Consultation Response from KC Lead Local Flood Authority		
2019/92646 Spurn Point, Manchester Road, Linthwaite, Huddersfield, HD7 5RF		
Outline application for erection of residential development		
Date Responded: 27 November 2019	**Responding Officer: Aleksandra Tomczyk**	**Responding Ref: 0**

Summary

Kirklees Flood Management and Drainage as the Lead local Flood Authority (LLFA) acknowledge that this is an outline application with all matters reserved except for access. The applicant should be aware that any decisions fixed at this stage may impact on feasibility of drainage options in the future, therefore careful consideration should be given to what is being proposed.

The application is described solely as 'Outline application for residential development' therefore Kirklees LLFA OBJECT to this planning application on the following grounds:

- **No Flood Risk Assessment has been provided; and**
- **No surface water drainage proposals have been provided.**

Kirklees LLFA also offer the below additional comments.

Additional comments

The proposed development site currently holds industrial buildings. The applicant is seeking permission to demolish them and erect a number of residential dwellings. At this stage, the layout provided is indicative only and the final number of residential dwellings proposed is not specified.

Site information

The proposed development site is located to the northwest of Manchester Road, in the area of Linthwaite. To the north and west, the side is bounded by steeply sloping open fields. To the southeast there are four terraced houses (not part of the development) and to the east, the site is bounded by Manchester Road. There are three existing buildings on site:

- Building A is the smallest within the development, and is located in the eastern area of the site, immediately adjacent to Manchester Road;
- Building B is the largest building on site, and is located in the centre of the site, south west of the Building A, north west of the terraced houses; and,
- Building C is located in the west are of the site, north of the terraced houses and south west of the Building B.

The proposed development site slopes away in north/north west direction, from approximately 143mAOD in the south east of the site to approximately 136mAOD in the north west. There is evidence of the site being levelled and infilled in the past.

There are two watercourses near the site:

- The River Colne, located approximately 110m north/north west of the proposed development; and
- Huddersfield Narrow Canal, located north/north west of the site, on the north side of the River Colne. It crosses the River via an aqueduct in a location approximately 140m north of the site.

Both of these watercourses are at the bottom of the slope to the north west of the site and are significantly lower than the site itself.

There are several sewers in the area. These are as follows:

- Combined sewer along Manchester Road, along the south eastern site boundary;
- Combined sewer along River Colne, located north/north west of the site;
- Combined sewer running through the western area of the development site,;
- Abandoned sewer running through the site, from Building B in the centre of the site northwest to the River Colne; and
- Private combined sewer running through the proposed development sire, from south west to north east between Building C and Building B.

The proposed site is located within the Flood Zone 1, according to the Environment Agency's *Flood map for planning* and therefore at Very Low risk of inundation from Main River watercourses.
The site is located within an area of low surface water flood risk, according to the Environment Agency's *Long term flood risk map*. The surface water mapping shows a potential flow into the site from Manchester Road via the existing entry gate adjacent to Building B. It is shown to pool between the entry and the largest building. It also appears to flow north around the building, and then pool behind it.
Kirklees LLFA hold no records of flooding in this area. The absence of records does not mean that flooding has not occurred, but simply that Kirklees LLFA have not been made aware of flooding.

Kirklees mapping shows that the area of the proposed development site is unsuitable for infiltration SuDS.

Flood Risk Assessment

As per paragraph 048 of *Planning Practice Guidance* (PPG), a change of use development which includes a change of vulnerability classification requires a flood risk assessment to be produced. Therefore, the applicant should produce a Flood Risk Assessment and submit it as part of the planning application.
This document should investigate all sources of flooding, the impact it may have on the development and any mitigation measures required. Additionally, the applicant should consider the impact the development might have on the flood risk in the area.

Flow Routing

Kirklees LLFA require an analysis of flow routing for the site layout to be provided, including inflows from offsite, as well as considering exceedance flows originating onsite. Short, intense storms may bypass road gullies and the route should avoid property curtilages where reasonably practicable, utilising roads and open spaces.
Flow routing from attenuation should also be considered, in case of a rainfall event which might exceed the drainage design. The applicant should use *Designing for Exceedance* guidance to inform this design and safe disposal of any exceedance volumes.

Surface Water Drainage Strategy

As per paragraph 080 of PPG, the surface water discharge point should be assessed using the following hierarchy of preference:

- *Infiltration*
  As previously stated in this response, Kirklees mapping shows the development site as unsuitable for infiltration features.
- *Watercourses*
  Kirklees LLFA recognise the River Calder as a feasible discharge point for surface water, as a gravity discharge can be achieved due to local topography and the land needed to be crossed is in the applicant's ownership, according to the *Location Plan* drawing (prepared by Farrar Bamforth Associates Ltd., number 19D23-FBA-ZZ-XX-DR-A-0101-P01, dated May 2019) submitted as part of the application.
  As stated previously in this response, Kirklees records show an abandoned sewer connecting

the development site to the River Calder. If the applicant chooses to discharge surface water using this connection, a CCTV survey and investigation of the drainage system must be carried out to show that this system is suitable to accept the flows. This CCTV survey should also determine the maximal discharge capacity of the system. The applicant should consider whether the existing connection is fit for purpose and whether it meets modern design standards. If it does not, then the outfall and system should be upgraded to modern standards.

- *Surface water sewer*
  Kirklees records show no surface water sewers in the area.
- *Combined sewer*
  As stated previously in this response, there is a network of combined sewers in the area. If a connection to a watercourse is demonstrated to be unfeasible then a connection to a combined sewer would be considered. Yorkshire Water should be contacted to discuss a connection to public sewers alongside the LLFA.

Kirklees LLFA highlight that brownfield sites must provide a minimum 30% improved discharge rate on existing infrastructure, unless a justification can be given for a higher rate. Evidence must be provided to prove a point of connection and justify why the proposed discharge is the lowest possible. Restricting flows to a reduced discharge rate will likely require the provision of attenuation systems to prevent site flooding. These can take many forms, as described in the CIRIA *SuDS Manual*.

Kirklees LLFA require the applicant to provide surface water drainage information. This should include the proposed discharge point, discharge rate (including associated calculations), surface water drainage layout and MicroDrainage outputs to satisfy the modern standards of design:

- No surcharging above pipe soffit for critical 1 in 1 year storm event;
- No surface water flooding for critical 1 in 30 year storm event;
- No surface water flooding that may pose a risk to users of the proposed development or area off site for critical 1 in 100 year event + climate change;
- Simulations provided from 15 minute to 24 hour storm duration; and
- Simulations provided for both summer and winter profiles.

This can include opportunities to store water in non-critical areas such as car parks or landscaped areas. This must not result in flooding to properties, evacuation routes or other critical areas that could pose risk to users of the development.

Following the applicant providing further information or making subsequent application for this site, it is important Kirklees LLFA is consulted.