Flood Risk Assessment

108 Mornington Avenue

Manchester

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Figure 1 Location Plan

Development site

The proposed development site is located 1 Mornington Avenue, Manchester and is currently a dwelling house. Looking over the lifetime of the proposed development, the site lies within Flood Zone 2 (Figure 2) and therefore a Flood Risk Assessment is required.

Development proposals

The development proposal for the above site is a single storey side /rear extension. The proposed development is therefore classified as less vulnerable and of a minor development.

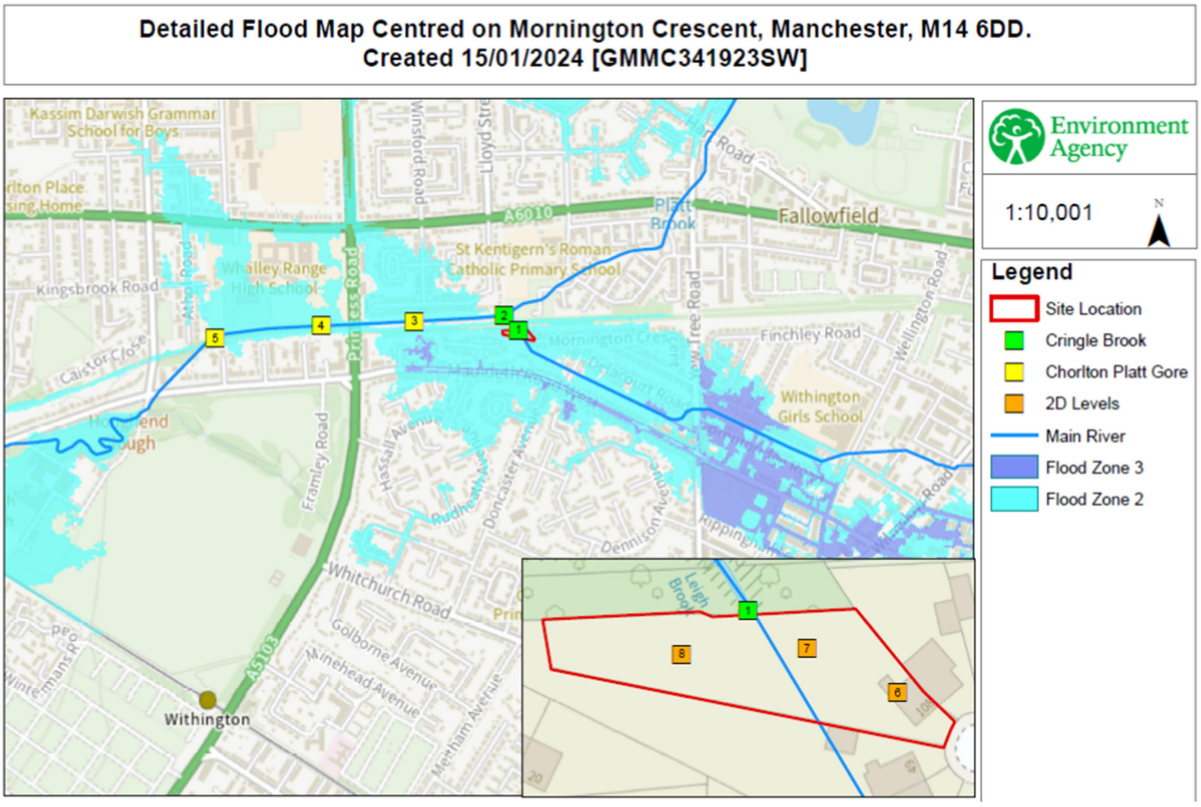


Figure 2 Flood Zone 2

