PROPOSED SINGLE DWELLING (HOLIDAY LET)

HAZEL-MERE, LONGRIDGE ROAD, HURST GREEN, LANCASHIRE, BB7 9QP

FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY

JANUARY 2026

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REGISTRATION OF AMENDMENTS

REV	COMMENTS AND ANY CHANGES	PREPARED BY:
First Issue January 2026	For Planning Application	AR

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EXECUTIVE SUMMARY

Flood Risk

This Flood Risk Assessment has been prepared in accordance with the requirements of the National Planning Policy Framework (December 2024) and its companion document the National Planning Practice Guidance (Flood Risk and Coastal Change), last updated September 2025.

The Environment Agency flood maps confirm that the site is located within Flood Zone 1, where there is a low probability of fluvial flooding. The proposed development (single dwelling for use as a holiday let) is classified as "more vulnerable" in accordance with Table 2 of the Planning Practice Guidance. Development of this vulnerability classification is considered appropriate within Flood Zone 1 and does not require the application of the Sequential Test or Exception Test.

The vulnerability of the development to flooding from other sources, including pluvial (surface water), sewerage, groundwater, and artificial water bodies, has been assessed. The Environment Agency Risk of Flooding from Surface Water mapping indicates that the proposed building location is at very low risk of surface water flooding, with less than a 1 in 1000 annual probability. However, the eastern site boundary adjacent to the ordinary watercourse shows some surface water flood risk at the 1 in 30 year, 1 in 100 year and 1 in 1000 year events. The site is not located within a reservoir flood risk area and is outside of a groundwater flood alert area.

Given the site's location within Flood Zone 1 with no built development proposed within areas at risk of flooding from any source, the Sequential Test is not required in accordance with paragraph 175 of the NPPF (December 2024).

Summary of Flood Risk to the Development

Location/Flood Risk	Site (Flood Zone 1)
Fluvial (Main River)	Low (Flood Zone 1)
Pluvial/Surface Water	Very Low (proposed building)
Groundwater	Very Low
Sewerage	Very Low
Artificial Water Bodies	Very Low

1.0 INTRODUCTION

1.1 This Flood Risk Assessment has been commissioned by Stephen Peploe to assess flood risk for the proposed demolition of an existing holiday let and construction of a replacement single dwelling (holiday let) at Hazel-Mere, Longridge Road, Hurst Green, Lancashire, BB7 9QP. A site location plan and proposed site layout are included in Appendix A.

1.2 This Flood Risk Assessment has been prepared in accordance with the requirements of the National Planning Policy Framework (December 2024) and its companion document the National Planning Practice Guidance (Flood Risk and Coastal Change), last updated September 2025.

1.3 Reference has been made to the Environment Agency flood maps, the Flood Map for Planning service, and the Environment Agency Standing Advice for Local Planning Authorities (Development and Flood Risk – England). Additionally, the Ribble Valley Borough Council Level 1 Strategic Flood Risk Assessment (Revised 2017) has been consulted to provide local context for flood risk management.

1.4 The purpose of this report is to provide relevant information to satisfy the requirements of planning policy regarding flood risk and drainage for the proposed development, in response to the Local Planning Authority's request for a Flood Risk Assessment (Reference: 3/2025/0720).

1.5 The assessment has been prepared using best engineering judgement but there are levels of uncertainty implicit in the historical data and methods of analysis. The report is based on the following information:

- British Geological Survey Mapping
- Flood Zone Maps from the Environment Agency website
- Environment Agency Flood Map for Planning (dated 30 September 2025)
- United Utilities sewer records (Reference: UUPS-ORD-702433, dated 22 January 2026)
- Ribble Valley Borough Council Planning Validation Letter (Reference: 3/2025/0720)
- Topographical Survey (TriCAD Solutions, July 2024)

1.6 All comments and opinions contained in this report, including any conclusions, are based on the information available at the time of writing. The conclusions drawn could therefore differ if the information is found to be inaccurate, incomplete or misleading. No liability is accepted should this prove to be the case, or if additional information exists or becomes available with respect to this site.

1.7 This report has been completed for the benefit of Stephen Peploe and any relevant Statutory Authority which may require reference in relation to approvals for the proposed development of the site. Other third parties should not use or rely upon the contents of the report unless written approval has been gained.

1.8 No responsibility or liability is accepted for:

a) the consequences of this documentation being used for any purpose or project other than that for which it was commissioned, and

b) use of this document by any third party with whom approval for use has not been agreed.

2.0 SITE DESCRIPTION

Site Location and Surroundings

2.1 The site is located within the village of Hurst Green at grid reference 367316, 437916, within the administrative area of Ribble Valley Borough Council, Lancashire. The site is situated on the southern side of Longridge Road, with agricultural land and woodland to the north, east and south. An ordinary watercourse flows along the eastern boundary of the site. Residential properties are located to the west along Longridge Road.

Site Description

2.2 The proposed development site comprises an existing single-storey holiday let building which is to be demolished. The total site area is approximately 1,743 m² (0.17 hectares). The proposal involves the demolition of the existing building and construction of a new single dwelling for use as a holiday let with an approximate footprint of 44 m², together with associated driveway and landscaping.

2.3 The site lies within the administrative boundary of Ribble Valley Borough Council. The Lead Local Flood Authority (LLFA) for this area is Lancashire County Council.

Topography

2.4 Based on the topographical survey undertaken by TriCAD Solutions (July 2024) and available mapping, the site generally slopes from west to east towards the ordinary watercourse on the eastern boundary. Ground levels across the site range from approximately 107 mAOD in the western part of the site adjacent to Longridge Road down to approximately 100 mAOD at the eastern boundary near the watercourse. The proposed dwelling is located on the higher ground in the western portion of the site.

Geology

2.5 The British Geological Survey (BGS) viewer shows the site is underlain by Warley Wise Grit comprising Sandstone. These sedimentary rocks are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).

2.6 The British Geological Survey (BGS) viewer shows the site is overlain by Till, Devensian comprising Diamicton. These sedimentary deposits are glacigenic in origin. They are detrital, created by the action of ice and meltwater, and can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary.

2.7 The presence of glacial till deposits indicates that infiltration drainage may not be viable at this location. Till deposits typically comprise a heterogeneous mixture of clay, silt, sand and gravel with variable and often low permeability characteristics. Ground investigation including BRE 365 soakaway testing would be required to confirm infiltration capacity, however the presence of till typically indicates poor drainage characteristics.

Hydrology and Hydrogeology

2.8 The Environment Agency Long Term Flood Risk information indicates the site is outside of a groundwater flood alert area, suggesting low risk from groundwater flooding.

2.9 Given the glacial till superficial deposits comprising diamicton, infiltration drainage is considered unlikely to be viable. Ground investigation including BRE 365 soakaway testing would be required to confirm infiltration capacity.

2.10 An ordinary watercourse is located along the eastern boundary of the site, approximately 12 metres from the proposed dwelling location. This watercourse flows in a generally northerly direction before being culverted beneath Longridge Road. The watercourse is under the jurisdiction of Lancashire County Council as the Lead Local Flood Authority for ordinary watercourse regulation.

2.11 The River Hodder, a Main River, is located approximately 1.5 km to the northeast of the site. The site is not within the floodplain of any Main River.

Existing Drainage

2.12 United Utilities Water is responsible for the operation and maintenance of the public sewers within the Ribble Valley Borough area.

2.13 United Utilities sewer records (Reference: UUPS-ORD-702433, dated 22 January 2026) have been obtained for the site and surrounding area. The sewer records indicate that there are no public sewers within the immediate vicinity of the site. The nearest public sewers are located a considerable distance from the site along Longridge Road.

