

**ADVISORY**

Richborough  
Land at Pendle Road  
Clitheroe  
Flood Risk Assessment

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## EXECUTIVE SUMMARY

This report demonstrates that the proposed development is at an acceptable level of flood risk, subject to the recommended flood mitigation strategies being implemented.

A review of flood data published by the Environment Agency has identified that the following potential sources of flooding do not pose a risk to the site or the proposed development: sewers and drainage systems, canals, and reservoirs and large waterbodies.

The majority of the site is located within Flood Zone 1 with a portion of the site located in Flood Zone 2 and 3 which is defined as land at medium to high risk of flooding from rivers. The built development has been sequentially arranged so that only water compatible uses are within the Flood Zones.

Groundwater has been identified to pose a low flood risk to the development. A conclusion that was supported by British Geological Survey mapping and historical borehole records.

Strategic level flood data has identified a surface water flow route of low to high probability that forms in the south of the site which flows towards the onsite watercourse. Depth mapping shows the flow route is unlikely to exceed depths of 0.2m and is generated from within the site; therefore, it will be addressed by the sustainable drainage infrastructure that is an embedded part of the proposed scheme. Therefore, this does not pose a flood risk to the development.

The proposed residential development will introduce new impermeable surfaces to the site that will increase the surface water runoff generated. To manage the additional runoff, the development proposals include surface water drainage infrastructure that will intercept, store, and slowly release storm water falling on the built development to the onsite watercourse. The surface water discharge rate will be restricted to the equivalent greenfield runoff rate to mimic the baseline conditions and prevent adverse downstream impacts.

This report sets out recommended measures that will increase the development's resilience to flood risk, and which will help manage any residual risks.

In compliance with the requirements of the National Planning Policy Framework, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider area subject to the suitable management of surface water runoff discharging from the site.

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## GLOSSARY & NOTATION

| Abbreviation / Notation | Definition                                                                                                                                                                                                                                                                                |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AEP                     | Annual Exceedance Probability. The probability (%) of a flood event occurring in any year                                                                                                                                                                                                 |
| m bgl                   | metres below ground level                                                                                                                                                                                                                                                                 |
| BGS                     | British Geological Survey                                                                                                                                                                                                                                                                 |
| Catchment               | The land area that drains (normally naturally) to a given point on a river, drainage system or body of water                                                                                                                                                                              |
| DTM / DEM               | Digital Terrain Model / Digital Elevation Model                                                                                                                                                                                                                                           |
| EA                      | Environment Agency                                                                                                                                                                                                                                                                        |
| FEH                     | Flood Estimation Handbook. Industry standard guidance on rainfall and river flood frequency estimation in the UK.                                                                                                                                                                         |
| Floodplain              | Any area of land over which water flows or is stored during a flood event                                                                                                                                                                                                                 |
| FFL                     | Finished Floor Level                                                                                                                                                                                                                                                                      |
| FRA                     | Flood Risk Assessment                                                                                                                                                                                                                                                                     |
| Freeboard               | The height of finished floor levels, top of a bank, floodwall or other flood defence structure, above the design water level. Freeboard can be seen as a safety margin that makes allowance for uncertainty associated with the potentially damaging effects of flood rise or wave action |
| Hydraulic Model         | A mathematical numerical (generally computer based) model of a water/sewer/storm system which is used to analyse the system's hydraulic behaviour                                                                                                                                         |
| LiDAR                   | Light Detection and Ranging aerial survey data                                                                                                                                                                                                                                            |
| LLFA                    | Lead Local Flood Authority                                                                                                                                                                                                                                                                |
| LPA                     | Local Planning Authority                                                                                                                                                                                                                                                                  |
| m AOD                   | metres Above Ordnance Datum                                                                                                                                                                                                                                                               |
| Main River              | A statutory type of watercourse in England and Wales, usually larger watercourses and rivers. The EA can carry out maintenance, improvement or construction work on main rivers to manage flood risk as part of its duties and powers                                                     |
| MHWS                    | Mean High Water Springs. MHWS is often used as a benchmark for understanding coastal processes and for various applications like coastal planning.                                                                                                                                        |
| NPPF                    | National Planning Policy Framework                                                                                                                                                                                                                                                        |
| Ordinary Watercourse    | A river, stream, ditch, drain, dyke, culvert/pipe (other than a public sewer) and passage through which water flows and which does not form part of a main river                                                                                                                          |