Sequential Test

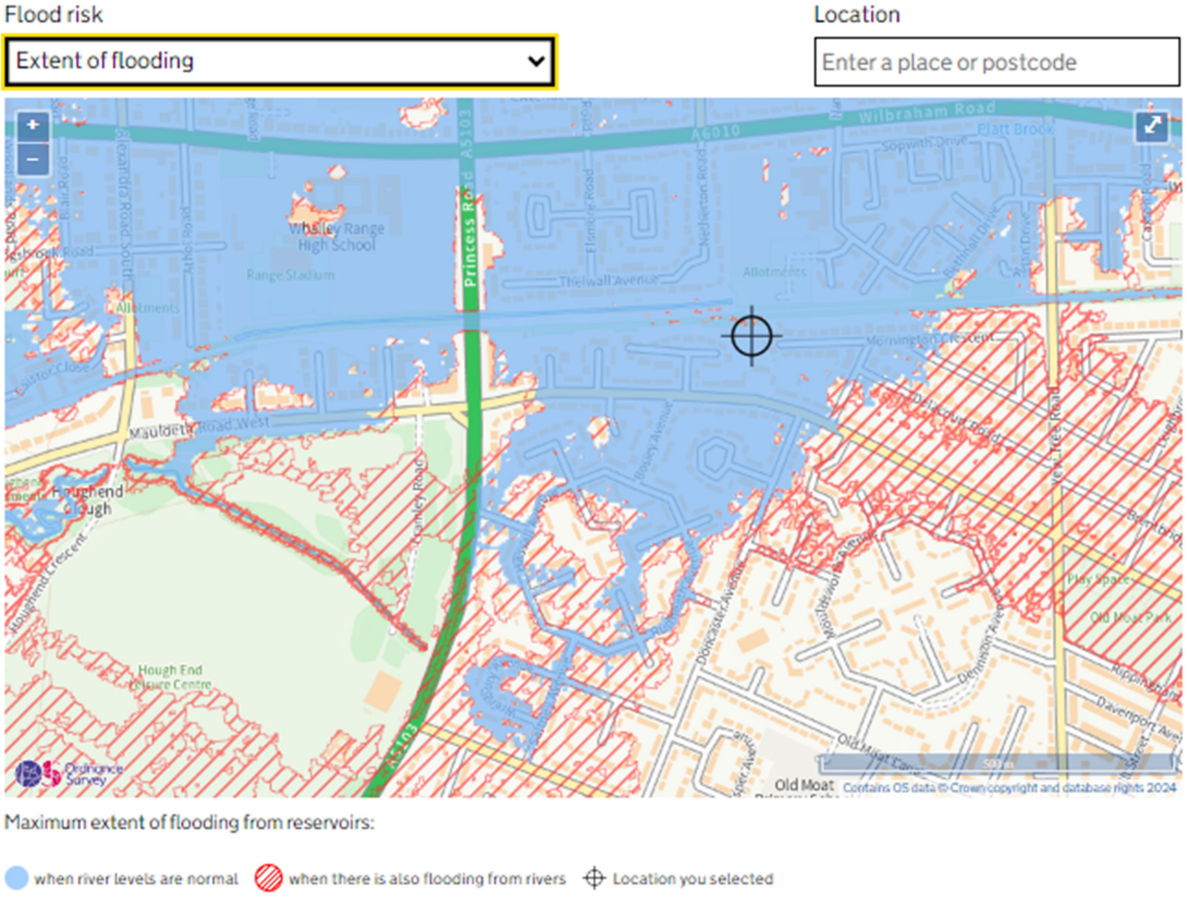
Due to this application being of a minor development. A Sequential test is not required. However, the requirements of the sequential test have been met.

Exception Test

The development does not increase the flood risk elsewhere. The requirements of the exception test have been met.

Site specific flood hazards

The proposed development site lies within Flood Zone 2 with the main risk of flooding coming from a river source.



Fluvial flooding

Flood model data for the site suggests that over the lifetime of the development, there is a low flood risk from flooding from Cringle Brook (Figure 3 – low risk).