2.14 The existing holiday let property is understood to drain foul water to an existing package treatment plant with discharge to the ordinary watercourse on the eastern boundary. Surface water from the existing building is understood to discharge to the ordinary watercourse.

2.15 Given the absence of public sewers in the vicinity, the existing private drainage arrangements are consistent with the rural nature of the location.

Artificial Water Bodies

2.16 According to the Environment Agency's Risk of Flooding from Reservoirs mapping, the site is not at risk of flooding from reservoirs. There are no large raised reservoirs upstream of the site that would present a flood risk.

3.0 POLICIES

National Planning Policy Framework (December 2024)

3.1 The National Planning Policy Framework (NPPF) sets out the Government's objectives for the planning system and emphasizes there should be a 'Presumption in Favour of Sustainable Development'. The planning system should facilitate and promote sustainable patterns of development, avoiding inappropriate development in areas at risk of flooding and accommodating the impacts of climate change.

3.2 The Framework seeks to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Reference should also be made to the Planning Practice Guidance (Flood Risk and Coastal Change), last updated September 2025, which provides additional guidance on flood risk and the Sequential Test.

3.3 Key paragraphs from the December 2024 NPPF relevant to this assessment include:

Paragraph 173: "Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk..."

Paragraph 175: "The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk)."

Paragraph 176: "Applications for some minor development and changes of use should also not be subject to the sequential test, nor the exception test set out below, but should still meet the requirements for site-specific flood risk assessments set out in footnote 63."

Paragraph 182: "When determining planning applications relating to development which could affect drainage on or around the site, local planning authorities should give consideration to the use of sustainable drainage systems, having regard to the advice of the lead local flood authority."

Flood and Water Management Act 2010

3.4 The Flood and Water Management Act 2010 gained Royal Assent on 8th April 2010. The Act is the government's legislation to improve flood risk management and ensure the security of water supplies in England and Wales. The Flood and Water Management Act helps to reduce flood risk by:

- Clarifying who is responsible for managing all sources of flood risk
- Encouraging more sustainable forms of drainage in new developments
- Making it easier to resolve misconnections to sewers

3.5 The Flood and Water Management Act imparts significant new roles and responsibilities on local authorities. County or unitary authorities are now classified as Lead Local Flood Authorities (LLFAs) who have responsibilities for managing local flood risk. Lancashire County Council is the LLFA for this area.

Planning Practice Guidance on Flood Risk and Coastal Change

3.6 The Government's planning policy on sustainable drainage systems expects local planning policies and decisions on planning applications relating to development to ensure that sustainable drainage systems for the management of runoff are put in place, unless demonstrated to be inappropriate.

3.7 Following the December 2024 NPPF update and subsequent PPG updates in September 2025, the requirement for SuDS has been expanded. Paragraph 182 now requires consideration of SuDS for all development proportionate to the scale and nature of the scheme.

3.8 The updated PPG (September 2025) clarifies that where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development, without increasing flood risk elsewhere, then the sequential test need not be applied for surface water flood risk.

National Standards for Sustainable Drainage Systems (June 2025)

3.9 The Government released new National Standards for Sustainable Drainage Systems on 19 June 2025. From 1 November 2025, all new planning application consultations are assessed using these new National Standards. Lancashire County Council as LLFA expects applicants to demonstrate compliance with these standards.

3.10 The new standards establish seven comprehensive requirements focusing on water quantity, water quality, amenity, biodiversity, and long-term maintenance. The standards prioritise a hierarchy of discharge destinations and require consideration of rainwater harvesting, infiltration, and surface water bodies before discharge to sewers.

Ribble Valley Borough Council Strategic Flood Risk Assessment

3.11 The Ribble Valley Borough Council Level 1 Strategic Flood Risk Assessment (Revised 2017) provides detailed information on flood risk within Ribble Valley Borough Council's administrative area. The SFRA identifies flood risk from multiple sources and provides guidance for development management decisions.

3.12 The SFRA confirms that the site at Hurst Green is located within Flood Zone 1 with low probability of fluvial flooding. The SFRA identifies the River Hodder and its tributaries as the main sources of fluvial flood risk in the Ribble Valley area, with the Hodder catchment being predominantly rural with high water quality.

Lancashire County Council Lead Local Flood Authority Guidance

3.13 Lancashire County Council as LLFA provides guidance on sustainable drainage systems and surface water management. The LLFA expects applicants to demonstrate compliance with the National Standards for Sustainable Drainage Systems and relevant local planning policies.

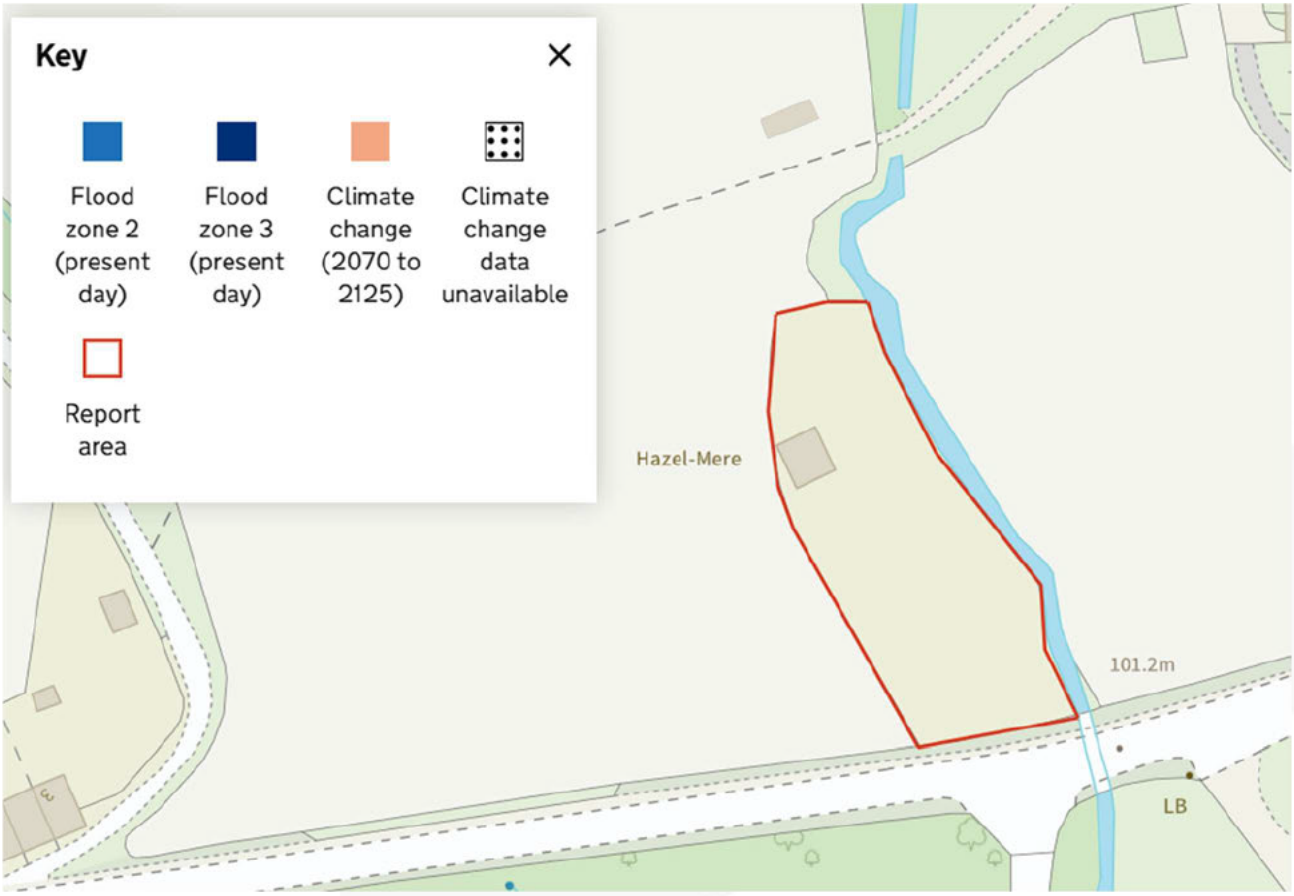
3.14 For ordinary watercourse works, Land Drainage Consent may be required under Section 23 of the Land Drainage Act 1991. Any proposed outfall to the ordinary watercourse on the eastern boundary will require separate consent from Lancashire County Council.

