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Title:	Flood Risk Technical Note
Date:	4 th March 2024
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Client:	Built Developments Ltd.

1.0 INTRODUCTION

- 1.1 This Technical Note has been prepared in accordance with instructions from Bernard Taylor Partnership, on behalf of their client, Built Developments Ltd., to support their planning application to Manchester City Council for the proposed change of use of an existing vehicle repair garage to office (Class E), at the property known as Manchester Buildings, 71-73 Hyde Road, Ardwick, Manchester, M12 6BH.
- 1.2 The purpose of this Technical Note is to assess the flood risk in accordance with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG) *Flood Risk and Coastal Change* and other current guidelines.

Technical Information

National Planning Policy Framework (NPPF)

- 1.3 The NPPF and associated PPG *Flood Risk and Coastal Change* explains how flood risk should be taken into consideration during the planning and development process. It categorises flood risk by *flood zone* and defines the types of development *appropriate* to each flood zone according to *vulnerability*. The flood zones are defined as:
- Flood Zone 1 – Areas with a Low Probability (annual probability less than 0.1% or 1 in 100-years).
 - Flood Zone 2 – Areas with a Medium Probability of flooding (annual probability between 0.1% (1 in 1000-years) and 1.0% (1 in 100-years) for rivers, 0.1%-0.5% (1 in 1000-years to 1 in 200-years) for coastal areas).

- Flood Zone 3a – Areas with a High Probability of flooding (annual probability greater than 1.0% (1 in 100-years) for rivers, 0.5% (1 in 200-years) for coastal areas).
- Flood Zone 3b – The Functional Floodplain (probability same as Flood Zone 3a).

Environment Agency Flood Maps

- 1.4 The Environment Agency (EA) predicts the likelihood of flooding via a national series of indicative flood maps, available via the GOV.UK website. The *Flood Map for Planning* shows the flood zones, described above, coloured in different shades of blue.
- 1.5 The *Flood Risk from Surface Water Map* at Long Term Flood Risk information on the GOV.UK website shows potential overland flow routes and accumulation of runoff resulting from rainstorm events based on topography, divided into low, medium, and high-risk scenarios.
- 1.6 The *Flood Risk from Reservoirs* map at Long Term Flood Risk information on the GOV.UK website shows potential flooding from reservoir and other water infrastructure failure.

Manchester City, Salford City and Trafford Strategic Flood Risk Assessment

- 1.7 Local Planning Authorities are required to produce a Strategic Flood Risk Assessment (SFRA) which sets the scene for flood risk in their areas. Manchester City Council, Salford City Council, and Trafford Council jointly prepared their Strategic Flood Risk Assessment in 2010.

2.0 FLOOD RISK ASSESSMENT

Fluvial Flooding

- 2.1 According to the EA *Flood Map for Planning*, the application site is wholly within Flood Zone 2 (Medium Probability). This is associated with the perceived fluvial flooding event associated with the Corn Brook. The Corn Brook runs in a culvert under Hyde Road, entering the culvert 1.8km to the east of the site. The brook is largely culverted through the inner city, before outfalling to the Manchester Ship Canal at Parnona Docks, approximately 3.6km to the west of the site. The Corn Brook is considered to be one of Manchester's 'hidden watercourses'.
- 2.2 According to the Manchester, Salford, and Trafford SFRA, dated March 2010, the culverted nature of the channel can result in significantly longer overland flow paths for flood waters to return to the channel than would be expected of an open channel. This therefore is reflected by the Flood Zones through areas such as Brunswick, Ardwick and Moss Side. According to the SFRA, no historic flooding events at or near the development site have occurred.
- 2.3 As the site is within Flood Zone 2, with an annual probability between 1 in 1000-years and 1 in 100-years, any fluvial flooding affecting the site would likely be infrequent, and very shallow. Therefore, fluvial flooding is unlikely to present any significant hazard to personnel.
- 2.4 Furthermore, according to the NPPF, and associated PPG, the proposed development is considered to be within the 'Less Vulnerable' category, and therefore is considered to be 'Appropriate' within Flood Zone 2.
- 2.5 Notwithstanding the relatively low flood risk, in order to provide assurance to personnel, the site management will operate a Flood Management Plan. By this means the occupants will be kept safe from fluvial flooding.