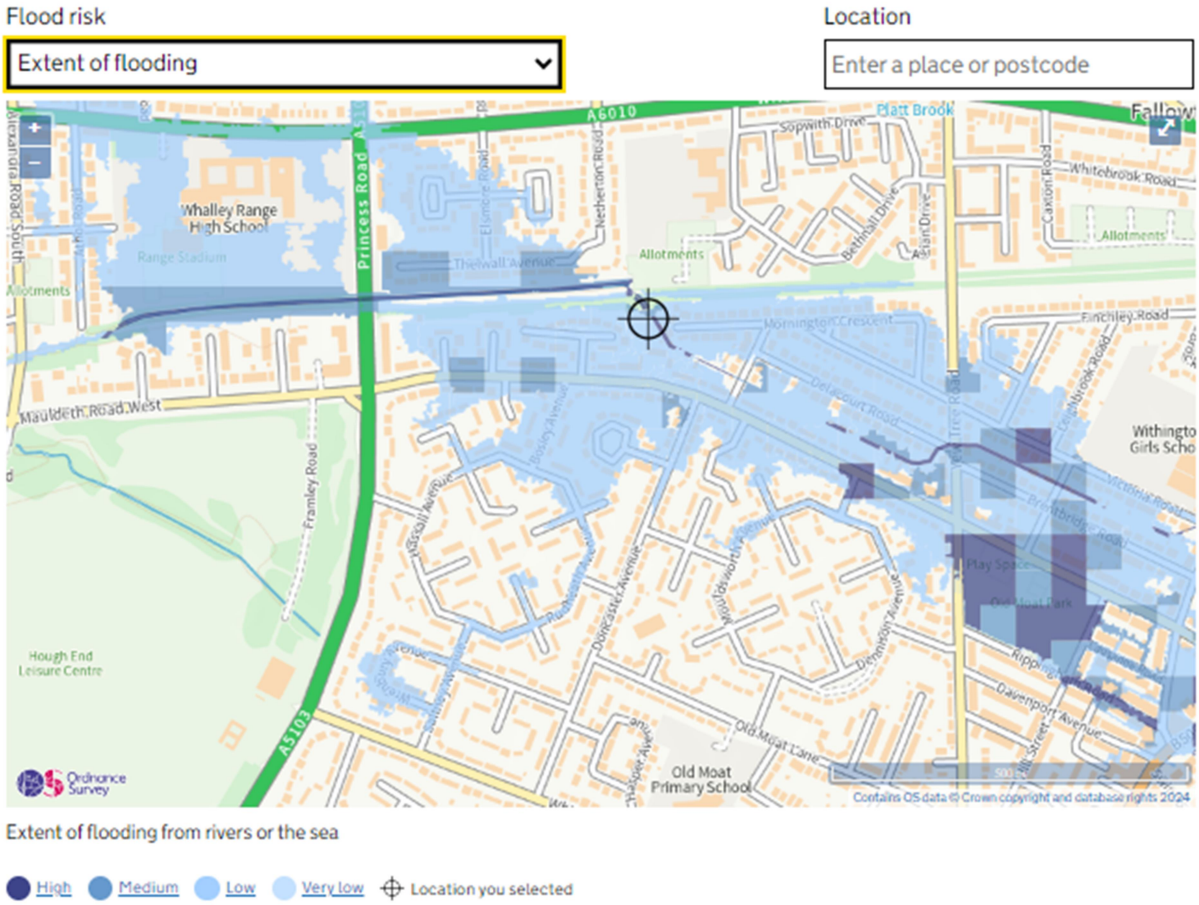


Figure 3 Extent of flooding from Rivers

Surface water flooding

Surface water at the site is currently managed by United Utilities. The proposals for surface water management are to connect to the existing surface water system. Extent of flooding is low from surface water flooding (Figure 4). Flood depths of below 300mm (Figure 5) can be expected and will be of low velocity (Figure 6).

