

**Flood Risk Assessment
31 Grasmere Gardens, Bridgegate BS30 5XW**

20.090 FRA 001

This statement should be read in conjunction with the following plans and details submitted with this Application – drawing Nos:

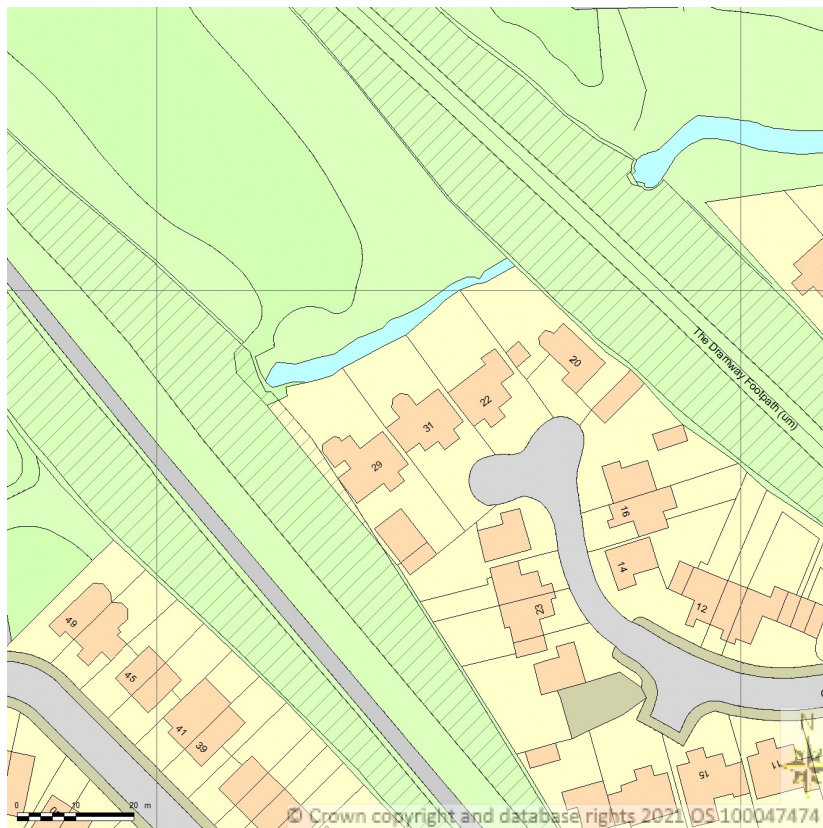
Site Location Plan

AL(0)001 Rev A – Existing Conditions

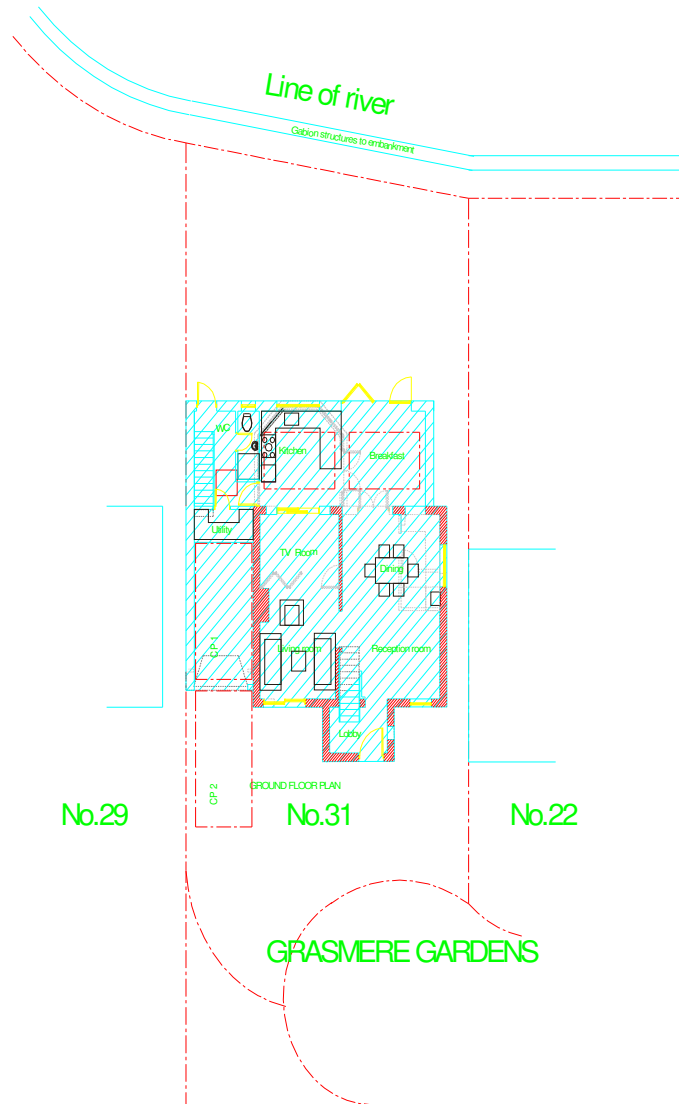
AL(0)002 Rec A – Proposed Conditions

1.0 The Site

31 Grasmere Gardens is one of 4 detached properties in a cul-de-sac which back onto the river. The properties area is 308.5sq.m approx. The rear boundary fence ranges from 10.8 -12.8m approx. from rear of main house face and it is a further 1m+ to the nearest river bank.



Site Plan



31 GRASMERE GARDENS
BRIDGEYATE
BS30 5WX
BLOCK PLAN 1:200 CA/21

Block Plan

2.0 The Location

The rear garden of number 31 Grasmere gardens is generally flat and remains so up to the front elevation on to the cul-de-sac where there is gradient up to the road



View of rear garden from main house with shed on left



Front garden with rise up to road

The rivers general level is some 2m+/- below the bank at this location. Recently much engineering work has been carried out to strengthen bank to properties including grilles and other debris retention and protection measures.



River view with shed in background



Gabion bank reinforcement



Debris protection measures at river behind property



3.0 Flood Risk

<http://www.environment-agency.gov.uk/research/planning/93498.aspx>

In reference to above environment agency flood evaluation tool link for the site postcode it is suggested that the property and rear garden sit in Zone 3 of flood map (see copy appendix) and front garden sits in Zone 2 of the map due to the proximity of a small river at the rear of property hence the requirement for this assessment.

