

DESIGNQube

By Steven Brown

Architecture and Urban Design

1 New Cottages, Hallington, Louth, Lincs, LN11 9QX
Tel: 01507 610375 E-Mail: designqube@btconnect.com Web: www.designqube.co.uk

FLOOD RISK ASSESSMENT

Introduction:

This flood risk assessment has been undertaken on behalf of the owner of 117 Golf Road, Mablethorpe and accompanies a planning application for extensions and alterations to the existing dwelling bungalow.

The Site:

117 Golf Road is situated to the western fringe of the Mablethorpe. The application site lies within Flood Zone 3 (High Risk) of the Environment Agency Flood Map.

Sources of Flooding:

Possible Flooding Mechanisms		
Source	Significant	Comment/Reason
Fluvial	Yes	Drains on opposite side of the road
Tidal / Coastal	Yes	Proximity to North Sea
Pluvial (urban drainage)	No	Much of the site and the wider area is permeable
Groundwater	No	Does depend on ground conditions
Overland Flow	No	No higher ground other than the dunes in the vicinity of the site to promote overland flow
Blockage	No	Nothing in close proximity to the site that could cause a blockage
Infrastructure Failure	No	No infrastructure in close proximity to the site that could fail
Rainfall Ponding	No	No depressed areas in the site which could encourage ponding

Sources of flooding include The North Sea, the sand dune sea defences of which are situated approximately 1km east of the site. The coastal defences comprise of earth embankments with concrete flood walls and manual floodgates in places where infrastructure passes through the defences and are maintained by The Environment Agency. The defences provide defence from flooding to a 1 in 200-year standard.

Local drainage ditches are situated to the west of the site on the opposite side of Golf Road. The dykes are set within a deep channel and are not embanked by flood defences or flood walls.

Flooding History:

The Environment Agency historical flood map suggests that flooding did occur on the site during the January 1953 North Sea coast flooding event.

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Proposed Mitigation Measures and the Safety of the Site:

Whilst it is not possible to make any site safe during a flooding event, the site will be made safer and better prepared for such an event through:

Flood Resilient Construction Techniques:

It is considered that the detailed design and construction works should incorporate measures contained in BRE Publication: Design Guidance on Flood Damage to Buildings (1996).

This would include the following measures:

- Proposed floor levels to the new extension are to be set at the same level as the existing finished floor levels.
- Either solid concrete floor construction or suspended precast concrete. Solid concrete has been identified as more suitable to withstand the forces of water below the ground.
- Masonry construction applied to all ground floor walls with rendered blockwork used throughout the build.
- Insulation materials throughout floors and walls to be rigid impervious foam types.
- Locating all electrical fittings, wiring and consumer units at high level with all sockets satiated at least 1m above ground level.
- Doors should be of solid construction and ideally fitted on butt hinges to allow them to be removed and placed in a dry area prior to a flooding event.
- Kitchens should be provided with plastic base feet to reduce damage from low level flooding. Fitted ovens should ideally be fixed as high as possible.
- Provide purpose-built flood boarding that can be fitted when flooding is expected

Existing Tidal Defences:

The site is currently protected by the sea defences to on average a 1 in 200-year standard of protection with the local sea defences maintained by the EA. During all breach scenarios, the occupants would have received the EA automated flood warning and would have evacuated the dwelling.

EA Automated Flood Warning:

In the majority of cases a tidal flooding event is predictable. The owners of the site should sign up for EA automated flood warnings. The EA automated warning system ensures that on average the occupants would receive a 2-hour warning before the flooding event would take place. This would give the owners plenty of time to implement flood evacuation procedures.

Flood map for planning

Your reference
Golf Rd

Location (easting/northing)
549825/385721

Created
2 Mar 2021 13:33

Your selected location is in flood zone 3, an area with a high probability of flooding.

