Flood Risk Note – 01 – Proposed 3 Bed Zeo Emission Dwelling, Dale Road, Elloughton

1.0 Brief

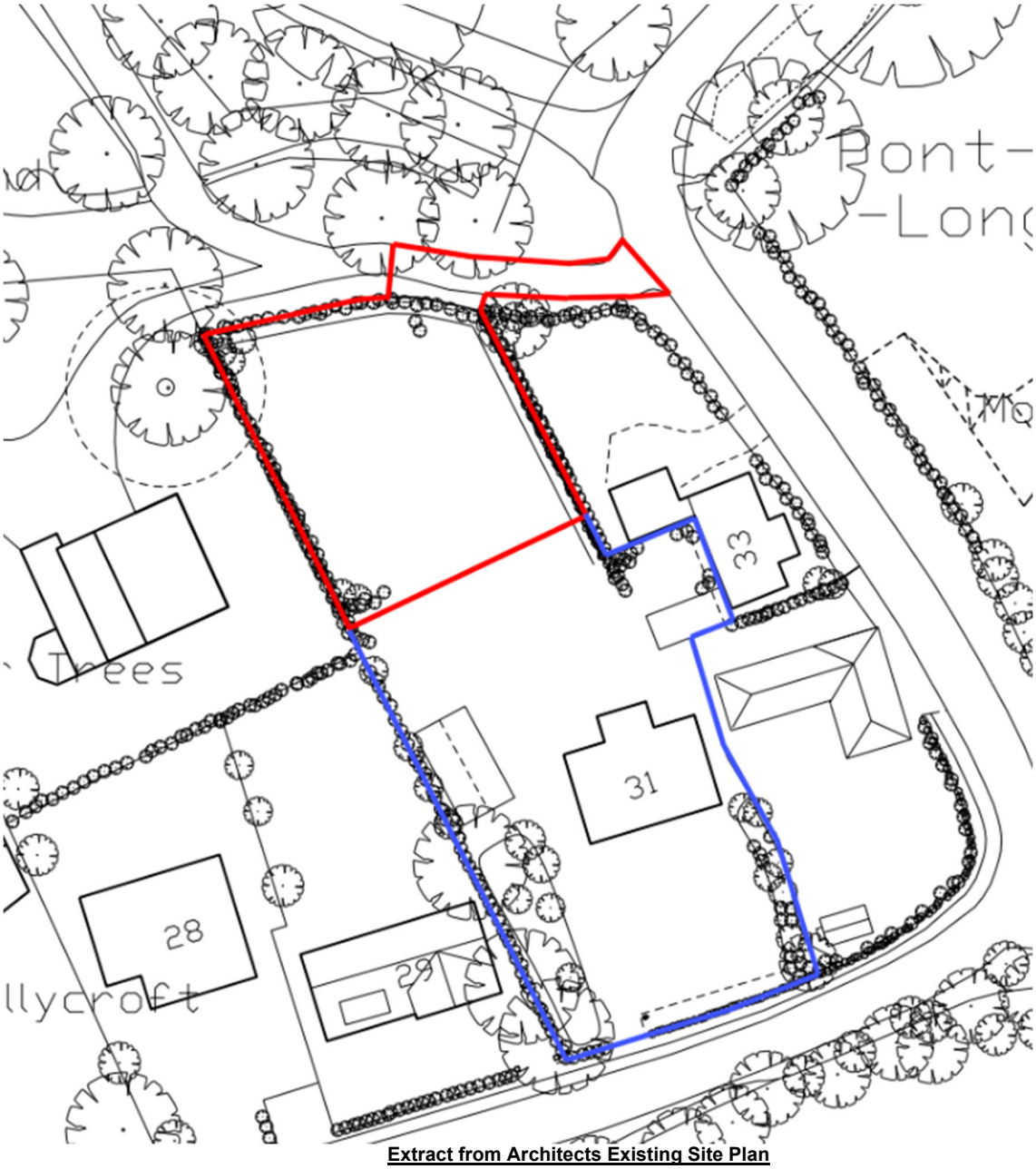
ACRA Consulting were requested by the owners, to prepare a flood risk note for the proposed Zero Emission Dwelling, at the Land Rear 31 Brookdale, Dale Road, Elloughton, HU15 1HY.

