Calderdale Local Plan

LP1229 – FLOODING AND ECOLOGY IMPACT CONSULATION OF EMBANKMENT OVER OVENDEN BROOK

Calderdale Metropolitan Borough Council

July 2021

LP1229 – FLOODING AND ECOLOGY CONSULATION ON POTENTIAL IMPACT OF EMBANKMENT OVER OVENDEN BROOK

1. Introduction

1.1 The Stage 2 Hearings of the Examination of the Local Plan concluded on Friday 4th December 2020. The Council are now working through the tasks and modifications resulting from the hearings. These item tasks can be found in CC85 – Stage 2 Draft Task List.

1.2 During the hearing on 'Matter 18 – Halifax Housing Allocation', the Inspector recommended the Council to seek comments from consultees regarding ecology and drainage impacts of providing a potential embankment over the beck. (CC85 - Item 154). The Council's Ecology Officer and Flooding Engineer have provided the comments below.

2. Ecology Officer's Comments

2.1 The Council's Ecology Officer has some minor concerns around providing an access over Ovenden Brook by ways of an embankment given the access arrangements are currently only preliminary, no ecological survey work or impact assessment has been undertaken for the access and due to the Wildlife Habitat Network being very narrow at this point. (see figure 1). However, the Council's Ecology Officer considers an embankment is likely to be acceptable provided that the scheme is very carefully designed and informed by detailed ecological assessments and the passage of wildlife along the Wildlife Habitat Network is maintained.

