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Evolution
Environmental Solutions

Site-specific Flood Risk Assessment

Dairy House, Goose Lane, Chipping

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Development Site and Location

The proposed development comprises a residential annex and garage at an existing property at

Dairy House
Goose Lane
Chipping
PR3 2QB



Figure 1 – Location Plan

The development lies within Flood Zone 2 and 3 (medium to high probability of flooding from river and sea), and therefore requires a flood risk assessment to support the planning application.

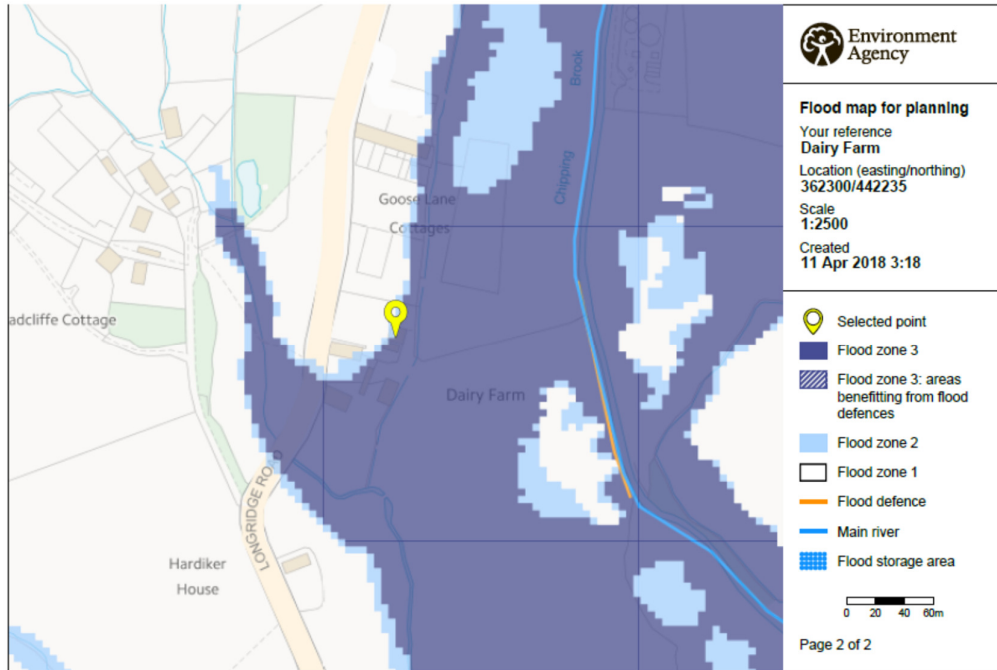


Figure 2 – Flood Zone Plan

However, the development lies within a very low risk area of flooding from surface water (Figure 3).



Figure 3 – Flood Risk from Surface Water

The site is also not in an area classed to be at flood risk from reservoirs.