4.0 FLOOD RISK TO THE SITE

Fluvial Sources

4.1 The site has been assessed using the Environment Agency Flood Map for Planning service which provides guidance for fluvial flood risk.

Figure 1: Flood Map for Planning:



4.2 The Environment Agency flood maps confirm that the site is located within Flood Zone 1 (low probability - annual probability of less than 1 in 1000). The site is not within the floodplain of any Main River.

4.3 The nearest Main River is the River Hodder, located approximately 1.5 km to the northeast of the site. The site is well outside the floodplain of the River Hodder and any associated flood risk.

4.4 The Flood Map for Planning printout dated 30 September 2025 confirms the site's location within Flood Zone 1.

Flood Zone Classification

Flood Zone	Definition	Site Status
Zone 1 (Low Probability)	Land having less than 1 in 1,000 annual probability of river or sea flooding	**SITE LOCATION**
Zone 2 (Medium Probability)	Land having between 1 in 100 and 1 in 1,000 annual probability of river flooding	Not applicable
Zone 3a (High Probability)	Land having 1 in 100 or greater annual probability of river flooding	Not applicable
Zone 3b (Functional Floodplain)	Land where water has to flow or be stored in times of flood	Not applicable

Flood Vulnerability Classification

4.5 The proposed development is for a single dwelling (holiday let). Using Table 2 'Flood Risk Vulnerability Classification' from the Planning Practice Guidance, residential development including holiday lets is classified as 'more vulnerable'.

4.6 In accordance with Table 3 of the Planning Practice Guidance (Flood Risk Vulnerability and Flood Zone Compatibility), 'more vulnerable' development is considered appropriate within Flood Zone 1 and does not require the application of the Sequential Test or Exception Test.

Flood Risk Vulnerability and Flood Zone Compatibility

Flood Risk Vulnerability Classification	Flood Zone 1	Flood Zone 2	Flood Zone 3a	Flood Zone 3b
Essential Infrastructure	✓	✓	Exception Test	Exception Test
Highly Vulnerable	✓	Exception Test	✗	✗
More Vulnerable	✓ **(SITE)**	✓	Exception Test	✗
Less Vulnerable	✓	✓	✓	✗
Water Compatible	✓	✓	✓	✓

Key: ✓ = Development appropriate | ✗ = Development should not be permitted

Sequential Test

4.7 The December 2024 NPPF (paragraph 175) confirms that the Sequential Test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements,

would be located on an area that would be at risk of flooding from any source, now and in the future.

4.8 This site is located entirely within Flood Zone 1. The proposed dwelling is positioned on the higher ground in the western part of the site, well away from the ordinary watercourse and any areas at risk of surface water flooding. The access route from Longridge Road is also located on higher ground outside any flood risk areas.

4.9 On the basis that no built development, access routes, or other vulnerable elements are proposed within areas at risk of flooding from any source, the Sequential Test is not required in accordance with paragraph 175 of the NPPF.

Pluvial/Surface Water Flooding

4.10 Pluvial/Surface Water flooding occurs when natural and engineered systems have insufficient capacity to deal with the volume of rainfall.

Figure 2 – EA Surface Water Flood Risk 1in100:

4.11 The Environment Agency Risk of Flooding from Surface Water mapping confirms that the proposed building location is at very low risk of surface water flooding, with less than a 1 in 1000 annual probability.

4.12 The eastern site boundary adjacent to the ordinary watercourse shows some surface water flood risk at the 1 in 30 year (high risk), 1 in 100 year (medium risk) and 1 in 1000 year (low risk) events. This is consistent with the topography showing lower ground adjacent to the watercourse.

4.13 Importantly, the proposed dwelling is located approximately 12 metres from the watercourse on higher ground at approximately 104-106 mAOD, well above the areas shown to be at risk of surface water flooding. The proposed development footprint is entirely outside any surface water flood risk areas.

Sewer Sources

4.14 Information on sewer infrastructure has been provided by United Utilities (Reference: UUPS-ORD-702433). The records indicate that there are no public sewers within the immediate vicinity of the site.

4.15 Given the absence of public sewers, the risk of sewer flooding at this location is considered very low. The existing property utilises a package treatment plant for foul drainage which will be retained or replaced as part of the proposed development.

Tidal/Coastal

4.16 The site is not at risk of tidal or coastal flooding due to its inland location.

Groundwater Sources

4.17 The Environment Agency Long Term Flood Risk information indicates the site is outside of a groundwater flood alert area. The risk from groundwater flooding is considered very low.

4.18 The Ribble Valley Level 1 SFRA (2017) confirms that no evidence of groundwater flooding in the Borough has been identified by the Environment Agency.

Artificial Water Bodies

4.19 The Environment Agency's Risk of Flooding from Reservoirs mapping confirms the site is not at risk of flooding from reservoirs. There are no large raised reservoirs upstream of the site that would present a flood risk.

Historic Flooding

4.20 The Ribble Valley Level 1 SFRA (2017) identifies historic flood events within the Borough, primarily affecting locations such as Whalley, Ribchester, and Clitheroe. No historic flood events have been identified at or in the immediate vicinity of the site at Hurst Green.

4.21 The December 2015 flooding event affected communities in Billington, Whalley, Ribchester, Clitheroe and Longridge, but Hurst Green was not identified as being significantly affected due to its elevated position away from major watercourses.

Flood Defences

4.22 There are no formal flood defences in the vicinity of the site. Given the site's location within Flood Zone 1 on elevated ground, flood defences are not required.

5.0 FLOOD RISK FROM THE DEVELOPMENT

5.1 The requirements of a Site-Specific Flood Risk Assessment, as outlined in the Planning Practice Guidance, should assess the following off-site impacts:

- How will it be ensured that the proposed development and measures to protect the site from flooding will not increase flood risk elsewhere?
- How will runoff from the completed development be prevented from causing an impact elsewhere?
- Are there any opportunities offered by the development to reduce flood risk elsewhere?

5.2 The primary flood risk generated by development is typically the risk posed to others by surface water runoff. The proposed development involves demolition of an existing holiday let (approximately 50 m² impermeable area) and construction of a new dwelling with driveway (approximately 210 m² total impermeable area).

Existing Site Characteristics

5.3 The site currently comprises an existing single-storey holiday let building with a footprint of approximately 50 m², together with meadow/grassland. The existing building drains surface water to the ordinary watercourse on the eastern boundary.

Impermeable Area Summary

Area Description	Existing (m²)	Proposed (m²)
Buildings (roofs)	50	44
Hardstanding/Driveway	0	166
Total Impermeable Area	**50**	**210**

Climate Change Allowances for Drainage Design

5.4 Environment Agency guidance 'Flood Risk Assessments – Climate Change Allowances' provides the peak rainfall intensity allowances for drainage design. For the Ribble management catchment and a development lifetime to 2125, the upper end allowance should be applied to the 1% AEP rainfall event for drainage design.

