

FLOOD RISK ASSESSMENT

New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT

Works to include upgrading works to access and access track, creation of parking area, re-instatement of collapsed roof, insertion of rooflights and alterations to fenestration in connection with the conversion of an existing agricultural barn to a single dwellinghouse

Prepared by: Emma Kirby Design Ltd

On behalf of: Sarah Bridge

Date: 30 March 2026

Application Site: New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT

Proposed Use: Conversion of existing agricultural barn to a single dwellinghouse (Use Class C3)

Local Planning Authority: Ribble Valley Borough Council

CONTENTS

1. Introduction
2. Site Description and Location
3. Planning and Policy Framework
4. Flood Risk — Fluvial and Tidal
5. Surface Water Flood Risk
6. Foul and Surface Water Drainage Strategy
7. Conclusions

Appendices

- Appendix A — Location Plan
- Appendix B — Proposed Site Plan
- Appendix C — EA Flood Zone Map (Flood Zones 1, 2 and 3)
- Appendix D — EA Surface Water Flood Risk Map
- Appendix E — Approved Foul and Surface Water Drainage Strategy (Drawing No. 151, previously approved under 3/2016/0760)
- Appendix F — Proposed Foul and Surface Water Drainage Strategy (Drawing No. 151 P1)

1. Introduction

This Flood Risk Assessment (FRA) has been prepared by Emma Kirby Design Ltd in support of a full planning application for works at New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT. The application is submitted on behalf of Sarah Bridge and relates to works including upgrading works to the access and access track, creation of a parking area, re-instatement of a collapsed roof, insertion of rooflights and alterations to fenestration, in connection with the conversion of the existing agricultural barn to a single dwellinghouse.

1.1 This FRA has been prepared in accordance with the requirements of the National Planning Policy Framework (NPPF) 2024, the accompanying Planning Practice Guidance (PPG) on Flood Risk and Coastal Change, and the Environment Agency's standing advice on flood risk.

1.2 The purpose of this FRA is to:

- confirm the flood zone classification of the application site;
- assess the vulnerability of the proposed development in the context of its flood zone classification;
- identify any surface water flood risk affecting the site or its associated access;
- demonstrate that the proposed development would not increase flood risk on or off the site; and
- confirm that the proposed foul and surface water drainage strategy is appropriate and consistent with the previously approved drainage approach.

1.3 This FRA should be read alongside the application drawings and supporting documents, and in particular:

- Location Plan (*see Appendix A*)
- Proposed Site Plan (*see Appendix B*)
- EA Flood Zone Map (*see Appendix C*)
- EA Surface Water Flood Risk Map (*see Appendix D*)
- Approved Foul and Surface Water Drainage Strategy, Drawing No. 151 (previously approved under planning permission 3/2016/0760) (*see Appendix E*)
- Proposed Foul and Surface Water Drainage Strategy, Drawing No. 151 P1 (*see Appendix F*)

2. Site Description and Location

2.1 New Barn is an existing stone agricultural barn located at Knowles Brow, Hurst Green, Near Clitheroe, Lancashire, BB7 9PT. The site extends to approximately 0.144 hectares.

2.2 The building is a substantial traditional agricultural structure constructed in stone with a slate roof and stone detailing to openings. It is of clear local vernacular character and is situated within the Forest of Bowland National Landscape.

2.3 The site is in a rural location and is approached by an existing access route, the upgrading of which forms part of the current application.

2.4 The site is not in proximity to any main river or ordinary watercourse that would give rise to a direct fluvial flood risk to the barn itself. The surrounding topography is characteristic of the gently undulating rural landscape of the Ribble Valley.

2.5 The application site is shown on the Location Plan at Appendix A and the Proposed Site Plan at Appendix B.

3. Planning and Policy Framework

3.1 National Planning Policy Framework 2024

3.1 Chapter 14 of the NPPF 2024 (*Meeting the challenge of climate change, flooding and coastal change*) sets out the national policy framework for flood risk. The NPPF requires that a sequential, risk-based approach is taken to the location of development, steering new development to areas with the lowest probability of flooding.

3.2 The NPPF establishes a flood zone classification system:

Flood Zone	Description	Annual Probability of Flooding
Flood Zone 1	Low probability	Less than 1 in 1,000 year (< 0.1%)
Flood Zone 2	Medium probability	Between 1 in 100 and 1 in 1,000 year (0.1%–1%)
Flood Zone 3a	High probability	Greater than 1 in 100 year (> 1%)
Flood Zone 3b	Functional floodplain	Land which floods frequently

3.3 The NPPF's Flood Risk Vulnerability Classification identifies residential uses (dwellinghouses) as *More Vulnerable* development. The NPPF confirms that More Vulnerable development is appropriate in Flood Zone 1 without the need for a Sequential Test or Exception Test.

3.4 Where a site lies within Flood Zone 1 and is less than 1 hectare in area, a site-specific FRA is not ordinarily required by the NPPF unless the site is identified as being at risk from other sources of flooding, including surface water. In this case, an FRA is submitted voluntarily and in the interests of transparency, given that a section of the approved access route is identified as susceptible to surface water flooding on the Environment Agency's surface water flood risk mapping.

3.2 Planning Practice Guidance

3.5 The PPG on Flood Risk and Coastal Change provides detailed guidance on the application of the NPPF's flood risk policies. It confirms that FRAs for sites in Flood Zone 1 should focus on surface water and other sources of flooding where relevant,

and should demonstrate that the development would not increase flood risk elsewhere.

