model nodes closest to the site show the highest 0.1% (1 in 1000) including 65% climate change in channel level as 2.43m ODN. This is comparable to levels on the site but considerably lower than the finished floor level for the proposed dwellings (3.00m AOD). The risk from this source is therefore considered to be low due to the topography of the area, the intervening features between (i.e., roads, watercourses, buildings) and the raised levels of the dwellings.



Figure 6: Flooding from the Willoughby High Drain taking into account defences.

TIDAL

- 5.5 The North Sea is approximately 3.0km to the east. The coastline in this area is mainly protected from flooding by concrete floodwalls and natural sand dunes supplemented by a programme of beach nourishment. The Environment Agency have confirmed that these defences are in good condition and provide protection against a flood with a 0.5% chance of occurring: a 1 in 200-year chance. Whilst these defences protect the site a residual risk that they may be breached or overtopped remains.
- 5.6 The Environment Agency's detailed hazard maps show that during a present day 0.5% (1 in 200 year) breach part of the site could experience flooding between 0-0.25m. For a similar event in the future (year 2115) approximately 50% of the site remains affected up to 0.25m whilst the other half (on the western side) could be affected by flooding up to a maximum depth of 0.5m (Figure 7).
- 5.8 Taking the sea defences into account the site is shown to be a 'low risk' of flooding (Figure 9). As can be seen, when taking defences into account the risk of flooding to the site is the same as for the approved development of 89no. dwellings to the east.