5.5 For the 2070s epoch (2061-2125), the upper end climate change allowance for peak rainfall intensity in the Ribble management catchment is 45%. This has been applied to the surface water drainage design.

Peak Rainfall Climate Change Allowances

Epoch	Central Allowance	Upper End Allowance
2050s (2040 to 2059)	25%	35%
2070s (2061 to 2125)	30%	**45% (Applied)**

5.6 The surface water drainage strategy has been designed using the upper end 45% climate change allowance in accordance with Environment Agency guidance.

Proposed Development

5.7 The proposal involves demolition of an existing holiday let and construction of a replacement single dwelling (holiday let) with an approximate footprint of 44 m², together with permeable paved driveway areas totalling approximately 166 m².

5.8 The increase in impermeable area of 160 m² (from 50 m² to 210 m²) requires attenuation to ensure surface water runoff rates are restricted appropriately and do not increase flood risk elsewhere.

Loss of Floodplain Storage

5.9 The proposed development is located entirely within Flood Zone 1 and is not within any floodplain. The development will not result in any loss of floodplain storage.

5.10 The proposed dwelling is located on higher ground in the western part of the site, approximately 12 metres from the ordinary watercourse and well above any flood risk areas. No land raising is proposed that would affect flood storage.

6.0 CONSIDERATION OF SUSTAINABLE DRAINAGE SYSTEMS

6.1 Surface water arising from developed sites should, as far as practical, be managed in a sustainable manner to mimic the surface water flows arising from the site in its natural state and to reduce flood risk both on and off site.

6.2 The National Standards for Sustainable Drainage Systems (June 2025) establish a hierarchy of discharge destinations. Surface water runoff shall discharge to one of the following, listed in order of priority:

a) Collected for non-potable use (rainwater harvesting), or where that is not reasonably practicable,

b) Infiltrated to ground through an adequate soakaway or other infiltration system, or where that is not reasonably practicable,

c) Discharged to an above ground surface water body (watercourse), or where that is not reasonably practicable,

d) Discharged to a surface water sewer, or another piped surface water drainage system, or where that is not reasonably practicable,

e) Discharged to a combined sewer.

6.3 Disposal of surface water runoff by infiltration is subject to verification of suitable ground soakage capacity. The available geological information shows the site is overlain by Till, Devensian comprising Diamicton. These glacial deposits are typically heterogeneous with variable and often low permeability. Infiltration is considered unlikely to be viable without ground investigation to confirm.

6.4 An ordinary watercourse is located on the eastern boundary of the site, approximately 12 metres from the proposed dwelling. Discharge to this watercourse represents the highest viable priority in accordance with the SuDS hierarchy, given that infiltration is unlikely to be achievable.

6.5 There are no public surface water sewers in the vicinity of the site according to the United Utilities sewer records. Discharge to sewer is therefore not an available option.

6.6 Discharge to the ordinary watercourse is therefore proposed as the most appropriate and practical option for surface water disposal from this development.

7.0 DRAINAGE STRATEGY

Surface Water

7.1 The surface water strategy proposes that runoff arising from the development will discharge to the ordinary watercourse on the eastern boundary. The discharge rate will be restricted to 0.7 l/s, which represents the practical minimum achievable flow rate, with attenuation storage provided to accommodate the 1 in 100 year + 45% climate change event.

7.2 The strategy will provide betterment compared to the existing drainage situation by restricting peak flows to the watercourse significantly below existing runoff rates.

Greenfield Runoff Rates

7.3 Greenfield runoff calculations have been undertaken using the UK SuDS website tool for the site location. For the total site area of 1,743 m², the calculated greenfield runoff rates are:

Return Period	Greenfield Runoff Rate
QBAR	0.2 l/s

7.4 The proposed discharge rate of 0.7 l/s represents the QBAR rate and practical minimum achievable flow rate, which will provide significant betterment compared to uncontrolled runoff from the site.

Attenuation Storage

7.5 Surface water storage calculations have been undertaken to determine the attenuation volume required to accommodate the 1 in 100 year + 45% climate change event with a restricted discharge rate of 0.7 l/s.

7.6 The calculated storage volume required is approximately 11 m³. This will be provided through permeable paving to the driveway areas with a 400mm depth of Type 3 sub-base providing 30% void ratio storage.

Permeable Paving Storage Calculation

Parameter	Value
Driveway Area	166 m²
Sub-base Depth	400 mm
Void Ratio	30%
Available Storage Volume	**19.9 m³**
Required Storage Volume	**11 m³**

7.7 The permeable paving sub-base provides 19.9 m³ of storage, which exceeds the required 11 m³ storage volume. This provides a factor of safety and allows for any uncertainties in the design.

7.8 The permeable paving will also provide storage and attenuation for the proposed dwelling roof area. Runoff from the dwelling roof will be collected and discharged to the permeable paving sub-base storage before controlled discharge to the watercourse.

Water Quality Treatment (National Standards 2025)

7.9 The National Standards for Sustainable Drainage Systems (June 2025) require that surface water runoff is treated to prevent pollution of receiving waters.

7.10 For residential development, roof water and driveway runoff require appropriate treatment before discharge to a watercourse. The proposed permeable paving system provides treatment through filtration and sedimentation within the permeable surface and sub-base layers.

7.11 The permeable paving treatment train satisfies the water quality requirements of the National Standards for the proposed residential development.

Interception

7.12 The National Standards (June 2025) require that interception shall be delivered within the development for the first 5mm of rainfall for the majority of rainfall events, with 80% interception achieved during summer (May to October) and 50% in winter (November to April).

7.13 The permeable paving system provides interception through initial wetting losses and storage within the permeable surface layer. The system is designed to intercept the first 5mm of rainfall before any discharge occurs.

Foul Water

7.14 There are no public foul or combined sewers within the vicinity of the site according to the United Utilities sewer records. The existing holiday let property is understood to drain foul water to an existing package treatment plant with discharge to the ordinary watercourse.

7.15 The strategy proposes that foul water drainage from the proposed dwelling will be collected and treated through a new package treatment plant (or refurbishment of the existing system) with discharge to the ordinary watercourse on the eastern boundary in accordance with General Binding Rules or an Environmental Permit as required.

7.16 The discharge of treated effluent to the watercourse will comply with the requirements of the Environmental Permitting (England and Wales) Regulations 2016 and Environment Agency guidance.

Ordinary Watercourse Consent

7.17 Any new outfall to the ordinary watercourse on the eastern boundary will require Land Drainage Consent under Section 23 of the Land Drainage Act 1991 from Lancashire County Council as the Lead Local Flood Authority. This consent is separate from planning permission and should be obtained prior to construction.

Maintenance

7.18 The proposed on-site drainage system will be designed to current standards. The permeable paving and attenuation system will be the responsibility of the property owner. A maintenance plan should be developed to ensure the drainage system is inspected and maintained regularly to ensure continued effective operation throughout the lifetime of the development.

7.19 Permeable paving requires periodic maintenance including sweeping and vacuuming to remove sediment and debris that may reduce permeability. Inspection should be undertaken annually with remedial maintenance as required.

8.0 FLOOD MITIGATION

8.1 Given the site's location within Flood Zone 1 with very low flood risk from all sources at the proposed building location, extensive flood mitigation measures are not required. However, good practice measures are recommended to ensure the development is resilient.

Finished Floor Levels

8.2 The proposed dwelling is located on higher ground in the western part of the site at approximately 104-106 mAOD based on the topographical survey. The ordinary watercourse at the eastern boundary is at approximately 100 mAOD.