| Abbreviation / Notation                | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OS                                     | Ordnance Survey                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PFRA                                   | Preliminary Flood Risk Assessment. An assessment of floods that have taken place in the past and floods that could take place in the future. It generally considers flooding from surface water runoff, groundwater and ordinary watercourses, and is prepared by the LLFAs                                                                                                                                                                                      |
| PPG                                    | Planning Policy Guidance. Specifically, the Flood Risk and Coastal Change category                                                                                                                                                                                                                                                                                                                                                                               |
| Return period                          | A statistical term defining the probability of occurrence of a flood event. A 1 in 30-year flood is one likely to be equalled or exceeded on average only once in a 30-year period: a flood with a 3.33% AEP                                                                                                                                                                                                                                                     |
| RoFSW                                  | Risk of Flooding from Surface Water. A strategic level dataset published by the EA, illustrating the potential probability of flooding from surface water runoff, including an allowance for climate change                                                                                                                                                                                                                                                      |
| SFRA                                   | Strategic Flood Risk Assessment. A study carried out by one or more local planning authorities to assess the risk of flooding from all sources, now and in the future within a defined area                                                                                                                                                                                                                                                                      |
| SDS                                    | Sustainable Drainage Statement                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Section 19 Flood Investigation Reports | Under their duties under the Flood and Water Management Act 2010, LLFAs have a duty to publish reports of investigations of flood incidents. A section 19 flood investigation report is a public statement of the circumstances of a historical flood event and what parties have a role in managing the risks. The investigation does not always give an in-depth analysis of the flood risk or mechanisms, but it can provide a valuable record of past events |
| SuDS                                   | Sustainable Drainage Systems. Surface water management techniques that are intended to reduce the risk of flooding and pollution from urban runoff                                                                                                                                                                                                                                                                                                               |
| SWMP                                   | Surface Water Management Plan. These are non-statutory plans which preceded the introduction of the Flood and Water Management Act 2010. They can provide an important evidence base of local flood risk issues which can include critical drainage areas, surface water drains, groundwater, and small watercourses                                                                                                                                             |
| UOW                                    | Unnamed Ordinary Watercourse. An ordinary watercourse that has no name published on OS maps or within the SFRA                                                                                                                                                                                                                                                                                                                                                   |

## 1. INTRODUCTION

- 1.1 This FRA has been prepared on behalf of Richborough to support a planning application for a residential development of up to 200 dwellings on land at Pendle Road, Clitheroe.
- 1.2 The level of detail included is commensurate and subject to the nature of the proposals at the outline planning stage of the design process.

### Sources of Data

- 1.3 The following sources of data have been reviewed in the preparation of this FRA:
- i. Topographical Survey by BWB Consulting Ltd, reference 255496-BWB-03-ZZ-DR-G-0001 - **Appendix 1**
  - ii. Illustrative Development Framework Plan by Pegasus, reference 25-2353\_DE\_002-01A, Rev A - **Appendix 2**
  - iii. EA Flood risk assessments: climate change allowances<sup>1</sup>
  - iv. EA RoFSW<sup>2</sup>
  - v. Ribble Valley Level 1 Strategic Flood Risk Assessment<sup>3</sup>
  - vi. Ribble Valley Borough Council Core Strategy 2008-2028<sup>4</sup>
  - vii. Lancashire Preliminary Flood Risk Assessment<sup>5</sup> and Addendum
  - viii. Local Flood Risk Management Strategy for Lancashire<sup>6</sup>
  - ix. United Utilities Sewer Records
  - x. BGS Drift & Geology Maps
  - xi. EA LiDAR (Composite 1m DTM 2022)

### The Existing Site

- 1.4 The site lies to the north of Pendle Road and on the eastern extent of the town of Clitheroe. The southern boundary is formed by Pendle Road with existing residential development located beyond. Access to the site is currently made via Pendle Road. Worston Road forms the eastern boundary, and open agricultural land is located to the north, west and east of the site. The site's location is illustrated in **Figure 1.1**.

