

**Consultation Response from KC,
Lead Local Flood Authority**
2021/91871 Land adj, High Street and Challenge Way, Hanging Heaton, Batley
Erection of residential development including access and associated infrastructure
**Date Responded:
01/06/2021**
**Responding Officer:
Martin Stephenson**
**Responding Ref:
0**
Detailed Consultation Response

The proposed development is for 55 new housing units on a 1.76 ha greenfield site which slopes at an approximate gradient of 1 in 20 in a northerly direction. It is proposed to discharge attenuated surface water flows to Green Hill Beck to the north-west of the site. The route of the connection to the beck is through land outside the development area and may therefore require agreement with third party landowners. A storage tank with a volume of 900 to 1,000m³ is proposed based on an allowable discharge to the beck of 3.5 l/s. GFRO for the site for the 1 in 1 year event is calculated to be 2.98 l/s per ha (using the FEH method), equal to 5.24 l/s for the 1.76 ha site, however it is not clear that the site currently drains wholly or partially to Green Hill Beck, therefore, the proposed 3.5 l/s discharge rate is accepted, provided the minimum diameter of the flow control device outlet is preferably 100mm but an absolute minimum 75mm to reduce the risk of blockage.

It is recommended that the construction of the tank should be of the "Carlow" (or similar) concrete box type with a low flow channel and MH access points to allow for the inspection and maintenance of the tank. The size of the tank will need to be confirmed using a MicroDrainage (or similar) computer model based on the critical 1 in 100 year (plus 30% climate change allowance) and the above allowable discharge rate. In addition, full hydraulic modelling results (MicroDrainage or similar) for the 1 in 1 year, 1 in 30 year and 1 in 100 year (plus 30% climate change allowance) rainfall events should be provided.

The submitted drainage drawing (E&P ref: 45467/001 Rev D dated 11/11/20) does not indicate how the tank is connected to the surface water drainage system, however it is assumed that the outlet is to the chamber adjacent to the south-west corner of the tank. The inlet MH should be of the silt trap/catch pit type to reduce the risk of siltation within the tank.

A temporary drainage strategy outlining the drainage arrangements for different construction phases of the project should be submitted including a plan showing the location of the attenuation storage and supporting calculations, which shall be based on the critical 1 in 5-year storm. It should be assumed that once the topsoil has been stripped that the percentage run-off will be 100 %. The maximum discharge rate, off-site, shall not exceed 2.5 litres per second, unless otherwise agreed with the LLFA. Reference should be made to industry standards, for example CIRIA C532 Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors.

The routing of floodwater during exceedance events (i.e. flows greater than the critical storm or due to blockage/failure of the drainage system) should be determined and should indicate no flood risk to existing or proposed housing or commercial properties. The route should avoid property curtilage and use the road network and open space to achieve a safe design.

A Section 106 Unilateral Undertaking to ensure maintenance and management of any accepted surface water scheme will apply to this site. As part of a Section 106 agreement the Council are required to ensure the site is managed in a safe and suitable way up until adoption by a regulatory body. This requirement should also apply to drainage on the site, during the build out a management and maintenance plan including responsible management company must be secured. This should be enforced until adoption **and continued for the life of the development if adoption fails**. Adoption

can fail at any step in the development process from concept design to site inspection post construction.

Suggested Condition

DR01 Drainage Details

Development shall not commence until a scheme detailing foul, surface water and land drainage, (including off site works, outfalls, balancing works, plans and longitudinal sections, hydraulic calculations, phasing of drainage provision, existing drainage to be maintained/diverted/abandoned) has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include a maintenance and management plan for surface water infrastructure. The building shall not be brought into use until such approved drainage scheme has been provided on the site to serve the development and retained thereafter.

DR07 Overland Flow Routing

The development shall not commence until an assessment of the effects of 1 in 100 year storm events, with an additional allowance for climate change, blockage scenarios and exceedance events on drainage infrastructure and surface water run-off pre and post development between the development and the surrounding area (both upstream and downstream of the development), has been submitted to and approved in writing by the Local Planning Authority. No part of the development shall be brought into use (dwellings shall not be occupied) until the works comprising the approved scheme have been completed and such approved scheme shall be retained thereafter.

DR10 Construction Phase Surface Water Flood Risk and Pollution prevention plan.

Development shall not commence until a scheme, detailing temporary surface water drainage for the construction phase (after soil and vegetation/site strip) has been submitted to and approved in writing by the Local Planning Authority. The scheme shall detail:

- phasing of the development and phasing of temporary drainage provision.
- include methods of preventing silt, debris and contaminants entering existing drainage systems and watercourses and how flooding of adjacent land is prevented.
- the strategy shall include a plan showing the location of the attenuation storage and supporting calculations, which shall be based on the critical 1 in 5-year storm. It should be assumed that once the site has been stripped that the percentage run-off will be 100 %. The maximum allowable off-site discharge rate shall not exceed 2.5 litres per second, unless otherwise agreed with the LLFA.

The temporary works shall be implemented in accordance with the approved scheme and phasing and no phase of the development shall be commenced until the temporary works approved for that phase have been completed. The approved temporary drainage scheme shall be retained until the approved permanent surface water drainage system is in place and functioning in accordance with written notification to the Local Planning Authority.

Section 106 Unilateral Undertaking

In order for the LPA to fulfil their obligation to ensure the maintenance and management of surface water drainage systems for the lifetime of the site, a unilateral undertaking to set up a management company to carry out an approved maintenance and management scheme; including access to and into any structure in accordance with CDM regulations 2015; and an itinerary and schedule of maintenance and management tasks. Such an undertaking can cease if and when the infrastructure is formally adopted by the Statutory Undertaker and/or Highways Authority.