2.0 Description of Existing Site

As existing site is located to the rear of 31 Brookdale, current used as an extensive rear garden. Access would be via a shared existing access track off Dale Road.

The land surrounds the proposed site falls from the North East to the proposed access and fall West. Elloughton Beck is located to the southern side of Dale Road falling with the road to an existing culvert under Dale road to the north corner of the proposed access.

The culvert opens in to an open watercourse to the north of access road flowing West.



Extract from Architects Existing Site Plan

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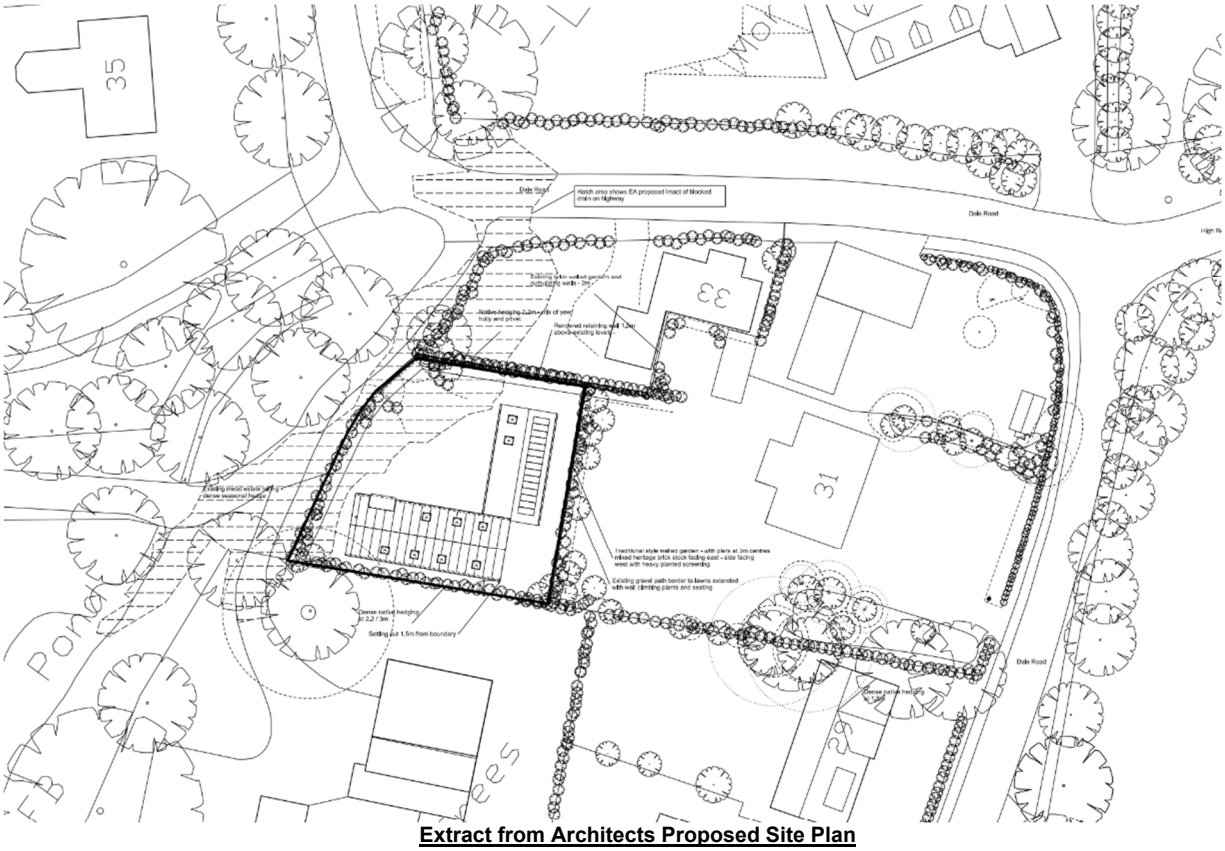
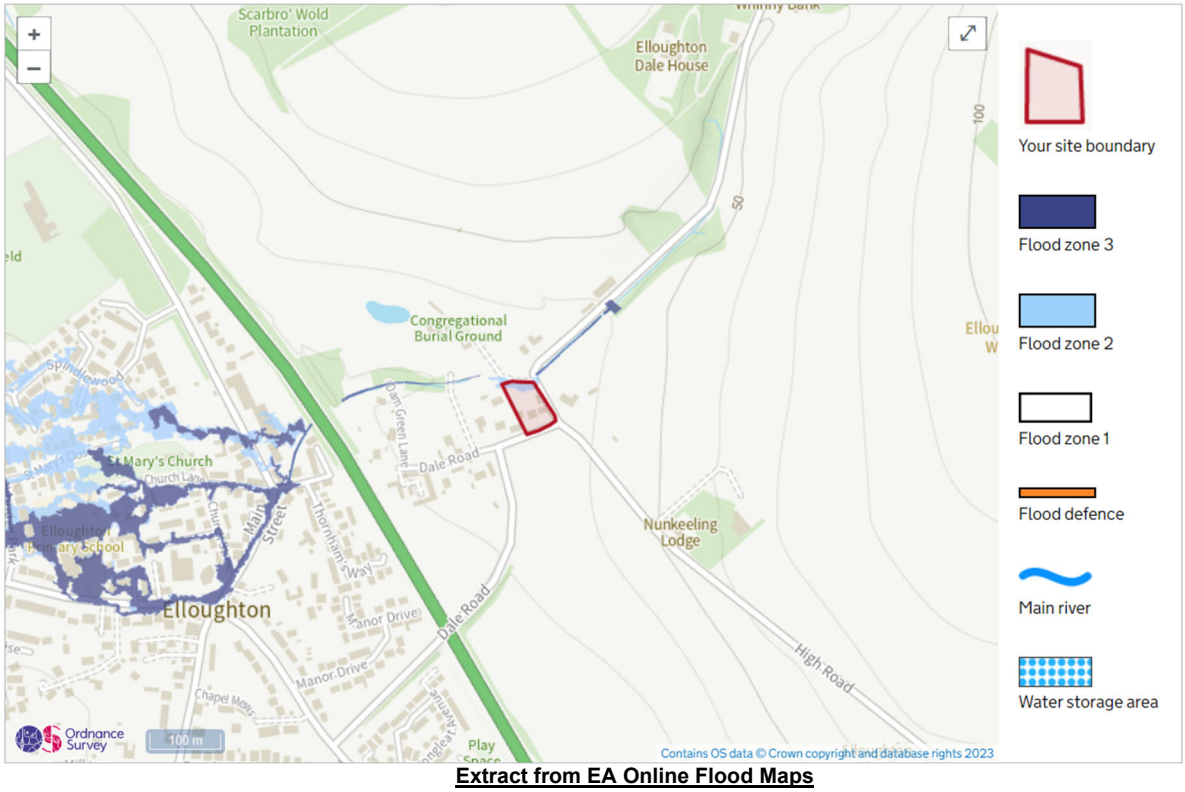
3.0 Proposed Development

