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**FLOOD RISK ASSESSMENT REF Proposed Dwellings. Adjacent The White House, Blackjack Road, Swineshead. Linc's. PE20 3HH**

## Background

See/read the below in conjunction with the EA Docs Letters Plans and Map of predicted levels/risk etc.

## Sources of Potential Flooding

According to the the EA, Tidal Breaching of the existing Defences, which Defences are regularly checked and kept in good condition, is a possibility with a (2115) 1in 150 years likelihood.

The max depth modelled by the EA on site is between 250 and 500mm depth.

Notwithstanding that, the above variable depth, EA Hazard Mapping shows the Road at 3.0M inundated to only a maximum possible depth of up to 250mm, thus the site being at 2.9M ODN, the maximum depth possible on the site cannot be more than 250 above the road, which in turn on site equates to up to 350mm maximum on the site, or a maximum flood level of 3.25M ODN.

## Site Location and Description

The site is situated within the Village of Swineshead.

The topography of the vicinity is relatively flat EA Lidar shows site levels generally at or around 2.9 M ODN with the road adjacent at 3.0M ODN. the proposed is to be located on the highest part of the site at 2.9M ODN (EA Lidar attached)

The site is surrounded by other residential and commercial uses including significant infrastructure. Many of the dwellings/buildings have been in place for up to hundreds of years, predating existing defences by a considerable period.

## Proposed Development

Two traditionally constructed New Dwellings, two storey brick/block and tiled, to replace two existing single storey non-traditionally constructed dwellings, basically two caravans and a wooden shed.

Floor Levels within the proposed dwelling is proposed to be at a min 500mm above site level or at min 3.4M ODN with the now proposed additional first floor at a min 2.65M higher than the ground floor level.

There is no history or record of flooding having occurred at or anywhere near the site.

## Summary

Site Level is at 2.9 M ODN

Max EA modelled Flood Level on Site 3.25 m ODN

Ground Floor Level will be at 3.4 M ODN

First Floor Level will be at 6.05 M ODN

The site is safe from Risk of Flooding for the envisaged lifetime of the Proposed Development.

The proposed dwellings will provide a safe refuge if ever needed, from all possible events however unlikely or impossible to occur, at some 6.05M ODN.

#### Mitigation and Managing Residual Risk

The occupants can take advantage of the EAs AVM free flood warning alert, ensuring safe evacuation or retreat to the first floor were the impossible to occur.

A designated Emergency escape route, even in the instance of the impossible is available to the occupants via Swineshead and Donington on the A52 to higher ground.

Surface and Foul water from the development will be dealt with by way of the existing septic tank, and an additional Packaged Treatment Plan

Enlarged soak-aways to that which currently cater for the runoff from the existing buildings and paving will be utilised to provide Surface Water infiltration.

#### Conclusion

This is a Previously Developed site with two established single storey dwellings. Flood risk, as unlikely or impossible as it is to materialise, can be safely mitigated and a safe refuge or a dry escape route are both available to occupants. Possibility of any damage from flooding is mitigated by GF Level being above possible worst case scenario flood level and could be further mitigated through constructing the GF from flood resilient materials.

#### Warning and Evacuation Plan (If deemed necessary)

1 Occupants to sign up to the EA Direct Early warning System

2 Occupants to fill out and maintain a Personal Flood/Evacuation Plan as advised/designed by the EA

3 Occupants to follow fully the advice contained in the LRF Risk Register and Contextualisation of Risks including not to act on their own intuition but follow the Emergency Services advice and either Evacuate in advance or retreat to the first floor and await and follow further advice.

As I am sure you will agree it is pointless the occupants trying to predetermine any particular escape route as whichever they decide on may as likely as not be directly effected by any incident. They are intimately aware of the surrounding road network and can follow whichever route to safety if evacuation is advised."

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