

REF: 8/1982/FLOOD

29th August 2019

For the attention of David Eaves,

In our opinion the site, Langstone Technology Park, is at a low risk of flooding **from all sources**. In particular, the proposed development on the site is within flood zone 1 with respect to flooding from Rivers and the Sea.

The following outlines our rationale and response to the Environment Agency's (EA) concerns outlined in the received letter dated 27th August 2019 (ref: HA/2019/121531/01-L01) as to why we maintain that the site is at a low risk of flooding.

Summary of the proposed development

The proposed development is to undertake the partial demolition building 1000 in the north east corner of the site and remodel the existing car park to increase vehicle capacity. In the south-west of the site there is to be the development of 12. No. new commercial units replacing existing outbuildings and car parking areas.

Summary of EA objections

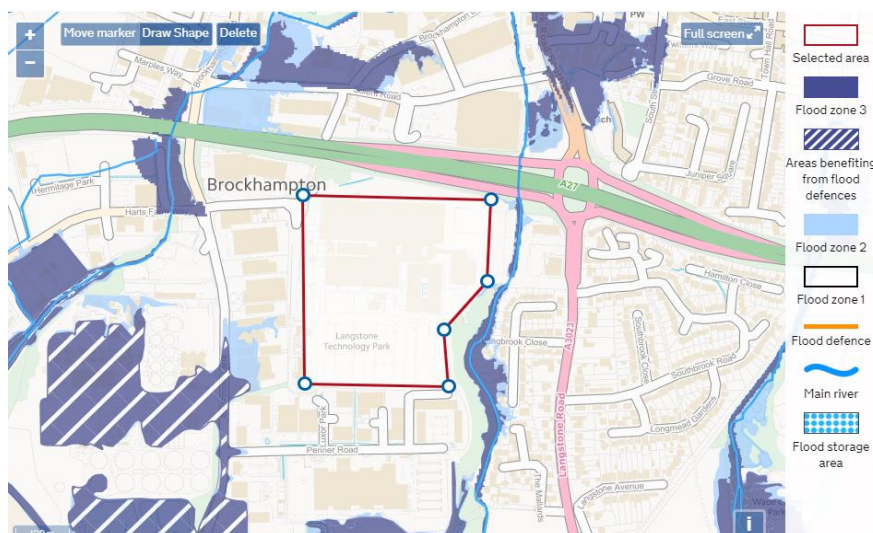
The following objections have been made by the EA with regards to the application:

- The FRA fails to take into account the impacts of climate change adequately.
- Consider the requirement for flood and emergency planning
- Consider how a range of flooding events (including extreme events) will affect people and property.

Summary of potential flooding

Likely sources of river flooding largely come from the defended area to the west of the site where the existing southern water sewage treatment plant is, and to the east of the site where a main river is located.

Flood mapping provided by the EA for planning indicates that the site is predominantly situated in a flood zone 1 (1 in 1000 year or smaller likelihood of flooding) The site is identified as being in flood zone 1 in the Havant local plan (2018)



Screenshot of flood map for planning ([Gov.uk](https://www.gov.uk))

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Defended area (sewage treatment works – Southern Water) to the west of the site

Information regarding the design of the flood defences was unable to be obtained from the available strategic flood risk assessments. For the purposes of this assessment it should be assumed that the defences fail.

Using Southern Water asset plans, the level range of Southmoor lane (~120m west of the proposed development) is 3.81mAOD (asset 9601X cover level – See Appendix C of the FRA) whilst topographic information (See Appendix B) indicates the western level of the existing site to range between 4.3-5.4mAOD indicating a level rise of approximately 0.5-1.6m from the area indicated to be in flood zone 3.

It can be concluded from the level information that the defended sewage treatment works provides a low potential for flooding on the proposed development due to the extreme volume of water required to elevate flood water 0.5-1.6m across an area large enough to reach the site ~120m to the east.

Therefore, for the west of the site to be at threat from flooding the 1 in 100 year +20% climate change (central allowance category) would have to provide flood level and volume of flooding far in excess of the 1 in 1000 year event which we do not believe is likely. However, if the EA has contradictory data available we would request that this data be presented to Clancy Consulting Ltd so that we may use it to further inform the research carried out for the flood risk assessment.

Main River east of the proposed development

The approximate level of the main river is 3.96-4.44mAOD at the time of measurement. The site is protected by an elevated grass bank boarding the river with peak levels of 7.5-8.1mAOD indicating a bank height above the river level of 3.5-4.1m. The river level will fluctuate seasonally.

We have attached a sketch mark up indicating levels across the site obtained from Southern Water asset plans and a topographic survey conducted on the site.

It can be seen on the mark up that should the river flood north of the bank the flood water would likely not encroach on the site due to the localised depression in the north-eastern region of the site.

All existing structures in the north of the site have a slope on the approach to the structure to guard from surface water egress.

As with the potential for flooding from the west of the site, we believe that a 1 in 100 year +20% climate change allowance is unlikely to exceed the 1 in 1000 year event and reach the elevated levels of the site. However, if the EA possess data to the contrary, we would request that this is passed to Clancy Consulting Ltd so that we may assess the impact on the development.

Information provided in the Strategic Flood Risk Assessment (SFRA)

As part of the Havant borough council local plan for 2036 the strategic flood risk assessment was updated in November 2018.

Langstone technology park is directly identified in the SFRA on page 10. The site review found that the technology park was located in flood zone 1, was a sequentially preferable site, exception test not required and having “no flood risk”.

Safe access and egress routes

In the event of flooding there are a number of routes available for the safe passage of people working on site.

The proposed commercial units have an internal first floor elevated 3.4m above the ground floor with the ground floor varying between 4.5mAOD and 5.0mAOD which are significantly above the indicated flood zone 3. Therefore evacuation to the first floor of the units will offer adequate protection from flooding.

Should personnel on site be required to evacuate the site then a route north across would be most suitable, evacuation to the Havant bypass (A27) via footpath is possible in the north east and north west of the site

Finally, management of the technology park should ensure they are registered with the flood warning system (<https://www.gov.uk/sign-up-for-flood-warnings>) to receive alerts which can be distributed around the site to private firms and individuals.

Summary of EA objections with response by Clancy Consulting

- Taking the impacts of climate change into account
We believe we have demonstrated that the proposed development is situated in **flood zone 1** by inspection of the existing levels and EA flood map data for planning. We believe no further modelling would be required. The coast line south of the site is deemed as 'hold the line' and therefore it has been assumed that adequate sea defences will be maintained.
- Consider the requirement for flood and emergency planning
We have not considered emergency planning in case of flooding in our report due to the low risk of flooding. Please refer to the paragraph above in this response.
- Consider how a range of flooding events (including extreme events) will affect people and property.
Due to the site being situated in flood zone 1 (less than 1 in 1000 year probability of flooding) we do not consider there to be any risk to people and buildings from flooding events, extreme or otherwise. Comments regarding the safe access and egress can be found in this response.

Once again, we would like to reiterate that from the evidence we have acquired, we believe the site is at a low risk of flooding, and that there is nothing in flooding terms to justify objection.

Kind regards

A handwritten signature in black ink, appearing to read 'C. Hardingham'.

Charles Hardingham
Civil Engineer
Clancy Consulting Ltd