The proposed application consists of a new 3 bed Zero emission dwelling.



Extract from Architects Proposed Site Plan

The proposed development is in a known area of flood risk as outlined by the Environment Agency's flood risk map. With reference to the EA maps, the development site north boundary lies within **Flood Zone 2.**



Extract from EA Online Flood Maps

4.0 Flood Risk Vulnerability Classification of the Proposed Development

With reference to Table 2 of the NPPF technical guide[3], the proposed use of a Residential Dwelling classifies as **'More vulnerable'.**

With reference to Table 3 of the technical guide[3], developments with 'More vulnerable' classifications within flood zone 2 are acceptable.

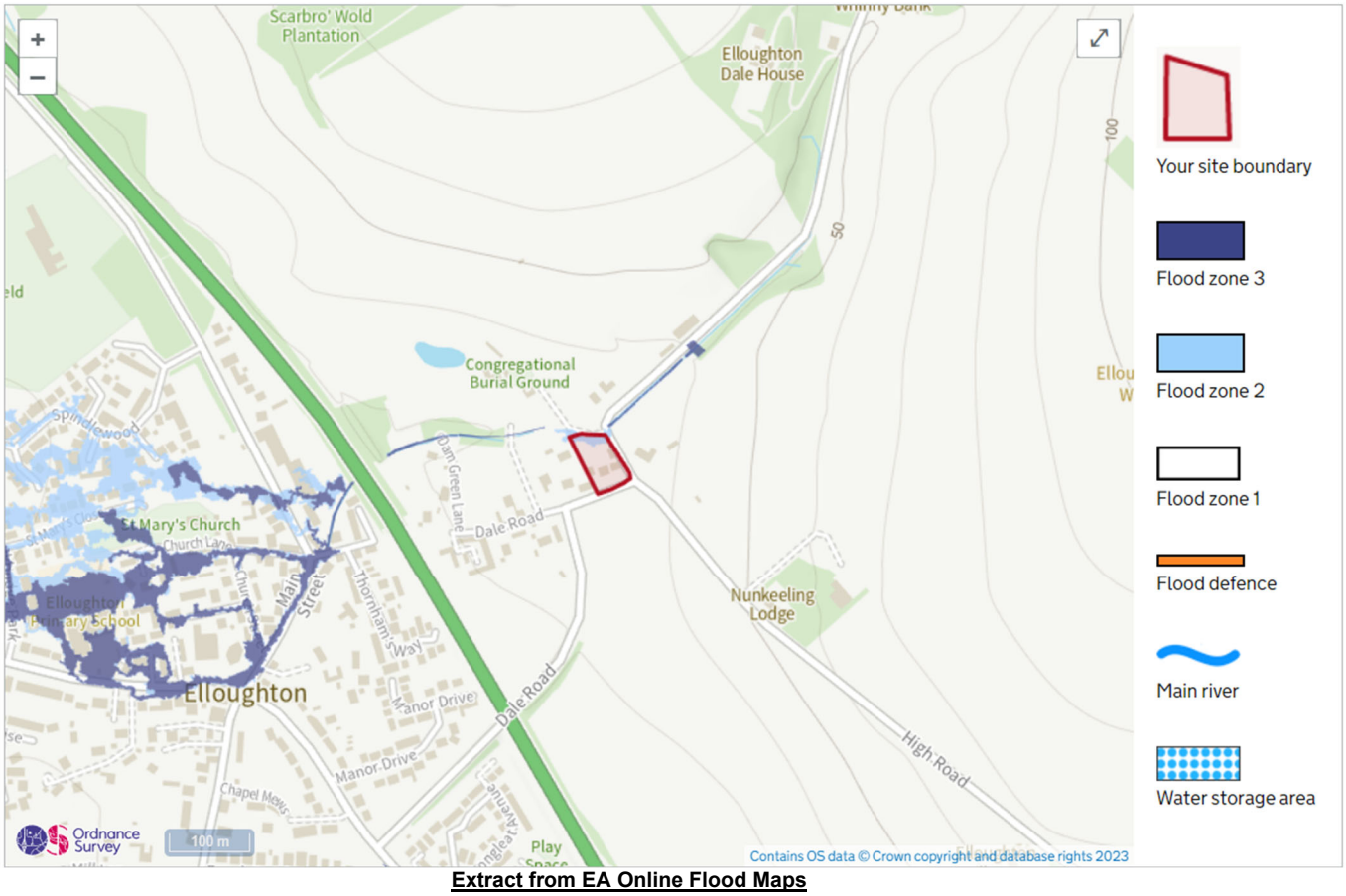
Table 3: Flood risk vulnerability and flood zone 'compatibility'

Flood risk vulnerability classification (see table 2)		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone (see table 1)	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓	✓
	Zone 3a	Exception Test required	✓	×	Exception Test required	✓
	Zone 3b functional floodplain	Exception Test required	✓	×	×	×

Key: ✓ Development is appropriate.
× Development should not be permitted.

5.0 Flood Risk

Given the proposed development has been confirmed to be within flood zone 2 along the northern boundary which follows Elloughton Beck. The flood risk can be concluded to be from surface water flood risk.