3.3 Ribble Valley Core Strategy

3.6 Key Statement DME6 (*Water Management*) of the Ribble Valley Core Strategy requires that development proposals incorporate appropriate measures to manage surface water run-off and that development does not increase flood risk on or off the site.

3.7 The submitted drainage strategy has been prepared in accordance with these requirements and is consistent with the approach previously approved by the Local Planning Authority.

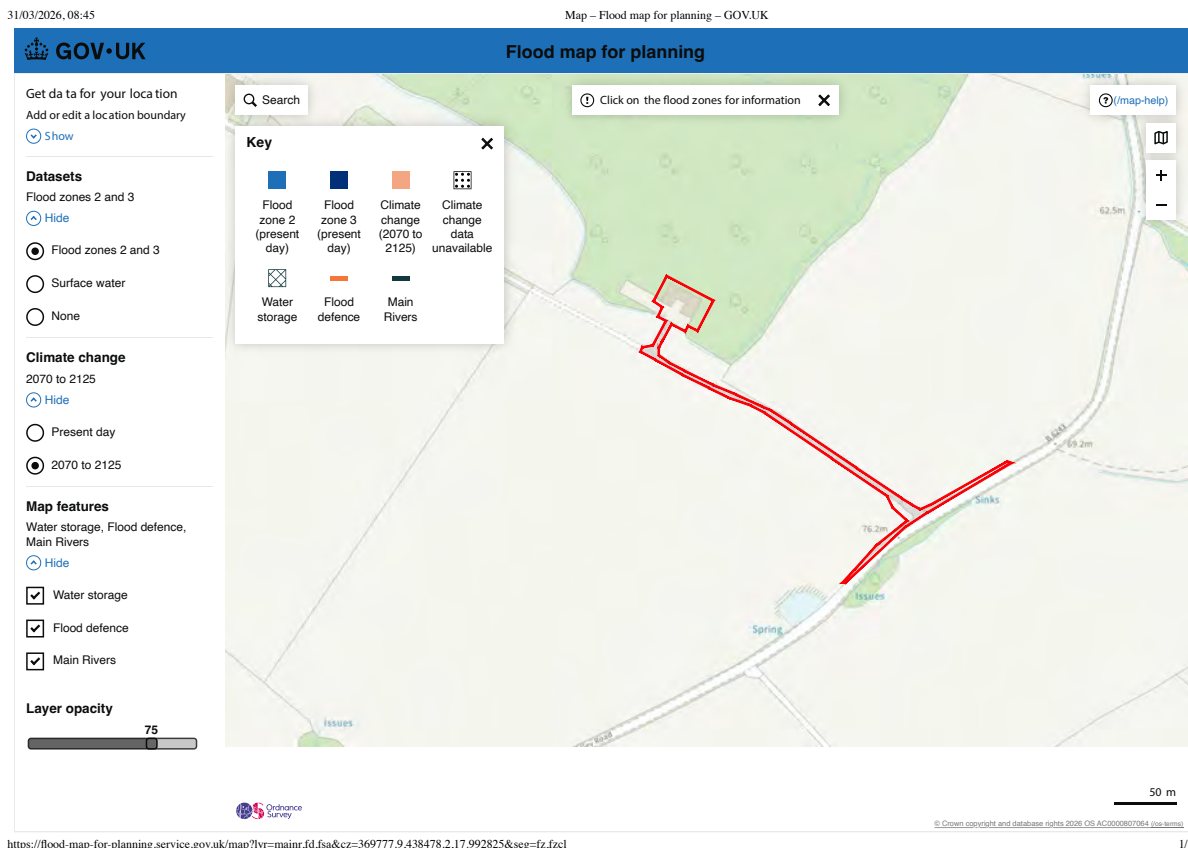
4. Flood Risk — Fluvial and Tidal

4.1 Flood Zone Classification

4.1 The application site has been assessed against the Environment Agency's Flood Map for Planning, which shows the flood zone classification for land in England.

4.2 The EA Flood Zone Map confirms that the whole of the application site falls within Flood Zone 1 — the area of lowest probability of flooding from rivers or the sea.

4.3 The EA Flood Zone Map is reproduced at Appendix C.



EA Flood Map for Planning centred on New Barn, Knowles Brow, Hurst Green, BB7 9PT. © Environment Agency copyright and/or database right 2026. All rights reserved.

4.2 Sequential Test and Exception Test

4.4 As the application site lies wholly within Flood Zone 1, the Sequential Test is passed without the need for further sequential assessment. The proposed residential use (a single dwellinghouse) is classified as *More Vulnerable* development under the NPPF's Flood Risk Vulnerability Classification.

4.5 More Vulnerable development is appropriate in Flood Zone 1. There is therefore no requirement to apply the Exception Test.

4.6 The proposal is fully consistent with the sequential, risk-based approach to flood risk required by the NPPF.

4.3 Climate Change

4.7 Given that the site lies wholly within Flood Zone 1 and is not in proximity to any main river or tidal influence, the effects of climate change on fluvial or tidal flood risk at this location are not considered to present a material risk to the proposed development.

