FLOOD RISK ASSESSMENT

16, Northney Road, Hayling Island, PO11 0ND.

Development site
The proposed site is located at 16 Northney Road, Hayling Island and is currently a three bedroomed house. See position of property on map provided. Looking at the proposed development it lies just within the Environment Agency designated Flood Zone 3.

Development Proposal
The development proposal for the above site is a two storey side extension; single storey rear extension; revised fenestration.

Sequential Test
As the development is a minor development, namely an extension to an existing dwelling, this is deemed unnecessary. With reference to the Flood Risk and Coastal Change Planning Practice Guidance, a Minor Development is classified as either:

A minor non-residential extension: industrial/commercial/leisure etc, extensions shown to create a footprint of less than 250m2; Alterations: developments that do not increase the size of buildings e.g. alterations to external appearance; or Householder developments: for example, sheds, garages, games rooms etc within the curtilage of the existing dwelling, in addition to physical extensions to the existing dwelling itself. This definition excludes any proposed development that would create a separate dwelling within the curtilages of the existing dwelling e.g. subdivision of houses into flats.

Safe development
Flood control measures and flood mitigation measures.

The Coastal Partners was formed through a shared service agreement signed in April 2012 between the four local authorities of Portsmouth City Council, Havant Borough
Council, Gosport Borough Council and Fareham Borough Council. The Coastal Partners work, on behalf of the council is: Reduce the risks to people and the developed and natural environment from flooding and coastal erosion by encouraging the provision of technically, environmentally and economically sound and sustainable defence measures along the entire 162km coastline contained within the Coastal Partners authority boundary. This is achieved by undertaking a number of functions:

- ensure the development of strategic plans for the future management of the
- coastline and ensure their implementation.
- ensure that any development within the coastal zone does not adversely affect the environment.
- ensure that any development within the coastal zone does not disrupt natural processes, such as the transport of sediment along the shoreline.
- avoid committing future generations to inflexible and expensive options for coastal defence.
- monitoring the evolution of the coastline and the forcing parameters affecting it.

The Coastal Partners also works to protect assets against coastal erosion and flooding from the sea, without conflicting with the above.
The Coastal Partners survey and carry out research relating to coast protection and sea defence; designs and supervises new sea defence and coast protection projects; arranges and supervises coastal protection works and advises private individuals on minor problems with coast protection and flooding where these are the consultee's responsibility.

The Coastal Partners maintain this with the help of land owners whose land adjoins the shoreline. The Coast Protection Act 1949 and the Land Drainage Act 1991, provide maritime Councils with permissive powers to carry out coastal defence works. Coastal defence is an encompassing term for both 'coast protection' and 'sea defence'; where coast protection is the protection of the land from the risk of erosion and sea defence is the defence against the risk of flooding by the sea. A major task is the production of Management Plans in association with the Environment Agency (EA). Shoreline Management Plans, Flood and Coastal Erosion Risk Management Strategies and Beach Management Plans contribute to the continuing maintenance of the Borough's assets and protection of property. The Plans are used to provide the framework within which maintenance works and new schemes are identified and prioritised.

Coastal Tidal Flood Plain

Hayling Island has a population of over 17,000, is located on the south Hampshire coast, within the Borough of Havant and has approximately 38km of coastline.

Being an island community, climate change is one of the largest challenges Hayling Island will face. It poses a significant threat to the economy, environment, health and way of life. Rising sea levels due to climate change are predicted to significantly increase the level of coastal flood and erosion risk on the island.

With no flood defences in place, 609 residential properties and 348 non-residential properties are currently at flood risk on the island from a 0.5% AEP event. By 2120, with sea level rise and climate change, this figure rises to 2,490 properties at risk from coastal flooding during a similar extreme event and 531 properties at risk from coastal erosion on Hayling Island. Access and egress on and off the island to the mainland via the sole road bridge connection (A3023) is also at risk.

In order to manage these risks into the future, they have developed a strategy for the Hayling Island Coastline. The plan is to develop and identifying management approaches for the next 100 years, in two stages; Part 1: Hayling Island Funding and Implementation Strategy (HIFIS) - now complete, and Part 2: Hayling Island full FCERM Strategy

Flood risk mitigation design options

The simplest water exclusion measure is to build the ground floor above the maximum level that any flood water is likely to reach. However, this option is discounted due to being impractical owing to the nature of the development. This being an extension to an existing semi-detached property, it will result in the development being disproportionately higher than the existing floor level and neighbouring properties.

