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Dear Paul,

**Re: Proposed Conversion at 16 Marine Parade, Torbay Sands Hotel, Paignton - Flood Risk Statement**

TWP were appointed by PMR Architecture to produce a site-specific Flood Risk Statement to support a re-development of the above site to demolish an existing hotel and construct two 4-bedroom properties. This statement is written in accordance and to the requirements set out in the National Planning Policy Framework (NPPF) document published March 2021 and updated July 2021.

The purpose of this statement is to assess the potential flood risks that may threaten the proposed development over the course of its development lifetime and specify any required mitigation measures, as the scheme involves residential use this lifetime is 100 years.

**1.0 Existing Site**

The existing site comprises a three-storey detached hotel building with parking to the front at a lower level with an access from the road, Marine Parade. The site is located within a row of other predominantly 3 storey detached hotels and 3 storey dwellings, all fronted along Marine Parade which provides vehicular and pedestrian access and egress. The site is located at National Grid Reference SX 89663 61893.

The adjacent sites comprise a hotel which is currently going through planning to be re-developed into residential use and two large semi-detached residential properties. The rear of the property leads down to a narrow access track running parallel behind the properties. Approximately 7m from the access track lies a network rail trainline (also running parallel) that is 5m higher than the access track at the top of a wall and bank.



The site is located 20m from the high tidal line of Tor Bay, 500m north of where Occombe valley watercourse outfalls into the bay. To the north east lies the river Dart and to the south the larger River Teign, both rivers flow eastwards.

Devon County Council's (DCC) Environment Viewer does not identify any small 'ordinary watercourses' within the vicinity of the site. The Environment Agency (EA) Flood Map for Planning does identify the nearby Occombe valley watercourse as a 'main river' and so under the jurisdiction of the EA. This culverted watercourse lies 120m south of the site.

South West Water's (SWW) records show the existence of a 675mm diameter combined sewer within Marine Parade as well as a 1200mm diameter overflow combined sewer flowing towards the sea. To the rear of the property lies a 150mm diameter public combined sewer.