8.3 Finished floor levels should be set a minimum of 150mm above surrounding ground levels to provide freeboard against localised ponding and overland flow during extreme rainfall events.

Surface Water Exceedance

8.4 Exceedance flows from extreme rainfall events beyond the design capacity of the drainage system should be managed through appropriate levels design to direct overland flows away from building entrances and towards the eastern part of the site where they can drain to the watercourse without affecting the dwelling.

8.5 Ground levels should be designed to fall away from the dwelling towards the east, ensuring that any surface water ponding or overland flow is directed away from the building.

Safe Access and Egress

8.6 The site is accessed from Longridge Road to the north. The access route is located on higher ground outside any flood risk areas. Safe access and egress is available during all flood events.

8.7 There are no constraints on safe access to or from the site during flood events.

Informatives for Future Occupants

8.8 Although the site is at very low flood risk, it is recommended that future occupants are made aware that:

- The property is located within Flood Zone 1 with low probability of flooding
- An ordinary watercourse is located on the eastern boundary of the site
- The surface water drainage system requires periodic maintenance to ensure continued effective operation
- Permeable paving should be swept and vacuumed periodically to maintain permeability

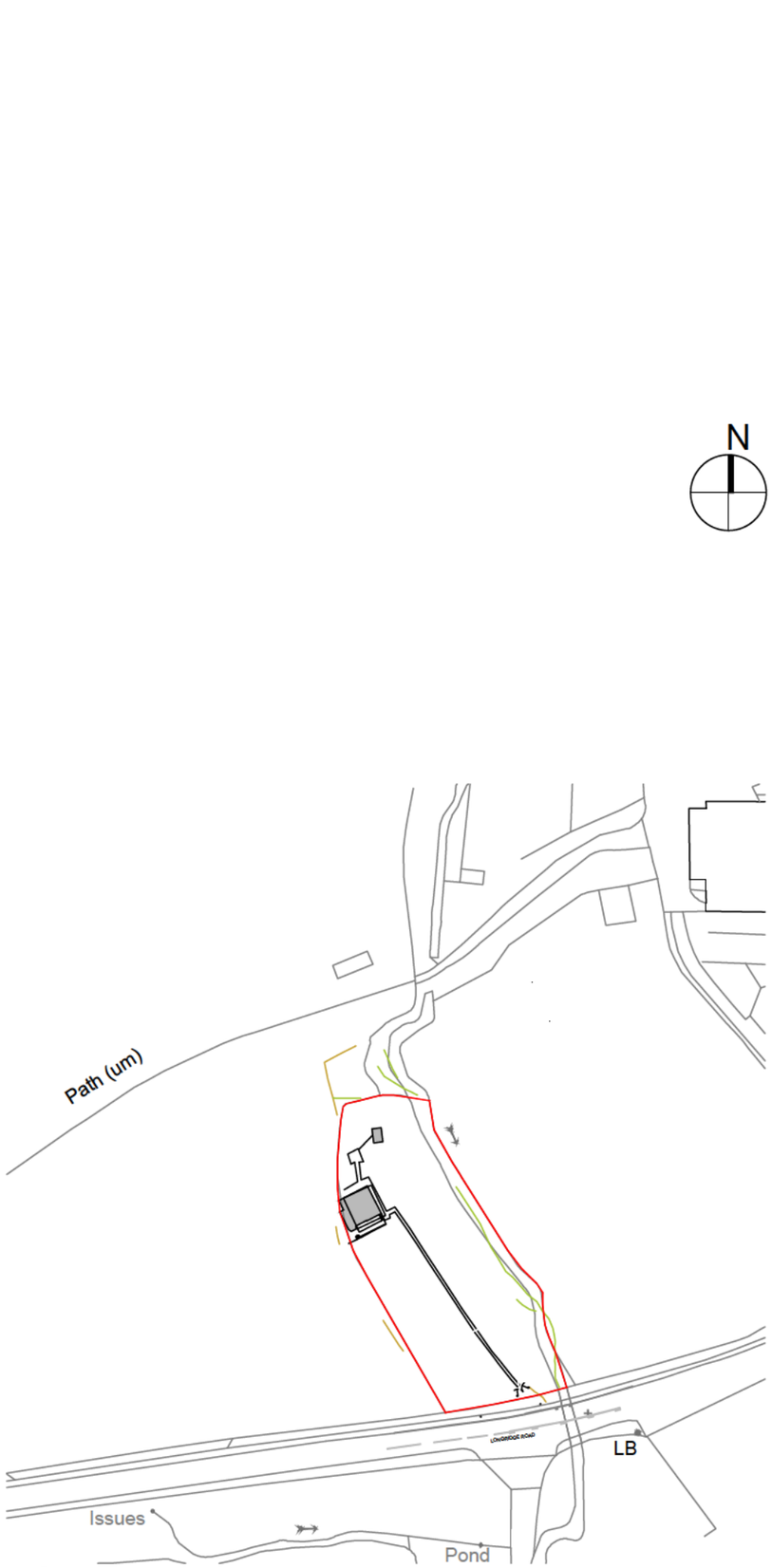
9.0 REFERENCES

9.1 The following documents have been referred to in this report:

1. The Building Regulations 2010 (as amended), Approved Document H – Drainage and Waste Disposal
2. National Planning Policy Framework – December 2024
3. Planning Practice Guidance – Flood Risk and Coastal Change (updated September 2025)
4. Environment Agency Flood Risk Standing Advice for Local Planning Authorities
5. The SuDS Manual – CIRIA C753 (2015)
6. British Geological Survey – Geology of Britain Viewer
7. BRE Digest 365:2016 – Soakaway Design
8. Flood and Water Management Act 2010
9. Water Industry Act 1991
10. National Standards for Sustainable Drainage Systems – June 2025
11. Environment Agency – Flood Risk Assessments – Climate Change Allowances (updated 2022)
12. Ribble Valley Borough Council Level 1 Strategic Flood Risk Assessment (Revised 2017)
13. Lancashire County Council Lead Local Flood Authority Guidance
14. Environment Agency Flood Map for Planning – dated 30 September 2025
15. United Utilities Sewer Records – Reference: UUPS-ORD-702433, dated 22 January 2026
16. Environmental Permitting (England and Wales) Regulations 2016
17. Land Drainage Act 1991

