

Consultation Response from KC, Lead Local Flood Authority		
2020/91468 Former North Bierley Waste Water Treatment Works, Oakenshaw, BD12 7ET		
Discharge of conditions 5 (Phasing Plan), 11 (Sewer Overflow), 13 (Foul Water Drainage), 14 (Discharge of Surface Water), 23 (Flood Risk) and 24 (Disposal of Surface Water) on previous permission 2016/92298 for outline application for re-development of former waste water treatment works following demolition of existing structures to provide employment uses (use classes B1(c), B2 and B8)		
Date Responded: 24/11/2020	Responding Officer: Alex Fraser	Responding Ref: R02

Kirklees LLFA Summary

Kirklees Flood Management and Drainage as the Lead Local Flood Authority (LLFA) have no objection to the discharge of conditions for Phase 1 of this site (construction of the access road and formation of development plateaus). For clarity the LLFA only provide comment on the following listed conditions;

- Condition 14 – Discharge of Surface Water;
- Condition 23 – Flood Risk and Residual Uncertainty; and,
- Condition 24 – Disposal of Surface Water.

Conditions

Kirklees LLFA have reviewed the documents submitted against the following conditions for the Phase 1 only.

14. No piped discharge of surface water from the application site shall take place until works to provide a satisfactory outfall, other than the local public sewerage, for surface water have been completed in accordance with details to be submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure the provision of adequate and sustainable systems of drainage are employed, during and after the construction phase in the interests of amenity, environmental well-being and to ensure that the site is satisfactorily drained and avoids the risk of flooding from the proposed development in accordance with Policy BE1(iv) of the Kirklees Unitary Development Plan, PLP28 of the Publication Draft Local Plan and part 14 of the National Planning Policy Framework.

Kirklees LLFA Comment: Kirklees LLFA have no objection to the discharge of this condition for Phase 1 only as no positive connection is being requested for surface water (other than the carriageway).

As outlined in the documents provided by the applicant, no connection is being requested to discharge surface water from the site during the enabling works phase (**Phase 1**). The volume provided within relict infrastructure on site has been identified as being sufficient for this phase. Should a positive discharge to the watercourse be required to drain down these attenuation areas then approval must be sought with the LLFA **prior to connection**.

23. Detailed plans and particulars of the reserved matters shall include a 'Residual Uncertainty Assessment' in relation to flood risk to be submitted to and approved in writing by the Local Planning Authority. The assessment shall:

1. use latest Environment Agency Guidance that seeks to develop uncertainty from known inputs.
2. Validate REFH2 hydrograph or where demonstrated that there is not possible increase Standard of Protection significantly to allow for the uncertainty posed by an unvalidated hydrograph (the LLFA recommend the use of the 1 in 1000-year flood extent given the minimal change.
3. Ensure that all areas of the site have a dry evacuation route that does not cross a Fluvial, Surface Water risk area or an area of flood routing.

Reason: In order for officers to make an informed assessment and to ensure satisfactory drainage of the site is delivered, in accordance with the National Planning Policy Framework and Policies PLP28 and PLP29 of the Publication Draft Local Plan.

Kirklees LLFA Comment: Kirklees LLFA have no objection to the discharge of this condition for Phase 1 only, detailed comments as follows.

As part of assessing displacement the applicant has used the 1 in 1000-year flood depth and provided a displacement allowance for this within what was previously proposed to be an attenuation pond. The modelling report provided shows that the modelling uses standard approaches for 1D modelling, with a stated limitation being the incoming hydrology. As the exceedance storage volume exceeds the potentially displaced 1 in 1000-year event this demonstrates that the proposed development should not adversely impact third parties by passing increase flows downstream. This storage area and connecting pipe infrastructure must be completed and be fully operation **BEFORE** the construction of any development plateaus. The presence of this pipe may also alleviate issues of displacement from the existing roadway during lower order events.

The exceedance storage is proposed to be connected to the watercourse by a 300mm diameter pipe, the maintenance of this system could be a significant burden long term. Therefore, as part of further phases management and maintenance agreements will need to be put in place for this pipe infrastructure. Kirklees LLFA have no objection to a 300mm pipe but would prefer a larger pipe diameter if possible be installed or twin 300mm pipes if cover above pipes is an issue. During phase 2 preparation work it may be possible, and the LLFA would encourage the applicant, to refine the modelling work undertaken to allow 2D-1D representation. This might reduce the need for this storage area to be used for compensatory storage and scale back the conservative allowances provided within this design proposal. While the rates described in the note from Curtins outline that the flows within the 300mm pipe would suggest self-cleansing velocities are achieved, it is unlikely that such flows will be witnessed as the attenuation basin operates as a balancing system rather than a free flowing outfall.

Kirklees LLFA remind the applicant that this system and all associated maintenance is their responsibility and that the system must be maintained to be operational at all times. During Phase 1 Kirklees LLFA expect both headwalls to be inspected monthly and after each high-water event, any debris must be cleared and disposed of accordingly. Beyond Phase 1 a Management and Maintenance Plan for compensatory storage should be provided.

24. Detailed plans and particulars of the reserved matters pursuant to conditions nos. 1 and 2 above shall include a scheme to dispose of surface water from the development. This scheme shall:

- i. Restrict discharge from the development to a combined discharge rate of 50.2/s for all rainfall events up to and including the 1 in 100-year event, unless otherwise agreed by the Local Planning Authority;
- ii. Adhere to the principles as set out in the drainage strategy from Curtins reference 65646-FRA-SB Rev 4;
- iii. Provide attenuation on site for the 1 in 100 year plus climate change event;
- iv. Using known flood levels perform simulations to ascertain the risk associated with a blocked outfall and provide compensatory storage and high-level overflow within the drainage systems to manage this,
- v. Incorporate vegetated sustainable drainage techniques throughout the development wherever possible and practicable. Justification for alternatives should be by means of a viability assessment, and
- vi. Provide details of the adoption and maintenance of all surface water features on site.

The resultant drainage information shall inform the layout of the site and shall include appropriate stand-off distances between drainage infrastructure and buildings within the site and appropriate measures for flood risk management. None of the buildings shall be occupied until the approved drainage scheme, the flow restriction and attenuation works has been provided on the site to serve the development for each agreed phasing of the development to which the buildings relate and thereafter retained.

Reason: In this instance it is necessary that the layout of the site be interdependent with the existing and proposed drainage infrastructure. A comprehensive layout taking its form following investigation and consideration of on-site drainage systems and their relationship to adjoining off-site drainage networks shall be submitted to demonstrate that the site can be satisfactorily drained and to mitigate flood risk. This is to accord with Policy BE1(i) of the Kirklees Unitary Development Plan, PLP28 of the Publication Draft Local Plan and part 14 of the National Planning Policy Framework.

Kirklees LLFA Comment: Kirklees LLFA have no objection to the drainage design proposals with a restricted discharge for all events up to the 1 in 100-year plus climate change, with attenuation being provided in oversized pipes located under the access road.

The design shows that discharge from the Northern part of the site will be restricted to 24.5l/s, design drawings also show the concept for the private drainage connecting into the carriageway system at 7l/s. Discussions around the development design on each plot may require the 7l/s to go direct to the watercourse instead of via the road system, if this is the case then the 24.5l/s will need to be reduced further and another flow control swapped into the system.

This original design has been superseded with the attenuation now being used as compensatory storage for the development plateaus. Refinement of the modelling could provide greater understanding of the system meaning the compensatory storage area could revert to an attenuation basin once the flood risk is better understood from the watercourse.