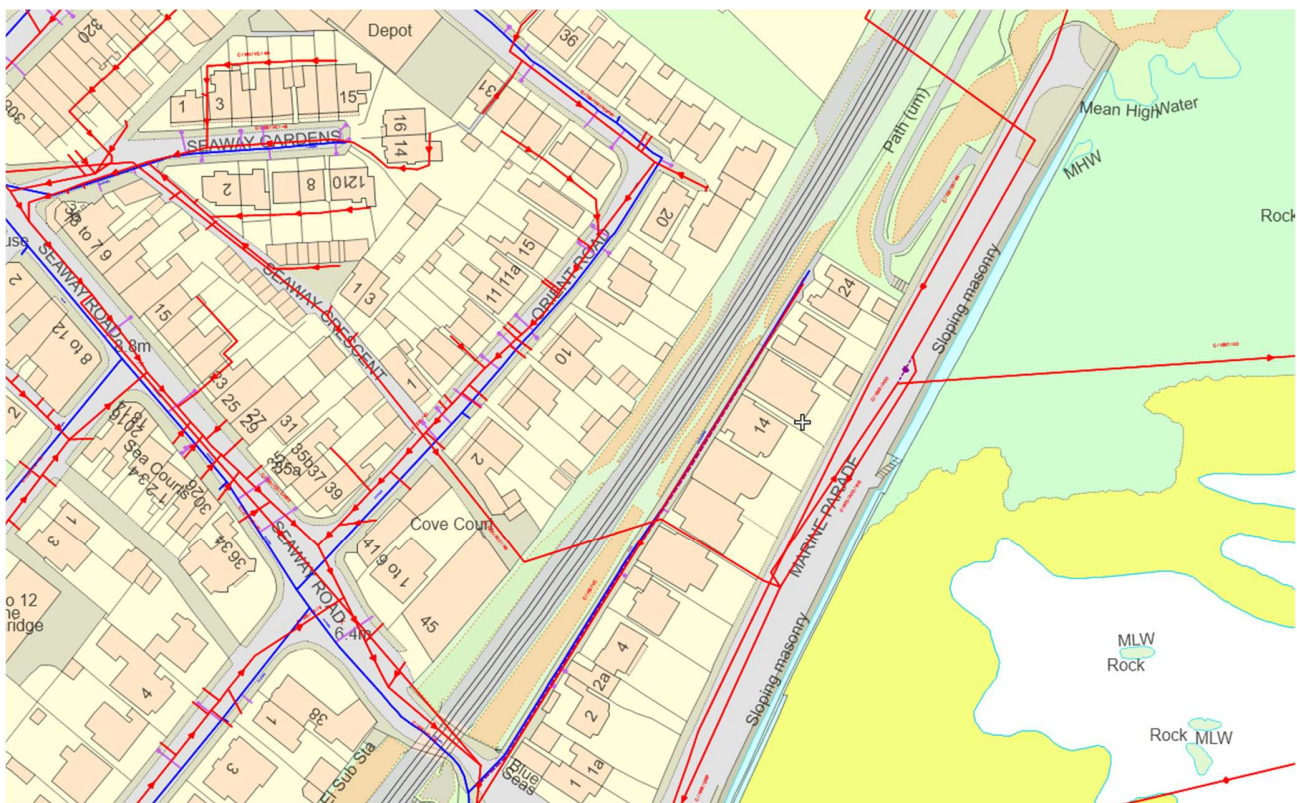


Figure 1 - SWW Sewer Map

It is envisaged all foul and surface water flows from the site currently discharge into a private network within the property's footprint, before discharging into one of the nearby existing public combined sewers.

## 2.0 Proposed Site

The scheme proposes to re-develop the existing hotel building into two 4-bedroom properties. The ground floor includes a kitchen, living room dining room, a sun room to the front leading out onto the terrace and a utility room to the rear leading out into rear courtyard. The first and second floors consist of bedrooms and bathrooms.

The proposed re-development will not change the NPPF flood risk vulnerability classification. Both hotel and residential properties are within the 'more vulnerable' flood risk classification.

SWW are yet to confirm if there is sufficient capacity within the sewer network to serve the expected flows however due to the minimal production of flows from the two properties this is not expected to cause issue.

### 3.0 Flood Risks Identified

**Flooding from rivers and sea** - the EA planning flood map shows the site is located within Flood Zone 1 and so an area with a low probability of flooding event from river or sea sources.

The DCC Environment Viewer supports the EA planning flood map by showing the site does not lie within the 'high' or 'medium' flood areas.