Extract from EA Online Flood Maps

5.1 Pluvial/Surface Water Flooding

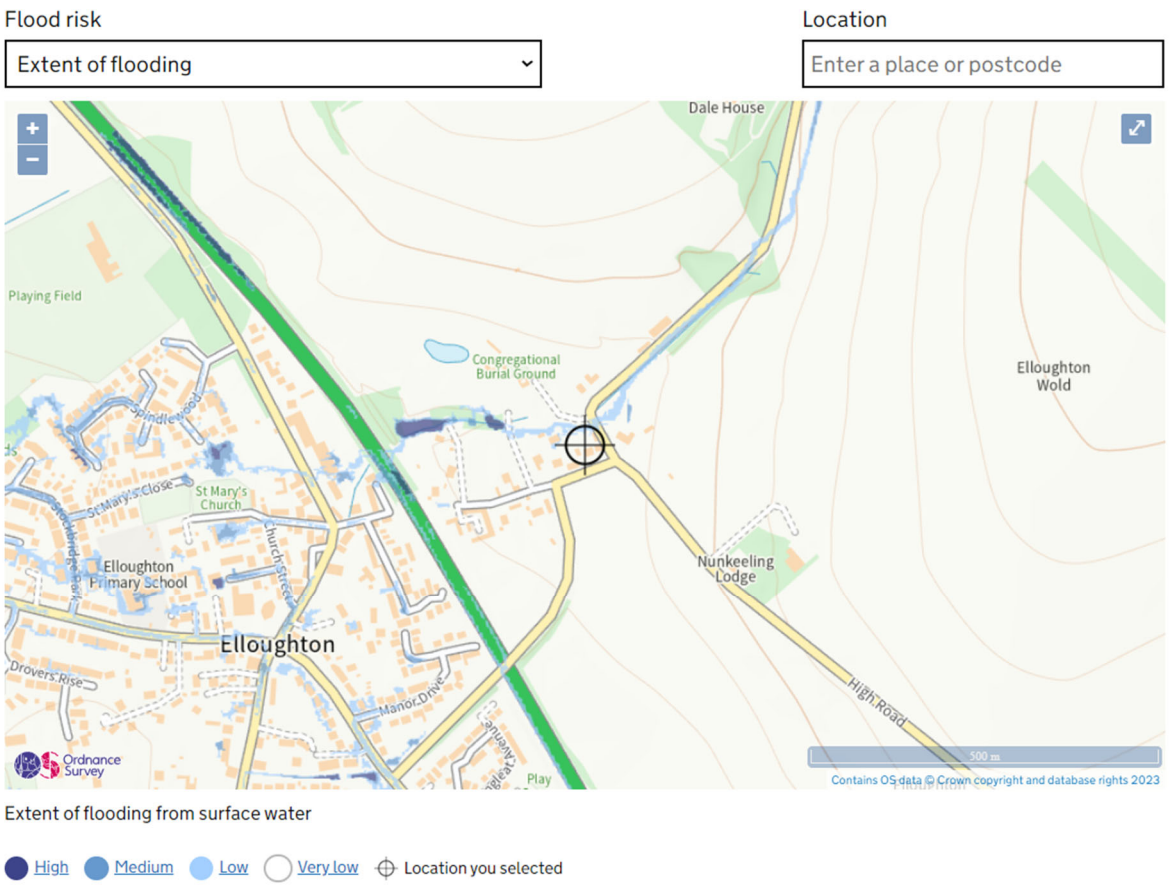
Surface water flood risk has recently been assessed on a national level by The Environment Agency. Maps were released in December 2013, which are some of the most comprehensive surface water flood risk maps in the world.

'The Surface Water mapping involves cutting edge technology, with flood experts using models to observe how rainwater flows and ponds. Then producing maps that take local topography, weather patterns and historical data into account.'

