Lancashire County Council

Contact: Please contact the Local Planning Authority

Date: 15 August 2022

Dear Local Planning Authority,

Thank you for inviting the Lead Local Flood Authority to comment on the below application.

PLANNING APPLICATION CONSULTATION RESPONSE

Application Number:	FUL/2022/0149
Proposal:	Full planning application for the erection of 200 dwellings and associated works.
Location:	Hollin Cross Farm Woodplumpton Road Burnley Habergham Eaves Lancashire BB11 3RS

The Lead Local Flood Authority is a statutory consultee for major developments with surface water drainage, under the Town and Country Planning (Development Management Procedure) (England) Order 2015. It is in this capacity this response is compiled.

Comments provided in this representation, including conditions, are advisory and it is the decision of the Local Planning Authority whether any such recommendations are acted upon. The comments given have been composed based on the extent of the knowledge of the Lead Local Flood Authority and information provided with the application at the time of this response.

Lead Local Flood Authority Position

The Lead Local Flood Authority **maintains its objection** to the above application on the basis of:

(Further information and concerns are detailed in the site-specific comments at the end of this letter. The calculations provided to the Lead Local Flood Authority (dated 30.06.22) only show the post-development situation and thus do not address the reasons for objection, which relate to the pre-development runoff characteristics. We also wish to raise significant concerns regarding the proposed site layout.)

Objection(s)

Objection 1 – Inadequate Surface Water Sustainable Drainage Strategy

In the absence of an acceptable surface water sustainable drainage strategy to assess the principle of surface water sustainable drainage associated with the proposed development, we object to this application and recommend refusal of planning permission until further information has been submitted to the Local Planning Authority.

Reason

Paragraphs 167 and 169 of the National Planning Policy Framework require major developments to incorporate sustainable drainage systems that:

- take account of advice from the Lead Local Flood Authority;
- have appropriate proposed minimum operational standards;
- have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and
- where possible, provide multifunctional benefits.

The submission of basic information on how surface water is intended to be managed is vital if the Local Planning Authority is to make informed planning decisions. In the absence of acceptable information regarding surface water sustainable drainage, the Lead Local Flood Authority cannot assess whether the development proposed meets the requirements of Paragraph 169 of the National Planning Policy Framework or the Planning Practice Guidance in principle. This is sufficient reason in itself for a refusal of planning permission.

In particular, the submitted surface water sustainable drainage strategy fails to:

- **Provide appropriate minimum operation standards for peak flow control**, in line with the Defra Technical Standards for Sustainable Drainage Systems, therefore, is contrary to paragraph 169 of the National Planning Policy Framework and Policy CC5 of the adopted Burnley Local Plan.

  Standard S2 of the Defra Technical Standards for Sustainable Drainage Systems requires applicants to demonstrate that post-development peak flows of any proposed development do not exceed existing pre-development surface water runoff rates for the 100% (1 in 1-year) and 1% (1 in 100-year) annual exceedance probability rainfall event.

  The submitted surface water sustainable drainage strategy fails to contain peak flows within these parameters as evidence has not been provided to demonstrate how the peak runoff rate from the development to the culverted watercourse has been calculated. Therefore, it is unclear whether the peak runoff rate for the 100% (1 in 1-year) annual exceedance probability rainfall event and/or the 1% (1 in 100-year) annual exceedance probability rainfall event will not exceed the peak greenfield runoff rate for the same event. The applicant must also demonstrate that the discharge location of the culverted watercourse has sufficient capacity to accept these flows.

  Therefore, the proposals are contrary to Standard S2 of the Defra Technical Standards for Sustainable Drainage Systems. This is sufficient reason in itself for a refusal of planning permission.

- **Provide appropriate minimum operation standards for volume control**, in line with the Defra Technical Standards for Sustainable Drainage Systems, therefore, is contrary to paragraph 169 of the National Planning Policy Framework.

  Standard S4 (or S6) of the Defra Technical Standards for Sustainable Drainage Systems requires applicants to demonstrate that post-development surface water runoff volume from the development in the 1% (1 in 100-year) annual exceedance probability, 6-hour rainfall event does not exceed the greenfield runoff volume for the same event

  The submitted surface water sustainable drainage strategy fails to contain surface water volume flows within the parameters set out in Standard S4 (or S6) of the Defra Technical Standards for Sustainable Drainage Systems as no supporting calculations have been provided. This is sufficient reason in itself for a refusal of planning permission.