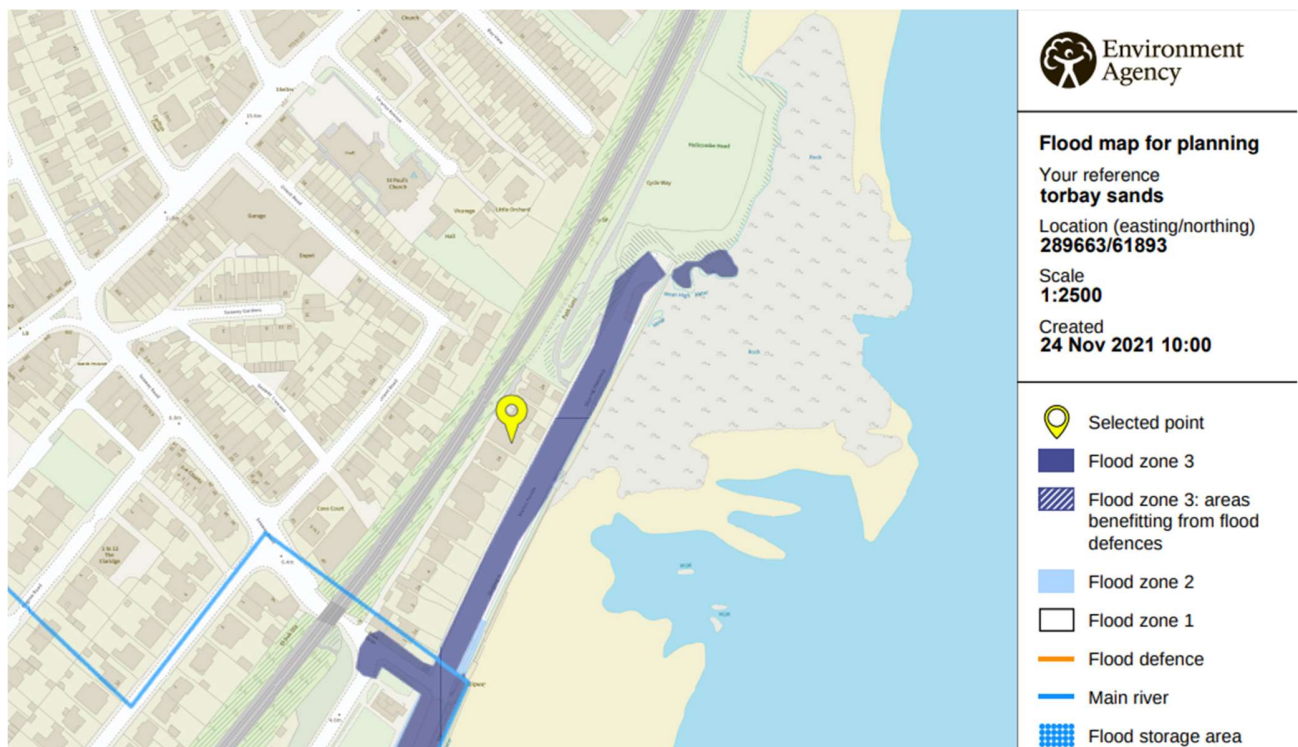


Figure 2 - EA Planning Flood Map

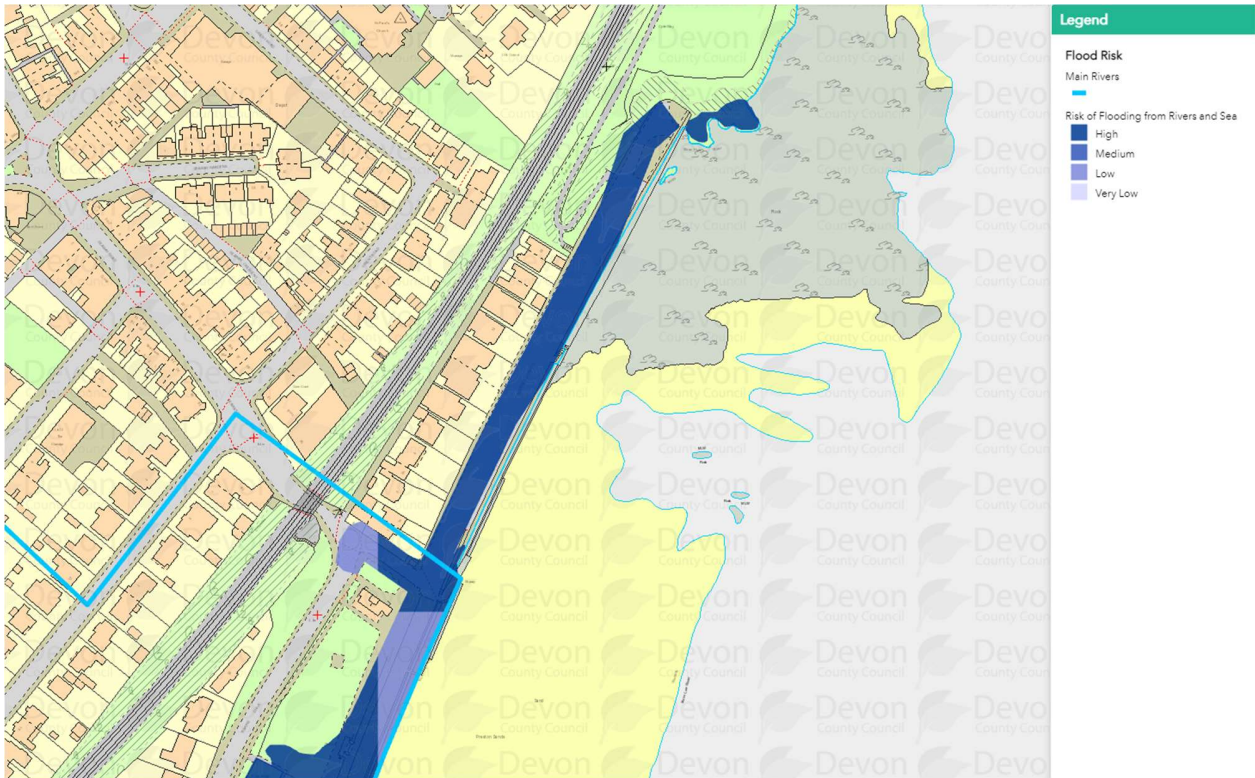


Figure 3 - DCC Rivers and Sea Risk Map

Tidal flooding poses a potential risk to the site, extracts from Torbay Council Level 2 Strategic Flood Risk Assessment (2010) show the areas of breach failure and overtopping of the defence during storm events. The site is not within this area of breach hazard.

