

Domestic House Extension

Flood Risk Assessment

49 Cranleigh Drive, Sale M33 3PN

Planning Ref: PP-09380730



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12-29-2020

Flood Risk Assessment Statement

1. The property, 49 Cranleigh Drive NGR: SJ 79312 90280, is located in the Area Benefitting of Defence (ABD) lying in Flood Zone 3, is visible in the map in Appendix A, figure 1.
2. The properties border line lies 79.56m away from the main river water course known as Baguley Brook. The location plan can be found in Appendix A, figure 2.
3. The flood level to Environment Agency Flood Map reference ZONE 3 is 26.95m Above Ordnance Datum (AOD) for an AEP of 1% plus climate change. The level obtained from Environment Agency model data sheet (see Appendix A figure 3 and Appendix B, figure 4)
4. There are flood defences protecting this area with a 1% chance of a river flood happening each year in a 1:100 standard or 1:200 year sea flood (0.5%) in any year. Protection standard obtained from Environment Agency.
5. There is no known historic flooding in the area.
6. Existing House ground floor level is 27.15m AOD.
7. The existing ground floor level is +300mm above external ground level. The extension levels will be the same as existing house 27.15m AOD because it is not practical to raise the extension floor.
8. Surface water will be discharged into the existing mains drainage system, below ground, as for the house.
9. Floor protection measures to the proposed extension will be provided by use of flood resistant materials and construction techniques as follows:
 - External and internal walls to be constructed from non-absorbent or moisture protected masonry
 - Cavity wall insulation materials will be non-absorbent
 - Floor Construction to be concrete with moisture resistant protection
 - Internal wall finish to be plaster
 - External doors will be UPVC
 - All new electrical sockets and switches to be minimum 500mm above finished flood level
 - Consideration will be given to protecting the existing property

Appendix A – Maps and Plans

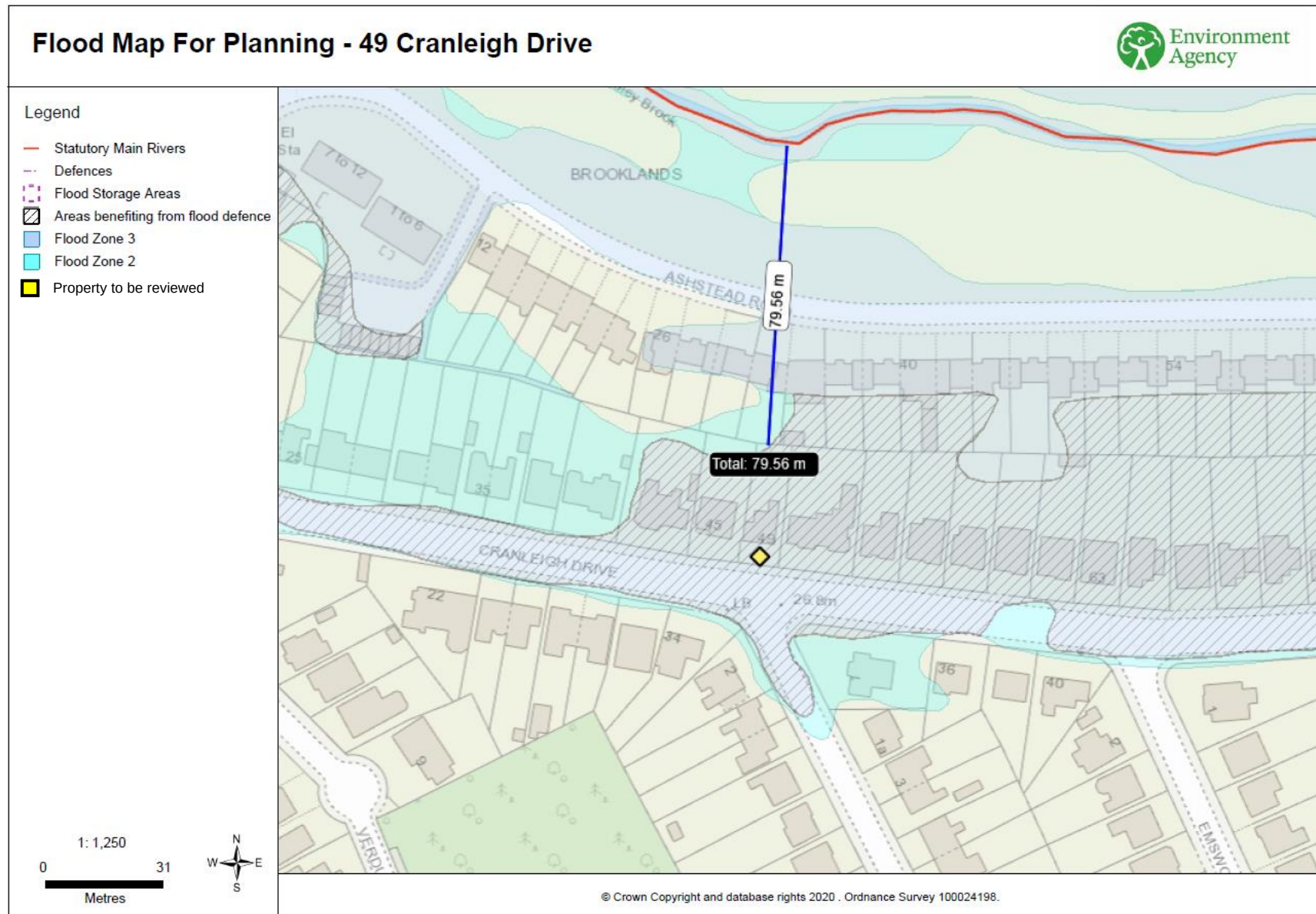


Figure 1. 49 Cranleigh Drive, Easting 379312 and Northing 390280.