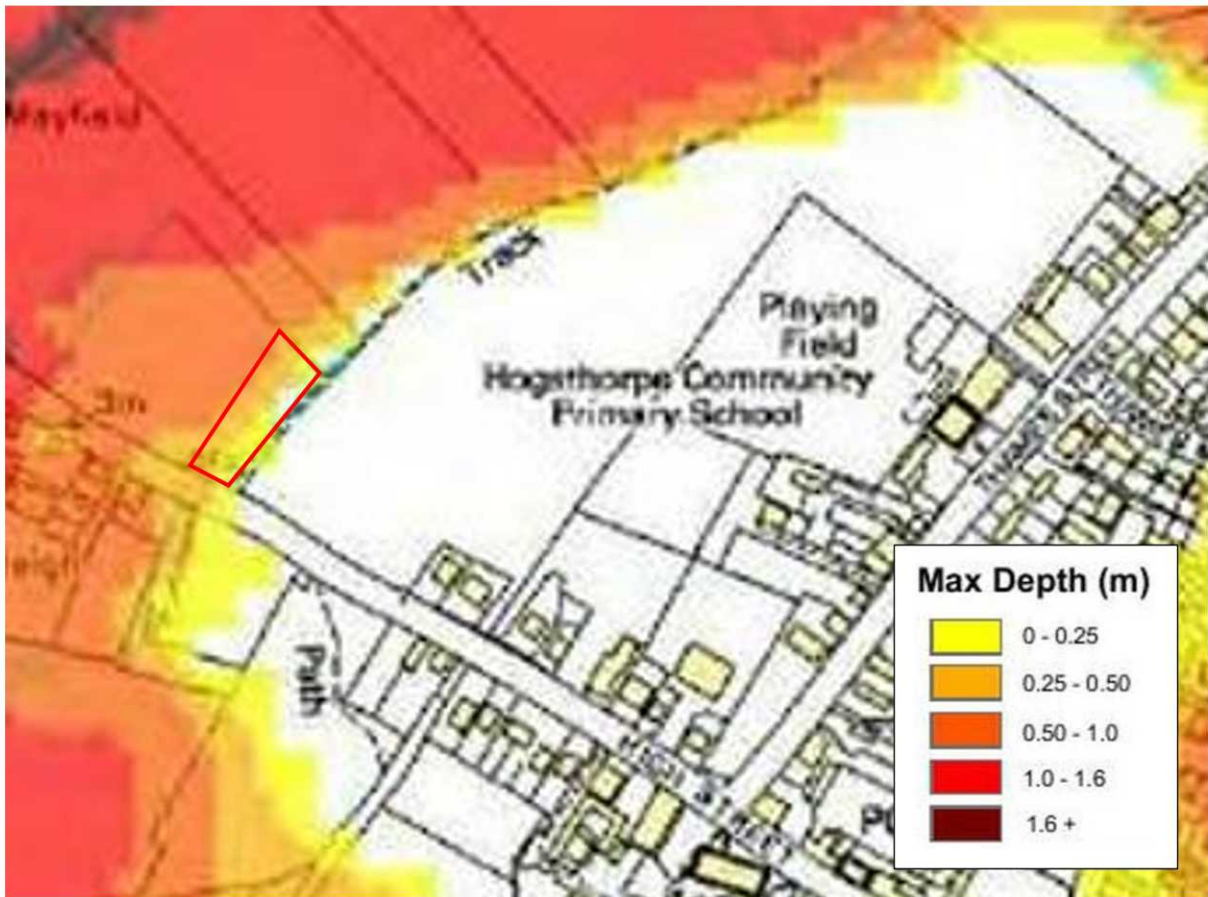


Figure 7: 2115 0.5% (1 in 200) breach map showing the depth of water (site outlined red).

5.7 There is no present-day or future risk from overtopping of the defences (Figure 8).

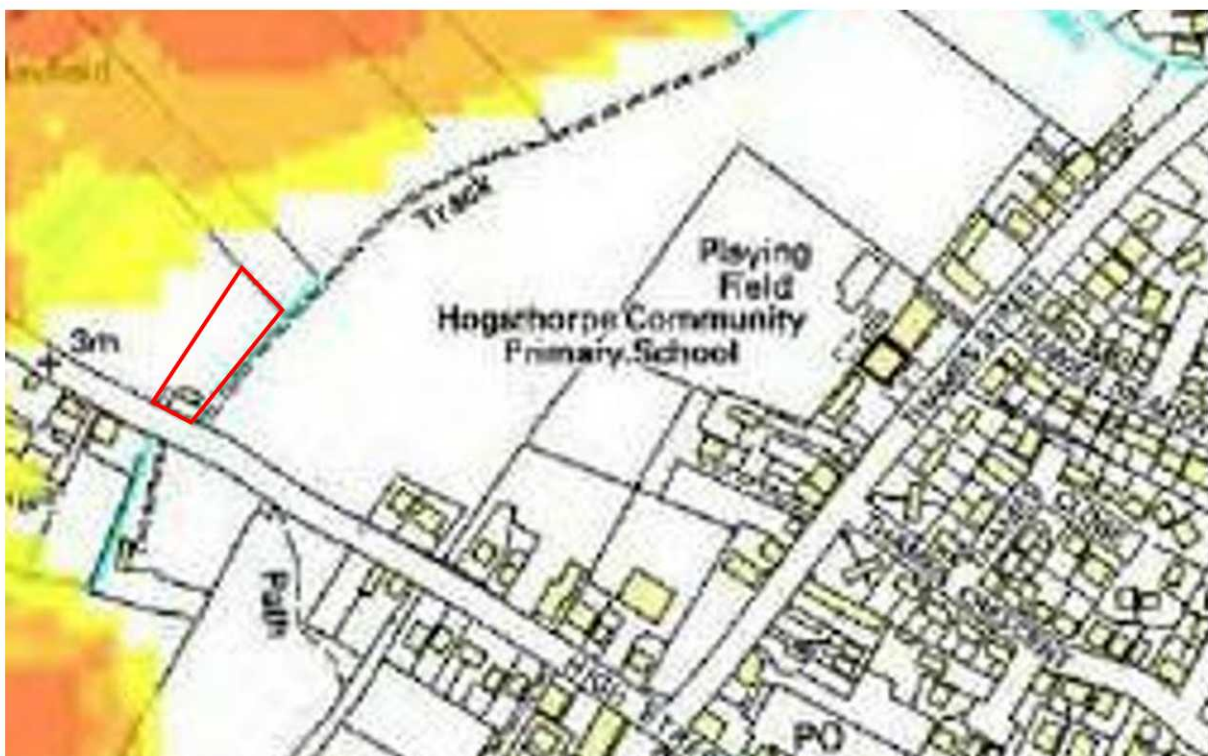


Figure 8: 2115 0.5% (1 in 200) overtopping map showing the depth of water (site outlined red).