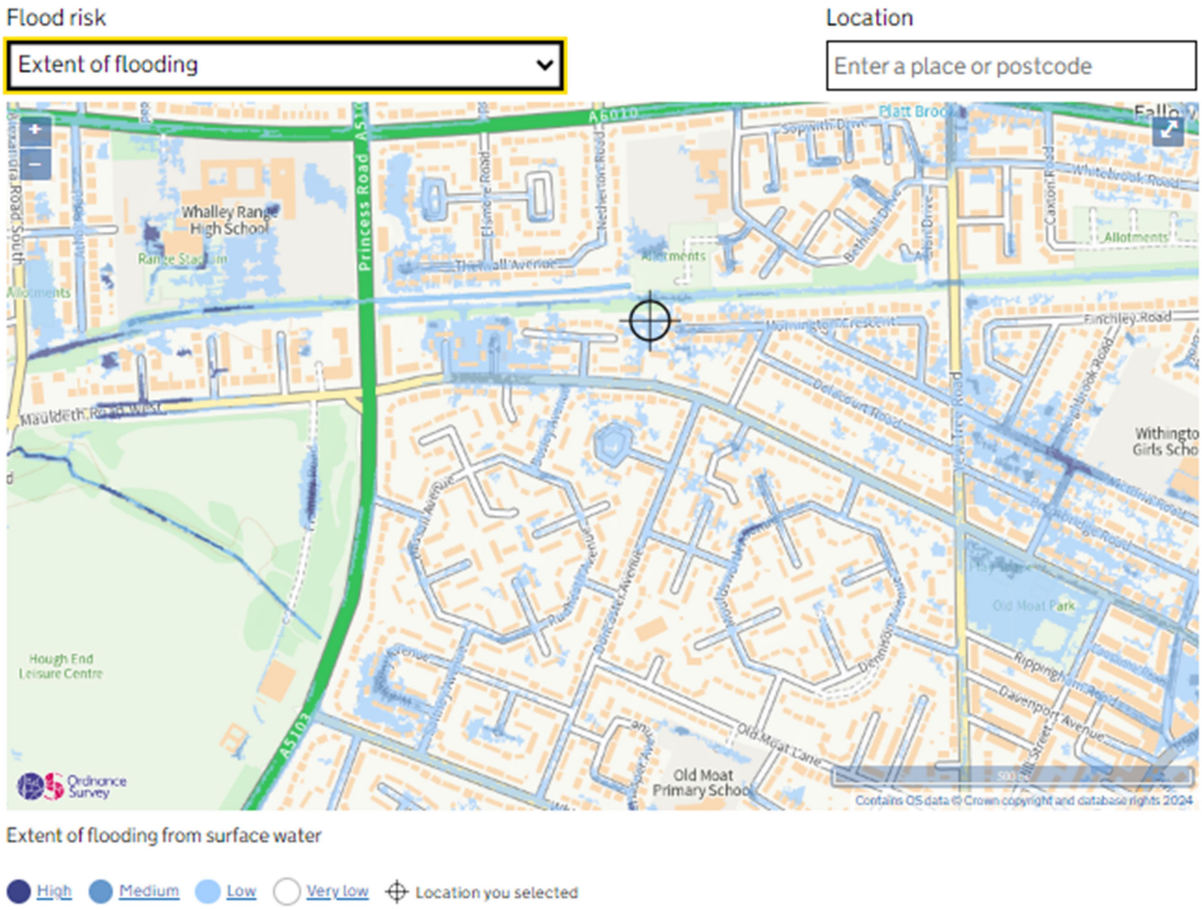


Figure 4 Low Risk Surface Water Flood Risk

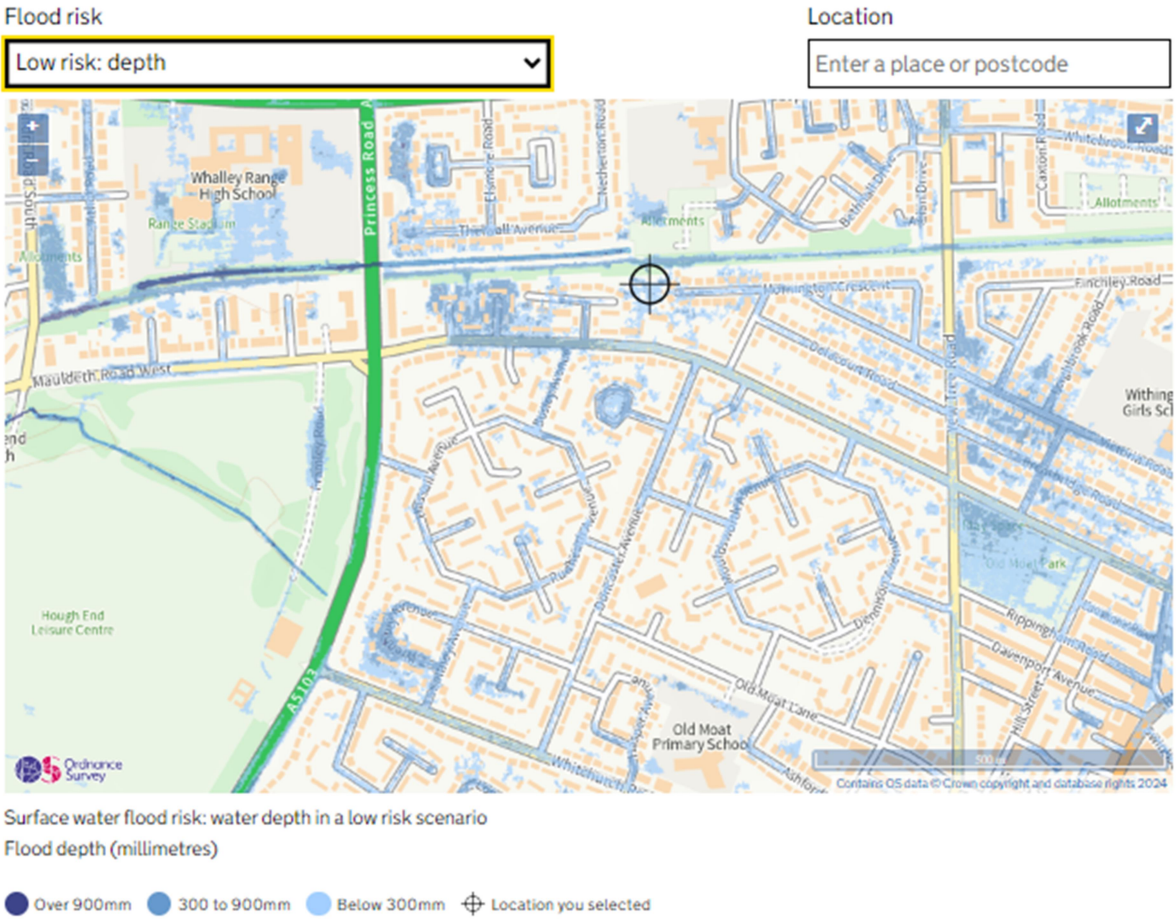


Figure 5 Low Risk: Depth from Surface Water

