



JOB NUMBER: **VCE0759**

PROJECT: **THE REZ, WALL GRANGE**

CLIENT: RADWORTH ARCHITECTURAL SERVICES

REPORT NUMBER: VCE0759/rep/001

REPORT TITLE: **FLOOD RISK ASSESSMENT**

Prepared with reasonable care and attention:

A handwritten signature in black ink, appearing to read "M. Haley", is written over a horizontal dotted line.

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EXECUTIVE SUMMARY

M Design were commissioned by Radworth Architectural Services to undertake a Flood Risk Assessment (FRA) to support a planning application for the change of use, from commercial to residential, of two existing buildings. The application also includes an extension to the rear of the eastern building. The development is situated off Sutherland Road, Longsdon, Staffordshire.

The site is shown to be on the edge of the flood zone of the Endon Brook which flows approximately 75m to the south. As the buildings are to become residential dwellings it is important to ensure that the occupiers are not at risk during the event of extreme flooding. This is discussed within the body of this report.

The development focuses on two building; The Rez Cafe which is the eastern building and The Pumphouse which is the western building. The footprint of the Pumphouse is to remain as existing; however there is a small extension to be constructed to the rear of The Rez Cafe, this will slightly increase the impermeable area. To ensure that this increase does not increase the surface water flows into the existing drainage system, the surface water drainage from the extension area is to discharge into a soakaway on site.

The proposed development will not exacerbate flood risk in the area and the proposed property is not at risk of flooding. Development of this site is therefore considered appropriate in terms of flood risk.

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CONTENTS

- 1 INTRODUCTION
 - 1.1 Background
 - 1.2 Scope of Report
 - 1.3 Consultations & Data Sources

- 2 SITE DESCRIPTION
 - 2.1 Site Location
 - 2.2 Site Details
 - 2.3 Site Flooding Potential
 - 2.4 Surface Water Drainage

- 3 PROPOSED DEVELOPMENT
 - 3.1 Proposed Development Description
 - 3.2 Proposed Development Surface Water Runoff & Proposals

- 4 CONCLUSIONS
 - 4.1 Conclusions

APPENDICES

- A Aerial Photography
- B Environment Flood Maps
- C Proposed Dwelling Plan
- D Proposed Escape Route

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1 INTRODUCTION

1.1 Background

M Design were commissioned by Radworth Architectural Services to undertake a Flood Risk Assessment (FRA) to support a planning application for the change of use, from commercial to residential, of two existing buildings. The application also includes an extension to the rear of the eastern building. The development is situated off Sutherland Road, Longsdon, Staffordshire.

The planning process requires an assessment to be made of any flood risks related to proposed developments. In particular this involves two key issues; whether the development itself would be at risk of being flooded or whether the development would increase the risk of flooding elsewhere. This assessment is contained within this report which has been prepared to be submitted with the planning application.

1.2 Scope of Report

The following tasks were undertaken in the preparation of this report:

- An assessment was made in order to identify any risks of flooding to the site, identify drainage patterns, receiving watercourses, and to identify any constraints to the drainage system that may restrict the proposed development;
- Liaison with the Environment Agency was undertaken to establish occurrences of flooding in the area;
- Evaluation was made of how the proposed development would affect the existing surface water runoff.

1.3 Consultations and Data Sources

The following tasks were undertaken in the preparation of this report:

- Environment Agency Flood Maps;
- Environment Agency
- Improving the Flood Performance of New Buildings

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2 Site Description

2.1 Site Location

The development is situated off Sutherland Road, Longsdon, Staffordshire at a grid reference of approximately ST9 9QD.



Fig 2.1 Location of Site.

The site is accessed via access track to the south. It is surrounded by a mixture of dense woodland, grassed areas and assorted buildings.

An aerial photographic image is included within this report as Appendix A.

2.2 Site Details

The site is located in an area in between the Caldron Canal and the Endon Brook. The site slopes from north to south by approximately 3m. There are 3 brick built buildings on site; The Pump House, The Rez Café and the Blacksmith Workshop. There are no plans to carry out any work on the latter building.



2.3 Site Flooding Potential

The site is shown to be on the edge of the flood zone of the Endon Brook which flows approximately 75m to the south. As the buildings are to become residential dwellings it is important to ensure that the occupiers are not at risk during the event of extreme flooding.

2.4 Surface Water Drainage

It has been assumed that the surface water drainage from the existing buildings discharges into an existing sewer in the area.

