FLOOD RISK

Flood Risk and Surface Water Drainage Strategy Overview

1.1 This note is in relation to the proposed residential development at Milford Golf Club, Milford, Surrey, GU8 5HS.

1.2 This note presents a summary of the Fluvial Flood Risk to the development and surrounding catchments from the River Ock located on the western boundary of the development site and describes how surface water runoff will be managed post development.

Fluvial Flood Risk (flood risk from watercourses)

1.3 Fluvial flood risk refers to the risk of flooding from watercourses. At Milford Golf Club, the source of fluvial flood risk is the River Ock which is located on the western boundary.

Flood Risk

1.4 Site specific flood modelling has been carried out to fully understand the hydrological processes at the site and in the surrounding catchments. The modelling includes a conservative climate change factor that has been added to ensure that any increase in rainfall and flows in the river as a result of climate change has been fully considered.

Flood Risk Mitigation

1.5 All properties and groundworks are located outside of the modelled flood extent. Additionally, all floor levels of properties within the development are raised to a minimum of 600mm above the maximum modelled 1in100 year flood level including an allowance for climate change. This ensures that the properties on site are protected from flooding for the lifetime of the development.

1.6 In addition to protecting the development itself from fluvial flooding, measures have been taken to ensure the development proposals do not increase fluvial flood risk elsewhere in the catchment. The development proposals will not displace any flood water and a sustainable surface water drainage strategy has been incorporated into the proposals to capture, remove contaminants, and control the release of surface water, which is described below.

Surface Water Drainage Strategy

Design Philosophy

1.7 The proposals aim to mimic the existing surface water runoff regime for the lifetime of the development by capturing, treating, and controlling the surface water runoff from the development area and discharging it into the River Ock at the pre-development runoff rate, including a 40% climate change factor to ensure its effectiveness in the future.

Surface Water Discharge

1.8 Surface water currently flows overland to the River Ock at the west of the site. Once the proposals are implemented the surface water runoff generated will be collected and discharged to this watercourse, thus matching the existing scenario.

1.9 The pre-development surface water runoff rates (often referred to as greenfield rates) for a series of storm events were calculated after considering soil type, site area and the rainfall profile for the specific site location.

1.10 It is proposed that the maximum discharge rate from the development will not exceed the existing greenfield runoff rate. Therefore, the development will maintain the existing surface water discharge rate and ensure flood risk elsewhere is not increased because of the proposals.

Surface Water Drainage Strategy Overview

1.11 To restrict the discharge rate and store the surface water on site, a series of Sustainable Drainage Systems (SuDS) are proposed in combination with a traditional piped system.

1.12 The SuDS features proposed on site have been selected to provide biodiversity, amenity, and water quality benefits in addition to providing the storage volume required to manage surface water appropriately.

1.13 The proposed SuDS features include permeable paving, swales, filter trenches and geocellular storage tanks.

1.14 Calculations have been undertaken to demonstrate that it is sufficient to store surface water during a range of storm events and not exceed the greenfield runoff rates.