APPENDICES

A. Site Location Plan & Proposed Site Layout

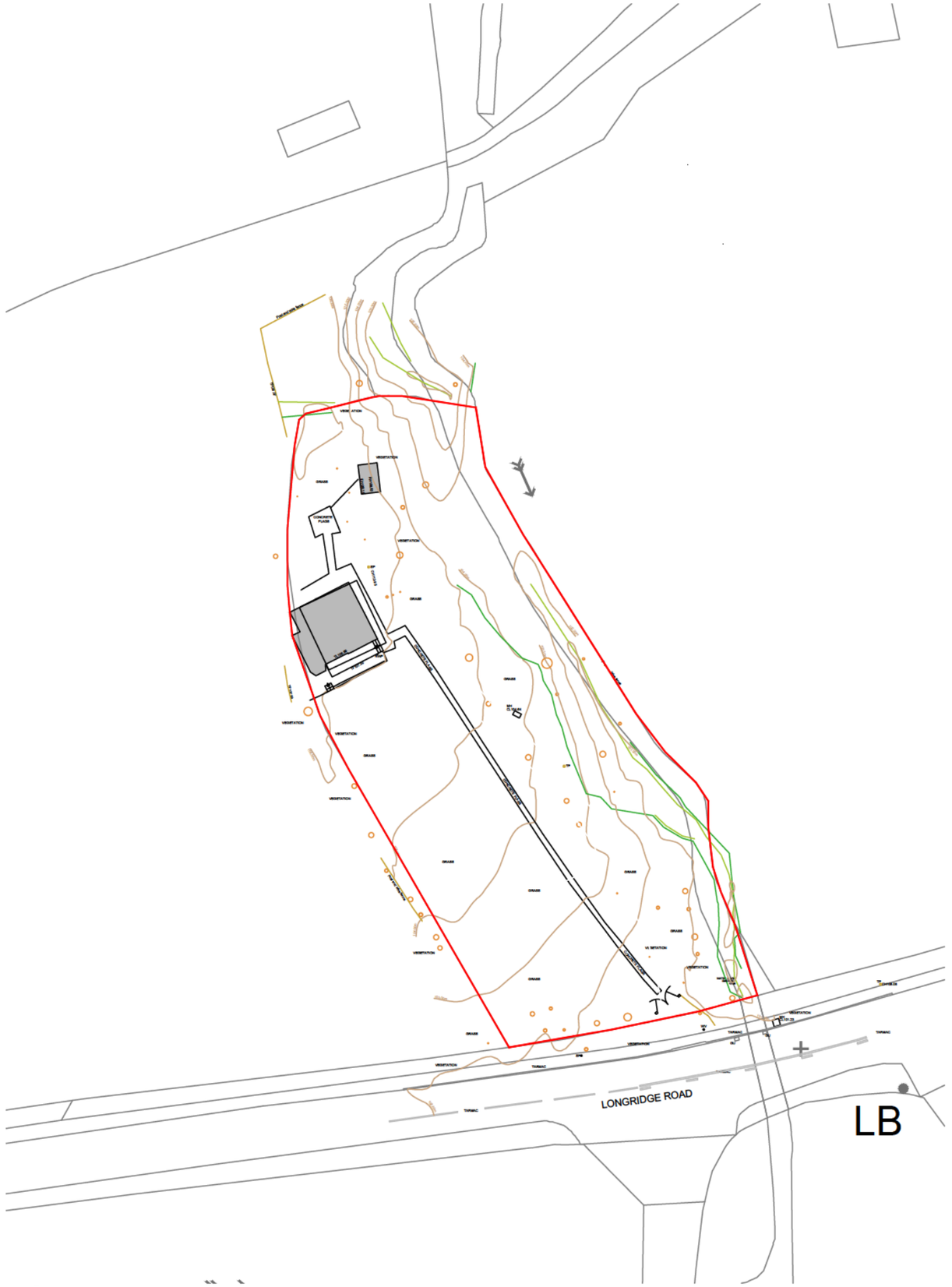


LOCATION PLAN

SCALE 1:1250

0 12.5 25 37.5 50 62.5m

1:1250



BLOCK PLAN

SCALE 1:500

0 5 10 15 20 30 40 50m

1:500

Notes:

1. Notes

REV: DESCRIPTION: BY: DATE:

STATUS:

Stage 3 - Spatial Coordination

BLACK BARN ARCHITECTURE
Planning, Design & Architectural Consultants

SITE:

Longridge Road
Hurst Green
Lancashire
BB7 9QP

CLIENT:

Mr Hull

JOB TITLE :

Hazel-Mere

DRAWING TITLE :

Location & Block Plan

DATE:	DRAWN:	CHECKED:	PAPER SIZE:
15/03/24	MS	CH	A3 (420x297)
JOB NO:	DRAWING NO:		REVISION:
BBA_232	LP01		C

Notes:

All Retained Trees

LONGRIDGE ROAD

PROPOSED SITE PLAN
SCALE 1:200

0 2 4 6 8 10m
1:200

REV: DESCRIPTION: BY: DATE:

STATUS:
Stage 3 - Spatial Coordination

BLACK BARN ARCHITECTURE
Planning, Design & Architectural Consultants

SITE:
Longridge Road
Hurst Green
Lancashire
BB7 9QP

CLIENT:
Mr Hull

JOB TITLE :
Hazel-Mere

DRAWING TITLE :
Proposed Site Plan

DATE:	DRAWN:	CHECKED:	PAPER SIZE:
10/09/24	CR	MS	A2 (420x594mm)
JOB NO:	DRAWING NO:		REVISION:
BBA_232	P01		F

B. United Utilities Water Records

Water for the North West

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Arbtech

Unit 3
Well House Barns,
Chester,
CH4 0DH

FAO:

Your Ref: BB7 9QP
Our Ref: UUPS-ORD-702433
Date: 22/01/2026

Dear Sirs

Location: HAZEL-MERE LONGRIDGE ROAD, HURST GREEN, CLITHEROE, BB7 9QP

I acknowledge with thanks your request dated 19/01/2026 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

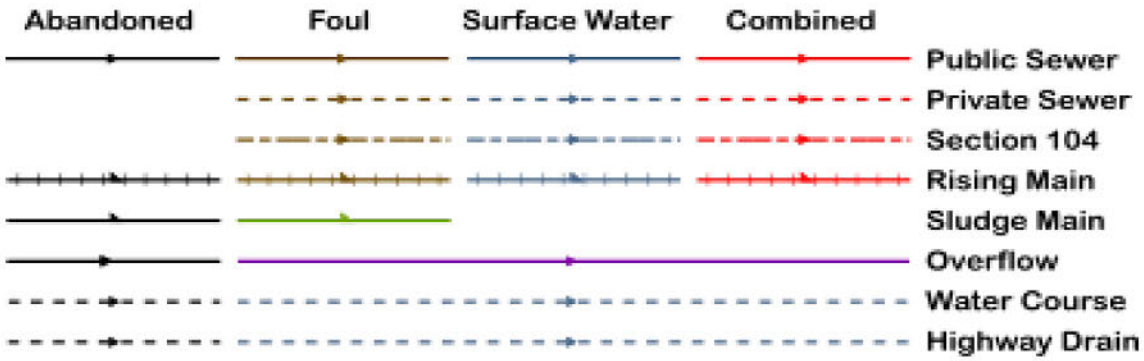
TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

United Utilities
Water for the North West

Wastewater Symbology



All point assets follow the standard colour convention: red – combined, brown - foul, blue – surface water, purple - overflow

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- CK Control Kiosk
- DNM Network Monitoring Point
- Change of Characteristic

United Utilities

Water for the North West

SEWER RECORDS

Address or Site Reference

HAZEL-MERE LONGRIDGE ROAD,
HURST GREEN,
CLITHEROE,
BB7 9QP

Scale: 1:2500
Date: 22/01/2026

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

C. Greenfield Runoff and Storage Calculations

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	28/01/2026
Calculated by	
Reference	
Model version	2.2.2

Location

Site name	
Site location	

Site easting (British National Grid)	367324
Site northing (British National Grid)	437892

Site details

Total site area (ha)	1 ha

Greenfield runoff

Method

Method	IH124

IH124

	My value		Map value
SAAR (mm)	1190 mm		1190
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
QBar (IH124) (l/s)	9 l/s		

Growth curve factors

	My value		Map value
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	IH124
Flow rate 1 year (l/s)	7.8 l/s
Flow rate 2 year (l/s)	8.4 l/s
Flow rate 10 years (l/s)	12.4 l/s
Flow rate 30 years (l/s)	15.3 l/s
Flow rate 100 years (l/s)	18.7 l/s
Flow rate 200 years (l/s)	21.3 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent 'zero' figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

Surface water storage volume design tool

www.uksuds.com | Surface water storage volume design tool (https://www.uksuds.com/)