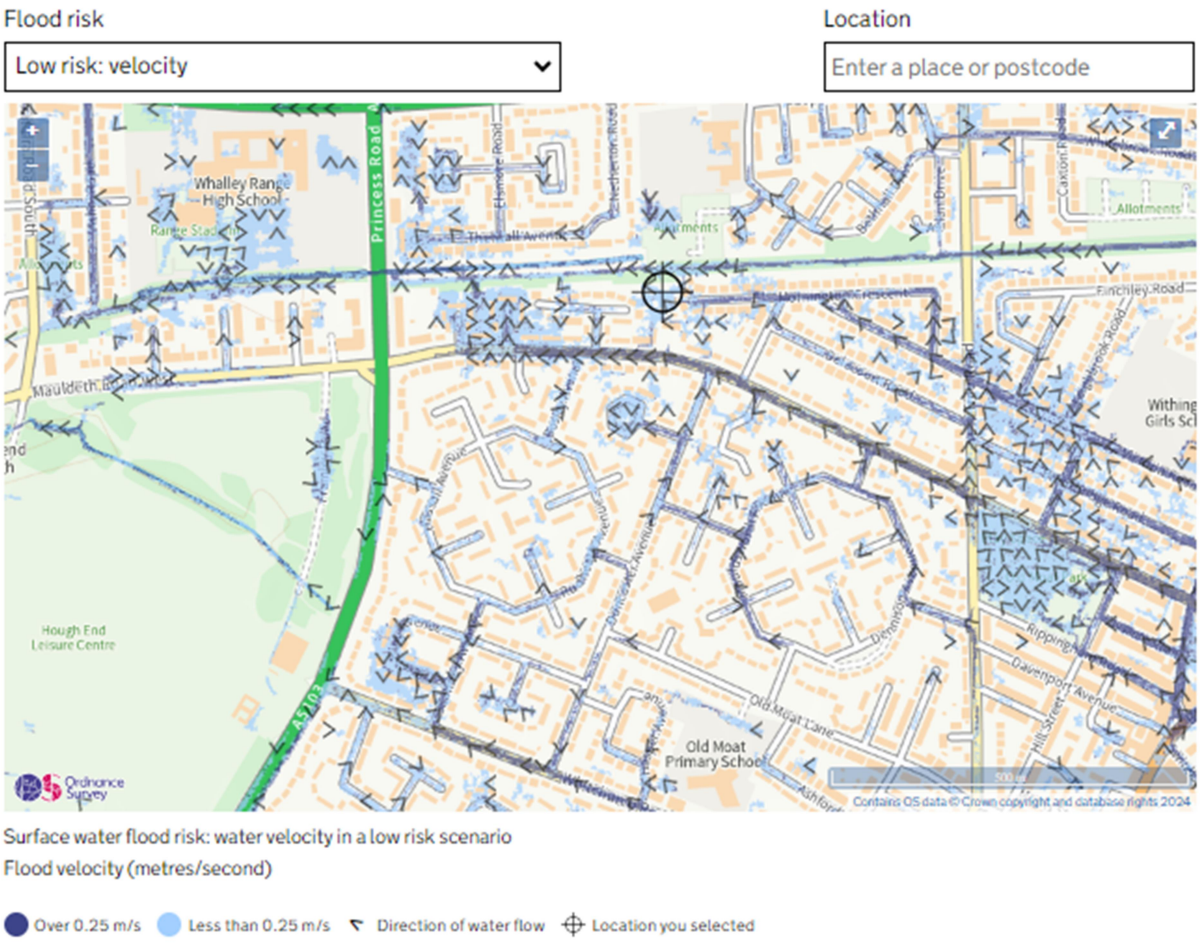


Figure 6 Low Risk Velocity Water Flood Risk

Flood Risk Management

The development being of a minor development will not require any real flood risk management.