4.8 Climate change effects on surface water run-off are addressed in Section 5 and Section 6 of this FRA.

5. Surface Water Flood Risk

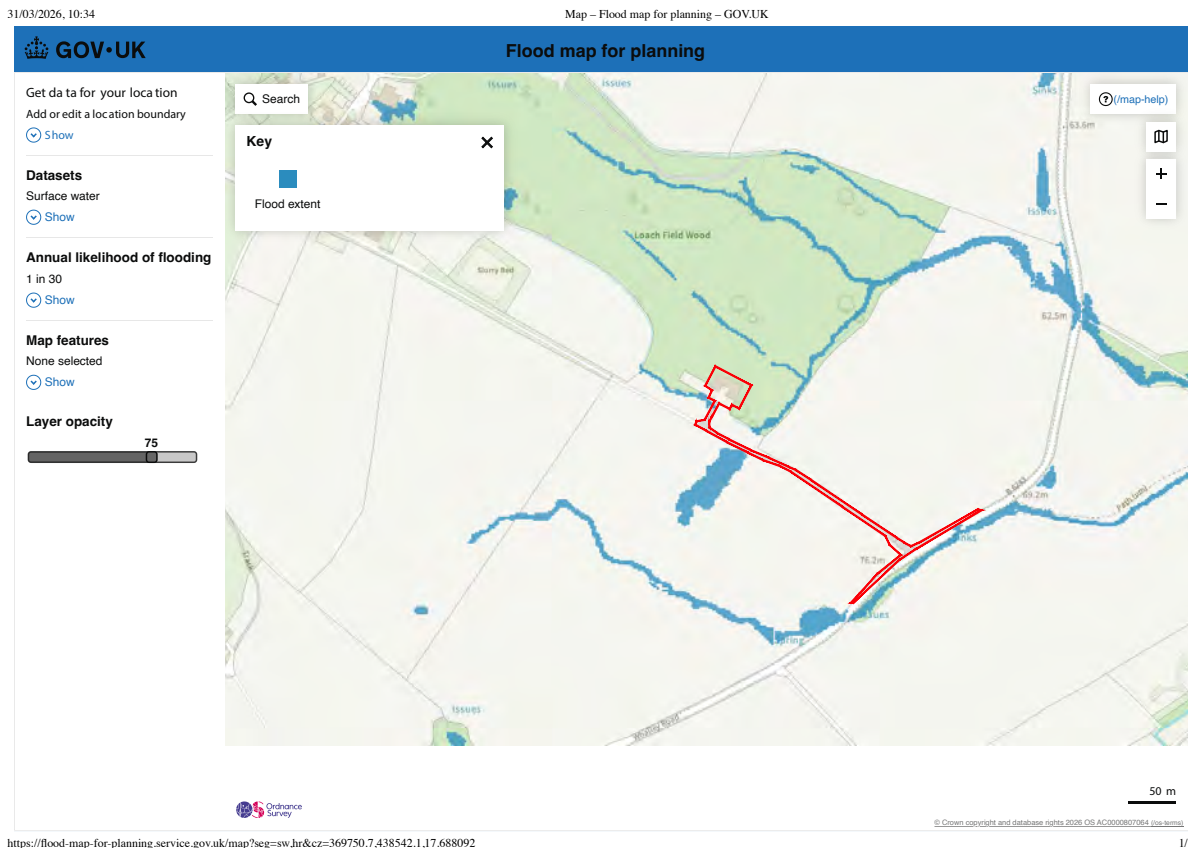
5.1 EA Surface Water Flood Risk Mapping

5.1 The Environment Agency's Risk of Flooding from Surface Water mapping has been reviewed for the application site and its immediate surroundings.

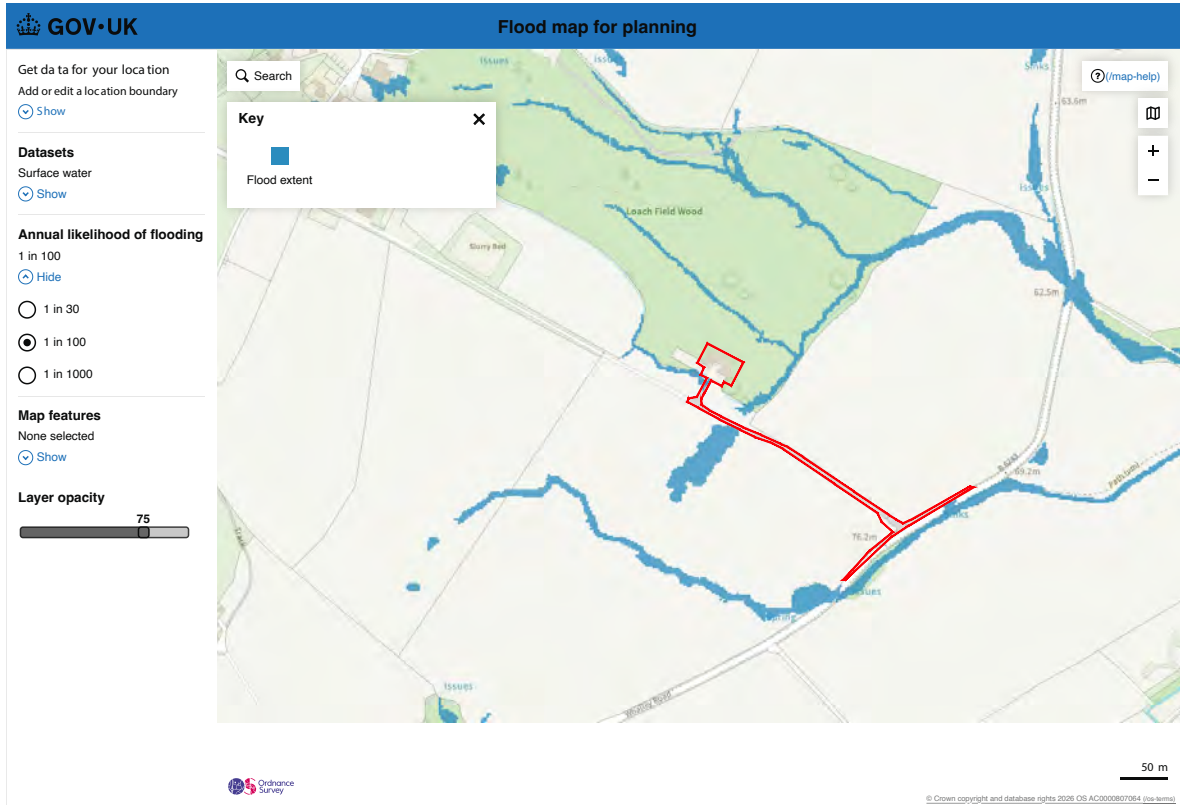
5.2 The mapping confirms that the barn itself and the majority of the application site are not at risk from surface water flooding.