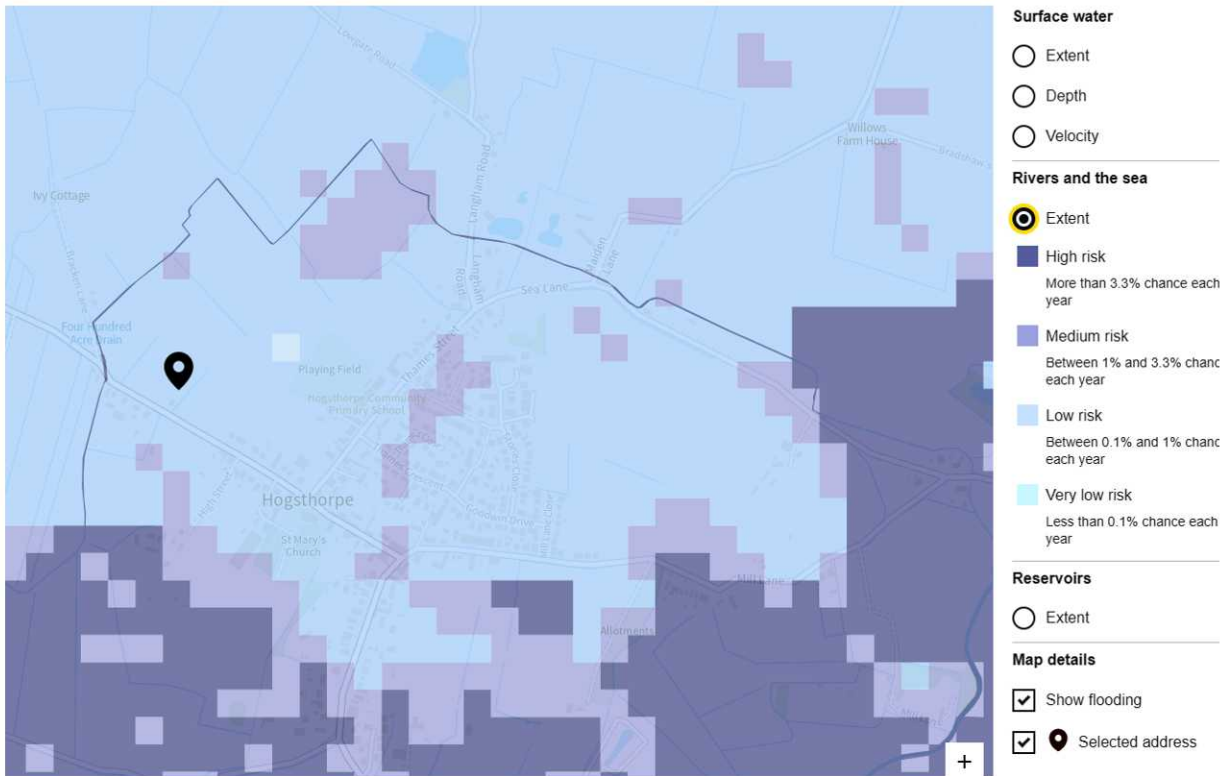


Figure 9: The risk of flooding with tidal defences taken into consideration.

SURFACE WATER

5.9 The Flood Map for Planning shows that the site is at ‘very low’ risk of surface water flooding (Figure 10). ‘Very low’ risk means that each year this area has a chance of flooding of less than 0.1%.