<sup>1</sup> Environment Agency, Flood risk assessments: climate change allowances: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. Last Accessed November 2025.

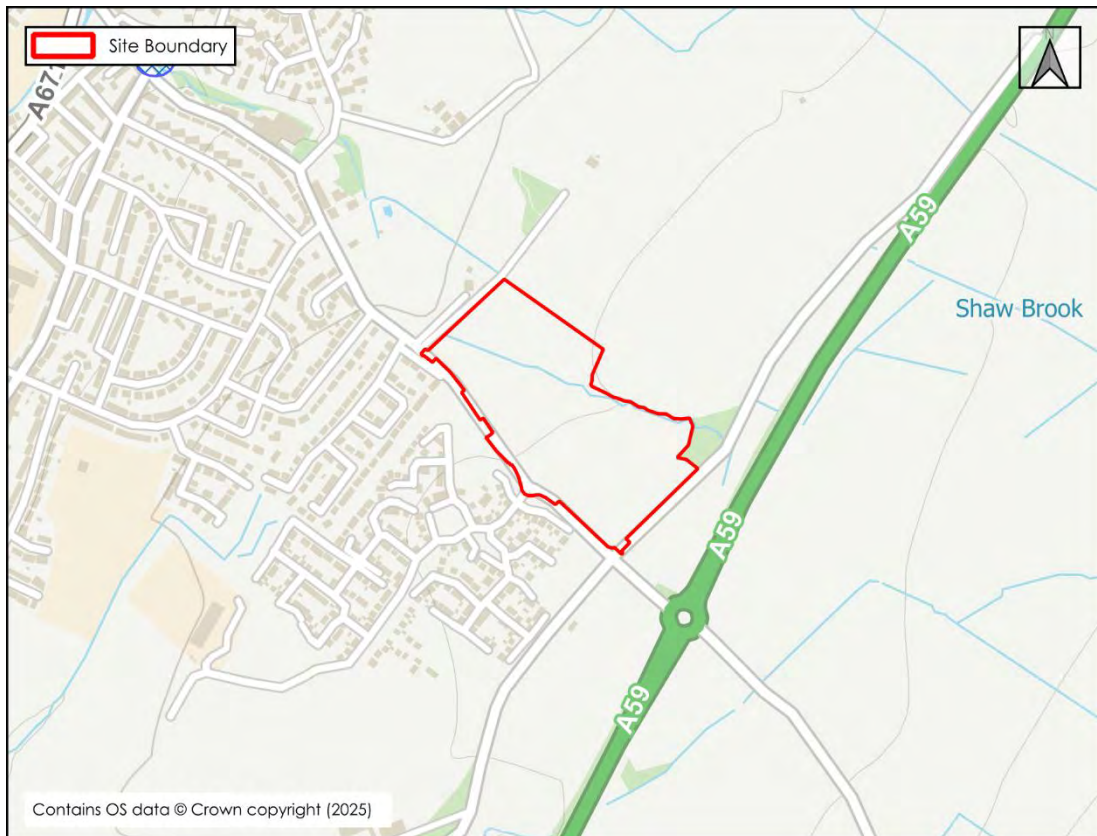
<sup>2</sup> Risk of Flooding from Surface Water. Environment Agency. Last Accessed November 2025.

<sup>3</sup> Ribble Valley Level 1 Strategic Flood Risk Assessment. Ribble Valley Borough Council, April 2017.