  Furthermore, the Lead Local Flood Authority note that the ground conditions in the location of the proposed attenuation basin are "extremely boggy" and, as such, no ground investigations have been carried out in this area. These conditions indicate high groundwater levels in this portion of the site. Groundwater intrusion into the proposed basin will impact the capacity of the SuDS and, therefore, the standard of operation. This may be contrary to paragraph 169 of the National Planning Policy Framework and must be addressed by the applicant before the site layout can be agreed upon.

Overcoming our Objection

You can overcome our objection by submitting information that covers the deficiencies highlighted above and demonstrates how surface water will be managed on-site, to satisfy Paragraphs 167 and 169 of the National Planning Policy Framework, the Planning Practice Guidance, and the Defra Technical Standards for Sustainable Drainage Systems. If this cannot be achieved we are likely to maintain our objection to the application. Production of this information will not in itself result in the removal of an objection.

The Lead Local Flood Authority asks to be re-consulted with the results of the amended site-specific flood risk assessment and/or amended sustainable drainage strategy and/or SuDS Pro-forma. We will provide you with further comments within 21 days of receiving formal re-consultation. Re-consultations should be sent to our identified mailbox.

Our objection will be maintained until the amended documents, as outlined above, have been received. Production of the amended documents will not in itself result in the removal of an objection.

Lead Local Flood Authority - Site-Specific Advice

The following advice is provided to inform the applicant and the Local Planning Authority of any additional concerns with the application:

- **Discharge Rate –** The applicant has provided no supporting calculations of their discharge rate. Discharge from the site should be restricted to greenfield Qbar in line with Local Planning Policy. The areas of public open space to the north and east of the site should be excluded from the area used to calculate the discharge

rate. Existing catchments must also be respected. For example, if any areas of the site do not naturally drain to the culvert in the northeast corner, they should be excluded from the calculations of the discharge rate, to avoid increasing flood risk off-site. A plan of the existing catchments must be provided to prove or disprove this.

The calculations provided to the Lead Local Flood Authority (dated 30.06.22) only show the post-development situation and thus do not address the reasons for objection, which relate to the pre-development runoff characteristics.

- **Protecting Natural Drainage Features -** Natural and existing artificial drainage features of sites must be identified and mapped so that they can be protected and integrated with the SuDS and wider integrated water management on the site to help reduce the causes and impacts of flooding in line with the National Planning Policy Framework. This can also help meet other environmental targets such as Biodiversity Net Gain.

  The site layout should be designed around these features to ensure they are protected. Buildings should not be constructed over existing drainage features, including field drains, without specific alternative flow routing capacity being provided. The Lead Local Flood Authority expect any development in the northern portion of the site to be avoided.

- **Groundwater Concerns** – The applicant proposes to locate the attenuation basin in an area with very high groundwater levels. Historic records of groundwater levels, or ground investigations, should be checked to ensure that during periods of high groundwater, the storage capacity of the basins is retained and that hydraulic connectivity between the surface water runoff and groundwater is acceptable from a water quality perspective. If a liner is used, there is a risk that the liner may 'float' during periods of high groundwater levels. A seasonally high groundwater table may not always impede the proper functioning of the facility, but it can result in a muddy base that may be considered unattractive if not developed into a permeant water feature. This will impact the proposed use of the basin as an amenity space during times of low rainfall.

  The applicant also proposes to locate a geocellular storage tank in the area of anticipated high groundwater. It is recommended that attenuation tanks are installed above the groundwater table, because groundwater pressure significantly increases lateral loads on the walls of the tank, and even a small defect in the surrounding waterproof geomembrane or pipe joints can result in groundwater entering the tank and filling the design storage volume. Where a storage tank has to be installed either close to or below the groundwater table, the possibility of floatation should be prevented by ensuring that the combined weight of the tank and the soil over the top is greater than the uplift buoyancy force due to the groundwater (with an appropriate safety factor (The SuDS Manual (C753) Section 21.4.1–Step 3). Alternatively, specialist geotechnical advice should be sought on possible anchor systems.

  The Local Planning Authority should satisfy themselves that the proper functioning of the SuDS can be achieved for the lifetime of the development before agreeing to the site layout.

- **Ground Conditions –** The applicant proposes to locate the attenuation basin in the northern portion of the site, with excavations up to 1.3 m based on the existing topography and drainage layout plans. The limited ground investigations for this part of the site suggest the ground contains peat. The Lead Local Flood Authority would question the suitability of any construction in this part of the site, mainly the excavation of peat, which stores large volumes of water and carbon, as this may act to increase flood risk off-site. The Lead Local Flood Authority advise that the Local Planning Authority seek advice from relevant experts on the suitability of the proposed development given the ground conditions and high groundwater levels in this portion of the site. The Lead Local Flood Authority does not have the technical expertise, nor are we a consultee on groundwater flood risk.