3 Proposed Development

3.1 Proposed Development Description

The proposals for the site are to renovate the two existing buildings and convert them into residential dwellings. The Rez Cafe, which is the eastern building, is to have a small extension constructed to the rear. The finished floor levels of both buildings are to remain as existing. A copy of the proposed plans are included within Appendix C

3.2 Proposed Development Surface Water Runoff & Proposals

The Pump House

The footprint of the pump house is to remain as existing; as a result there will be no increase in the surface water flows. Therefore any drainage alterations can utilise the existing connections around the building.

The Rez Cafe

As part of the proposals there will be a small extension built onto the rear of the building. This will increase the impermeable area of the building and may also result in an increase in surface water flows. Given the flooding shown in the area it is important to resolve this. It is therefore recommended that the surface water collected from the extension is discharged into a soakaway on site. The size and location of this is to be confirmed following percolation tests carried out to

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establish the ground conditions. Any pipes draining the original footprint of the building can discharge into the existing drainage system on site.

3.3 Proposed Flooding Solutions

The EA Flood Maps show that the south of the site is within a flood zone. However this only affects the southernmost section of the building. The finished floor levels of both to be maintained and are both elevated above the ground levels on site (The Pumphouse is over 1.5m above ground level and the Rez Cafe is 500mm above ground level). As a result of this flooding to the property is negligible.

Both properties have exits situated to the north of the building which is outside of the flood zone. These can be used as means of escape if an extreme flood event does occur. It is recommended that the occupiers of the building sign up to the Environment Agency early warning system which gives advanced notice of any possible flooding. This will allow residents to exit the building and head to higher ground or evacuated to higher floors within the property. The subscription to the flood warning system should be highlighted in the deeds of the property to make future occupiers of the property aware of the procedures. A flood evacuation plan is shown within Appendix D of the report.

4 Conclusions

4.1 Conclusions

The southern boundary of the site is shown to be within a flood zone. However the report shows that both building have a raised finished floor level and also have exits to the rear of the property to an area outside of the flood zone. Due to this risk to the occupiers of the building will be minimal. Also it is recommended that the occupiers of the building sign up to the Environment Agency early warning system which gives advanced notice of any possible flooding.

The extension to The Rez Cafe will slightly increase the impermeable area of the building. However the additional surface water flows are to discharge into a soakaway so this will not increase the risk of flooding downstream of the site.

The report has shown that the buildings are not at risk from flooding and that every step will be taken to ensure the safety of the residents. The development will not increase the surface water discharge from the site and therefore will not increase the risk of flooding downstream. The development is therefore deemed acceptable in relation to flood risk.