<sup>4</sup> Ribble Valley Borough Council Core Strategy 2008 – 2028 (December 2014)

<sup>5</sup> Lancashire Preliminary Flood Risk Assessment. Lancashire County Council, May 2011.

<sup>6</sup> Local Flood Risk Management Strategy for Lancashire. Lancashire County Council, November 2021



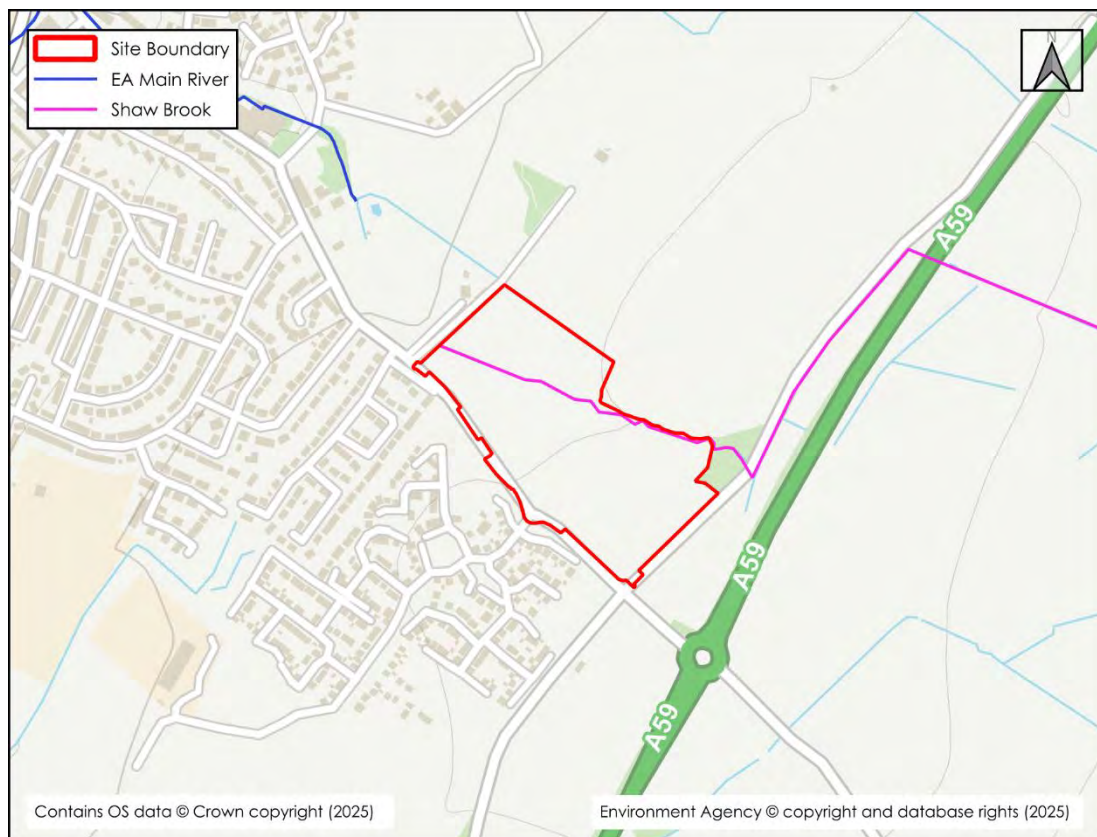
**Figure 1.1: Site Location**

- 1.5 A topographical survey of the site has been undertaken and is included as **Appendix 1**. The survey shows the site generally falls from east to west. Levels in the site fall from a high point of approximately 117.0m AOD at the eastern boundary to a low point of approximately 101.1m AOD in the western corner.
- 1.6 The existing site comprises greenfield land, currently in use for grazing sheep. A forested area is present in the eastern corner of the site, as illustrated in **Figure 1.2**.