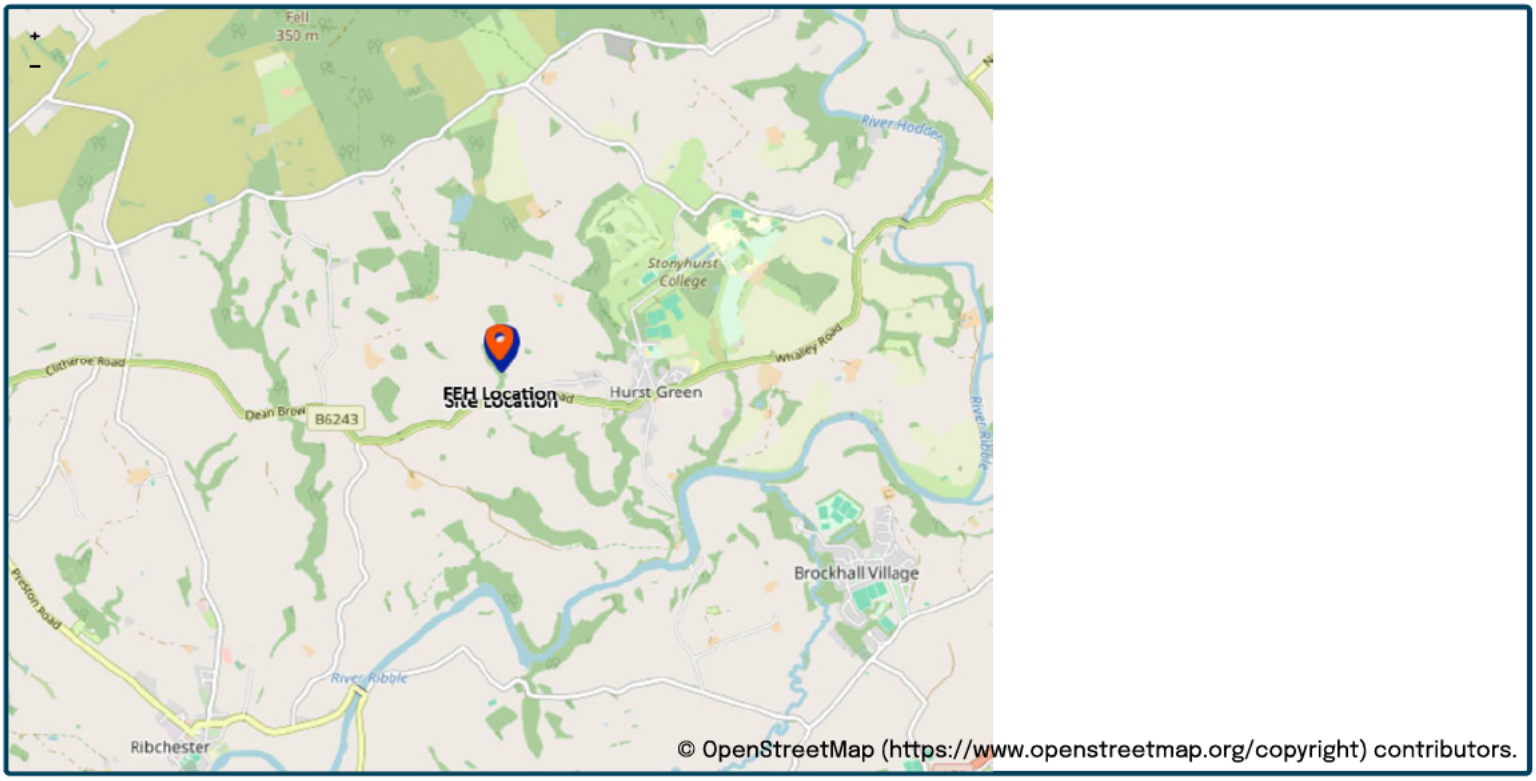
This is an estimation of the storage volume requirements that are needed to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). It is recommended that the total storage volume for the site is distributed across the site using multiple SuDS and that hydraulic modelling software is used to undertake and finalise the detailed design of the drainage system.

Project details

Date	28/01/2026
Calculated by	
Reference	
Model version	2.2.2

Location

Site name	
Site location	



Site easting (British National Grid)	367335
Site northing (British National Grid)	437903

Site areas

Total site area (ha)	0.021	ha

Roof area

Total roof area (ha)	0.0081	ha
Contributing roof area (ha)	0.0081	ha
Non-contributing roof area (ha)	0	ha

Paved area

Total paved area (ha)	0.0122	ha
Contributing paved area (ha)	0.0122	ha
Non-contributing paved area (ha)	0	ha

Grass / vegetated area

Total grass / vegetated area (ha)		ha
Contributing grass / vegetated area (ha)		ha
Non-contributing grass / vegetated area (ha)	0	ha

Total area

Total contributing area (ha)	0.0203	ha

Contributing areas with urban creep allowance

Urban creep allowance factor	+10%	
Contributing roof area (adjusted for urban creep) (ha)	0.0081	ha
Contributing paved area (adjusted for urban creep) (ha)	0.0122	ha
Contributing grass / vegetated area (adjusted for urban creep) (ha)	0	ha

Storage design parameters

Storage base shape	Rectangular / square	
Storage base length to width ratio	1:1 (square)	
Storage design depth (m)	0.4	m
Storage side slope (1 in x)	Vertical sided	
Storage voids ratio (%)	30% (e.g. aggregate filled structure)	
Storage volume design return period (years)	1:100 years	

Discharge flow rate from the site

Method

Type of site	Greenfield
Specify the method	IH124

IH124

	My value		Map/default value
SAAR (mm)	1190 mm		1190
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
Total area for greenfield runoff calculation (ha)	0.0203 ha		0.0203
QBar (l/s)	0.2 l/s		
Hydrological region	10		10
Return period (years)	Qbar (1:2.3 years)		
Growth curve factor	1		
Flow rate (IH124) (l/s)	0.2 l/s		

Final discharge rate

Runoff calculation method	IH124
Design flow rate (l/s)	0.2 l/s

Blockage risk

Specify the method	Orifice diameter
Minimum orifice diameter to prevent blockage (mm)	mm

	My value	Calculated value
Design orifice diameter (mm)	23 mm	12
Flow rate of orifice (l/s)	0.69 l/s	

Rainfall and runoff

Rainfall input type	FEH22 CSV file
	FEH_Point_Rainfall_FEH22_AM_367323_437900.csv
Distance from FEH location to site (km)	0 km
Climate change allowance factor	145%

