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CONSULTING ENGINEERS

Technical Note

Project: Canterbury Fields Holiday Park SMA Ref: 5485

Subject: **Drainage Statement**

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1.0 INTRODUCTION

1.1. This Technical Note has been produced by Stuart Michael Associates (SMA), Consulting Engineers, with regard to the drainage strategy, for the proposed Darwin (Canterbury Fields) Ltd (the Applicant) development located at Canterbury Fields Holiday Park off Stone Street, Canterbury, CT4 5PL.

1.2. The proposed development site is located within the administrative boundary of Canterbury City Council (CCC), the Local Planning Authority (LPA) and Kent County Council (KCC) the Lead Local Flood Authority (LLFA) for the area.

2.0 SURFACE WATER DRAINAGE

2.1. The proposed SW drainage strategy utilises trenches to control surface water runoff from the lodges and roadways across the site (via gravity pipework) to a cellular storage structure located to the west of the site, which is infiltrating the collected runoff into the ground.

2.2. The cellular storage structure does not produce a discharge, as it infiltrates the collected runoff completely into the ground.

3.0 FLOOD RISK

3.1. The Site is located in Flood Zone 1, as indicated on the Environmental Agency's (EA's) Flood Map for Planning, and is therefore at low risk of fluvial flooding. Additionally the site is shown at being in very low risk of flooding from surface water.

4.0 FOUL WATER DRAINAGE

4.1. There is an existing public foul water sewer that traverses through the site from south to north (just west of the neighbouring properties) and is maintained by Southern Water.

4.2. The proposed FW drainage strategy utilises pipework from each lodge to a carrier system, discharging into the existing public foul sewer, either directly via a gravity system or via a private packaged pumping station.

5.0 DRAINAGE STRATEGY

5.1. The surface water drainage strategy incorporates a cascaded system consisting of trenches surrounding the caravans, discharging into trenches along the roadway which are then discharging into a cellular storage structure which is infiltrating into the ground. In addition, a swale will be constructed on top of the cellular storage facility to provide sufficient storage for the 100 year rain event plus 30% climate change. **Drawing 504/23** highlights the amended proposals.

5.2. In accordance with the Non-statutory technical standards for sustainable drainage systems (NTS) conditions **S1** to **S6**, runoff will infiltrate into the ground, causing no runoff peaks exceeding the Greenfield runoff of the site.

5.3. The drainage system has been designed to attenuate runoff from the proposed development with no surface flooding for all rainfall up to and including the 100 year 30% climate change event and is therefore in accordance with conditions **S7** and **S8** of the NTS.

5.4. The site falls towards the cellular storage structure located at the western boundary. In extreme rainfall conditions (i.e. rainfall in excess of the 100-year event), that exceed the design storage of the trenches and cellular storage, any flooding would be directed towards the western side, away from the caravans. This exceedance route would minimise the damage to people and property in accordance with condition **S9** of the NTS. In addition, all caravans will have a floor level significantly higher than the existing ground level.

5.5. The foul water drainage strategy incorporates connecting each lodge to a carrier system. All Lodges connect directly to the public foul sewer via a gravity system, except Lodges 14 to 22. These lodges connect via a gravity system to a private packages pumping station, located on the western side (low) of the site, near lodge 19. The FW is then pumped via a rising main to a higher, centrally located gravity carrier system.

6.0 CONCLUSION

6.1. To conclude, it is considered that for the surface water drainage for the site development, it is possible to provide sufficient storage and infiltration within the SuDS Management Train proposed for the Site, minimising any risk of surface water flooding up to and including the 100-year event plus 30% climate change.

6.2. The foul water drainage can be collected and discharged to the existing public foul water sewer that traverses through the site.