5.3 However, the mapping identifies that a section of the previously approved driveway and access route to New Barn is susceptible to surface water flooding. This susceptibility is localised and relates to the topography of the access track and the potential for surface water to pond or flow along the access route in significant rainfall events.

5.4 The EA Surface Water Flood Risk Map is reproduced at Appendix D.



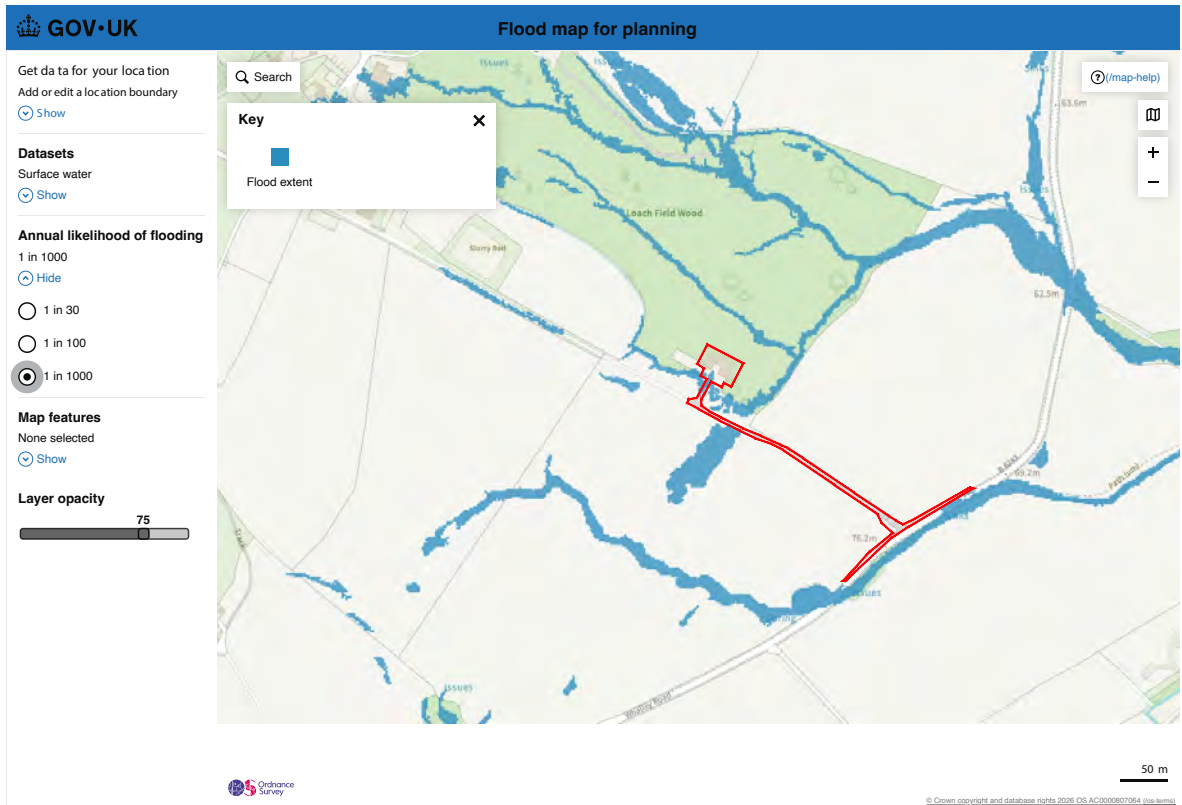
EA Risk of Flooding from Surface Water map (1 in 30 years) centred on New Barn, Knowles Brow, Hurst Green, BB7 9PT. © Environment Agency copyright and/or database right 2026. All rights reserved.



https://flood-map-for-planning.service.gov.uk/map?cz=369750.7,438542.1,17.688092&seg=sw_mr

1/1

EA Risk of Flooding from Surface Water map (1 in 100 years above and 1 in 1000 years below) centred on New Barn, Knowles Brow, Hurst Green, BB7 9PT. © Environment Agency copyright and/or database right 2026. All rights reserved.



https://flood-map-for-planning.service.gov.uk/map?seg=sw_hr&cz=369750.7,438542.1,17.688092

1/1

5.2 Assessment of Surface Water Flood Risk to the Access Route

5.5 The section of the access route identified as susceptible to surface water flooding forms part of the previously approved and part-implemented access arrangements, which were approved under planning permissions 3/2014/0417 and 3/2016/0760 and confirmed as lawfully commenced by Lawful Development Certificate 3/2016/1011.

5.6 The surface water susceptibility of this section of the access is therefore an existing characteristic of the approved access route and is not a new risk introduced by the current application.

5.7 The proposed access upgrading works, which form part of the current application, are consistent with the previously approved access arrangements and do not materially alter the alignment or character of the access route in a manner that would increase surface water flood risk.

5.8 The access route serves a single dwellinghouse. The proposed development would generate fewer vehicle movements than the extant three-dwelling fallback scheme. The risk to occupants from the localised surface water susceptibility of the access route is therefore no greater than that associated with the extant fallback, and is likely to be less.