Surface Water Flooding

- 2.6 According to the EA *Surface Water Flood Map* (Appendix A), the site is categorised as 'Medium' risk of surface water flooding. This surface water flood risk classification is on account of the incapacity of the Corn Brook culvert to convey extreme event surface water flows. When the flow of water entering the culvert exceeds its capacity levels at the upstream entry, the water level will rise, resulting in overtopping of riverbanks. This would then lead to a flow of water progressing downstream along Bennett Street, Hyde Road, and through Brunswick. Therefore, it is considered that any surface water flooding event should be treated similarly to a fluvial flooding event.
- 2.7 The proposed development seeks a change of use of the existing property of 71-37 Hyde Road. Consequently, the proposed development will occupy the same impermeable area as it does at present with no increase to the overall impermeable area. Surface water runoff will be collected via rainwater pipes and discharged as it does at present.
- 2.8 In the unlikely event of a surface water flood, the site will either be evacuated as for a fluvial flood, as detailed within Section 3, below.
- 2.9 Therefore, it is considered that the proposed development will not give rise to increased surface water flooding, or cause flooding elsewhere.

Reservoir Flooding

- 2.10 According to the EA *Flood Risk from Reservoirs* map, the site would be impacted by potential flooding associated with the failure of the Gorton Reservoirs, approximately 4km to the east of the development site.
- 2.11 Although the EA *Flood Risk from Reservoirs* map shows a risk of reservoir flooding, the Gorton Reservoirs (owned by United Utilities) are managed in a systematic and responsible manner. Therefore, the risk of flooding from reservoir flooding may be regarded as extremely low. In the unlikely event of infrastructure failure, sufficient

warning will be given to facilitate the evacuation of personnel in the area, similarly to the procedure for fluvial or surface water flooding.

Impact of Flooding

- 2.12 Although it will not be possible to defend the proposed development from extreme flooding events, the anticipated flood water depth is likely to be shallow. Subsequent to any flooding event, the site would be cleaned up and normal operations quickly resumed.

3.0 FLOOD MANAGEMENT

- 3.1 As the site may be at risk of flooding in an extreme event, a Flood Management Plan containing the following robust flood management provisions will be prepared and implemented by the Site Management.

Warnings & Evacuation

- 3.2 The EA *Floodline Warnings Direct Service* is not available in this location, presumably reflecting the relatively low flood risk in reality. Consequently, regular checks will be made on the online EA *Flood Alerts and Warnings* service (<https://check-for-flooding.service.gov.uk/alerts-and-warnings>), especially where heavy rainfall events have been forecast.
- 3.3 Should a flood warning be posted, or a flood event otherwise predicted, personnel will evacuate in good time to higher ground before any local flooding occurs. Personnel may also be able to seek shelter on the upper floor of the proposed development until flood waters recede.
- 3.4 In the event of a need for urgent evacuation of any personnel, e.g., for medical reasons, attendance by emergency services would not be precluded by the depth of floodwater within the flood zone.

Sequential and Exception Tests

- 3.5 As the proposed development is for the change of use of an existing building, the sequential test is not required for this form of development, in accordance with the NPPF.
- 3.6 The NPPF does not require consideration of the Exception Test for 'Less Vulnerable' development, such as the proposed office use. Nevertheless, in order to ensure the safety of the occupants, a Flood Management Plan will be in operation, as described above.

4.0 CONCLUSIONS AND RECCOMENDATIONS

- 4.1 The proposed development site is located within Flood Zone 2 of the EA *Flood Map for Planning*, with an annual probability between 1 in 1000-years and 1 in 100-years. Any fluvial flood water affecting the site would likely be both very infrequent and very shallow, and therefore would not present any significant harm to personnel.
- 4.2 The site is located in an area of 'Medium' risk of surface water flooding, surface water flooding is not considered to be a significant issue, as this reflects the nature of the culverted Corn Brook, which flows under Hyde Road. There will be no changes made to the existing impermeable area of the site, and consequently, no increase to surface water flooding.
- 4.3 A Flood Management Plan will be prepared and implemented, as set out in Section 3 of this Technical Note. Regular checks of the online *Flood Alerts and Warnings* service will be carried out by Site Management, and personnel will evacuate to higher ground, or may seek shelter on the upper floor of the building.
- 4.4 The Sequential Test is not required to be considered as part of the change of use process, in accordance with the NPPF.
- 4.5 The NPPF does not require consideration of the Exception Test as the proposed use of the building for offices is within the 'Less Vulnerable' category. Nevertheless, a Flood Management Plan will be implemented in order to ensure safety of the occupants and personnel.
- 4.6 Overall, with regard to flood risk and drainage, the site is suitable for the proposed use. The development may be occupied safely and adequately drained without increasing flood risk on the site or elsewhere.

