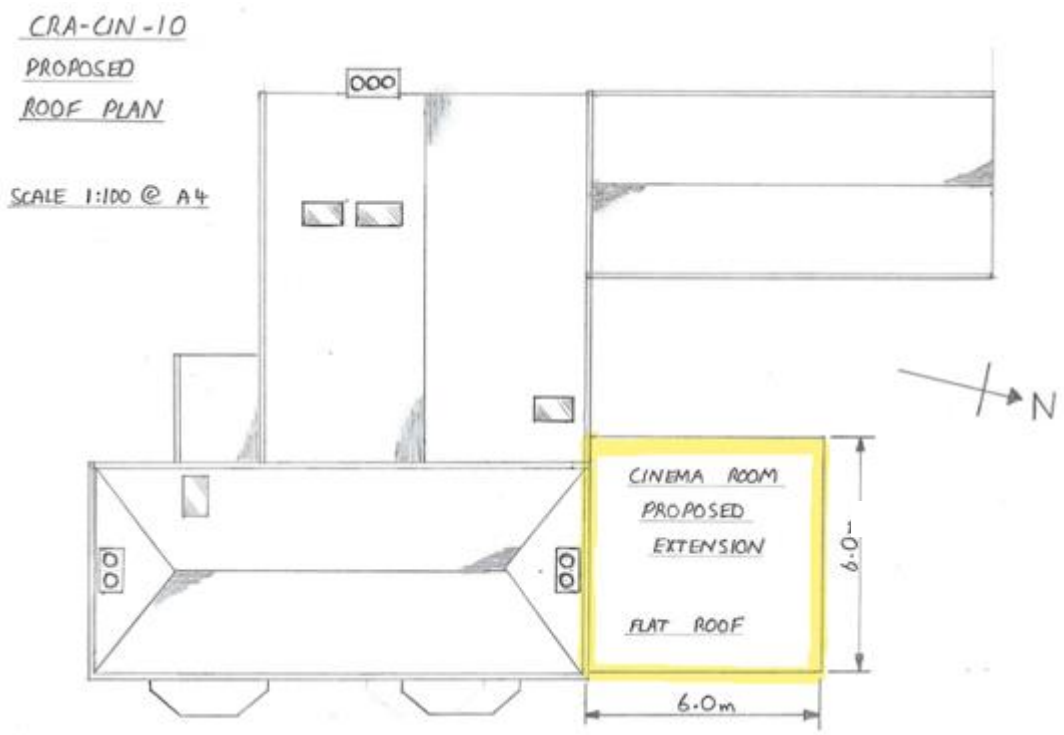
Flood Risk Assessment (FRA)

Address relating to this FRA: Cranesgate House, Cranesgate North, Whaplode, Spalding, Lincolnshire, PE12 6TY.

Description of the proposed development: Single story side extension (6m wide x 6m deep x 4m high), to form a cinema room for use by the owners of the property (identified below in yellow outline)