  Peat is an extremely valuable resource and should be protected given its benefits in mitigating flooding and climate change. More information is available at:

  - https://www.newground.co.uk/blog/for-peats-sake-how-peatland-can-manage-flood-risk/
  - https://www.iucn-uk-peatlandprogramme.org/sites/default/files/2019-11/COI%20Peatlands%20and%20NFM.pdf
  - https://www.iucn.org/resources/issues-briefs/peatlands-and-climate-change

- **Attenuation Basin and Amenity –** The applicant proposes that the SuDS basin will also form an amenity space in dry periods. While the Lead Local Flood Authority always encourages this approach in principle, we would question whether the ground conditions and design of the basin to accommodate all sized rainfall events would make this suitable for the proposed development site. It is likely, based on current proposals, that the basin will be very boggy, limiting its value as an amenity space.

- **Development within 8 m of an Ordinary Watercourse -** The Lead Local Flood Authority expects no development to occur within 8 metres from the bank top of any ordinary watercourse. This includes the construction of structures such as walls and fences and any activity during the construction phases of development.

  Construction within 8 metres of any ordinary watercourse is not advised as access for maintenance purposes is restricted and it has the potential to pose a detriment to water quality and undue flood risk to structures should flooding occur. This may be contrary to the National Planning Policy Framework.

  On the proposed development, this easement should be provided around the proposed outfall and any watercourses that will be retained post-development.

For the avoidance of doubt, the Lead Local Flood Authority currently accept the following methods for calculating the discharge rate and surface water attenuation volume for a development:

For both methods, the greenfield runoff rate for the full site area must first be calculated using an approved methodology (IH124, FEH Statistical or ReFH2). The 'full site area' should exclude any areas of significant public open space, areas that contribute directly to the receiving watercourse(s) or areas that contribute to another catchment.

Either of the following approaches can then be applied:

Approach 1 (Full site area discharge rate and attenuation):

The SuDS is designed based on the full site area. A consistent approach is applied in line with the SuDS Manual (C753), whereby the 'full site area' is used to calculate the discharge rate and attenuation volume.

- The discharge rate from the site post-development is the same as the greenfield runoff rate from the full site area.
- The attenuation storage requirements must be based on the full site area, including both permeable and impermeable areas.
    - A volumetric runoff coefficient of 1 must be applied to the impermeable area.
    - Appropriate volumetric runoff coefficients for the permeable areas must be selected and justified by the applicant (the contribution of runoff from such areas may vary depending on factors including the site geology and soil type, site gradient, event size and antecedent conditions).
    - Allowances for climate change must be applied.
    - Allowances for urban creep must be applied (a 10% increase in the impermeable area only).

Approach 2 (Impermeable area only discharge rate and attenuation):

The SuDS is designed based only on the impermeable site area. A consistent approach is applied in line with the SuDS Manual (C753), whereby the 'impermeable site area' is used to calculate the discharge rate and attenuation volume.

- The greenfield runoff rate for the full site area is prorated based only on the impermeable site area to provide the post-development discharge rate.
- The attenuation storage requirements must be based only on the impermeable area.
    - A volumetric runoff coefficient of 1 must be applied to the impermeable area.
    - Allowances for climate change must be applied.
    - Allowances for urban creep must be applied.

The advantage of approach 2 is that the requirements under the Design and Construction Guidance are met, allowing for the system to be offered for adoption by an appropriate Water and Sewerage Company.

Material Changes to this Planning Application

If there are any material changes to the submitted information which impact on surface water, the local planning authority is advised to consider re-consulting the Lead Local Flood Authority via our identified mailbox.

If you decide to approve contrary to our advice

If the Local Planning Authority grants planning permission for this development contrary to our advice, then we will be unable to assist with the discharge of any

planning conditions, including surface water or flood risk conditions that we have not recommended.

The Local Planning Authority should be aware that any development built after 1 January 2012 is not eligible for Grant-in-Aid funding from central government to study or alleviate flood issues. This is set out in section 9.3 of the Memorandum relating to capital grants for local authorities and internal drainage boards in England.

Please send a copy of the decision notice to our identified mailbox.

Yours faithfully,

Phil Wadley

Lead Local Flood Authority