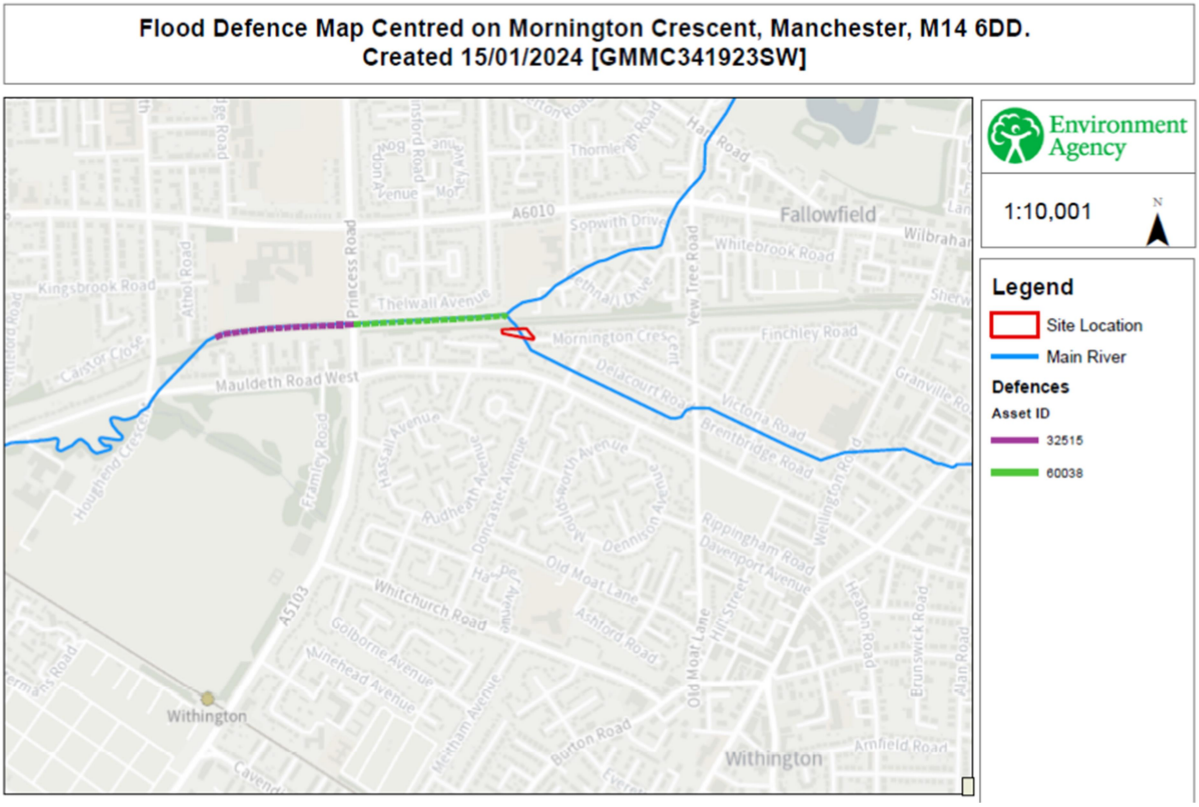


Figure 7 Existing Flood defence

Flood control measures

The development being of a minor development will not require any flood control measures apart from conventional piped drainage systems.

Flood mitigation measures

The proposed floor level is to be no lower than the existing property.

Planning

Planning department has stated the proposal was within 20m of the culvert and required more information. The culvert has been constructed out of brick and concrete. It is 1.19m below ground level. The culvert is 2m wide x 1m height. Therefore, the extension in its proposed location is outside the angle of repose and will not load or cause any damage to the culvert.