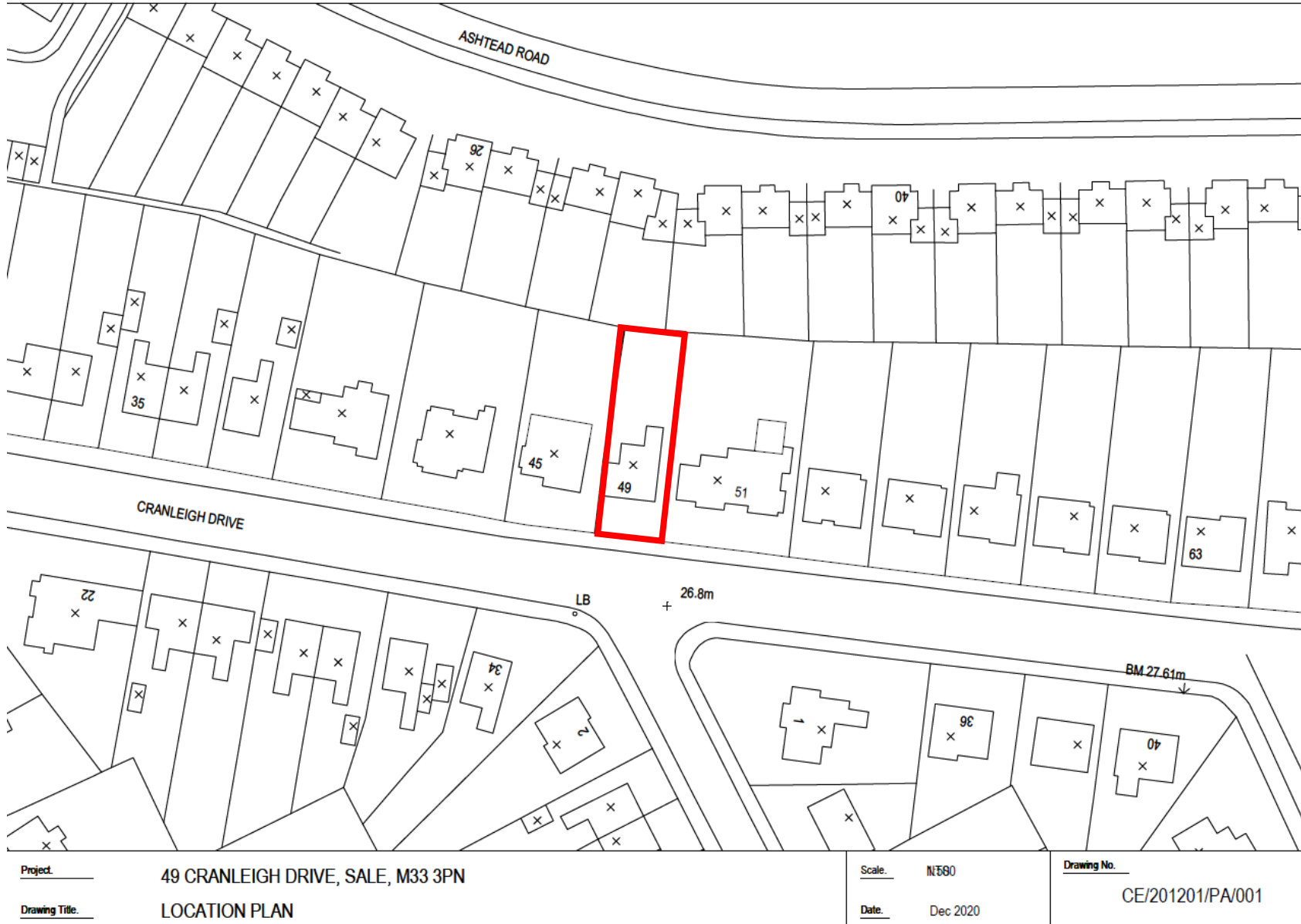


Figure 2. The location plan of 49 Cranleigh Drive.