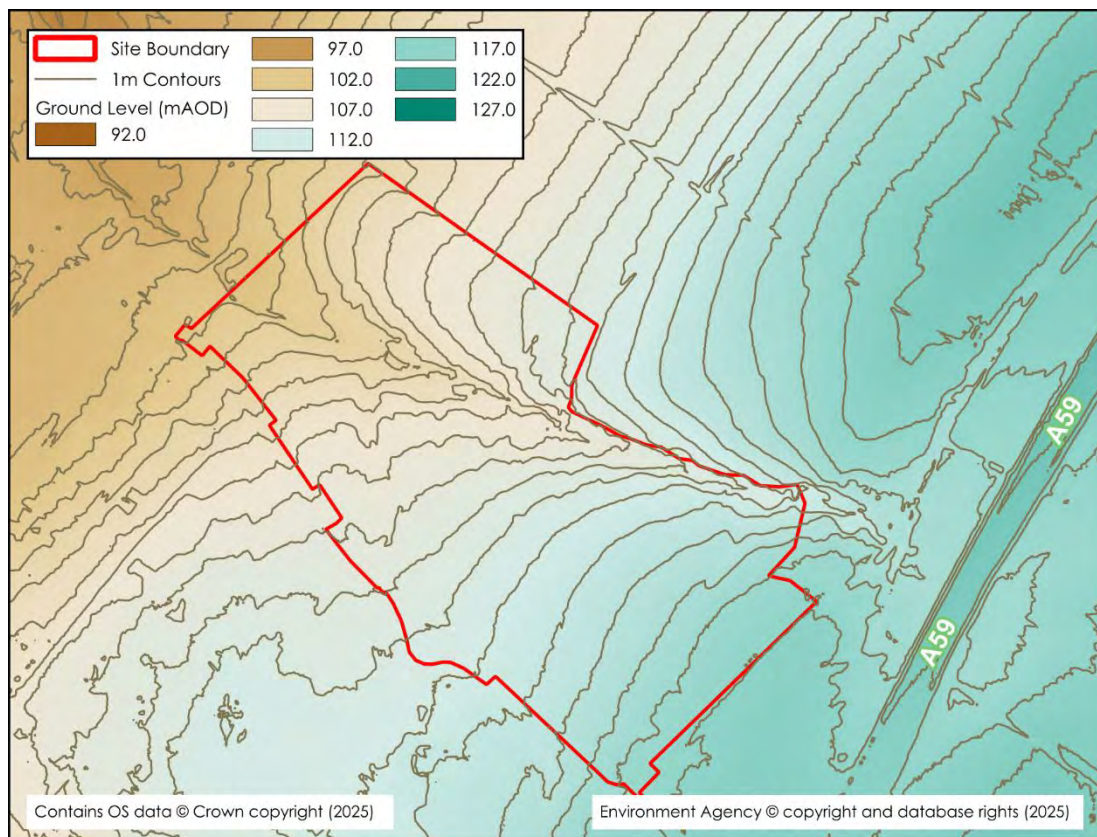
**Figure 1.2: Existing Land Use**

- 1.7 The Shaw Brook originates to the northeast of the site and flows beneath the A59 via a culvert. The watercourse then follows the edge of the adjacent Worston Road before bisecting and flowing through the site as illustrated in **Figure 1.3**.



**Figure 1.3: Local Watercourse Network**

- 1.8 EA 2022 LiDAR data as shown in **Figure 1.4** illustrates the generalised topography of the site, showing a steep fall across the site, with surface levels sloping towards the Shaw Brook, indicating a natural drainage pathway.



**Figure 1.4: Generalised Topography (from EA LiDAR DTM)**

### The Proposed Scheme

- 1.9 The proposed scheme comprises an outline planning application for the erection of up to 200 dwellings with associated landscaping, children's play areas, sustainable urban drainage, and other infrastructure with all matters reserved except access. Access will be made from Pendle Road to the south. An Illustrative Development Framework Plan is available as **Appendix 2**.
- 1.10 The landscaping enhancements include areas for amenity use, areas allocated to provide BNG, and areas to help manage flood risk. The development also includes for SuDS to manage surface water runoff.