5.9 The surface water susceptibility of the access route does not affect the barn itself. The proposed residential use of the barn is not compromised by this localised surface water issue.

5.10 The drainage strategy submitted with the application (addressed in Section 6 below) incorporates measures to manage surface water run-off from the access and parking area, which will assist in reducing the potential for surface water to accumulate along the access route.

5.3 Residual Risk

5.11 The residual risk from surface water flooding to the proposed dwellinghouse is considered to be low. The barn itself is not identified as susceptible to surface water flooding.

5.12 In the event of an extreme rainfall event, occupants of the dwellinghouse would be able to access and egress the property via the access route. The localised surface water susceptibility of the access route is not considered to present a risk to life or a significant impediment to safe access and egress.

6. Foul and Surface Water Drainage Strategy

6.1 Overview

6.1 A Foul and Surface Water Drainage Strategy has been prepared in connection with the proposed development and is submitted under Drawing No. 151 P1 (*see Appendix F*).

6.2 The proposed drainage strategy follows the same principles as the drainage strategy previously approved under planning permission 3/2016/0760. The approved drainage strategy is submitted for reference under Drawing No. 151 (*see Appendix E*).

6.3 The proposed drainage strategy has been developed having regard to:

- the rural location of the site and the absence of a public sewer in the immediate vicinity;
- the requirement to manage foul water from a single dwellinghouse;
- the need to manage surface water run-off from the access, parking area and roof drainage in a manner that does not increase flood risk on or off the site; and consistency with the previously approved drainage approach forming part of the extant fallback scheme.

6.2 Foul Water Drainage

6.4 The proposed dwellinghouse is located in a rural area where connection to the public sewer network is not reasonably practicable. The foul drainage strategy therefore proposes a private treatment system consistent with the approach previously approved under planning permission 3/2016/0760.

6.5 The proposed foul drainage arrangement comprises a package treatment plant or septic tank with soakaway, designed and located in accordance with the requirements of Building Regulations Part H and the relevant British Standards.

6.6 The proposed foul drainage system is appropriate for a single dwellinghouse and would generate a materially lower foul water load than the extant three-dwelling fallback scheme.

6.7 The precise specification and location of the foul drainage system is shown on Drawing No. 151 P1 (*see Appendix F*).

6.3 Surface Water Drainage

6.8 The surface water drainage strategy is designed to manage run-off from the proposed development in a manner that does not increase flood risk on or off the site.

6.9 The strategy follows the drainage hierarchy set out in the PPG and Building Regulations Part H, with surface water managed as close to source as possible through infiltration and attenuation where site conditions permit.

6.10 Roof drainage from the reinstated and repaired barn roof is proposed to be managed via rainwater goods discharging to a soakaway or infiltration system, consistent with the previously approved approach.

6.11 Surface water run-off from the access track and parking area is proposed to be managed through permeable surfacing and/or roadside drainage features, designed to intercept and attenuate run-off before it reaches the susceptible section of the access route identified on the EA surface water mapping.

6.12 The proposed surface water drainage measures are proportionate to the scale of the development and are consistent with the principles of the previously approved drainage strategy.

6.13 The proposed drainage strategy is shown on Drawing No. 151 P1 (*see Appendix F*).

6.4 Comparison with Extant Fallback Scheme

6.14 The proposed single dwellinghouse would generate materially lower foul and surface water drainage demands than the extant three-dwelling fallback scheme. In drainage terms, the current proposal is therefore a less intensive development than the fallback already capable of lawful implementation.

6.15 The proposed drainage strategy is materially consistent with the approach previously approved under planning permission 3/2016/0760 and follows the same design principles. No new drainage infrastructure is proposed that would materially alter the drainage characteristics of the site.

7. Conclusions

7.1 This Flood Risk Assessment has been prepared in support of a full planning application for works at New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT, in connection with the conversion of the existing agricultural barn to a single dwellinghouse.

7.2 The key conclusions of this FRA are as follows:

- The whole of the application site falls within Flood Zone 1, the area of lowest probability of flooding from rivers or the sea, as confirmed by the EA Flood Map for Planning (*Appendix C*).
- The proposed residential use (a single dwellinghouse) is classified as *More Vulnerable* development under the NPPF's Flood Risk Vulnerability Classification. More Vulnerable development is appropriate in Flood Zone 1. No Sequential Test or Exception Test is required.
- A section of the previously approved access route to New Barn is identified as susceptible to surface water flooding on the EA Risk of Flooding from Surface Water mapping (*Appendix D*). This is a localised characteristic of the existing approved access route and does not affect the barn itself.
- The surface water susceptibility of the access route is an existing feature of the approved and part-implemented fallback scheme. The current proposal does not introduce a new or greater surface water risk.
- The proposed Foul and Surface Water Drainage Strategy (Drawing No. 151 P1, *Appendix F*) follows the same principles as the previously approved drainage strategy (Drawing No. 151, *Appendix E*) forming part of the extant consent under planning permission 3/2016/0760.
- The proposed development would generate materially lower foul and surface water drainage demands than the extant three-dwelling fallback scheme.
- The proposed drainage measures are appropriate for the scale and nature of the development and would not increase flood risk on or off the site.

7.3 The proposal is fully consistent with the flood risk and drainage requirements of the NPPF 2024, the PPG on Flood Risk and Coastal Change, and Key Statement DME6 of the Ribble Valley Core Strategy.