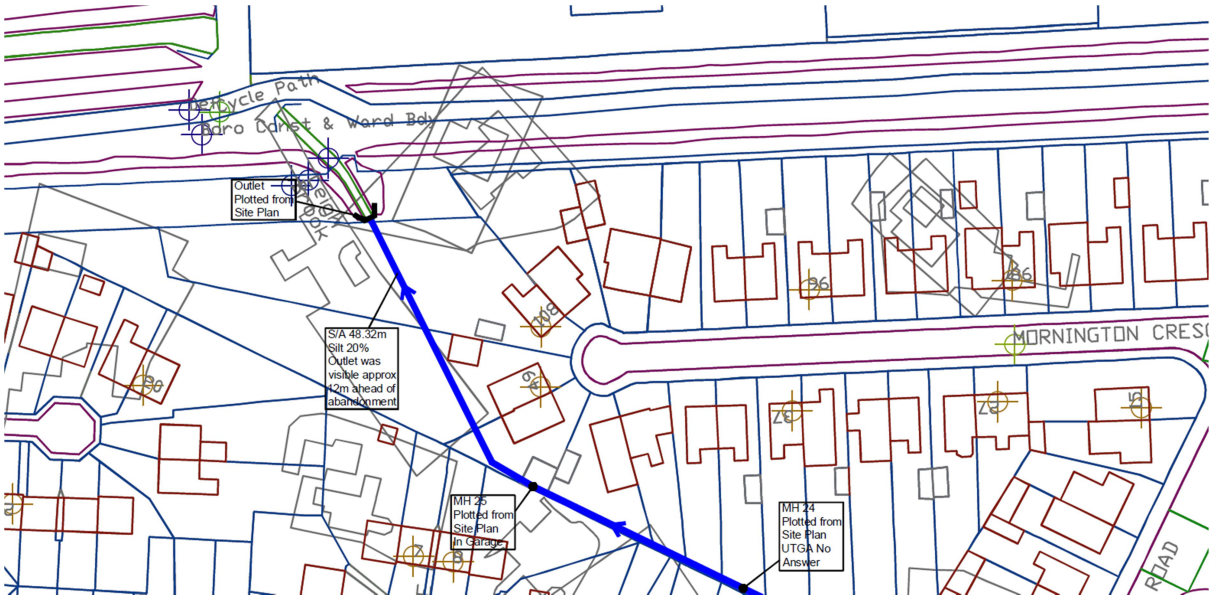


Figure 8 EA Map

Figure 9 Brick Culvert

Town or Village:	Fallowfield, Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	MH25
Road:	Off Mornington Crescent	**Inspected Length:**	48.32 m	**Upstream Pipe Depth:**	
Location:	Gardens	**Total Length:**	60.00 m	**Downstream Node:**	OUTLET
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.190 m
Use:	Culverted watercourse			**Pipe Shape:**	Rectangular
Type of Pipe:	Gravity drain/sewer			**Dia/Height:**	1,000 mm **Width:** 2,000 mm
Year Constructed:				**Pipe Material:**	Brick
Flow Control:	No flow control			**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection of condition			**Lining Material:**	No Lining
Comments:	U.T.L MH25 it is buried under garage r/o 47 Mornington Crescent				
Recommendations:					

Figure 10 Culvert Dimensions

Asset Survey Card

Asset ID: OUTLET eg: MH, CP, GY

Staus : PU Asset Type : OF Function: WC Cover Level:

Location: Cringle Brook, in woodland off cycle track off Shawfield Close, through allotments

Town: Fallowfield, Manchester

COVER DETAILS

☐ Square ☐ Rectangle ☐ Triangle ☐ Dbl Triangle ☐ Circular ☐ Other ☐ Other

☐ Hinged ☐ Lockable ☐ Grating ☐ Cover Duty ☐ x ☐ Size (mm)

