Title: Applicant Response to Hertfordshire County Council LLFA Consultation Response

Date: 29th August 2024

1.0 Introduction

1.1 Jubb has been commissioned by Hallam Land Management Ltd to provide flood risk and drainage advice in relation to the proposed development of land located to the south of Baldock Road (A507), west of Buntingford in Hertfordshire.

1.2 A planning application (Reference: 3/24/1255/OUT) was submitted for the following:

"Outline planning application for development of employment land (flexible use B2, B8, E(c) and E(g)), informal open space, associated works and infrastructure including a new access from A507, with all matters reserved except for access."

1.3 A Flood Risk Assessment and Drainage Strategy (FRADS(S)-01_v3), dated 14th June 2024, was prepared by Jubb and submitted with the planning application.

1.4 Hertfordshire County Council (HCC), in its role as the Lead Local Flood Authority (LLFA), have provided a consultation response to the planning application on 16th August 2024.

1.5 This technical note provides a formal response to the comments received from HCC LLFA in its consultation response, with an updated FRA report produced which includes additional information.

2.0 Applicant Response to LLFA Comments

2.1 **Table 2.1** summarises the comments received from HCC and the applicant response.

No.	LLFA Comment	Applicant Response
1	Include evidence of appropriate freeboard to finished floor levels from the design flood level. Commitment to raising finished floor levels (minimum of 150mm above external ground levels) should be stated.	As mentioned in Section 9.2.2 of the FRA report, 'finished floor levels should be set a minimum of 150mm above existing levels'. The development proposals are therefore committed to and will ensure that finished floor levels are set a minimum of 150mm above external ground levels.

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2	Evidence required on ground conditions/ BRE365 or similar infiltration testing/ dissolution potential/ seasonally high groundwater levels. We note that no ground investigation has taken place – we would usually expect testing to be carried out to confirm the viability of infiltration techniques.	Based on the currently available information it is anticipated that the discharge of surface water run-off via the use of infiltration techniques will not be feasible. As a result, an alternative attenuation strategy is the preferred option which has been proven to be a viable solution. Further ground investigation works will be undertaken across the proposed site as the site is taken forward to confirm the assumption that infiltration is not a viable option. At the outline planning stage, an attenuation strategy has been demonstrated as a viable strategy for the development. We would therefore suggest that the requirement for infiltration testing is covered by a suitably worded condition with the testing to be undertaken as the site is taken forward.
3	Surface watercourse – does it connect to the wider network and is there permission and there are agreed access locations for proposed outfalls with the riparian owner? It is not clear where the ditch is located that the site is proposed to discharge into – this should be shown on a plan. We would also expect it to be demonstrated how this ditch links with the wider watercourse/sewer network. In addition, the applicant should clarify that this watercourse will have sufficient capacity to take the onsite flows. It is unlikely that the ditch currently takes runoff from the entirety of the site as a result of the topography and so discharging all the runoff into one point in the ditch could potentially increase the flood risk downstream.	The existing site falls within the catchment of the River Rib, with flows from the site conveyed to the east and ultimately discharged to the River Rib as it runs through Buntingford, approximately 700m to the east of the site. The topography of the existing field falls steadily in an easterly direction, with the majority of land falling towards the low point located in the south-east corner of the site. An existing drainage ditch runs along the eastern and south-east site boundary, before being culverted beneath the A10 in the south-eastern corner of the site. The culvert conveys flows offsite beneath the A10 into an existing drainage ditch which runs in a north-easterly direction to the rear of the properties of Longmead. The ditch then joins the public surface water sewer network to the south of Baldock Road near Monks Walk. This network then continues in an easterly direction towards Chapel End, where the flows are ultimately discharged to the River Rib. The drainage strategy plan has been updated to highlight the existing ditch/ outfall location within the site and the offsite connectivity of the existing ditch. The plan is included in the updated FRA report (FRADS(S)-01_v4). The drainage strategy proposes to discharge flows from the development at a restricted greenfield Qbar rate, based on the developable area for all storm events up to the 1 in 100-year plus climate change. This rate has been combined with the greenfield rate for the area of the site which currently discharges to the ditch but will remain undeveloped.

No.	LLFA Comment	Applicant Response
		This rate has then been reviewed against the existing greenfield rate for the proportion of the site which drains to the existing ditch. The comparison shows that during the smaller rainfall events, the discharge from the developed site is slightly higher in comparison to the existing greenfield discharge from the proportion of the site which discharges to the ditch. This is well below the pipe capacity of the culvert beneath the A10, which will be less than the available capacity in the open downstream ditch. Therefore, its considered that flooding won't occur during these lower return period events. During the larger rainfall events, the discharge from the development is significantly lower than the existing greenfield rate. Consequently, the proposed development provides a significant betterment compared to the existing greenfield scenario during these events. It is therefore considered that the existing ditch and culvert have sufficient capacity to accommodate the development proposals, with the proposals providing betterment during a large number of storm events and therefore do not increase the risk of flooding downstream.
4	Outline drainage modelling calculations should be resubmitted using a CV value of 1.	The proposed drainage calculations have been revised with CV values set equal to 1 for the summer and winter events. A copy of the updated drainage calculations and drainage strategy plan have been included in Appendix E of the updated FRA report.
5	High level assessment of the maintenance of any SuDS features and structures and who will be adopting these features for the lifetime of the development. Informative: Although a short section on maintenance has been provided in Section 8 of the FRA, we would also usually expect this to provide an indication of the specific maintenance activities which would be required for each drainage component.	The operation and maintenance requirements for the proposed SuDS features has been considered based on Chapter 32 of Ciria C753. Section 8 of the FRA (FRADS(S)-01_v4) has been updated to include further details on the specific maintenance activities relating to each drainage component.

No.	LLFA Comment	Applicant Response
6	A high-level assessment of how water quantity and water quality will be managed during the construction phase is required. Identifying high level assumptions of a construction management plan, such as the need to discharge to a sewer or watercourse with appropriate pollution measures.	Throughout the construction phase of the development the contractor will be required to ensure that appropriate provisions are put into place to ensure that the water quality of the surface water discharge from the site is being maintained. This will involve measures to prevent silts and other construction waste being conveyed offsite through surface water run-off. At this outline planning stage, we would suggest that a construction management plan including details of how water quantity and quality will be managed is covered by a suitably worded condition, with further details to be provided as the site is taken forward and a contractor is onboard.