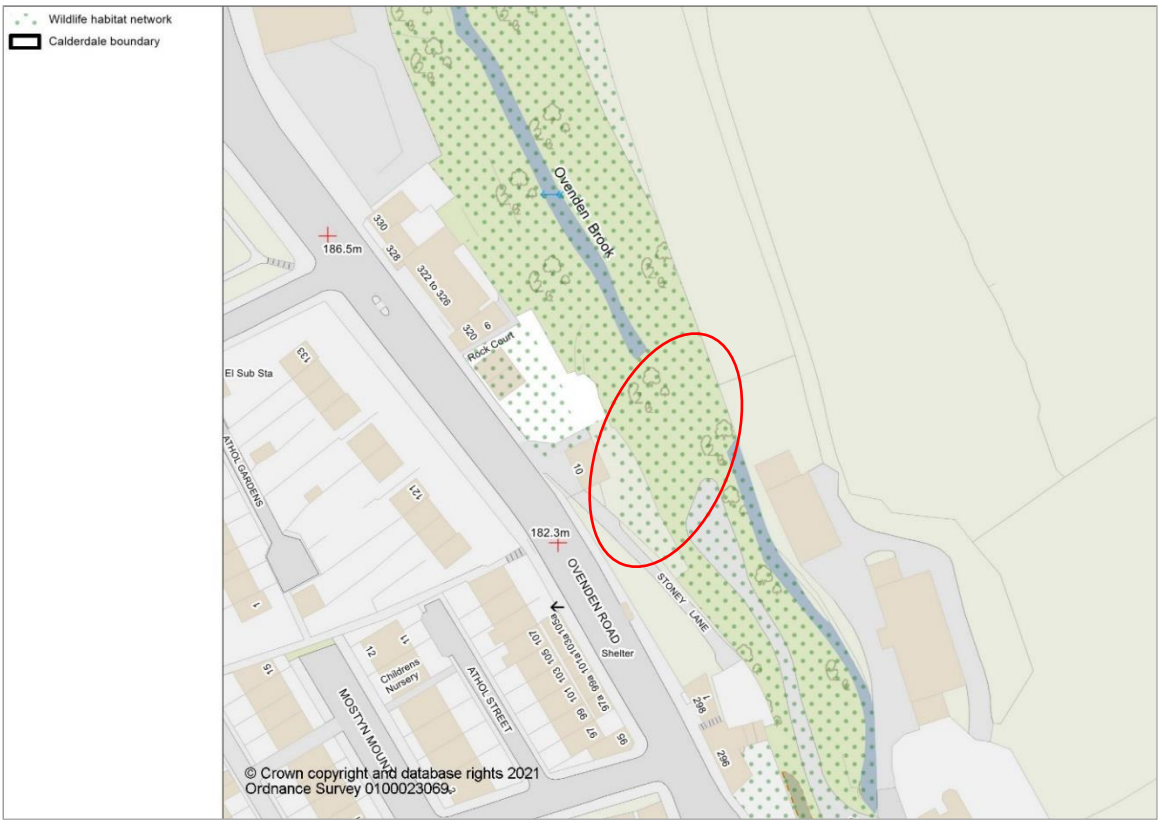

Figure 1: Wildlife Habitat Network at proposed Ovenden Road/Ovenden Brook Access

2.2 Furthermore, the purpose of 'GN3 – Natural Environment' seeks to achieve a better management of the Calderdale's natural environment. One of the criteria of policy GN3 states "Where opportunities arise, water bodies should be taken out of culvert, or daylighted if not possible, and physical barriers made passable to fish species. Under exceptional circumstances where culverting is delivered, daylighting should be integrated for habitat protection." Therefore, to ensure we are continuing to

seek improvements to this designated Wildlife Habitat Network along Ovenden Brook the Council considers it appropriate to include two additional Site Specific Considerations in Appendix 1 of the Plan. These are:

- Explore opportunities to deculvert Ovenden Brook where possible
- Assess the impact of retaining the culvert on the effectiveness of the Wildlife Habitat Network and seek opportunities to improve habitats

3. Flooding Engineer's Comments

3.1 The Council's Flooding Engineer considers an embankment crossing proposal will need to be carefully designed as to not impact on flood risk at the site or elsewhere. As Ovenden Brook is an Ordinary Watercourse (OW), works to or near this point, the applicant would also need a OW Consent to be submitted to the LLFA for consideration.

3.2 Regarding the use of an embankment to cross the Ovenden Brook, hydraulic modelling will be required to demonstrate that any proposals do not increase flood risk elsewhere and that flood waters are managed at the site. This will also require a site-specific Flood Risk Assessment to be submitted to demonstrate that any proposals do not affect flood risk at the site or elsewhere.

3.3 The drainage hierarchy should be reviewed and options to discharge development surface via infiltration should be explored. As an undeveloped site, Greenfield Drainage Principles should be utilised.

3.4 The Flooding Engineer has also provided additional informatives (see appendix) which will need to be addressed at Planning Application stage.

4. Conclusion

4.1 Based on the comments received from the Council's ecology and flooding officers it is considered that an access by way of an embankment could be suitable subject to ecological and flooding assessment to inform careful design. The two Site Specific Considerations recommended by the ecology officer will be added to Appendix 1 of the Local Plan. A Flood Risk Assessment including hydraulic modelling is already identified as a report required in the Appendix, therefore additional requirements are not necessary.

Appendix – Flooding Engineer's Informatives

1. A full Flood Risk Assessment is required for this development as it falls within one of the following: -
    a. In flood zone 2 or 3 including minor development and change of use
    b. More than 1 hectare (ha) in flood zone 1.
    c. Less than 1 ha in flood zone 1 and including a change of use in development type to a more vulnerable class (for example from commercial to residential) or where they could be affected by sources of flooding other than rivers and the sea (for example surface water drains, reservoirs) or in an area within flood zone 1 which has critical drainage problems as notified by the Environment Agency.

    The applicant should provide the Local Planning Authority with a completed full Flood Risk Assessment for comment for the site. Guidance on producing a flood risk assessment can be found here: https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-all

2. The applicant should demonstrate compliance with the hierarchy of surface water disposal. This will comprise an assessment to dispose of waters from all roof and paved areas via ground infiltration, to watercourse, to surface water sewer and finally to combined sewer in that order of priority. Initially the site should be investigated for its suitability for infiltration drainage techniques as a means of disposing surface water. Only if this proves impracticable, or other mitigating reasons, should the lesser disposal methods be considered in priority order. Any sustainable drainage system features should be designed in accordance with SuDS Manual C753. The applicant should carry out a ground investigation percolation test and submit their findings to the Local Planning Authority for comment.