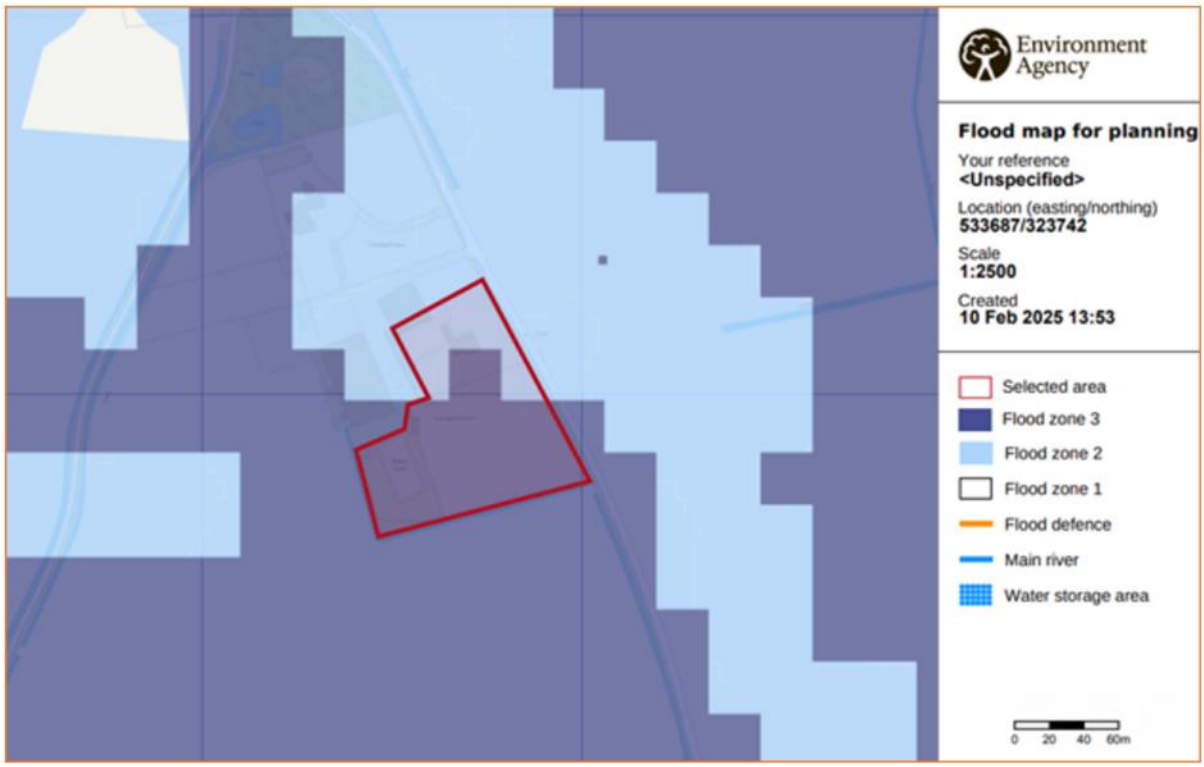


1.0) Why is this Flood Risk Assessment required:

Under the National Planning Policy Framework (NPPF), this FRA is required due to the following being applicable for this proposed development:

- Includes building or engineering works in Flood Zone 2 or 3;

The proposed development is identified as being within a flood zone (see below Environmental Agency Flood Zone Map, that identifies the red line boundary of the plot falling across both flood zones 2 and 3. The cinema room extension falls specifically within flood zone 2, light blue area on the map extracts below)



Extension Location Specific to the Flood Map – Identified in **green** below:



2.0) How will flood risk will be managed now and over the development's lifetime, taking climate change into account, and regarding the potential vulnerability of its users:

The 6m x 6m small side extension will be constructed as identified on the supporting plans / elevations accompanying the householder planning application. The Finished Floor Level (FFL) of the side extension cinema room will be identical to the FFL of the main house and will not be constructed any lower. This will ensure that the flooding risk associated with the cinema room extension is no worse that that of the existing property, that has stood for almost 200 years (late Georgian).

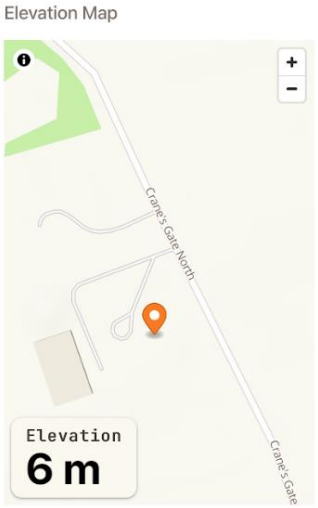
The rear door to the cinema room side extension will include a suitable water deflecting threshold, and the construction of the extension will be traditional in form using masonry construction techniques (brick and block, rendered to match the existing finish of the house…. Concrete GF slab). These materials lend themselves well even in the unfortunate event of a flood occurring.

This small side extension reflects an insignificant GFA in relation to the total area associated with the Plot Boundary (36sqm cinema room vs. 11,007sqm plot), as such it will not constitute to any noticeable increase in flooding risk associated with the property or adjacent land.

The rainwater that will fall onto the side extension flat roof will be directed into the existing underground soakaway of the property, making its way naturally into the watercourse. This will prevent any rainwater flooding that would otherwise be experienced with an above-ground water discharge method (that would not comply with building regulations in any case).