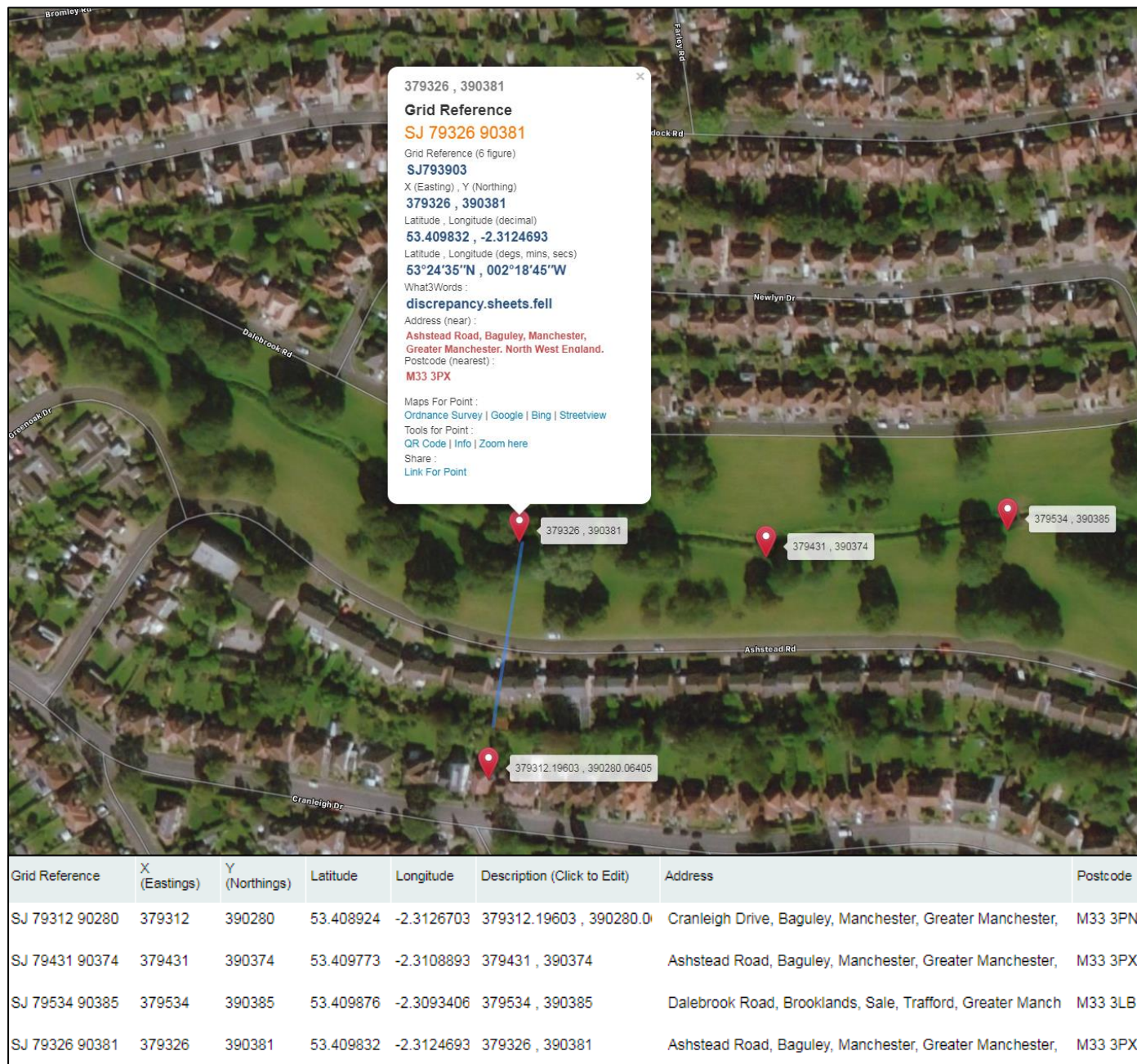


Figure 3. Ordnance survey datum, highlighting the ideal measurements used in the FRAP.

Appendix B – EA Model Data Sheet

31st May 2017

GMMC47241AB

Map Reference	Model Node Reference	Easting	Northing	Data	Undefended			Defended	
					1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + Climate Change*	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year)	
1	ea013_Model_08_BAGU01_00075	379534	390385	Modelled Water Level (m aodN)	27.33	27.34	27.34	27.36	
				Modelled Flow (cumecs)	3.36	3.38	3.41	3.55	
2	ea013_Model_08_BAGU01_00076	379431	390374	Modelled Water Level (m aodN)	27.12	27.12	27.13	27.14	
				Modelled Flow (cumecs)	3.72	3.75	3.79	3.93	
3	ea013_Model_08_BAGU01_00077	379326	390381	Modelled Water Level (m aodN)	26.95	26.95	26.96	26.97	
				Modelled Flow (cumecs)	3.73	3.76	3.80	3.94	
4	2D Levels	379375	390257	Modelled Water Level (m aodN)	26.94	26.96	26.96		
5		379380	390277	Modelled Water Level (m aodN)	26.86	26.92	26.94		

Model data taken from Altrincham 2009 Study

Notes:

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

*Climate Change Scenario - 20% increase in flow. We only hold climate change measurements based on the previous climate change guidance. The new climate change guidance is available at <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment. For further guidance on climate change within the GMMC area please see the attachment 'Flood risk assessments: Climate change allowances'. Particularly section 3, table B which shows the Local precautionary allowances for potential climate change impacts.

Figure 4. Model data for Baguley Brook obtained from the Environment Agency.