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DRAINAGE STATEMENT & FRA
NEWSOME ROAD, HUDDERSFIELD

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Client:	Urban Group / Yorkshire Housing
Project Name:	Newsome Road, Huddersfield
Report Title:	Drainage Statement & Flood Risk Assessment
Report Author:	Richard Parker
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Revision	Suitability	Date	Author	Checked	Approved	Description
P1	S2	10.08.21	RP	RP	RP	Initial Issue
P2	S2	13.08.21	RP	RP	RP	Correspondence added
P3	S2	23.08.21	RP	RP	RP	Overland Flow and diversion notes added

Please find attached our Drainage Statement and Flood Risk Assessment along with the relevant documentation to support the planning application for the development - Newsome Road, Huddersfield.

Proposed Development and Existing Site Details

The site is being developed as shown on the architectural drawings. The site is currently a developed brownfield site with a positive discharge to a Combined sewer running alongside the site. The ponds on site are linked and drain overflow into the sewer.

Existing Systems

The drainage on site is private. Two former mill ponds are located on site and are fed from a culverted watercourse and rainfall landing on the ponds.

Both ponds are linked and have an overflow into the combined sewer in Hart Street.

Drainage Strategy

This document sets out the drainage strategy for the above development and should be read in conjunction with the following documentation:

- Drainage Strategy Plan
- Architectural Site Layout

Surface Water

The surface water drainage strategy has been conceived with regard to Building Regulation and the SuDS hierarchy.

The site investigation report has confirmed the site is underlain by made ground onto clays/mudstone and soakaways are not viable.

There are no known watercourses in the area to support a viable discharge. The existing watercourse that serves the ponds has been traced downstream and the only outlet from the ponds is the overflow to the combined sewer. A copy of the drainage investigation survey is attached. We believe the watercourse is manmade and installed purely to drain the ponds as topographically would not have been its natural location. It is necessary to discharge, at a controlled rate, to the existing outfall, a combined sewer in Hart Street.

We have calculated each of the mill ponds as 1500m2 and would positively outfall to the combined sewer with the exception of any evaporation. We have discounted flows from the culverted watercourse as these cant be proven and we intend to divert back in to the combined sewer any flows that do come from that source. We would, therefore, suggest that the brownfield flow from the site is 3,000m2 x 50mm/hr = 42 l/s. A 30% reduction in this would suggest an allowable discharge from site of 29 l/s.

Yorkshire Water have accepted this principal but have opted to reduce the allowable discharge to 20 l/s. A copy of dialogue from Yorkshire Water is attached.

Considering the discharge option, the surface water attenuation system has been designed to conform to current standards. A storage volume of approximately 90m3 is required to accommodate the M100 and 30% climate change factor storm.

Consideration for Exceedance has been reviewed and there are a number of routes away from the proposed and existing properties onto the Public Highway. A review during the detailed external levels design should be carried out and fully assessed to ensure flood paths fall away from buildings.

Foul Water

Foul water will connect at an unrestricted rate to the local, public combined sewerage system. At this stage a gravity connection is envisaged, via a S106 agreement with the Water Authority and utilising existing connections where viable.