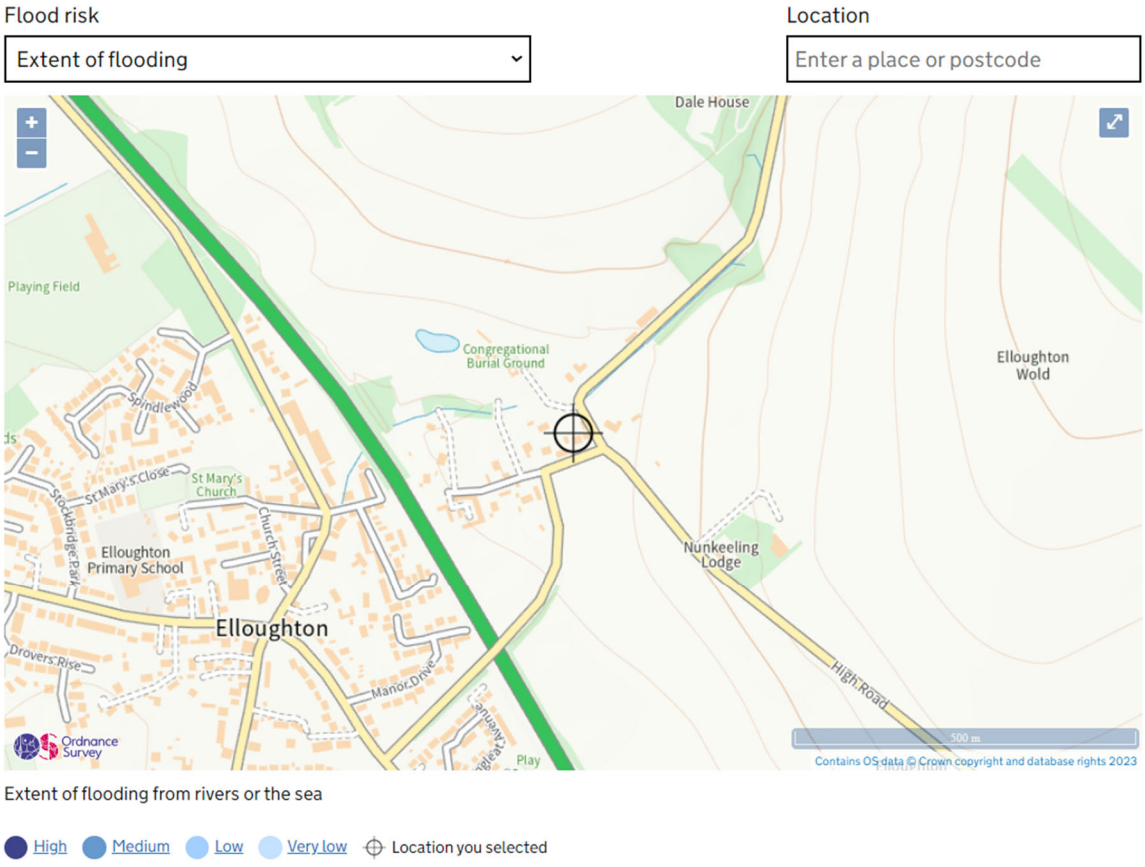
The Environment Agency surface water flood risk map shown below shows the site, to be at ***Low*** risk of surface water flooding, it also suggest a flow path following Elloughton Beck which would be expected.
The existing Beck is an open below ground watercourse with small culverts under road crossings.

As part of the proposed development the dwelling has been position into the site to avoid the area of flood zone 2 with the full property been located outside in flood zone 1.
The proposed access shall use porous surfacing ensure no increase in flood risk from the access in the area of the existing flood zone 2.

The dwelling rainwater shall be drained via SuDS infiltration.



Extract from EA – Surface Water Flood Risk



Extract from EA Flood Map – River & Sea

6.0 Summary

The proposed dwelling has been positioned on site sequential within flood zone 1 ensure the property is not located in the known flood zone 2 that extends across the north property boundary.

The proposed development shall use SuDS features for the construction of the access road via porous construction ensuring no net increase in flood risk occurs from the development.

The roof water runoff shall be collected and discharge via infiltration and where possible rainwater harvester should be considered via water butts or use as grey water.

In summary the proposal poses no change in flood risk to the surrounding area of the dwelling itself.

On behalf of ACRA Consulting Ltd

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Managing Director