APPENDIX A EA FLOOD MAPS

Flood map for planning

Your reference
Hyde Road

Location (easting/northing)
385623/396995

Created
22 Feb 2024 14:36

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

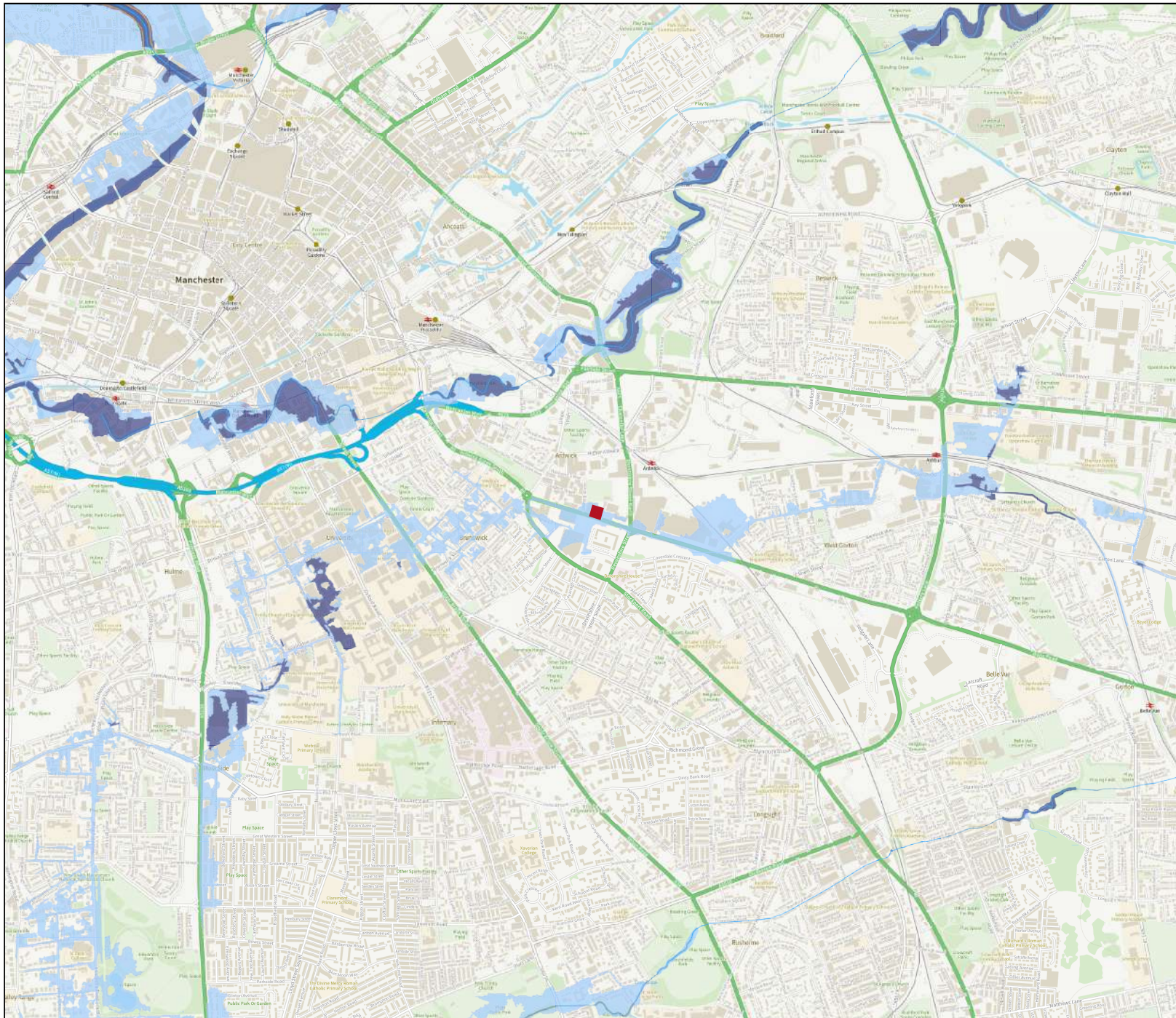
Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2022 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>