From UK Grid Reference Finder – Elevation chart BS30 5XW is shown to be at 48m AOD however Ordnance Survey maps note that nearby to the site a 45m contour passes. This sits about 3m above actual Site level at rear garden.

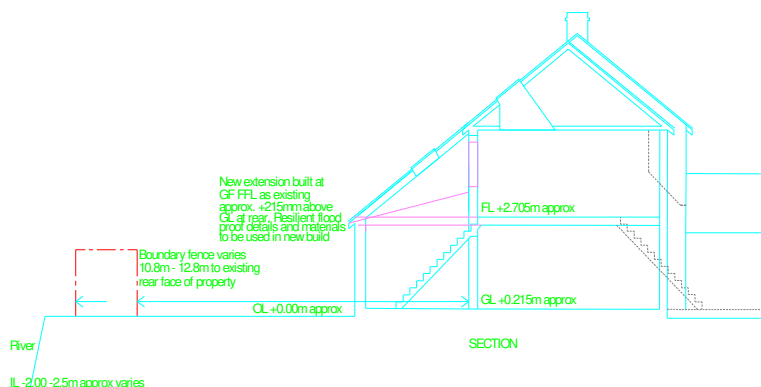
<https://www.gridreferencefinder.com/elevationOSM/elevation.php?pts=51.453670%252C-2.4676208&descs=BS30%2525205XW>

From Wessex EA information the 100yr Flood level for nearest site at reference E367029 N172698 is noted to be 34m approx.

4.0 Proposal

The proposal is for a rear single storey extension to rear of property following the demolition of the existing conservatory and a First Floor addition over garage (as shown on drawings). The current area of conservatory is 13.25sq.m approx. and new rear extension is 39sq.m resulting in an area increase of 25.75sq.m. The first floor addition adds no additional footplate area. The total area increase for proposed development is therefore +25.75sq.m approx.

All surface water drainage will be taken to existing system.



5.0 Conclusion

It can be suggested that any new displacement volume reduction will be negligible based on above areas and noting the physical protection measures described above being in place. It is also noted that the owner who has occupied the property for some 18yrs+ has not experienced any flooding to any part of the land or property.

All protection measures necessary in the build for construction and choice of resilient materials in a possible flood area will be adopted as per guidance recommendations in Improving the Flood Performance of New Buildings: Environment Agency: 2007 in particular the design details referenced in Par 3 Section 6 Guidance on flood resilient design and construction. Accordingly the extension will be designed to have a contiguous damp proof layer with moisture discharge as required and electric/ service points above normal siting level.