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Appendix A

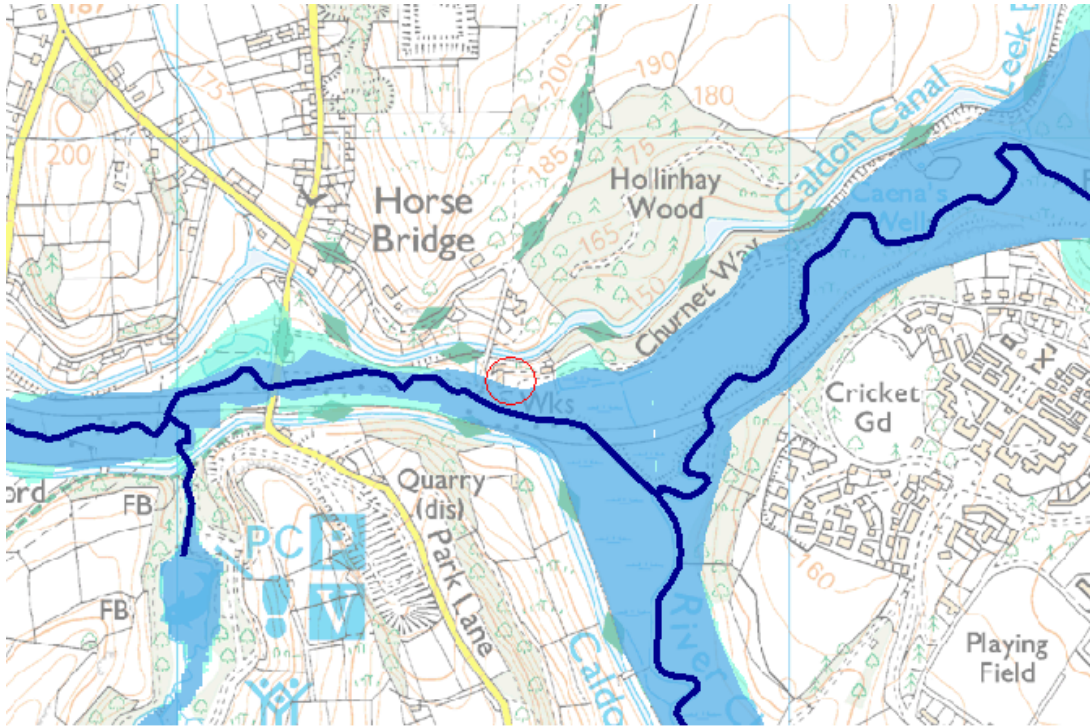


Aerial Photograph of Site

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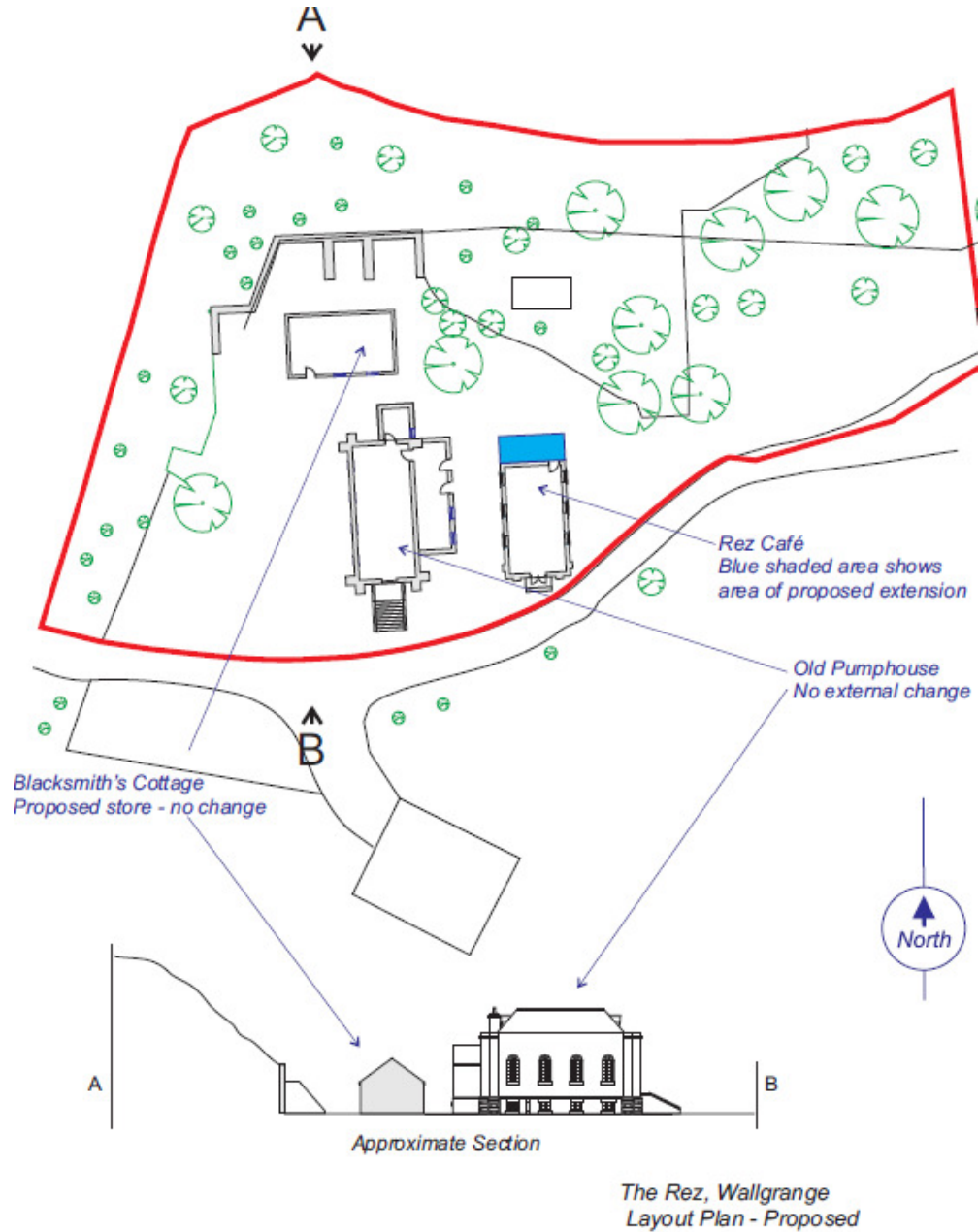
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Appendix B



Environment Agency Flood Maps

Appendix C



Proposed Site Plan

Appendix D



Escape Route To Higher Ground