

BULBY'S WOOD TOILET BLOCK - FLOOD RISK ASSESSMENT.
SEPTEMBER 2014

Introduction:

This flood risk assessment relates to the provision of the toilet block at Bulby's wood only and has been prepared in accordance with the 'Technical Guidance to the National Planning Policy Framework'. The FRA needs to consider the impacts of flooding on the building from all sources. It will also need to show how the proposed refurbishment will not increase flood risk elsewhere by managing any surface water runoff.

Existing Site and Background:

The site is located at Bulby's Wood, Ingram, Northumberland, NE66 4LT.

Bulby's Wood car park and toilet block is currently used on a daily basis by visitors to the area. It is positioned alone, surrounded by dense trees in Ingram Valley.

The building itself is around 30m² and is finished with painted render walls to the front and rear, and sandstone walls to the gable elevations. It has white timber framed windows with an opening pivot, timber doors and a natural slate pitched roof.

The building is detached and set within its own ample grounds with tarmac car park, grassed areas and numerous trees.

The existing toilet block is located within a group of trees on the west side of a substantial woodland block. It is approximately 32m (on the north side) from the public highway that runs the length of the valley. A parking area and groups of trees separate the building from the road. Currently the building is largely obscured from view from the car park and road and although the project proposals aim to improve visibility from the south it will not be completely opened up.

Development Description and Planning Context:

The current development proposals for the site are for the refurbishment of the existing toilet block facilities. The EA flood maps for the region show that the development is just within FLOOD ZONE 2 (Definition of Flood Zone 2 (TG-NPPF)), which has a low probability of flooding 1 in 1000 in any one year (0.1%). The building is around 20m from the river Breamish in the Ingram Valley.

The proposed refurbishment will comprise of renewing the existing male and female toilets, as well as a provision for a rangers office / information distribution area.

Existing Drainage:

Foul drainage from the building is currently served by an existing Klargestar Septic tank and soak-away system installed in 1994. The owner of the property, Northumberland National Park, has not been able to locate an Environmental Permit for the existing system. The septic tank is currently emptied by pump vehicle once a year. This is found to be more than adequate.

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Mains Connection – It is not possible to connect to a mains system as there is no known main sewer in the village of Ingram or this part of the Ingram Valley.

The existing drainage system will not be affected. The existing pipework will be used from the point that it leaves the building, there is no intention to change the existing Klargestor or soak-away.

Due to the reduction in toilet and washing facilities it is anticipated that flow volumes will be reduced. There is no known problem with the efficiency of the soak-away system and for this reason no percolation tests have been carried out.

The new water will be supplied via a borehole to be located within the existing car park. No depth of this borehole has yet been established but is likely to be between 30 – 60m.

Site Specific Flood Hazards:

The FRA needs to consider the impacts of flooding on the proposed development from all sources.

Tidal and Fluvial Flooding:

The site is noted to lie in Flood Zone 2 (low risk as categorised by NPPF and Environment Agency flood maps) and therefore the risk of flooding from rivers or seas is around 1 in 1000 each year.

Whilst there is no current evidence of any fluvial or tidal risk to the site as is illustrated by the Environment Agency Flood map, the FRA needs to consider groundwater and surface water flooding. No risk from flooding should occur as the proposed refurbishment does not alter the size or shape of the existing building or watercourse.

Groundwater:

It is not anticipated that groundwater flooding will be generated.

Reference to the Northumberland National Park's previous Flood Risk Assessments confirms that groundwater flooding is not a major problem in the area.

Significant flood risk is not expected from groundwater at this stage.

Artificial Sources:

Inspection of OS and EA maps indicate that this phase of the development is located in an area which is not at risk of flooding from reservoir failure. Flood risk is not expected from this source.

Summary of flood risk and mitigation measures:

In consideration of the impacts of flooding on the proposed development from all sources, it is determined that the risk level is low. The FRA will also need to show how the proposed development will not increase flood risk elsewhere. The surface water run-off will not be altered in any way and does not currently pose a risk of flooding.

Proposed Refurbishment:

The proposed refurbishment of the existing toilet block will accommodate an office area for a Park Ranger, as well as extra storage and the male and female toilets will also be modernised during the works.

A new pump room will be created to house a water pump and additional cleaning units to purify water provided from new bore hole pump system.

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As part of the works our intention is to landscape the immediate area surrounding the toilet block. This will include the removal of some small trees and shrubs and the laying of new paving areas including a dark skies area and seating.

Drainage Proposals:

As part of the refurbishment work no new external drainage connections will be created. All new drainage internally will connect to the existing soil stacks and surface water gullies.

Off Site Impacts:

The proposed development will not exacerbate fluvial flooding adjacent to or downstream of the site for the proposed lifetime of the development.

Residual Risks:

The investigations carried out as part of this flood risk assessment and flood risk management measures proposed demonstrate that the development will be safe, without increasing flood risk elsewhere.

Recommendations:

The following recommendations are made to reduce flood risk and promote a sustainable and practicable drainage strategy at the proposed development:

- Existing FFL of the building is set 150mm above local surroundings to ensure protection against localised surface water flooding.
- The proposed drainage system will be checked with an allowance of 30% additional flow to account for possible future climate change.
- Foul water drainage for the site proposals shall connect to the existing soil vented stacks taken to the existing septic tank. No new drainage runs will be created.

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