OTHERS

5.10 The Flood Map for Planning shows that the site is not at risk of reservoir flooding.

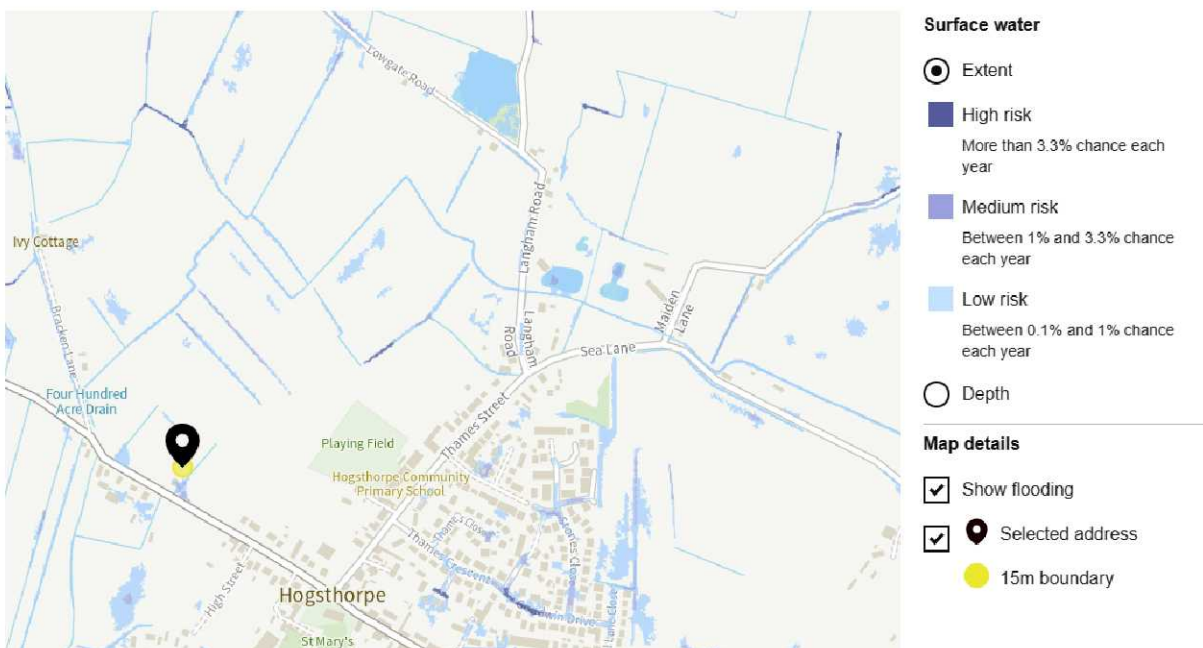


Figure 10: Surface water flood map with the site highlighted.

6 MITIGATION

- 6.1 The previous section has identified the sources of flooding which could potentially pose a risk to the site and the proposed dwellings. This section of the FRA sets out the mitigation measures which are to be incorporated within the proposed development to address and reduce the risk of flooding to within acceptable levels.
- 6.2 As the proposed dwellings are two storeys high, they have been designed in accordance with the 0.5% (2115) breach map. As such the internal finished ground floor level for each property has been raised 500mm and set at 3.00m AOD. In accordance with the Local Plan all bedrooms will be located on the first floor.
- 6.3 Additional physical measures which will be incorporated into the building include water resisting air bricks, backwater valves and non-return valves. All electrical installations will be located 600mm above finished floor level.
- 6.4 In addition to physical measures it is recommended that the future occupiers of the dwellings sign up to the EA flood warning service.
- 6.5 A Flood Warning and Evacuation Plan has been produced and accompanies the planning application.

7 CONCLUSIONS

- 7.1 This FRA is compliant with the requirements set out in the NPPF and the associated Planning Practice Guidance. This report demonstrates that subject to the flood mitigation measures being implemented there will be no risk to life or property as part of this development.