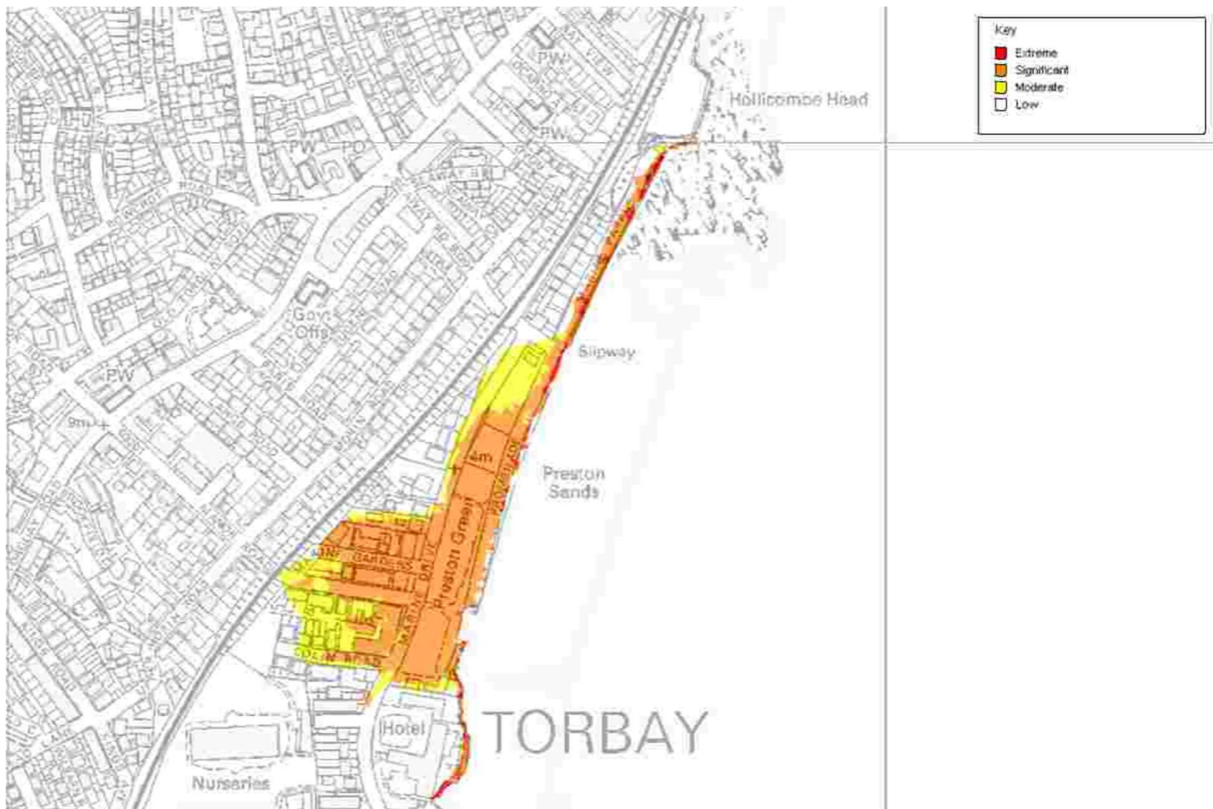
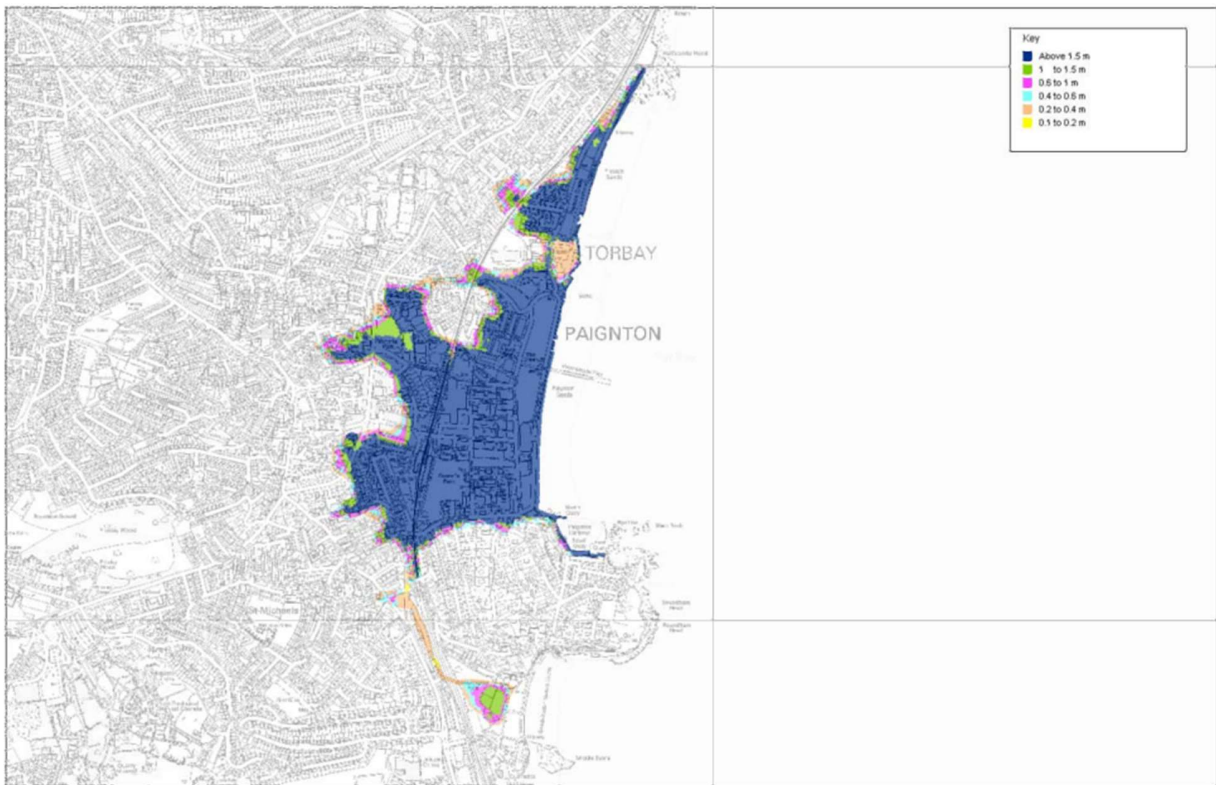