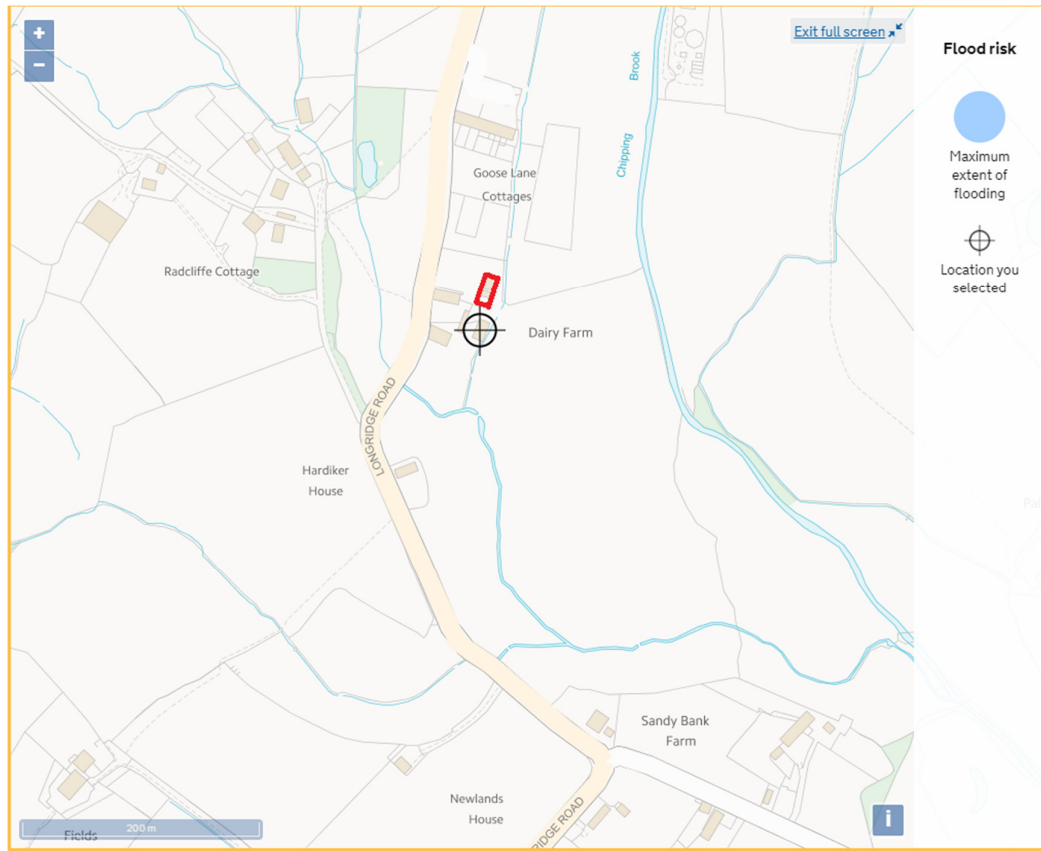


Figure 4 – Flood Risk from Reservoirs

The site does not lie within 20m of a main river.

Development Proposal

The proposal comprises a detached single storey residential annex and double garage within the garden of the existing property of Dairy House.



Figure 5 – Proposed Plan

The flood risk vulnerability classification for buildings used for dwelling houses is “more vulnerable”. The proposed build is a householder development within the curtilage of the existing dwelling, and as such is classed as “minor development”, and an Exception Test, as indicated by Table 3 is not required.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	✗	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	✗	✗	✗	✓*

Key:

✓ Development is appropriate

✗ Development should not be permitted.

Table 3 – Flood Risk Vulnerability and Flood Zone Compatibility

Flood Risk from the Site

The proposed annex is to be sited in an area presently housing Nissen huts; the area of the Nissen huts and the area of the proposed annex being approximately equal.

Currently, surface water run-off from the Nissen huts discharges to ground locally. It is proposed that surface water from the annex will discharge to ground in a similar manner.

A small greenhouse occupies the area proposed for the double garage. It is proposed that surface water from the garage will discharge to ground locally, in a similar fashion to the annex.

There is a small patio area associated with the development, and it is envisaged that surface water run-off from the hard paved areas will also discharge to ground locally.

The driveway to the annex is to be constructed of loose chippings, and will not affect the permeability of the site.

In conclusion, although there will be an increase in the impermeable area of the site following development, the increase is considered to be minimal, and surface water run-off will still discharge to ground locally, having no significant affect on the flood risk from the site.



Figure 6 – Existing Plan

Flood risk to the site

As illustrated in Figure 2, the curtilage of Dairy House lies within an area of the flood plain of Chipping Brook. This is the only known potential risk of flooding to the site. The proposed annex lies within an area of Flood Zone 3 and 2, on the boundary of Flood Zone 1, with Dairy House itself lying within Flood Zone 2 and 1.

A topographical survey has been completed for the curtilage and neighbouring land and the existing ground levels fall across the site in a south-easterly direction.

Threshold levels were measured at the existing house of 93.91 mAOD to the rear entrance and 93.88 mAOD at the front porch.

The finished floor level of the Nissen huts was recorded as 94.0 mAOD, with ground levels outside the huts to the west measured at 94.1 mAOD.

It is proposed to set the finished floor level of the annex at 94.2 mAOD, i.e. some 300 mm above the existing house finished floor level, which lies within Flood Zone 1.

It is considered that achieving this finished floor level will minimize the flood risk to the annex.

Evacuation Route

Although the annex is a single storey structure, should flooding occur safe refuge exists within Dairy House itself which is a two storey dwelling.

Should evacuation of the properties be necessary, a safe route exists out of Flood Zone 2, north along Longridge Road.

Flood Resilience Measures

Should it be deemed necessary, the scheme designers will ensure that suitable flood resilience measures are prescribed during the detail design stage of the project. This could include the requirement to site electrical services and connections above the risk level, wire internal sockets from above, and examine the practicality of other measures to prevent water access.

Conclusions and Recommendations

It is concluded that the measures to be taken in the design and flood planning for the proposed annex are sufficient and appropriate for the scale and type of development, and that the Environment Agency should accept and approve these measures in their representations to the Planning Office.