## Site Summary

**Table 1.1: Site Summary**

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Site Name</b>                         | Land at Pendle Road       |
| <b>Location</b>                          | Clitheroe                 |
| <b>Easting &amp; Northing</b>            | 375344, 441089            |
| <b>Application Site Area (ha)</b>        | 8.92                      |
| <b>Development Type</b>                  | Residential               |
| <b>Flood Zone Classification</b>         | Flood Zones 1, 2 and 3    |
| <b>NPPF Vulnerability</b>                | More Vulnerable           |
| <b>Anticipated Development Lifetime*</b> | 100+ years                |
| <b>Lead Local Flood Authority</b>        | Lancashire County Council |
| <b>Sewer Operator</b>                    | United Utilities          |

*\*In accordance with PPG Flood Risk and Coastal Change Paragraph 006*

## 2. FLOOD RISK PLANNING POLICY & GUIDANCE

### National Planning Policy Framework

- 2.1 The NPPF<sup>7</sup> sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk.
- 2.2 The NPPF states that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. When considering flood risk, the NPPF requires development to account for future climate change.
- 2.3 The NPPF identifies that development should only be allowed in areas at risk of flooding where it can be demonstrated that:
- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
  - the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;
  - it incorporates SuDS, unless there is clear evidence that this would be inappropriate;
  - any residual risk can be safely managed; and
  - safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

### Planning Practice Guidance – Flood Risk and Coastal Change

- 2.4 The NPPF is accompanied by the PPG category entitled "Flood Risk and Coastal Change"<sup>8</sup>. This sets out the vulnerability to flooding of different land uses. It encourages development to be located in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider catchment area.
- 2.5 Flood risk is identified as a combination of the probability and the potential consequences of flooding:

#### **Flood Risk = Probability x Consequences**

- 2.6 The probability is the chance of a flood occurring expressed as a return period or AEP, and the consequences are the potential impacts of the flood (for example, damage to buildings or risk to people's safety).
- 2.7 The PPG identifies the potential sources of flood risk as rivers and the sea, direct rainfall on the ground surface resulting in surface water runoff, rising groundwater,

<sup>7</sup> Revised National Planning Policy Framework, Ministry of Housing, Communities & Local Government, amended February 2025

<sup>8</sup> Planning Practice Guidance: <https://www.gov.uk/guidance/flood-risk-and-coastal-change>, amended September 2025

overwhelmed sewers and drainage systems, reservoirs, canals and lakes, and other artificial sources.

- 2.8 The PPG requires development to be designed to include flood risk management and resilience against the “design flood” for its lifetime. The PPG also states that all potential sources of flooding should be considered when preparing an FRA.
- 2.9 The PPG defines the “design flood” that new development should consider in its design, which is an event of a given probability generally defined as:
- river flooding likely to occur with a 1% AEP (a 1 in 100 chance each year); or
  - tidal flooding likely to occur with a 0.5% AEP (1 in 200 chance each year); or
  - surface water flooding likely to occur with a 1% AEP (a 1 in 100 chance each year),
- plus, an appropriate allowance for climate change.
- 2.10 The PPG includes a series of tables that define Flood Zones (Table 1), the flood risk vulnerability classification of development land uses (Table 2) and ‘compatibility’ of development within the defined Flood Zones (Table 3).
- 2.11 This FRA is written in accordance with the NPPF and the associated PPG.

### Flood Zone Classification

- 2.12 With particular reference to planning and development, and specifically the risk of flooding from rivers and the sea ignoring the presence of flood defences, the Flood Map for Planning identifies Flood Zones in accordance with Table 1 of the PPG. Further details on the Flood Zone classifications are outlined in **Table 2.1**.