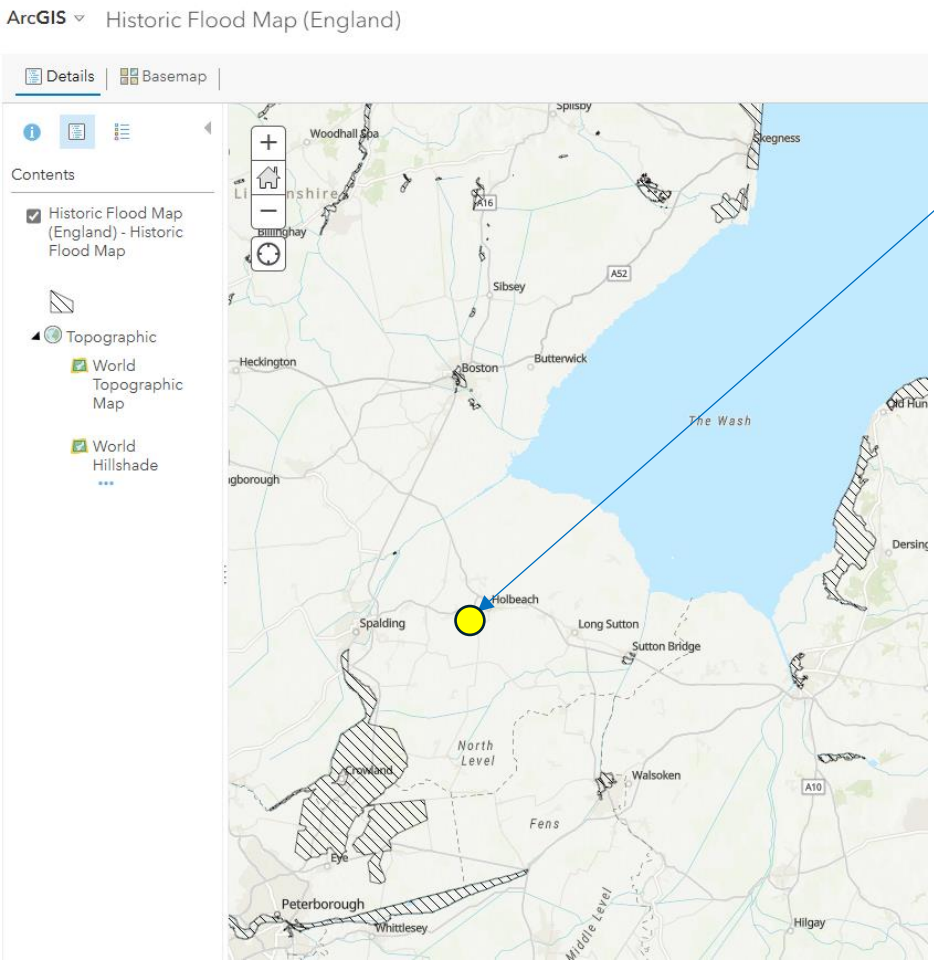
Like many towns and villages in the South Holland District, Whaplode is no exception in that it has an extensive and complex network of surrounding drains, dykes and ditches whose primary purpose is to direct water away from the arable farmland as quickly as possible during rainfall. As such, localised flooding has not been a problem since records began in 1946 (see historic flood data in section 3.0).

The existing property, and the proposed side extension cinema room has an elevation above sea level of 6.0m. Whilst not a highly elevated location, it is to its benefit above sea level, by a factor of 6 in relation to predictions of rising sea levels (see section 4.0).



3.0) Historic Flood Data:

The below map identifies the areas that have suffered historic flooding since records began in 1946 (areas hashed out in black).



Description

Historic Flood Map is a GIS layer showing the maximum extent of all individual Recorded Flood Outlines from river, the sea and groundwater springs and shows areas of land that have previously been subject to flooding in England. Records began in 1946 when predecessor bodies to the Environment Agency started collecting detailed information about flooding incidents, although we may hold limited details about flooding incidents prior to this date. This dataset differs from the Recorded Flood Outline dataset in that it contains only those flood outlines that are 'considered and accepted' if the following criteria are met:

- photographic/video evidence with the location referenced
- recorded flood levels with the location referenced
- evidence that the outline represents the time of peak water level (for example date / time stamped photo)
- evidence that the source of flooding is from rivers, the sea or groundwater and not surface water/overland runoff.

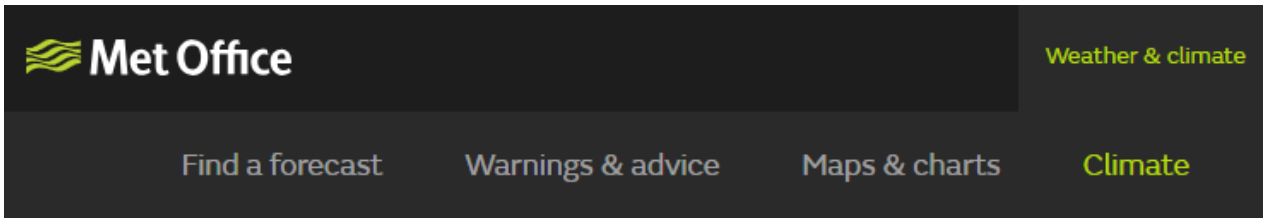
4.0) Estimated flood level from rising sea change:

The extent of rising sea levels as predicted by various worldwide organisations / bodies (Met Office / NASA etc) is a prediction based on differing carbon emission scenarios.

