

# **Flood Management & Drainage Consultation - LEAD LOCAL FLOOD AUTHORITY – Statutory Consultee**

**Consultation on Application Number: 2016/94118**

**Address: Land off Ravensthorpe Road, Thornhill Lees, Dewsbury**

**Proposed Development: Outline application for residential development**

**DC Officer: Steve Hopwood**

**Drainage Officer: Paul Farndale**

**Comments:-**

## **Summary**

***Whilst it is recognised that this application is in ‘outline’ with all matters reserved apart from consideration of the point of access, given the scale of adjacent land being promoted for housing in the Local Plan, it is imperative that site drainage, land drainage (watercourses) and current and future overland flood routing is considered holistically in order to facilitate development and promote a catchment wide drainage strategy that avoids risk wherever possible and mitigates risk to acceptable levels for new and existing properties.***

***In order to achieve this, whilst we are encouraged by the initial flood risk assessment, it is recognised that further detailed analysis is required, proportionate to the potential scale of the wider development (that includes this application site) and its effect on the surrounding built environment. A ‘Catchment Drainage Study’ is required.***

## **Catchment Drainage Study**

ARP Associates has commenced further investigation work with Kirklees Flood Management as Lead Local Flood Authority to better understand drainage network as phase 1 of this approach.

The LLFA envisages stage 2 to involve camera survey work both on and off site, dye testing and potential intrusive work on site understand location, size, depth, condition and connectivity of local drainage systems to produce a comprehensive map of ‘where water goes’.

For stage 3, a 2D model utilising best available LIDAR data and site specific topography, including the developed drainage map, blockage and inundation scenarios, and various storm return periods will be required to understand current overland flow routing and risk in as great a detail as is currently possible. This should be used as a benchmark in an analysis of how the landscape and built environment

may change as the wider site is altered both in terms of cut and fill (re-landscaping) and potential effects of grouting of mine works, in addition to designing, with justification, layouts around the identified risk. Models should then be re-run to demonstrate risk avoidance/reduction.

The ultimate goal is to inform the design and utilise road networks and public open space as conduits for surface water flooding, protecting watercourses and property and curtilage, whilst assessing where improvement can be reasonably made off to current risk off-site.

In this respect the current FRA does not yet assess off site connection opportunities, downstream impacts and known incidents of flooding adjacent to the site.

**Kirklees Flood Management as Lead Local Flood Authority and Land Drainage Authority feel it necessary to raise the possibility that major off site improvement works could be required that include the installation of brand new pipework to a designated outfall. However we do NOT OBJECT to the principle of housing in the area and SUPPORT the application subject to robust conditions to facilitate the above research and design process.**

### **Suggested Conditions**

#### **Special Condition – Catchment Drainage Study**

Development shall not commence until a Catchment Drainage Study, (produced in conjunction with the Lead Local Flood Authority), has been submitted to and approved in writing by the Local Planning Authority. The study shall include a full investigation of local drainage networks, overland flow analysis and a detailed analysis of catchment wide flood risk pre and post development, on and off site. As part of this study the LLFA shall determine of appropriate stand-off distances from identified watercourse and land drainage features. From the findings a scheme identifying the methodology for risk avoidance (and where it is agreed that this is not reasonably practicable), a scheme for risk mitigation, shall be submitted to and agreed in writing by the Local Planning Authority. The scheme agreed shall include a detailed maintenance and management regime for watercourse, sewerage and flood risk management infrastructure and ancillaries including sustainable drainage schemes. The scheme agreed shall be provided in accordance with a phasing plan that has first been agreed in writing by the Local Planning Authority.

#### **DR01 Drainage Details**

Development shall not commence until a scheme detailing surface water and land drainage, (including a sustainable drainage assessment in accordance with West Yorkshire Combined Authority SUDS guidance, off site works, outfalls, agreed discharge rates, flow control, balancing works, plans and longitudinal sections, hydraulic calculations, phasing of drainage provision, existing drainage to be maintained/diverted/abandoned, and percolation tests, where appropriate) has been submitted to and approved in writing by the Local Planning

Authority. The scheme shall include a detailed maintenance and management regime for both the storage facility including the flow restriction and other sewerage provision. None of the dwellings shall be occupied until such an approved drainage scheme has been provided on the site to serve the development or each agreed phase of the development to which the dwellings relate and thereafter retained throughout the lifetime of the development.

#### **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, in both directions, 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 throughout the lifetime of the development.

#### **DR10 Temporary Drainage Provision**

Development shall not commence until a scheme, detailing temporary surface water drainage for the construction phase (after soil and vegetation 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 temporary works shall be implemented in accordance with the approved scheme and phasing. 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.

**Signed: Paul Farndale**

**Date: 9<sup>th</sup> February 2017**