**Table 2.1: Flood Zone Classifications**

| Flood Zone                                | Description                                                                                                                                                                                                                                          |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flood Zone 1 (Low Probability)            | Land having less than a 1 in 1000 annual probability of river or sea flooding (<0.1% Annual Exceedance Probability). All land outside of Flood Zone 2 and 3.                                                                                         |
| Flood Zone 2 (Medium Probability)         | Land having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1% AEP); or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% - 0.1% AEP).                                                         |
| Flood Zone 3a (High Probability)          | Land having a 1 in 100 or greater annual probability of river flooding (>1% AEP); or land having a 1 in 200 or greater annual probability of flooding from the sea (>0.5% AEP). This is represented by “Flood Zone 3” on the Flood Map for Planning. |
| Flood Zone 3b (The Functional Floodplain) | Flood Zone 3b (The Functional Floodplain) is defined as land where water must flow or be stored in times of flood. This is not identified or separately distinguished from Zone 3a on the Flood Map for Planning.                                    |

- 2.13 LPAs use the Flood Zones to determine if they must consult the EA on planning applications. They are also used to determine the appropriate climate change allowance to consider and whether development is subject to the exception test.
- 2.14 The Flood Map for Planning does not identify functional floodplain. LPAs are responsible for producing maps showing the extent of functional floodplain (Flood Zone 3b) as part of a SFRA.
- 2.15 The site is shown to be located mostly within Flood Zone 1, with an area of Flood Zone 2 and 3 crossing the site associated with the Shaw Brook, as shown in **Figure 2.1**.



**Figure 2.1: Flood Map for Planning**

### **Flood Risk Assessments: Climate Change Allowances**

- 2.16 Predicted future changes in sea levels, peak river flows, and rainfall intensities caused by climate change are provided by the EA online. A range of projections are applied to regionalised 'River Basin Districts', which are further subdivided into Management Catchments, to provide a series of climate change allowances. The appropriate climate change allowances are determined by a number of factors that include the source of flooding, the current level of risk, the vulnerability of the proposed development, and the lifespan of the development.
- 2.17 The site falls within the Ribble Management Catchment.

## Peak River Flow

2.18 The relevant peak river flow climate change allowances are identified in **Table 2.2**.

**Table 2.2: Peak River Flow Allowance for the Ribble Management Catchment**

| Allowance Category | Total potential change anticipated for the '2020s' (2015 to 2039) | Total potential change anticipated for the '2050s' (2040 to 2069) | Total potential change anticipated for the '2080s' (2070 to 2125) |
|--------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|
| Upper End          | 27%                                                               | 44%                                                               | 71%                                                               |
| Higher Central     | 19%                                                               | 29%                                                               | 46%                                                               |
| Central            | 16%                                                               | 23%                                                               | 36%                                                               |

2.19 **Table 2.3** provides a matrix summarising the EA's guidance on determining the appropriate climate change allowance(s) for river flow.

**Table 2.3: Application of Appropriate Peak River Flow Climate Change Allowances**

| Flood Zone                                                                                                                                                                             | Essential Infrastructure                                                                    | Highly Vulnerable                   | More Vulnerable           | Less Vulnerable | Water Compatible          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|-----------------|---------------------------|
| 1                                                                                                                                                                                      | Use the central allowance where a location may fall within Flood Zone 2 or 3 in the future. |                                     |                           |                 |                           |
| 2                                                                                                                                                                                      | Use the higher central allowance                                                            | Use the central allowance           |                           |                 |                           |
| 3a                                                                                                                                                                                     | Use the higher central allowance                                                            | Development should not be permitted | Use the central allowance |                 |                           |
| 3b                                                                                                                                                                                     | Use the higher central allowance                                                            | Development should not be permitted |                           |                 | Use the central allowance |
| If development is considered appropriate by the LPA when not in accordance with Flood Zone vulnerability categories, then it would be appropriate to use the higher central allowance. |                                                                                             |                                     |                           |                 |                           |

2.20 The site is located partially within Flood Zones 2 and 3, the proposed development is classified as 'More Vulnerable', and it has an anticipated lifespan of at least 100 years. This requires the Central allowance for the '2080s' epoch to be considered.

