

Flood Risk Assessment to accompany Retrospective Planning Application

Site Location: Old Brickyard Farm, Peartree House Road, Penny
Hill, Holbeach.

A Flood Risk Assessment has been requested by South Holland District Council in respect of the retrospective planning application for development of the site for six residential caravans. These caravans are used for the temporary accommodation for agricultural workers, for a maximum period of six months per year.

LOCATION

The location of the site is at Old Brickyard Farm, Peartree House Road, Penny Hill, Holbeach, PE12 8DW.

South Holland District Council is already in possession of a location plan.

The National Grid Reference of the site is TF 36582724.

Existing land level at the site is 3.0m aOD. with caravan floor levels 500mm above ground level.

As situated the site is located within Flood Zone 3 of the Environment Agency's Flood Map for Planning, and this is used as a tool to raise awareness of the risk and mitigation of flooding.

The site is within Flood Zone 1 of South Holland District Council's Strategic Flood Risk Assessment (amended 2016), and outside of any current Hazard Zone detailed by the Council.

The site is also situated within the South Holland Internal Drainage Board district.

The site has been developed on land that was originally used for agricultural production, on the area bounded in red on the location plan.

Six caravans on the site will provide accommodation for agricultural workers throughout the summer, for a period of six months in each year

Sequential Test requirements are met as the site is located in Flood Risk Zone 1 of the Council's Strategic Flood Risk Assessment, and protected against both the 1 in 100 year fluvial event and the 1 in 200 year tidal event.

EXISTING FLOOD CONTROL MEASURES

Environment Agency

The area surrounding the site is within a defended floodplain, this being considered passive until a flood event occurs for which the defences were not designed. The probability of overtopping or breaching occurring is considered to be low.

South Holland Internal Drainage Board

The site and its surrounding land drains by gravity, via local Internal Drainage Board drains, to the Holbeach New River. This river is to the NW of the site at a distance of some 1.7 km.

The target level of service requirement stated by the Department of the Environment, Food and Rural Affairs is for a 1 in 50 years return period, and the South Holland Internal Drainage Board current standards meet this target level.

The Internal Drainage Board operates a rigorous maintenance programme on its pumping stations and drains, supporting an excellent standard of flood protection to the local area.

No evidence of any flooding of the site or surrounding properties has been discovered.

POTENTIAL SOURCES OF FLOODING IN THE FUTURE

The Internal Drainage Board main drain system

High maintenance standards will ensure that the likelihood of this being a source of flooding is very low.

Overtopping and/or breaching of the Wash defences

Embankments provide for a 1 in 200 year tidal event, and there remains a low risk that excessive wind or wave action may cause breaching or overtopping of the first line of defence, this being at a minimum level of 7.0m aOD. However there is further protection offered by the second embankment with levels of 6.0m aOD.

Failure of the Sutton Bridge Outfall Sluice and tidal defences

This may occur due to long term breakdown or power supply disruption. However the Internal Drainage Board has excellent emergency contingencies for such an event and if property were to be threatened then it would take action by utilising temporary pumping equipment.

Failure of the River Nene tidal defences

Flood embankments again provide for a 1 in 200 year return period level of protection.

The storm return period of 1 in 50 years being exceeded

South Holland Internal Drainage Board standards for main drain design does incorporate a minimum 900mm freeboard to the lowest land level, providing adequate storage in the case of events greater than 1 in 50 years

PROBABILITY AND RISK

The probability and therefore risk of flooding from local drainage systems are very low.

The probability of flooding caused by water from any Internal Drainage Board drain is deemed to be less than 1% - available storage within the existing system, the location, and the standards of operation and maintenance of the drains by the Internal Drainage Board ensure that the level of risk is low.

The probability of the site being flooded by tidal waters is also very low at less than 1%. This is due to the current standards of the coastal defences, and the location of the site, being 7.2 km. from the defences.

The probability of risk from extreme events is deemed to be very low at this location – 7.2 km. from coastal defences, 6.6 km. from the River Welland at Fosdyke and 13.3 km. from the River Nene at Sutton Bridge

IMPACTS ON THE SITE OF POSSIBLE FLOODING

Due to the evaluation of the risks shown above, no major or significant impacts of flooding are expected.

The location of the site is such that in the event of flooding from any Internal Drainage Board drain occurring, then it is anticipated that the rise in water level would not be sudden. Probably two or three days warning time would be available.

Similarly if coastal defences were overtopped or breached, then adequate warning time would be given. The Environment Agency issues both direct and indirect flood warnings, as well as a 24 hour Floodline Service which provides information and advice. The contact number is 0345 988 1188.

Climate change will undoubtedly cause a rise in sea levels over time, and thus affect levels in inland drainage systems. The Environment Agency, the Department of Food and Rural Affairs, South Holland Internal Drainage Board are constantly monitoring the predictions and are proactive in making adjustments and improvements to defences and infrastructures to ensure that the current level of protection is maintained.

The site offers temporary accommodation for seasonal workers in the summer months. In the event of an impending extreme event it would be possible to move this accommodation elsewhere.