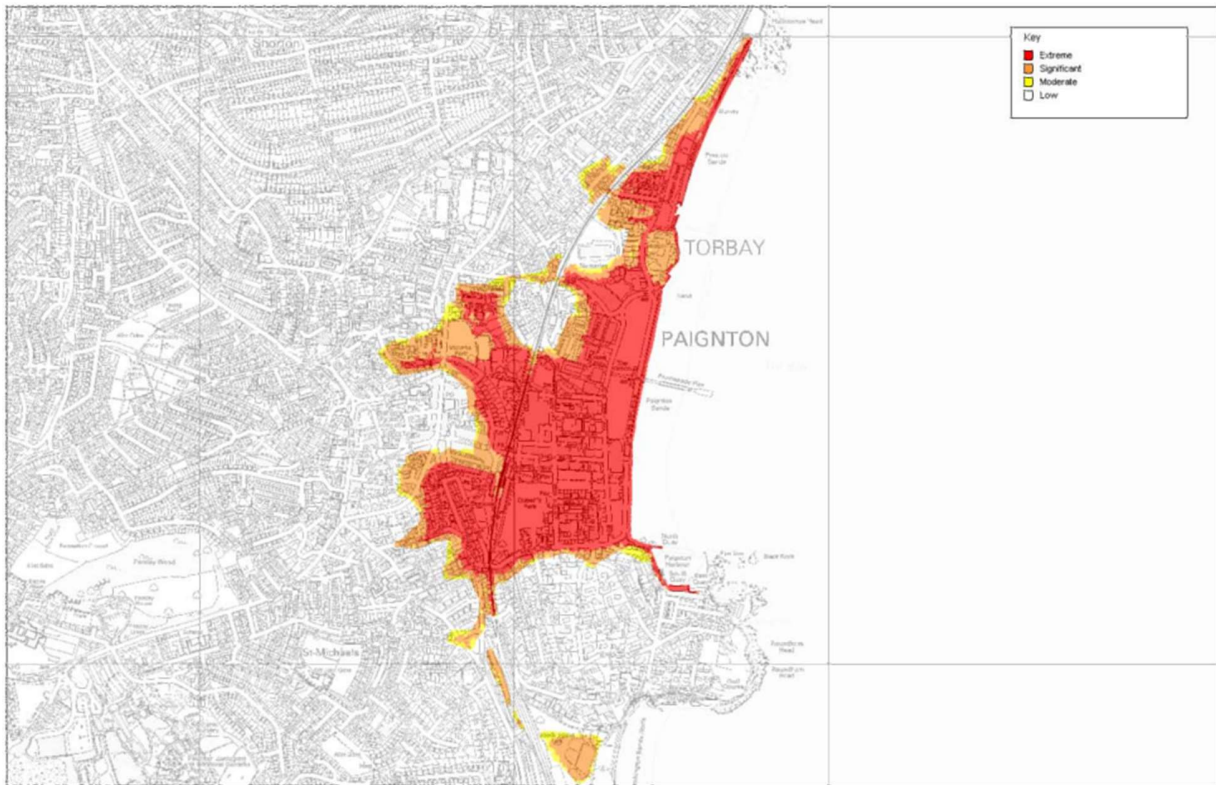


