

5C Water, Drainage and Flooding

Evidence

- 5.32 The SDNPA commissioned a number of studies in 2018 and 2021. JBA Consulting undertook a Preliminary Geotechnical and Geo-Environmental Assessment Report¹⁶ and a Preliminary Building Condition, Safety and Demolition Assessment Report¹⁷ in 2018. In 2021, the SDNPA commissioned CGL to undertake a Programme of Works Report for Land Contamination¹⁸ and Motion to prepare a Foul Water Drainage Strategy¹⁹.
- 5.33 The site is not connected to a Southern Water clean water mains or wastewater sewerage network. There is an existing private system of foul and surface water drains, including outfalls to the River Adur and two existing discharges of treated effluent to the ground and surface water.
- 5.34 The foul water drainage strategy for the site is that wastewater would drain from high point to low point (**Riverside**). There are two options for the site, which could either be connected to the existing sewer network with a new pumping station or a new waste water treatment works could be provided on site.
- 5.35 Tidal risk appears to provide the greater flood risk to the site on an event rarity basis. There is no encroachment of Flood Zone 2 or 3 predicted on any of the site areas. For Flood Zone 3a, when climate change allowances are applied, it is predicted to encroach on the southern part of the **Riverside**, at the point of the access road into the area. The flood extents from this event are larger than present day Flood Zone 2 extents. While both fluvial and tidal Flood Zone 3a climate change outputs intersect this part of the site, the extent is larger in the tidal event.
- 5.36 The flood defences along the River Adur reduce flood risk to the site, so the 'actual risk' is less than indicated by the Flood Zone modelling.

Issues

- 5.37 The provision of a WTW or pumping station will impact on viability and the extent of developable land and the type of development appropriate in close proximity to these facilities.
- 5.38 When future Flood Zone 3a is considered, a small extent of **Riverside** is predicted to be within the zone, but this is confined to the southern area of the site.

¹⁶ Preliminary Geotechnical and Geo-Environmental Assessment, JBA Consulting, 2018

¹⁷ Preliminary Building Condition, Safety and Demolition Assessment, JBA Consulting, 2018

¹⁸ Shoreham Cement Works, Programme Of Works Report For Land Contamination, Removal of Existing Buildings and Drainage Investigations, CGL, 2022

¹⁹ Foul Water Drainage Strategy, Motion, 2022

How the Issues Affect the Five Areas

- 5.39 Highly vulnerable development, with basements or temporary dwellings, is considered appropriate within all parts of the site including the **Riverside** with regards to flooding.
- 5.40 Commercial uses would be appropriate in the **Riverside** with regards to drainage. Space is likely to be required in order to locate attenuation, soakaways and other sustainable drainage system (SuDS) elements as the **Riverside** is at the lowest part of the site. Therefore this should be allowed for from the earliest stages of concept design. Dwellings would be appropriate in all parts of the site with regard to drainage.
- 5.41 Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage. The **Bowl** is an area of landfill with made ground, therefore it is the least likely area to be able to utilise infiltration drainage. For the **Bowl** and the **Moonscape** areas, the proximity of SuDS features to the existing quarry sides and terraces will also need to be considered, with regard to stability.

Options

- 5.42 There are a number of options arising from the water, drainage and flooding evidence:
- It is likely that the **Riverside** is suitable for housing or commercial/retail development. It may be the preferred location for the WTW or pumping station.
 - Dwellings would be appropriate in all parts of the site with regard to drainage.
 - Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage.