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36939/L/003/C/DK/dk

02<sup>nd</sup> February 2020

**RE: DOVER ROAD, SANDWICH – PLANNING CONDITION 11 ‘SURFACE WATER DRAINAGE’ – Response to KCC letter received 8<sup>th</sup> January 2021 (Ref: DDC/2020/082031)**

## BACKGROUND

This statement has been prepared to address the comments raised by KCC on 8<sup>th</sup> January 2021 (Ref: DDC/2020/082031) and also the subsequent pre-application meeting on Friday 29<sup>th</sup> January 2021.

## ITEMS RAISED BY KCC

1) During planning approval 18/00681, the River Stour Internal Drainage Board recommended confirmation of "drainage routes (including the downstream route and condition of the receiving watercourse and culverts)". The LLFA would seek confirmation as to whether connectivity has been confirmed and the impact of any over attenuation within the ditch and any additional impacts on drainage of the surrounding fields.

KHP Response: We have undertaken the following (note that we will also submit this to the IDB once confirmed as acceptable by yourselves):

A condition survey of the existing ditch has been undertaken (please see the attached photos along the full length of the ditch at the end of this response). As you can see the existing ditch is in good condition and even after the sustained period of heavy rain recently water levels are very low. We have also undertaken an onsite survey of the existing ditch levels in addition to the topographical survey completed at an earlier date, these levels correlate and show that the ditch falls towards Dover Road.

Regarding the second half of the query, we can confirm that there will be no over attenuation of the existing ditch as the greenfield runoff rate has been matched. The existing site broadly falls from east to west and this is replicated within our design therefore we do not anticipate any drainage impacts on the existing fields surrounding the development. A CCTV survey has been undertaken to ascertain the final outfall location and this has shown that the ditch makes a piped connection under Dover Road. Please see the attached drawing reflecting this.

2. The Drainage Strategy report prepared by Considine at the full planning stage (18/00681) proposed a combination of permeable paving and attenuation tanks to provide on site storage/ conveyance prior to discharge. Since the full submission, a detailed strategy has been developed whereby the permeable paving is no longer a feature and instead solely rely's on numerous attenuation tanks around the site. No clarification has been provided as to why the permeable paving option has been removed from the design. The LLFA actively pursue developments to use a multiple drainage features against a pipe and tank solution that does not offer any benefits in terms of sustainability. This is important given the removal of the permeable paved solution that has the added benefit of removing pollutants, prior to offsite discharge.

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KHP Response: As discussed at the pre-application meeting, we have taken on board your comments regarding the permeable paving. The Phase 2 Geo-Environmental Assessment (completed by Ecologia in November 2020) indicated very low or zero infiltration rates, therefore we have proposed lined permeable paving where the levels allow in the shared parking courts to provide the benefits of pollution removal. This will also allow the pavements to be maintained by the private management companies to ensure maximum efficiency of the drainage system.

3. The scheme presented at the full planning stage proposed for the outfall to be situated at the southern most point of the site, within a corridor of open space. The latest Drainage Layout drawing (CON599-3200, Revision P1) now proposes an outfall that transects under plot 12's driveway and garden before connecting to the ditch. It is not clear to us how access and subsequent maintenance can be provided at this location and would advise for any new outfall to be situated within an open space corridor, outside of 3rd party land.

KHP Response: Noted, as agreed at the meeting we have relocated the outfall location to the area south of Plot 7 in 3<sup>rd</sup> party land (this was also the location agreed at the planning submission stage).

4. The Drainage Layout drawing (CON599-3200, Revision P1) shows a large cellular tank in the green space area. We note that three trees are proposed to be situated over the tank. The LLFA advise against the planting of trees close to or over below ground features to mitigate any potential damage from root development. It is therefore recommended that the tree positions are relocated or suitable protection measures are in place to protect the tank

KHP Response: Noted, all trees will be positioned outside of the tank extents with appropriate tree root protection measures to prevent future clashes.

5. It is understood by the Drainage Statement from Knapp Hicks (14th December 2020) and supporting microdrainage calculations that the design has been tested for storm events up to the 100 +30% climate change. As per our current requirements, we would seek that a climate change value of 40% is applied and a simulation ran to understand the implications of a greater event.

KHP Response: As agreed in the pre-application meeting, we have updated the Drawing No CON599-3200 to suit the 1:100 year plus 30% climate change storm (the main difference being the tank has got smaller in the central green area) and have also added the exceedance route for both the 1:100 year 30% & 40% storms onto Drawing CON599-3200.

The expected flood volumes for the extreme events are lower than that discussed at the meeting (approx. 70m<sup>3</sup> during the 40% storm, spread over several locations), we assume that this acceptable as it will not encroach inside properties.

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**Ditch Photos**



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