Flood map for planning

Your reference
Hyde Road

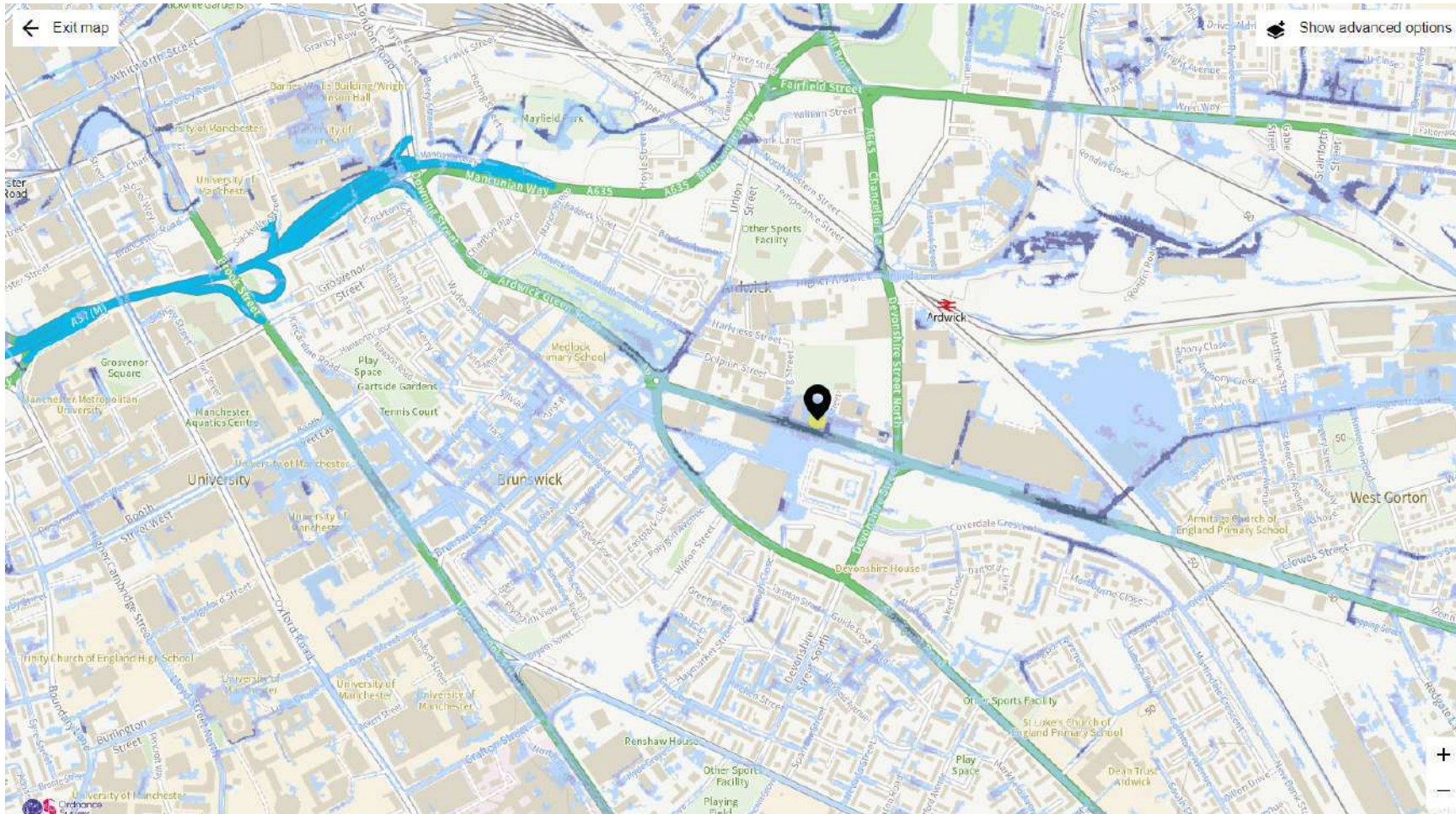
Location (easting/northing)
385623/396995

Scale
1:25000

Created
22 Feb 2024 14:36

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area


0 200 400 600m



Exit map

Show advanced options

Key

Surface water

Extent

High risk
More than 3.3% chance each year

Medium risk
Between 1% and 3.3% chance each year

Low risk
Between 0.1% and 1% chance each year

Depth

Map details

☒ Show flooding

☒ Selected address

15m boundary

