

CRA ENVPAC/1/THM/00626 - THM Ref: 182935**Prior Notification Ref: 211228**

**Delta House, 70 South View Avenue,
Caversham, Reading. RG4 5BB**

Addendum Summary

The current, approved scheme for Delta House has proven dangerous to fully implement without the demolition of a considerable part of the existing building.

Neighbours of the property and Reading Borough Council wish to retain the current building and therefore, are allowing extra time for the developers, in conjunction with the Environment Agency, to find an alternative solution(s) to address the flooding risks on this specific site.

During a meeting between the Environment Agency's Tidal Hazard Mapping Flood Risk team, the Developer, Structural Engineers and Planning Consultants where a Flood Wall solution was proposed, one of the THM experts asked if any raise in these floor levels would be possible.

One of the meeting outputs was to further examine the building structure & layout in relation to the modelled site-specific flood risk data. This has produced a proposal to raise the floor levels of the remaining ground floor flats to **37.87mAOD** which is 330mm above the 1:100 year modelled flood risk level for the specific site.

This 330mm freeboard (to take into consideration the increased water flows through climate change) will only impact 2 of the 11 flats should the level be surpassed.

During an extreme flooding event, the remaining ground floor flats (470mm higher), and the flats on the first floor would serve as ample safe haven for these lower flats (4 & 5) in this new proposal.

The purpose of this addendum is to gain support from the Environment Agency for the amended Prior Notification application in order for this development to be fully, efficiently and safely implemented.

Current Site Situation

As of December 2021 works have commenced on the Delta House site to convert the B1a Offices to C3 residential units as per the Approved Prior Notification application ref:211028. Finished floor levels in the majority of the older parts of the building have been raised in line with the FRA Version 1.1 - Dated 25/11/2020 to 38.34mAOD.

The renumbered flats 1 & 2 are privately accessed from individual doors on the East side of the building and lend themselves to an increase in floor levels. In flats 1 & 2 the habitable rooms have high ceilings as that part of the building dates back to the 1950's. These raised floors can continue into flats 3 & the majority of The Garden flat, except for the bedroom. Unfortunately, at the location for flats 4 & 5 there is not the same high ceiling to work with, instead those flats have a regular height ceiling made from concrete planks with pretensioned steel cables running through them.

Structural Engineers **Structure Haus** have advised there is a large health and safety risk in undertaking the removal of these planks without the demolition of that part of the building. As such they are strongly advising another course of action to mitigate the flooding risk.

FRA Version 1.1: Closest Node versus Site Specific modelled data

The current approved application shows a finished floor level of 38.34mAOD which was determined from being 300mm above the 1 in 100 year (1%AEP) flood risk level plus a 35% increase allowance for climate change (Upper End allowance category until the year 2069 or the Higher Central allowance category until the year 2115). This was based on the closest node point (06100_MN_36c.003) in the river Thames which is almost 1km away from the site.

Using Delta House's site grid referenced specific modelled data supplied as part of the Environment Agency's Product 4 (Detailed Flood Risk) under reference THM 182935: It states that the actual Delta House site's model has a 1:100 year (1% AEP) flood risk level of 37.54mAOD. With a +20% increase in flows allowance for climate change taking the flood risk level to 37.72mAOD.

Amended Proposal

The Developers have worked with architect's Morse Webb and acoustic consultants Paragon Acoustics to propose a solution to keep the concrete planks in place and be able to raise the floor levels within flats 4 & 5 and the bedroom of The Garden Flat to achieve a finished floor level of the 37.87mAOD.

This 37.87mAOD gives a 330mm climate change allowance increase over the site specific 1:100 year flood risk level of 37.54mAOD and still 150mm above the 1:100 year expectation with the +20% increase in flows level of 37.72mAOD.

Flat 4 & 5's main entrances will lead directly out to the communal staircase. From this staircase there is direct access to flats 3, The Garden flat and the first floor flats above where, during an extreme flood event, these neighbouring flats will provide an ample flood safe haven.

This proposal would maintain the 38.34mAOD level in the habitable rooms of the remaining ground floor flats except for The Garden Flat's bedroom which would also be raised to the 37.87mAOD level.

Alternative Proposal

Should the Environment Agency feel that the raising of floor levels as per this amended proposal is not acceptable, then there is a flood wall and removable barrier solution that has been approved structurally and functionally which we would like to bring full details forward if this current raised floor to 330mm above the site specific 1:100year flood level is not acceptable.