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8242: LAND AT PUMP FARM AND BLOORS FARM, LOWER RAINHAM

ADDENDUM NOTE: Information for Habitats Regulations Assessment – Update with regards to Hydrological Matters

Introduction and Background

1. This Addendum Note has been produced by Ecology Solutions on behalf of AC Goatham & Son and relates to the development proposals for Land at Pump Farm and Bloors Farm, Lower Rainham, Kent (hereafter referred to as the site) (Medway Council reference: MC/19/1566).
2. The planning application was supported by a document entitled *Information for Habitats Regulations Assessment* (IHRA) produced by Ecology Solutions (dated May 2019), which outlines a detailed assessment of the proposals in light of international / European designated sites.
3. Following submission of the planning application, a consultation response was provided by Natural England (dated 1 August 2019). In the letter, further information was requested with regards to the proposed surface water drainage strategy, in order “to demonstrate that measures can be implemented to ensure that contaminated surface water does not enter the River Medway”.
4. Subsequently, a Technical Note entitled *Surface Water Drainage Strategy Addendum* (SWDS Addendum) has been produced by Stantec (dated January 2020), which summarises the findings of further assessment and modelling work which has been undertaken (including infiltration testing) and provides further clarity with regards to the proposed surface water drainage strategy.
5. In light of this additional information, this Addendum Note has been produced to update the relevant section of the IHRA insofar as it relates to hydrological matters (specifically, paragraphs 5.42 to 5.50 inclusive). This Note should be read in conjunction with both the SWDS Addendum and also the IHRA.

Summary of SWDS Addendum

6. As outlined in Sections 4 and 5 of the SWDS Addendum, since the planning application was submitted borehole permeability testing has been undertaken at the site. The results of this work have confirmed that infiltration is indeed a suitable surface water drainage solution for the site. This has therefore

informed an updated Drainage Strategy, which is included at Appendix B of the SWDS Addendum. The assumption made (on a precautionary basis) in paragraphs 5.47 to 5.50 inclusive of the IHRA that a “no-infiltration” system would be required is therefore no longer relevant to the development proposals.

7. As illustrated at Appendix B of the SWDS, the Drainage Strategy involves the use of a number of soakaway basins across the site, each of which contains multiple deep bore soakaways and serves the relevant development plot/s. Swales and filter drains are proposed to treat and convey surface water runoff through the new development to the soakaway basins and interconnect these basins during exceedance events. As a result, surface water will be discharged directly to the ground, and no direct discharges into either existing surface water sewers or watercourses which discharge into the River Medway are proposed. It is therefore clear that the surface water drainage strategy will not be hydrologically connected to the international / European designated sites.
8. Notwithstanding the above, the SWDS Addendum provides further clarity with regards to how the drainage strategy has been designed to ensure that it will fully address surface water requirements, including details with regard to the mitigation measures which are proposed.
9. As outlined in Sections 7 and 8 of the SWDS Addendum, in order to inform the surface water drainage scheme, detailed consideration has been given both to existing and proposed discharge rates at the site, and also to the attenuation requirements of the proposed development (in light of the various catchment areas within the site). This detailed approach ensures that the measures proposed are fully adequate for the development proposed and provide the required capacity to address surface water runoff.
10. The SWDS Addendum notes that the drainage proposals can accommodate surface water runoff from the proposed development with no flooding for all storms up to and including the 1 in 100 (1%) annual probability plus 40% climate change event. Furthermore, the SWDS Addendum shows that the proposed soakaway basins will be equipped with freeboard to accommodate flood water in the event of exceedance, including extreme/bigger storms than the 1 in 100 (1%) annual probability plus 20/40% climate change event. As such the drainage strategy has been designed to ensure that there will be no discharge of flood water into the international / European designated site.
11. However, in a worst-case scenario, where the freeboard of the proposed basins is surpassed, flood water would be directed by basin overflows, conveyance swales and site wide exceedance routes towards Pump Lane and Lower Rainham Road and will drain towards the River Medway. The likelihood of such an extreme flooding event is considered to be exceptionally low indeed light of the design parameters; moreover, it is important to reiterate that the current situation involves discharge of surface water runoff to the Medway Estuary from the site.
12. Sections 10 and 11 of the SWDS Addendum outline the mitigation and pollution control measures that form an integral part of the drainage strategy. These measures will include the use of Sustainable Urban Drainage Systems (SuDS) such as permeable paving, filter drains, swales, and detention basins with deep bore soakaways. These SuDS features in combination provide water quality treatment such as removal of sediments, metals and hydrocarbons from the

surface water runoff, slow down the contribution of the surface water runoff into the drainage system and provide onsite attenuation.

Conclusions

13. In summary, the updated drainage strategy as outlined in the SWDS Addendum confirms that the use of on-site infiltration via deep bore soakaways will avoid any requirement for surface water discharge from the new development to either existing surface water drains or watercourses which lead into the River Medway. As such, there is no direct hydrological link between the proposed development and the international / European designated sites.
14. Moreover, through the use of SuDS measures as outlined in the SWDS Addendum, potential pollutants will be fully addressed, such that there will be no impacts to off-site habitats or species, including those associated with the Medway Estuary. The SWDS also provides reassurance that the measures proposed are fully adequate to mitigate for the scale of development proposed at the site.
15. It is important to note that the final strategy for surface water runoff control at the site will necessarily need to be confirmed at the detailed design stage. However, in light of the information outlined in the SWDS Addendum, the risk of potential adverse effects (via hydrological pathways) occurring as a result of the development proposals is considered to be *de minimis* in nature.
16. On this basis, it may be concluded that the development proposals would not be likely to have a significant effect on the European / international designated sites via hydrological impacts, either considered alone or in combination with other plans or projects.
17. Furthermore, it is considered that no specific mitigation (beyond that which is proposed as an inherent part of the scheme) would be required in order to reach this conclusion.