7.4 There are no flood risk or drainage objections to the grant of planning permission.

Prepared by Emma Kirby Design Ltd 30 March 2026

Get data for your location
Add or edit a location boundary
[Show](#)

Datasets

Flood zones 2 and 3

[Hide](#)

Flood zones 2 and 3

Surface water

None

Climate change

2070 to 2125

[Hide](#)

Present day

2070 to 2125

Map features

Water storage, Flood defence, Main Rivers

[Hide](#)

Water storage

Flood defence

Main Rivers

Layer opacity

75



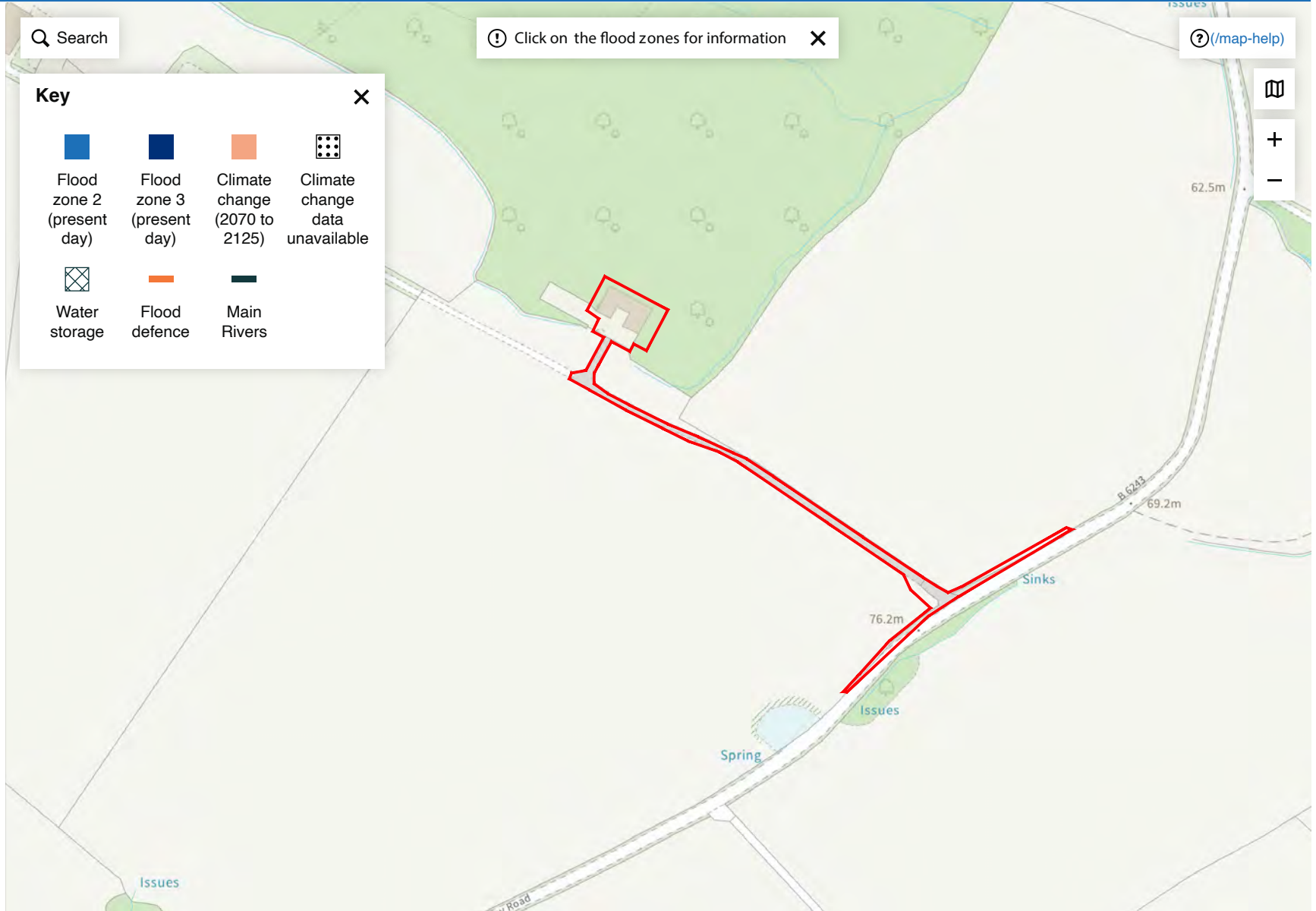
Search

Click on the flood zones for information

[/map-help](#)

Key

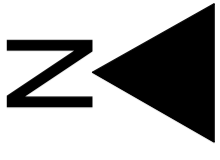
Flood zone 2 (present day)	Flood zone 3 (present day)	Climate change (2070 to 2125)	Climate change data unavailable
Water storage	Flood defence	Main Rivers	



50 m

Appendix A — Location Plan

Figure A — Location Plan. New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT. Scale 1:2,500 @ A4. Not to be scaled from this document.



EMMA KIRBY
DESIGN

THE COACH HOUSE STUDIO
HOME FARM
GRAFTON
OX18 2RY

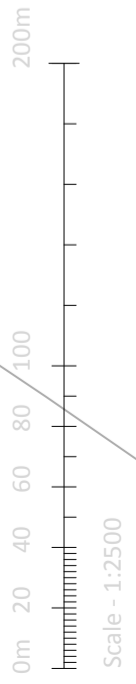
Tel: 01367 810575
www.emmakirbydesign.co.uk

Disclaimer Notice
All contractors are to carry out site surveys to determine correct measurements. No responsibility shall be borne by EKD Limited should contractors fail to carry out site surveys to determine their requirements.

Copyright Notice
This drawing is the property of EKD. No part of this drawing may be reproduced without the express and written consent of EKD.