Latest Met Office data ranges from 0.35m up to a worst-case prediction of 1.1m by the year 2100.

The mean of these predictions sets an average sea level rise of 0.725m.

Cranesgate House is 6.0m above sea level, and so would be unaffected by the prediction at year 2100 (resultant height above sea level by yr 2100 would be 5.275m)



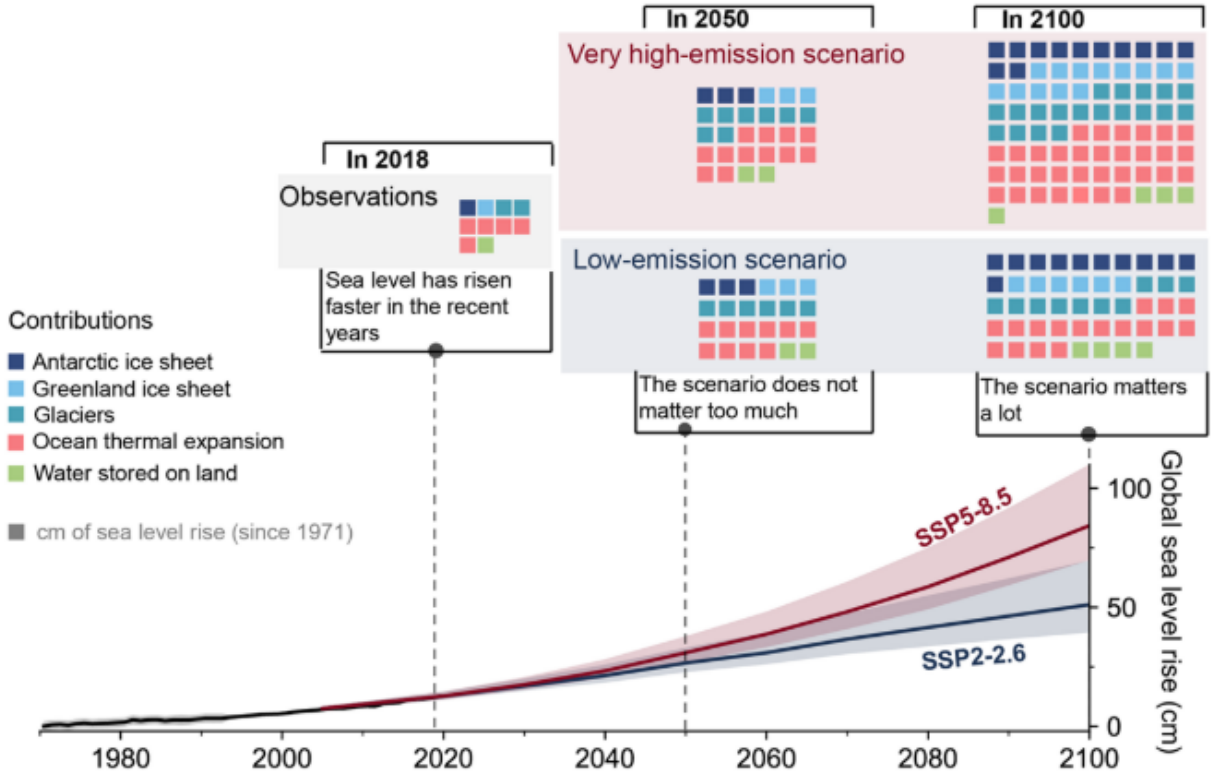


Figure 1 : Illustration of contributions to past and future sea level change. From IPCC AR6: FAQ 9.2.

5.0) Conclusion:

It is the conclusion of this FLA that this small cinema room side extension will not be affected by any current or future flooding from any source, and it will not increase the flood risk elsewhere surrounding the build site.

The acknowledgements and measures proposed to deal with the risks, as identified within section 2.0 are deemed appropriate.

The historic flood data and rising sea level predictions indicate a LOW probability of flooding to the site proposed for the cinema room side extension.