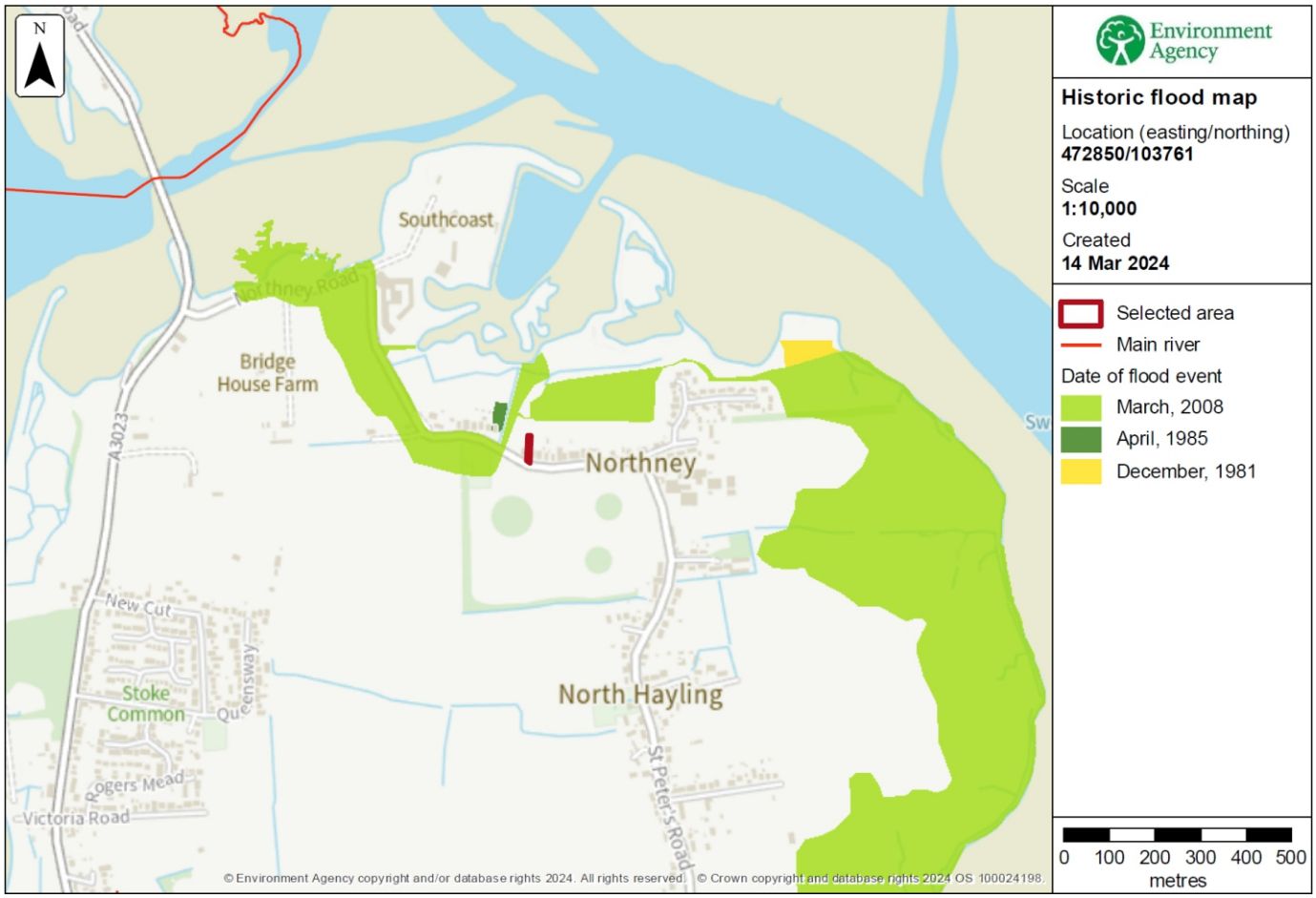
In reference to Environment Agency data (see pages 21 & 22 of the included *FRA Information* document for ground level spot heights) - where the ground levels aOD directly adjacent to the existing property show risk up to 500mm (see submitted plan 88088-01-009 Levels - Flood Risk)

Mitigation Measures to be utilised in this development:

- **Floor Levels;** due to the nature of this development, being a minor extension to an existing semi detached property, floor levels will be equal in height or greater then the existing.
- **Floor Construction;** Ground bearing concrete slab with closed cell insulation; finished and sealed with tile and waterproof grout.
- **Electricity;** external and internal meters, outlets and appliances will be fitted above the future flood risk height.
- **Release and circulation of raw sewage inside the house;** non-return valves fitted to all new and existing drainage routes.
- **Permeable;** exterior areas largely surfaced with permeable finishes. Removal of existing solid concrete driveway, to be replaced with permeable finish - this will help balance the newly developed areas.

Conclusion

The conclusion is that Northney Road is located on the north side of Hayling Island and includes 16 Northney Road, PO11 0ND. The address is only just in the Flood Zone 3 but, as per the Environment agency information document, does run a risk of a future flooding event. There have been recorded historic flood events in the wider area, caused by an unusual extreme wave overtopping. But as can be seen from the map and table shown below (taken from the submitted Environment Agency supplied FRA information document) - flooding does not occur on a usual basis and there have been no recorded events at this particular location.
During the 1970's and 1980's winter floods were an occurrence but today the flood risk is greatly reduced and flooding is extremely rare in this particular part of the road due to the existing defences to the North and the elevation of the property (see pages 21 & 22 of *FRA Information* document for ground level spot heights).



Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
10 March 2008	10 March 2008	sea	other	No
8 April 1985	8 April 1985	unknown	unknown	No
14 December 1981	14 December 1981	other	unknown	No