PIPE DETAILS

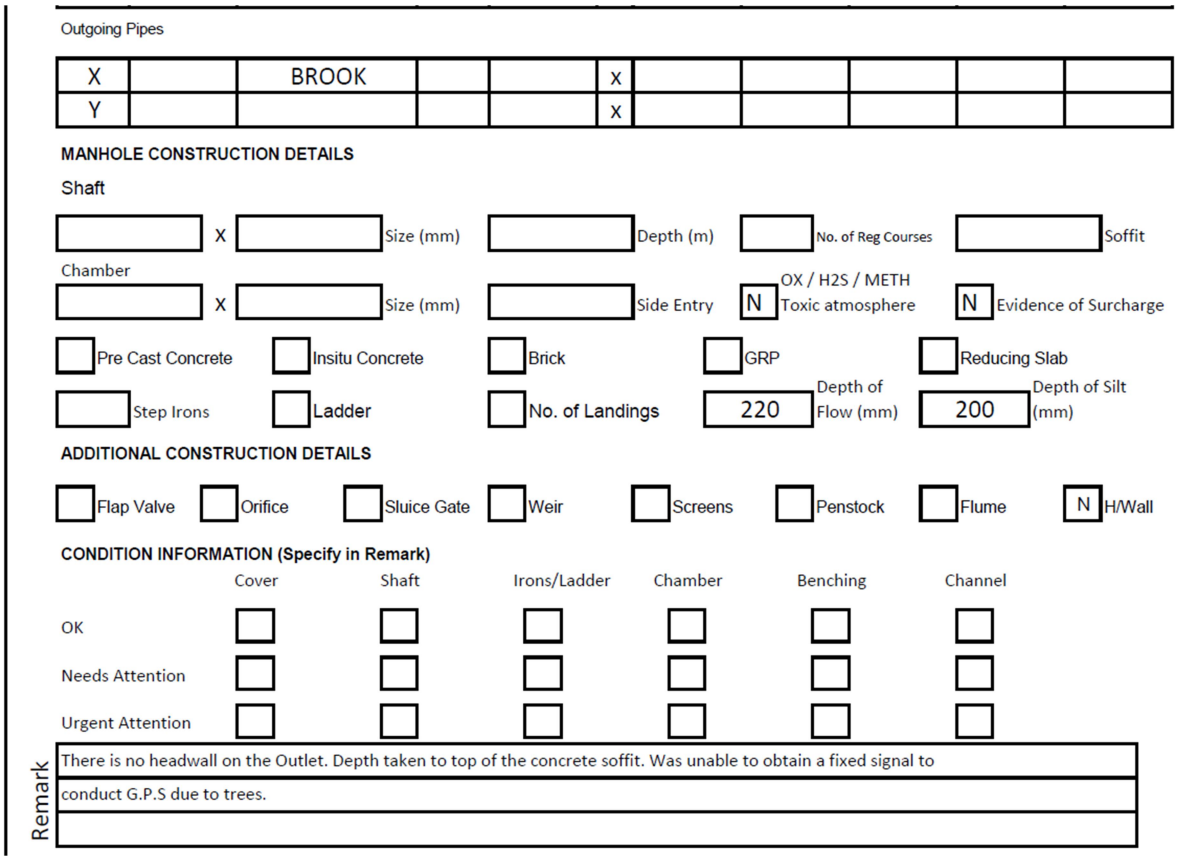
Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Soffit Level (m)	Invert Level (m)
A	1.19	MH24	R	1040	x	1910	BR+CO		-0.150	-1.190
B					x					
C					x					
D					x					
E					x					
F					x					

Outgoing Pipes

X		BROOK			x					
Y					x					

Figure 11 Survey Card



Outgoing Pipes

X		BROOK			x					
Y					x					

MANHOLE CONSTRUCTION DETAILS

Shaft

[ ] X [ ] Size (mm) [ ] Depth (m) [ ] No. of Reg Courses [ ] Soffit

Chamber

[ ] X [ ] Size (mm) [ ] Side Entry [N] OX / H2S / METH Toxic atmosphere [N] Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [ ] Brick [ ] GRP [ ] Reducing Slab

[ ] Step Irons [ ] Ladder [ ] No. of Landings [220] Depth of Flow (mm) [200] Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [N] H/Wall

CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	☐	☐	☐	☐	☐	☐
Needs Attention	☐	☐	☐	☐	☐	☐
Urgent Attention	☐	☐	☐	☐	☐	☐

Remark: There is no headwall on the Outlet. Depth taken to top of the concrete soffit. Was unable to obtain a fixed signal to conduct G.P.S due to trees.

Figure 12 Survey Card

Conclusions

This proposal is of a minor development. There is no previous record of a flood affecting the property stated by the Environmental agency. There is a current flood defence within the area. The property lies within a Flood Zone 2, but has low risk in regards to depth of the flood and velocity. The rear extension floor level is to be no lower than the existing floor level. The finish floor level is 614mm above the external ground level. This is over 300mm above the estimated flood level. Conventional surface water drainage has been proposed for the development.