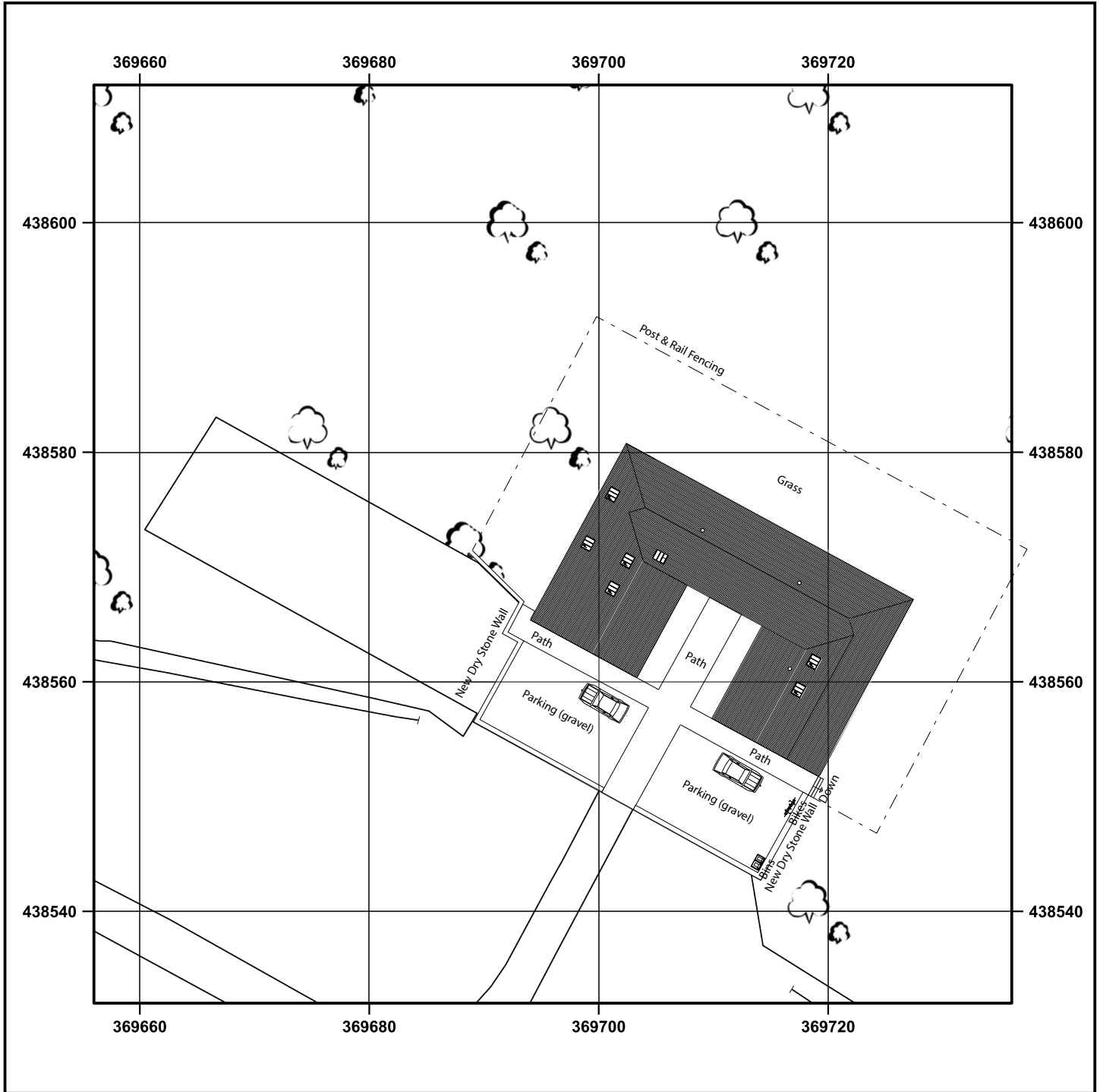
Rev	Date	Notes	Name
.
.
.

Client:	Sarah Bridge	Drawn:	AMT
Project Address:	New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT,	Date:	Nov 2025
Project Description:	Barn Conversion To Dwelling	Scale:	1/2500@A3
Drawing Title:	Location !		001 P1

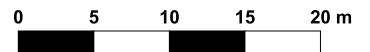


Appendix B — Proposed Site Plan

Figure B — Proposed Site Plan. New Barn, Knowles Brow, Hurst Green, Near Clitheroe, BB7 9PT. Drawing No. [insert]. Scale 1:500 @ A3. Not to be scaled from this document.



© Crown copyright and database rights 2026 OS AC0000848283. Public rights of way shown on this map have been taken from Local Authority definitive maps. The representation on this map of any other road, track or path is no evidence of the existence of a right of way.



Scale 1:500 - 1cm = 5m - A4 Size

PROPOSED SITE PLAN NEW BARN KNOWLES BROW HURST GREEN LANCASHIRE BB7 9PT

Supplied by: www.ukmapcentre.com

Product Info: www.ukmapcentre.com/block-plans-500-scale

Serial No: 324971

Centre Coordinates: 369696,438572

Production Date: 23/01/2026



Appendix C — EA Flood Zone Map (Flood Zones 1, 2 and 3)

Figure C — EA Flood Map for Planning. The application site (shown edged red) falls wholly within Flood Zone 1. Source: Environment Agency Flood Map for Planning accessed March 2026.

