

Flood Risk Statement

Project:	Lower Thames Crossing	Job No:	60549458
Subject:	Marling Cross Flood Risk Statement		
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The purpose of this Flood Risk Statement is to provide a high level assessment of the level of flood risk associated with a proposed satellite compound in Marling Cross, Gravesham, identified as required to support the enabling works for the Lower Thames Crossing.

Introduction

The Lower Thames Crossing (LTC) project will provide a tunnel crossing of the River Thames downstream of the Queen Elizabeth II Bridge at Dartford. Perfect Circle JV Limited (PCJV) has been appointed by Highways England Company Limited (Highways England) to perform Ground Investigation (GI) works for the LTC project. As a core member of PCJV, AECOM has been designated responsible for delivery of the investigation as Principal Contractor under a management contractor form of agreement.

The project requires several satellite compounds to provide laydown areas for equipment used during the GI, as well as providing welfare and office facilities for drilling and supervising staff. Construction activities will consist of installing new or upgrading current hard-standing and placing porta cabins. This document aims to provide a high level understanding of the level of flood risk at the proposed satellite compound; Marling Cross, situated in Gravesham, Kent Thameside (Postcode **DA12 5UD**).

The site is approximately 0.24ha in size, bound by the site access road and a footpath to the north, Valley Drive to the east and open land to south and west. It is situated in close proximity to the A2 Watling Street to the south. The site currently consists of a vacant area of hardstanding.

Flood Risk

The following table identifies the risk of flood from all sources to the site.

Source of flooding	Flood risk to Site	Reference	Risk Category
Rivers and the Sea	The site is indicated to be in Flood Zone 1, meaning the risk of flooding is land assessed as having a less than 1 in 1,000 annual probability from river and sea sources.	Gov.UK Flood Map for Planning, accessed 27/03/2019	Low
Land (Pluvial and Surface Water)	The western side of the site has a high risk of surface water flooding, with a chance of flooding greater than 3.3% per year. The most recent version of the Strategic Flood Risk Assessment of Kent Thameside available on via the Dartford Borough Council website does not detail whether this area is a Critical Drainage Area.	Gov.UK Long Term Flood Risk Map, accessed 27/03/2019 Strategic Flood Risk Assessment (SFRA) of Kent Thameside, 2005	High
Groundwater	The site is not indicated to be an area at risk of groundwater flooding.	SFRA of Kent Thameside, 2005	Very low
Sewers	There have not been any sewer flooding incidents recorded in the area	Thameside Stage 1 Surface Water Management Plan, Appendix B.2	Very low

Source of flooding	Flood risk to Site	Reference	Risk Category
	prior to May 2013. No other more recent information has been found readily available	DA02 Gravesend, May 2013	
Reservoirs, Canals & Other Artificial Sources	There is no risk of flooding from reservoirs indicated. There is no history of flooding in the area from other sources.	Gov.UK Long Term Flood Risk Map, accessed 27/03/2019 Thameside Stage 1 Surface Water Management Plan, Appendix B.2 DA02 Gravesend, May 2013	Very low

Conclusion

The site at Marling Cross is defined as being in Flood Zone 1 and has an area of less than 1ha. In addition, the site is at very low or low risk of flooding from tidal, fluvial, groundwater, sewer and reservoir sources. In contrast, surface water sources pose a high risk of flooding to the site; with pooling to the western side (refer to Figure 1).

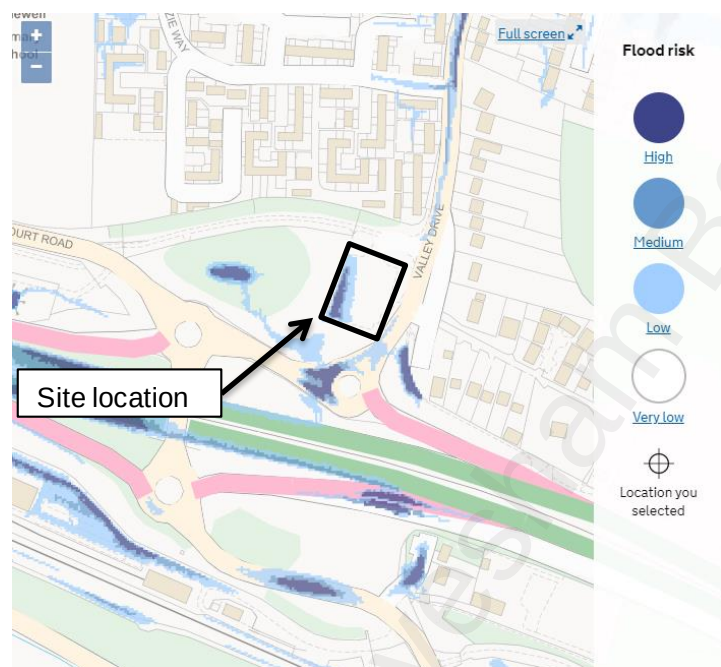


Figure 1 – Extent of surface water flood risk at Marling Cross



Figure 2 – Current design proposals

Under the National Planning Policy Framework (NPPF), the site would not require a site specific flood risk assessment (FRA) as:

- It is in Flood Zone 1 (low risk);
- It does not have a documented history of flooding (based on a desktop review of readily available sources);

- Plans entail the erection of temporary construction compounds with welfare facilities (excluding overnight sleeping accommodation) on existing car park (water compatible), creating less vulnerable conditions; and
- It is not identified as being located in a critical drainage area (based on the published version of the Kent Thameside SFRA).

It must be noted, that the Local Planning Authority (LPA) might have a revised updated version of the SFRA which is yet to be published. Liaison with the LPA is recommended to confirm the conclusions reached based on the published SFRA dated 2005.

Although from a NPPF perspective a FRA is not needed (based on the readily available information), the site is identified as being at potential risk of surface water flooding. Therefore, the proposed layout of the compound has been amended as much as possible to relocate water compatible uses such as the car park in the areas at highest risk of flooding (western boundary of the site).

In addition, the layout of the portacabins has been adjusted so that vulnerable units and equipment are not located within the higher risk areas. Furthermore, it is proposed that all portacabins are to be elevated 0.2m off the ground.

It is important to note that the surface water flood map is produced at a strategic level and therefore does not take into consideration any local features that would otherwise deal with surface water runoff. In this particular case, the site has a system of gullies running along its western boundary and, provided adequate maintenance of this drainage system is carried out, it is highly unlikely that ponding would occur on the site as a result of surface water runoff.

In conclusion, the risk of surface water flooding could be managed by ensuring adequate maintenance of the drainage system at the site and the layout presented above should ensure that any residual risk of flooding from this source is minimised.