This means:

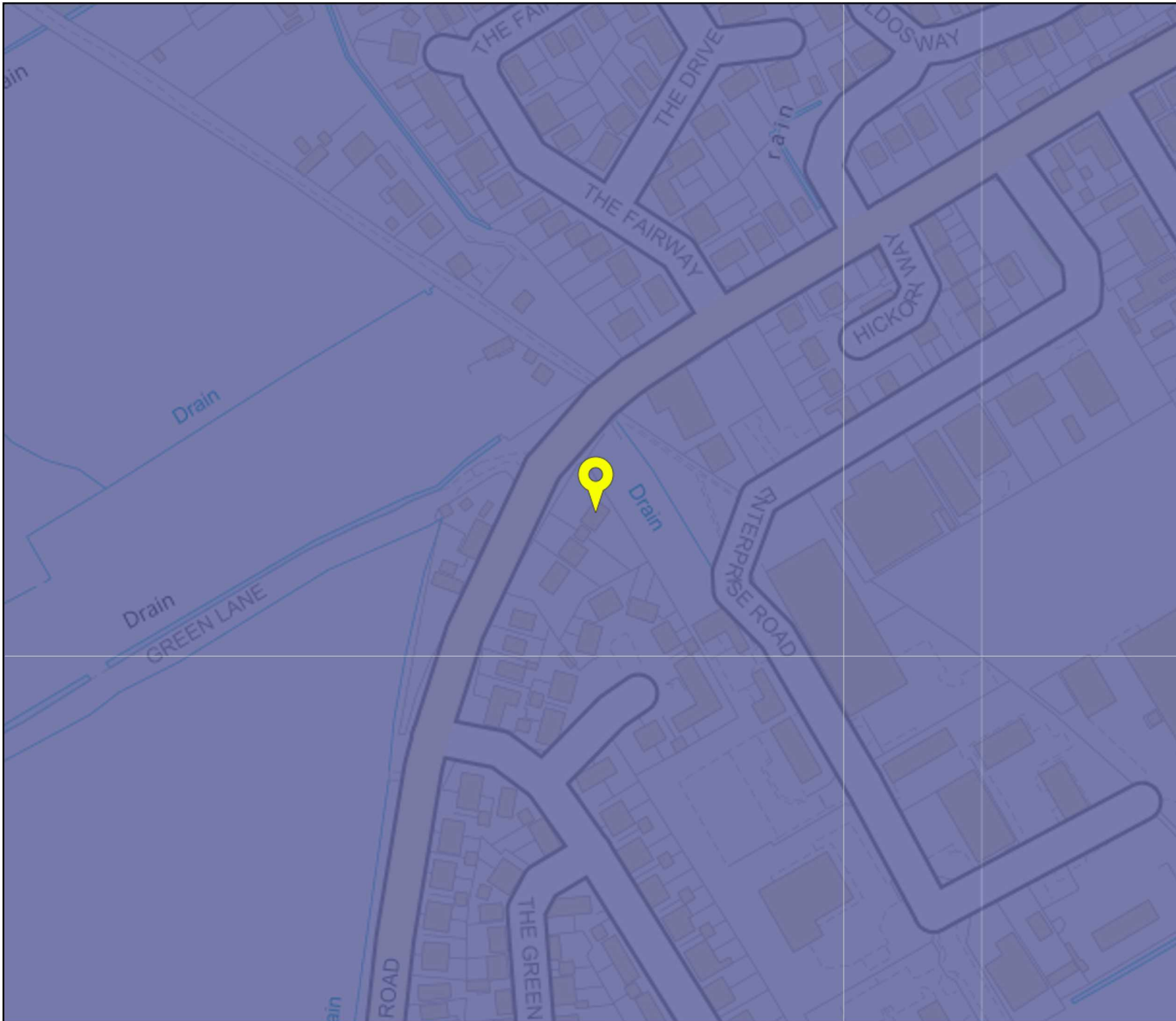
- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

The Open Government Licence sets out the terms and conditions for using government data.
<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



Flood map for planning

Your reference

Golf Rd

Location (easting/northing)

549825/385721

Scale

1:2500

Created

2 Mar 2021 13:33

-  Selected point
-  Flood zone 3
-  Flood zone 3: areas benefitting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Flood storage area