Diversion

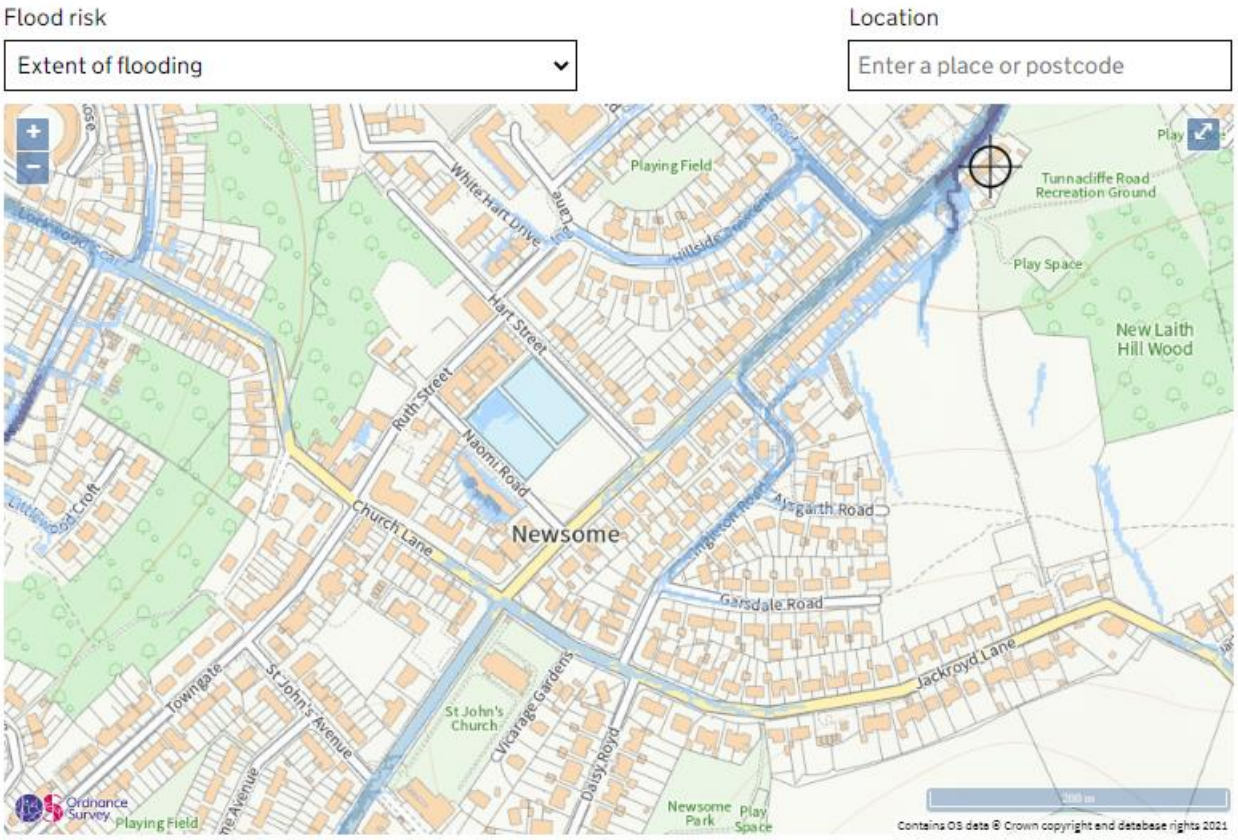
The existing inlet to the pond that overflowed into the combined sewer will need diverting back into the combined sewer and not through the new drainage system. This is a private feed and Yorkshire Water have confirmed it can be carried out via a Section 106 agreement. A copy of correspondence is attached to this report.

It is currently proposed to make this connection at the point where the inlet to the pond crosses the combined sewer in Newsome Road. Insufficient information is available to confirm if this is achievable, as the upstream end of the combined sewer terminates at a lamp hole, and if required the inlet will be taken downstream to connect to manhole 5703 on the junction of Hart Street and Newsome Road which is sufficiently deep to take the inlet.

Overland Flow Routes

Preliminary floor levels have been noted on the drawings including additional notes and floe directional arrows to demonstrate how water will flow through the site. All floor levels should be set a minimum 150mm above existing levels and it is clear on the attached drawings that none of the plots would be at risk of flooding from overland flows.

Flows from the adjacent street network are contained within kerbs and bypass the site. The Gov.uk maps show no other overland flows to consider



Extent of flooding from surface water

Flood Risk Assessment

The site is within Flood Zone 1 and not affected by surface water or reservoir flooding and will not be discussed further.

Conclusions

- Surface water will discharge to the existing combined sewer network at a rate of 20 l/s.
- Calculations and overland flow paths will be developed as part of the detailed drainage design and external works setting of levels.
- Foul water will discharge to the same network.
- The existing feed to the ponds will be diverted into the combined sewer outside of the site via a Section 106 agreement in accordance with Yorkshire Water requirements

Appendix
Appended Documents

Drainage Survey

Correspondence with Yorkshire Water

Correspondence with Kirklees Council