Figure 4 - Torbay Council Breach Hazard Map

Overtopping hazard and depth maps show that the site is within the area deemed as extreme or significant, this risk however is beyond the design life of the properties and so no concern.



The proposed ground floor level is +9.125m AOD, this is significantly higher than the Marine Parade levels and so flooding from rivers and sea poses no risk to the site.

**Flooding from surface water** - the DCC Environment Viewer map shows the flood risk posed by surface water runoff from rainfall events, as can be seen below the site is not at risk from any surface water flood events.

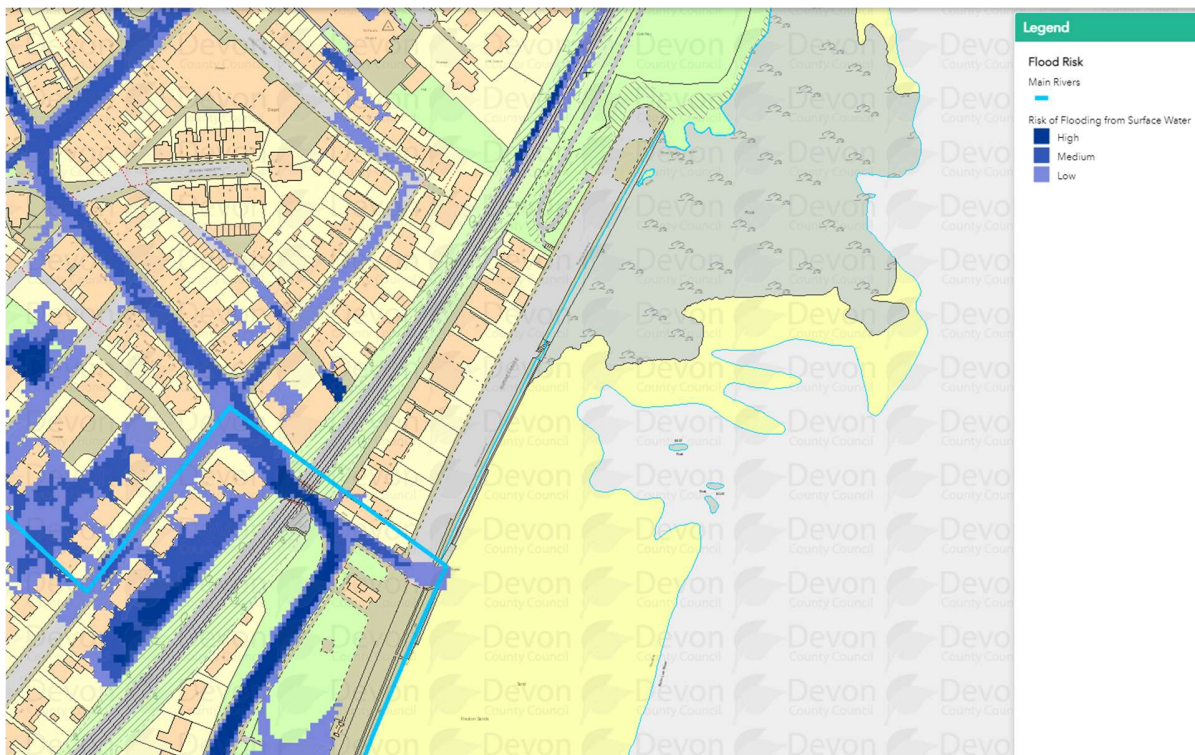


Figure 7 - DCC Surface Water Risk Map

No area within the site boundary is at risk from surface water flooding, the area of public highway and footway in which the building is accessed immediately off Marine Parade is not subject to any risk of surface water flooding. Safe access and egress throughout the design life of the properties are therefore not impeded. Safe refuge can also be provided in all areas of the buildings.

**Flooding from groundwater** - the Torbay Council Level 1 SFRA states, '*Overall ground water flooding within Torbay is not a major problem*'. There are no records to suggest otherwise.

**Flooding from drainage** - there are no known recorded instances of nearby sewer flooding from SWW or from highway drains within the Torbay Council SFRA's.

**Flooding from other sources** - there are no reservoirs or man-made lakes upstream of the site that would pose a flood risk.

**Critical Drainage Area** - The site does lie within the Torbay Critical Drainage Area (CDA) and so more stringent drainage criteria applies.

*'Minimum Drainage Standards Required*

*All new development will have to play their part in reducing current rainfall runoff rates. This requirement also applies to brown field sites that will have to match the same standards. The SUDS hierarchy should be followed, by using infiltration as far as is practicable. Further guidance on such systems can be found in the CIRIA SUDS manual and in LLFA guidance. All off-site surface water discharges from development should mimic "Greenfield" performance up to a maximum 1 in 10-year discharge rate. On-site all surface water should be safely managed up to the "1 in 100+climate change" conditions. This will require additional water storage areas to be created thereby contributing to a reduction in flooding downstream.'*

#### 4.0 Flood Risk Mitigation Measures

As the proposed residential properties are not at flood risk from any sources over the design lifetime, no flood mitigation measures are necessary.

Safe access and egress can be provided 24/7 as the expected flood waters occur only on Marine Parade. In addition, the rear access track is not liable to flooding. There is therefore no risk to loss of life to the occupants of the flats nor expected damage to the dwellings.

#### 5.0 Proposed Drainage Strategy

The proposed foul and storm drainage solutions will largely mimic the existing arrangement for the existing building.

All foul water flows will continue to discharge to the public combined sewer network, an existing drainage survey to confirm the existing arrangement and SWW to confirm capacity.

All surface water flows will continue to discharge to the public combined sewer network however each property will contain an attenuation feature with a restricted rate for each property of 1.5l/s for all storm events up to and including the 100yr +40% climate change.

#### 6.0 Conclusions

The proposed scheme is located within Flood Zone 1 and therefore suitable for residential development.

The residential areas of the site comprising the living and sleeping areas are located at a level free from all sources of flood risk.

Safe access and egress from the site can be afforded 24/7 as well as safe refuge.

We recommend the scheme is supported for planning permission.

We trust you find the above acceptable, but should you have any queries please do not hesitate to contact us.

Yours sincerely,



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