3. The applicant should provide hydraulic calculations together with drawings showing pipe numbers and contributing area to the Local Planning Authority for comment to demonstrate that the completed site surface water drainage system from all roof and paved areas will accommodate the following design parameters:-
    a. No system surcharge during a 1 in 2 year storm plus 30% for climate change.
    b. No surface flooding during a 1 in 30 year storm plus 30% for climate change.
    c. No internal flooding to property including access and egress areas during a 1 in 100 year storm plus 30% for climate change unless otherwise addressed in the approved Flood Risk Assessment.

4. Separate foul and surface water drainage systems should be provided on the site. In cases where both foul and surface water discharge to a public combined sewer they should remain separate and only join at a point that is as close as practicable to the public sewer. Shared foul and surface water drainage manholes will not be permitted.

5. The applicant should provide the Local Planning Authority with a plan layout drainage drawing for comment giving existing and proposed levels and showing pipe diameters and gradients, manhole locations and diameters, gully locations, SuDS systems, roof drainage, paved areas and soil pipe connection points, and where access points are to be provided for maintenance. Where new pipes are to be laid under highways, pipe trench and sewer connection details should also be included on the drawing.

6. The applicant should provide the Local Planning Authority with a drawing showing ownership and maintenance liability of all drainage systems associated with this development. A management and maintenance plan for the lifetime of the development shall also be provided which shall include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the system throughout its lifetime.

7. Surface water discharge to a watercourse should only be considered if infiltration as a means of surface water disposal proves impractical. The discharge to the watercourse is to be limited to the greenfield runoff (Qbar) calculated in accordance with Institute of Hydrology Document 124 or 2 ltrs/sec/ha for up to and including the 1 in 100 year storm event plus 30% allowance for climate change, whichever the greater. This is subject to the applicant investigating the receiving watercourse to ensure that it is hydraulically adequate downstream and to provide the Local Planning Authority with a report of the findings for comment.

8. Under Section 23 of the Land Drainage Act any works to an ordinary watercourse [every river, stream, ditch, drain, cut, dike/dyke, sluice, sewer (other than a public sewer) and passage through which water flows and which does not form part of a main river] will require consent from the Lead Local Flood Authority, Calderdale MBC, prior to works on the watercourse commencing. This is required for both temporary and permanent works and is separate to any planning permission granted or other consents issued. Please visit http://www.calderdale.gov.uk/v2/residents/environment-planning-and-building/flooding/watercourses-land-drainage for further information and an application form. Alternatively, please contact llfa@calderdale.gov.uk for an application form.

9. The drainage design should include a collection system that prevents overland surface water flows from any part of the development discharging onto the public highway or neighbouring land.

10. The applicant should provide the Local Planning Authority with a drawing showing the flood exceedance routes above the 1 in 30 year plus 30%, for climate change, events and emergency escape routes that are clear from flood water up to and including a 1 in 100 year plus 30%, for climate change, storm event for comment.

11. The applicant should demonstrate compliance with the hierarchy for foul water disposal. This comprises discharge to public sewer, to package sewage treatment plant (which can be offered to the Sewerage Undertaker for adoption), to septic tank, and finally to cesspool in that order of priority. Only if following the hierarchy proves impracticable, or other mitigating reasons, should the lesser disposal methods be considered. The applicant should carry out a hierarchy assessment and submit his findings to the Local Planning Authority for comment. Refer to the following for more information - https://www.calderdale.gov.uk/v2/residents/environment-planning-and-building/planning/apply-planning-permission/local-list and select 'Foul sewage and drainage assessment'.