

Pell Frischmann

Parkhill Avenue, Crumpsall, Manchester

DRAINAGE TECHNICAL NOTE

APRIL 2024

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Report Ref. Parkhill Avenue, Crumpsall Drainage Technical Note

File Path Document8

Rev	Suit	Description	Date	Originator	Checker	Approver
A		Draft for Client Review	29/04/24	C. Mason	C.Mason	A.Hall
B		Issue for Client Review	30/04/24	C. Mason	C. Mason	A. Hall

Ref. reference. Rev revision. Suit suitability.

1. Introduction

Pell Frischmann have been commissioned by Great Places Housing Association to provide an outline Drainage Technical Note for Parkhill Avenue, Crumpsall.

2. Background

The site is bounded by Parkhill Avenue, Delaunays Road and Cleveland Road. The site encompasses an area of 0.38 hectares. The site has a large level difference from Delaunays Road to Parkhill Avenue, converging at the corner of the site at the junction with Cleveland Road (see photograph below).



3.0. Flood Risk

According to Flood Risk Mapping for Planning provided by the EA, the site is located within Flood Zone 1. The classifications of flood zones can be seen in the table below:

Table 1 Flood Zones (EA Website)

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a high Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.(Land shown in dark blue on the Flood Map)
Zone 3b functional flood plain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

3.1 Fluvial Flood Risk

Fluvial flood risk is the risk arising from rivers and watercourses. The River Irk is located approximately 50m to the North of the site boundary and is culverted under Delaunays Road. The Environment Agency data demonstrates that at this location there is a potential restriction in the culverted system at Crumpsall Vale. Access to install a point of discharge to the main river would be via a number of third party landowners and it is not considered to be a viable option for surface water disposal.



Environment Agency (EA) Data Review – Fluvial Flooding

3.2 Surface Water Flood Risk

Surface water flooding occurs where high rainfall events exceed the drainage capacity in an area (i.e. sewer system and/or watercourse), leading to flooding.



An extract of the Environment Agency's (EA) Risk of Surface Water Flooding map is shown above. Whilst there is no evidence of surface water risk on site, the adjacent roads to the proposed development area are shown to demonstrate varying levels of surface water flood risk. The drainage proposal below addresses this risk, and measures will be put in place to mitigate any additional surface water risk to the adjacent highway caused by the proposed development. There are no known existing ordinary watercourses within the vicinity of the proposed development site.

4. Drainage Proposals

In line with the Hierarchy of Drainage, if soakaway is not a viable option for drainage following testing, discharge into the combined United Utilities sewer is proposed at two locations and will be restricted as close to Greenfield rates as practicably possible with consideration of flow control maintenance. Whilst the implementation of an above ground storage feature was considered, it was not possible to accommodate the feature in a suitable location. However, it is proposed to install tanked permeable paving within the apartment car parking area. Attenuation on site will be designed to account for the 1 in 100-year storm event return period (with 45% Climate Change Allowance) and an additional allowance for urban creep. The proposed storage system will be underground crates,

There are two proposed discharge points from the site due to levels and this is shown on the Drainage Strategy drawing 105596-PEF-HDG-00-DR-D-00001 Proposed Surface Water Drainage Strategy (Appendix A). It is proposed that the Northern section of the site will drain to the combined sewer at a restricted rate of 2l/s and a restricted rate of 3 l/s for the Southern Section. United Utilities have agreed to the principles, as set out in the correspondence located in Appendix B.

The proposed site layout has been developed to include sustainable features where practicably possible for surface water runoff from the development. A boundary filter drain will also be considered in order to prevent runoff from the development onto Delaunays Road.

Due to the topographical restrictions of the site and catchment area of the new proposed development, this option is considered to be the only viable solution in terms of buildability and future maintenance requirements.

5. Conclusion

This assessment of flood risk information, undertaken within this report, has identified the following:

- The proposed development site is within Flood Zone 1.
- The proposed residential development is classified as a “more vulnerable” development which is compatible within Flood Zone 1 and so aligns with the NPPF.
- The development does not pose any additional flood risk to any land or neighbouring properties.
- The site and proposed development are compatible with Planning Policy.

- The proposed method of drainage for the development is to the United Utilities Combined Sewer network at two points in Delaunays Road and Cleaveland Road.

APPENDIX A



- GENERAL NOTES
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- G2. ANY DIMENSIONAL DISCREPANCIES SHOULD BE NOTIFIED TO THE ENGINEER IMMEDIATELY.
- G3. ALL DIMENSIONS ARE IN MILLIMETRES - (mm)
ALL LEVELS ARE IN METRES - (m) AND ARE ABOVE ORDNANCE DATUM AT NEWLYN, CORNWALL UNLESS NOTED OTHERWISE.
- G4. NORTH SHOWN INDICATIVE ONLY
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KEY

PROPOSED SURFACE WATER DRAINAGE

PROPOSED UNDERGROUND STORAGE CRATE

PROPOSED PERMEABLE PAVING

REV	DESCRIPTION	DRN	CHK	APP	DATE
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Project

**PARKHILL AVENUE
CRUMPSALL**

Drawing Title

**PROPOSED SURFACE WATER
DRAINAGE STRATEGY**

Drawing Status				
PRELIMINARY				
Drawn	Name	Date	Status Code	S2
Designed	J. TROLAN	15.04.24	Scale	
Eng Chk	A. HALL	29.04.24	Revision	
Approved	A. HALL	29.04.24	P01	

Drawing No.

105596 - PEF - HDG - 01 - DR - C - 00001

APPENDIX B

UU REF 05517250 – WW PDE – Parkhill Avenue, Manchester

 seweradoptions@uuplc.co.uk


 Reply  Reply All  Forward 

Thu 28/03/2024 13:59

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Good Afternoon,

Thank you for your WW PDE, please see our response below.

UU REF 05517250 – WW PDE – Parkhill Avenue, Manchester

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.

If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:

<https://www.unitedutilities.com/builders-developers/working-near-our-assets/>

Foul Water

Foul flow from this site will be allowed to drain into the public combined sewer system

Surface Water

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.
Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.
This is outlined as follows, in order of priority:

1. into the ground (infiltration);
2. to a surface waterbody;
3. to a surface water sewer or highway drain;
4. to a combined sewer.

For guidance, The [North West SuDS Pro-Forma](#) provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.
The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).
The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities.

Should the above be exhausted and a combined connection is required I can confirm we have no objections in principal to 5 l/s.

Please do contact me should you wish to discuss any matters