Get data for your location
Add or edit a location boundary

[Show](#)

Datasets

Flood zones 2 and 3

[Hide](#)

Flood zones 2 and 3

Surface water

None

Climate change

2070 to 2125

[Hide](#)

Present day

2070 to 2125

Map features

Water storage, Flood defence,
Main Rivers

[Hide](#)

Water storage

Flood defence

Main Rivers

Layer opacity

75



[\(/map-help\)](#)



Key



Flood zone 2 (present day)



Flood zone 3 (present day)



Climate change (2070 to 2125)



Climate change data unavailable



Water storage



Flood defence



Main Rivers



50 m



Appendix D — EA Surface Water Flood Risk Maps

Figure D — EA Risk of Flooding from Surface Water Map. The barn and the majority of the application site are not at risk from surface water flooding. A section of the previously approved access route (annotated) is identified as susceptible to surface water flooding. Source: Environment Agency Risk of Flooding from Surface Water, accessed March 2026.

Get data for your location
Add or edit a location boundary

[Show](#)

Datasets

Surface water

[Show](#)

Annual likelihood of flooding

1 in 30

[Show](#)

Map features

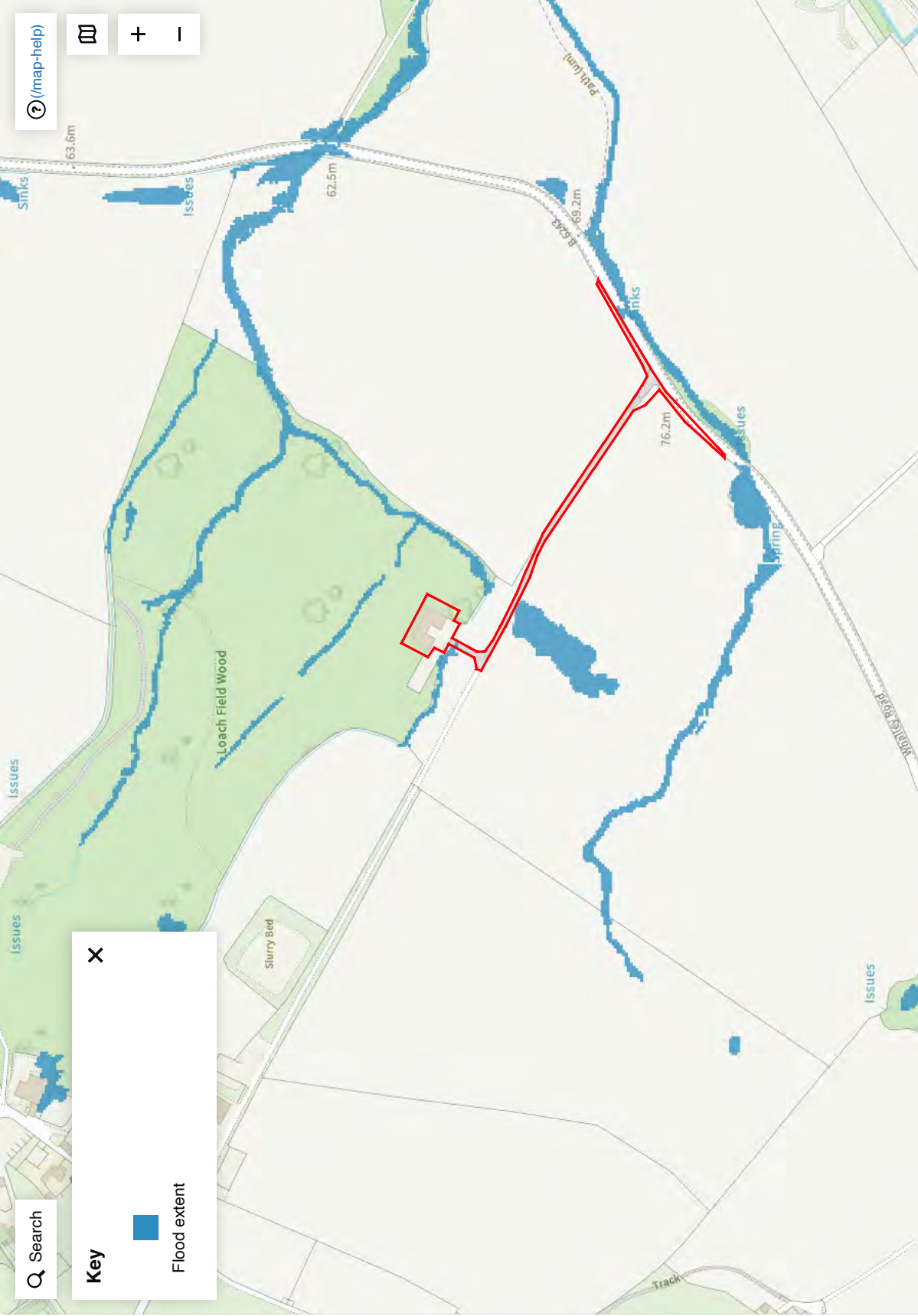
None selected

[Show](#)

Layer opacity



Key



50 m



Appendix E — Approved Foul and Surface Water Drainage Strategy

(Previously approved under planning permission 3/2016/0760 — Drawing No. 151)

Figure E — Approved Foul and Surface Water Drainage Strategy. Drawing No. 151. Approved under planning permission 3/2016/0760, Ribble Valley Borough Council. This drawing forms part of the extant consent and is reproduced here for reference.

Appendix F — Proposed Foul and Surface Water Drainage Strategy

(Drawing No. 151 P1)

Figure F — Proposed Foul and Surface Water Drainage Strategy. Drawing No. 151 P1. The proposed drainage strategy follows the same principles as the previously approved strategy at Appendix E and is consistent with the approach accepted under planning permission 3/2016/0760.