Model results

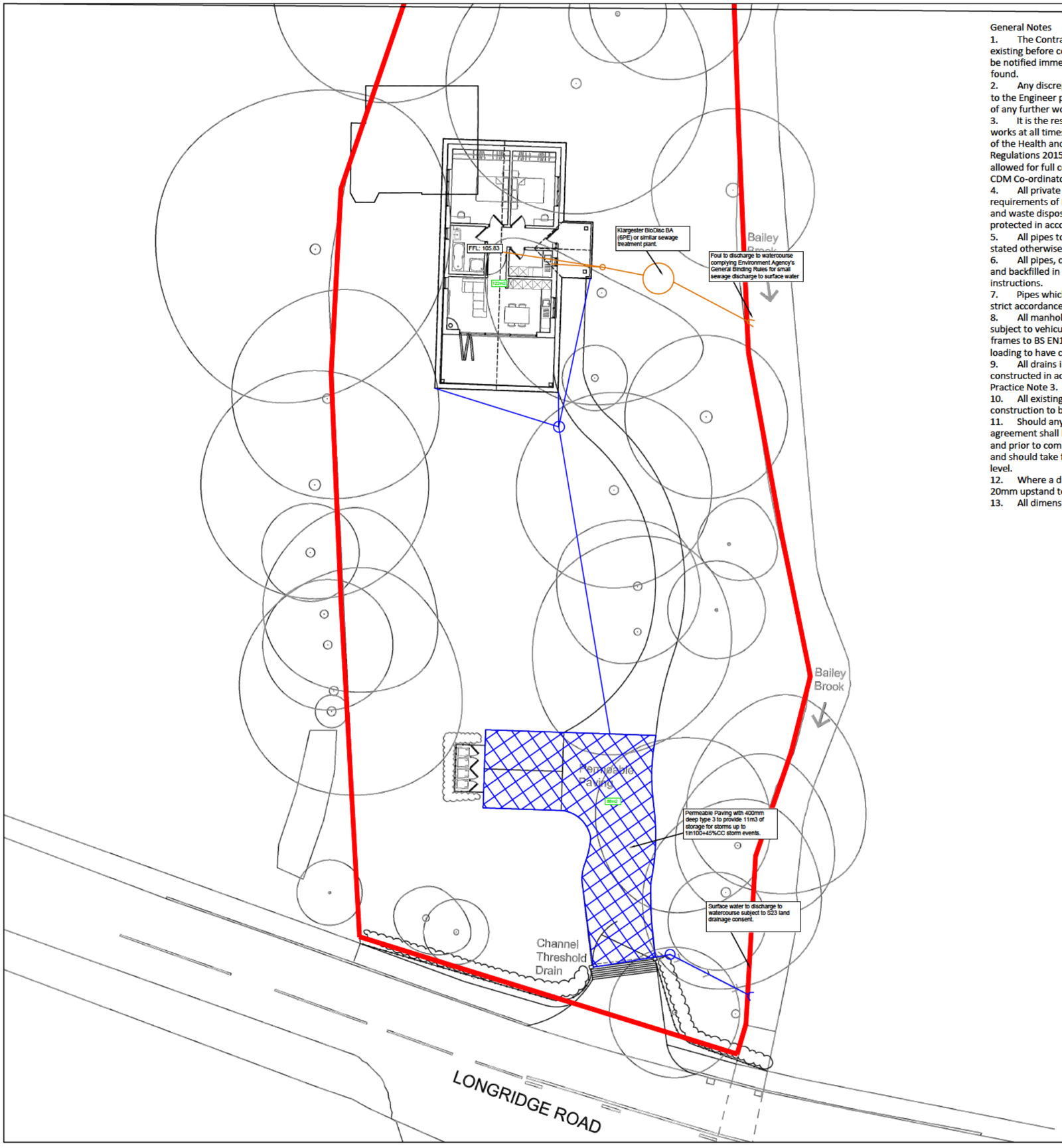
- **Maximum discharge flow rate:** 0.7 (l/s)
- **Outflow orifice diameter:** 23 (mm)
- **Storage base length:** 9.6 (m)
- **Storage base width:** 9.6 (m)
- **Storage base area:** 93 (m^2)
- **Storage total volume:** 37 (m^3)
- **Storage total water volume:** 11 (m^3)
- **Storm return periods run:** 1, 2, 10, 30, 100, 200 (years)
- **Storm durations run:** 15, 30, 60, 120, 180, 240, 360, 540, 720, 900, 1080, 1440, 1800, 2160, 2880, 3600, 4320, 5040, 5760 (minutes)

Return Period (years)	Critical Duration (minutes)	Peak Flow Rate (l/s)	Max Depth (m)	Max water volume (m^3)	Max storage volume (m^3)
1	360	0.4	0.13	3.6	12
2	360	0.4	0.15	4.3	14
10	360	0.5	0.25	7.0	23
30	240	0.6	0.32	8.8	29
100	240	0.7	0.40	11	37
200	240	0.7	0.42	13	43

Please note runoff estimation and storage volume estimation are subject to uncertainty. Storage volume results are therefore reported to the nearest 1 m^3 value, unless storage volumes are less than 10 m^3, in which case, storage volumes are provided to 1 decimal place.

Disclaimer

D. Drainage Strategy



General Notes

1. The Contractor shall check all tie-ins for line and level with existing before commencing any works. The Engineer shall be notified immediately, in writing, should any errors be found.
2. Any discrepancies, of whatever nature, must be reported to the Engineer prior to the commencement or continuance of any further works.
3. It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety at Work Act 1974, and the C.D.M. Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the CDM Co-ordinator, within his rates.
4. All private drainage works to be in accordance with the requirements of Building Regulations 2015, Part H, "Drainage and waste disposal". Pipes with less than 600mm cover to be protected in accordance with Part H, Diagram 11.
5. All pipes to be 100 or 110mm dia. and laid at 1 in 80 unless stated otherwise.
6. All pipes, chambers and fittings to be installed, bedded and backfilled in accordance with the manufacturers instructions.
7. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25.
8. All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames to BS EN124 and those not subject to vehicular loading to have class A15 covers and frames.
9. All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.
10. All existing land drains encountered on site during construction to be re-connected.
11. Should any departure from the slab level be considered, agreement shall be sought from the Engineer immediately and prior to commencement or continuance of any works, and should take full account of all restrictions to the slab level.
12. Where a drive slopes towards a garage there is to be a 20mm upstand to the garage slab.
13. All dimensions in metres unless otherwise stated

Key:

- Site Boundary
- Proposed Foul Sewer
- Proposed Surface Water Sewer
- Proposed Permeable Paving
- 61.2m2 Catchment Area

Rev.	Description	Drawn	Date

Tel: 01244 747223
Email: email@arbtech.co.uk
Arbtech,
Unit 3,
Well House Barns,
Chester,
CH4 0DH

Project Title
Hazel-mere, Longridge Road, Hurst Green, Lancashire, BB7 9QP

Drawing Title
Drainage Strategy

Scale	Drawn By	Designer Check	Engineer Check
1:100	AR		
	Date 26.01.26	Date	Date

Job No.	Drawing No.	Revision
1001	1001–001	–

Original Sheet Size A2

Notes

All Dimensions to be checked on site. Walls shown on plans are not to be assumed to be solid & should be checked for thickness, construction, load bearing capacity & stability.

North

0 2 4 6 8 10 12 14 16 18 20
Metres

ABBREVIATIONS

CH	Cable Height
CL	Cover Level
DK	Drop Kerb
EH	Eaves Height
EP	Electric Pole
FFL	Finished Floor Level
GP	Gate Post
GU	Gully
MH	Man Hole
RH	Ridge/Roof Height
RWP	Rain Water Pipe
TL	Threshold Level
TP	Telegraph Pole

NOTE
All levels and coordinates relate to OSGB36(15) using GNSS data.

Levels defining edge of carriageway are observed at channel (bottom of kerb).

NOTE
All levels and coordinates relate to OSGB36(15) using GNSS data.

Levels defining edge of carriageway are observed at channel (bottom of kerb).

Rev. 0 Description. Issued

TriCAD Solutions Ltd.
BUILDING & LAND SURVEYORS
2 Berkshire Close | Wilpshire | Blackburn | Lancashire | BB1 9NG
tel 01254 614055 fax 01254 209754 e-mail sales@tricadsolutions.co.uk

Site Address
Hazel-Mere
Hurst Green
BB7 9QP

Project Description
Site Survey

Drawing Title
Existing
Site Layout

Scale	Date	Drawn By
1:200@A1	21/07/2024	IW&JB

Drawing Number
TRI-4523-01