2.21 Therefore, to ensure the development is designed adequately for its lifetime an uplift of 36% to river flows will be assessed.

## Local Plan

- 2.22 The adopted Ribble Valley Borough Council Core Strategy 2008-2028<sup>9</sup> has been reviewed during the preparation of this report. No specific policies related to the flood risk management for new developments were observed, other than the general objectives in *DME 6:Water Management*:
- 2.23 Development will not be permitted where it poses an unacceptable flood risk or increases flood risk elsewhere. Proposals must incorporate measures to:
- o Prevent pollution of surface and groundwater,
  - o Reduce water consumption, and
  - o Minimise surface water flood risk, including the use of Sustainable Drainage Systems (SuDS).

## Strategic Flood Risk Assessment

- 2.24 The Ribble Valley Level 1 SFRA has been reviewed in the production of this FRA. The SFRA includes the following general requirement, but no other recommendations or requirements related to the flood risk management for new developments were observed:

"A site specific flood risk assessment (FRA) is required for proposals of 1 hectare or greater in Flood Zone 1; all proposals for new development (including minor development and change of use) in Flood Zones 2 and 3, or in an area within Flood Zone 1 which has critical drainage problems (as notified to the local planning authority by the Environment Agency); and where proposed development or a change of use to a more vulnerable class may be subject to other sources of flooding."

- 2.25 The SFRA also provides guidance on the classification of Flood Zone 3B:

"Following discussion with the EA, it is proposed that all rural/undeveloped sites within Flood Zone 3 should, at this stage, be identified as "potential" Flood Zone 3B...Within Zone 3B only water compatible uses and the essential infrastructure listed in PPG Table 3 (see Appendix 1) that have to be there should be permitted in this zone."

---

<sup>9</sup> Ribble Valley Borough Council Core Strategy 2008 – 2028 (December 2014)

### 3. HISTORICAL FLOODING INCIDENTS

- 3.1 A review of the data sources identified in **Section 1** was undertaken to identify any records of historical flooding incidents within the vicinity of the site, these are summarised within **Table 3.1**.

**Table 3.1: Summary of Reported Historical Flooding Incidents**

| Data Source                            | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SFRA                                   | The Ribble Valley Level 1 SFRA reports flooding which impacted Clitheroe in 1923 and December 2015. The December 2015 was attributed to intense rainfall; however, the exact locations of areas impacted are not provided.                                                                                                                                                                                                                                                                                                                                                               |
| PFRA and Addendum                      | <p>The PFRA historical flood map and database of historical incidents makes no reference to Clitheroe or the surrounding vicinity of the site (as downloaded from the National Archive<sup>10</sup> in November 2025). However, as the SFRA post-dates the PFRA reports, it is likely to have presented a more complete record of incidents.</p> <p>The PFRA Addendum states that the LLFA's understanding of flood risk has improved since 2011 due to flooding that has occurred since the original PFRA was published; however, no further historical flood records are provided.</p> |
| SWMP                                   | Ribble Valley Borough Council does not have a published SWMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LRMS                                   | The Local Flood Risk Management Strategy for Lancashire <sup>11</sup> 2021-2027 notes that " <i>Clitheroe is built on a series of flat or gently sloping terraces to the River Ribble</i> ". However, no information regarding flood risk at or near the site is referenced                                                                                                                                                                                                                                                                                                              |
| Section 19 Flood Investigation Reports | Lancashire County Council have published 17 Section 19 Flood Investigation Reports which document flooding from 2012 to 2023. None of the reports refer to incidents which have impacted the site.                                                                                                                                                                                                                                                                                                                                                                                       |
| EA Recorded Flood Outlines             | The EA have not published any recorded flood outlines which have impacted the site. The nearest recorded flood outline is located approximately 600m west of the site attributed to surface water flooding in 2007.                                                                                                                                                                                                                                                                                                                                                                      |

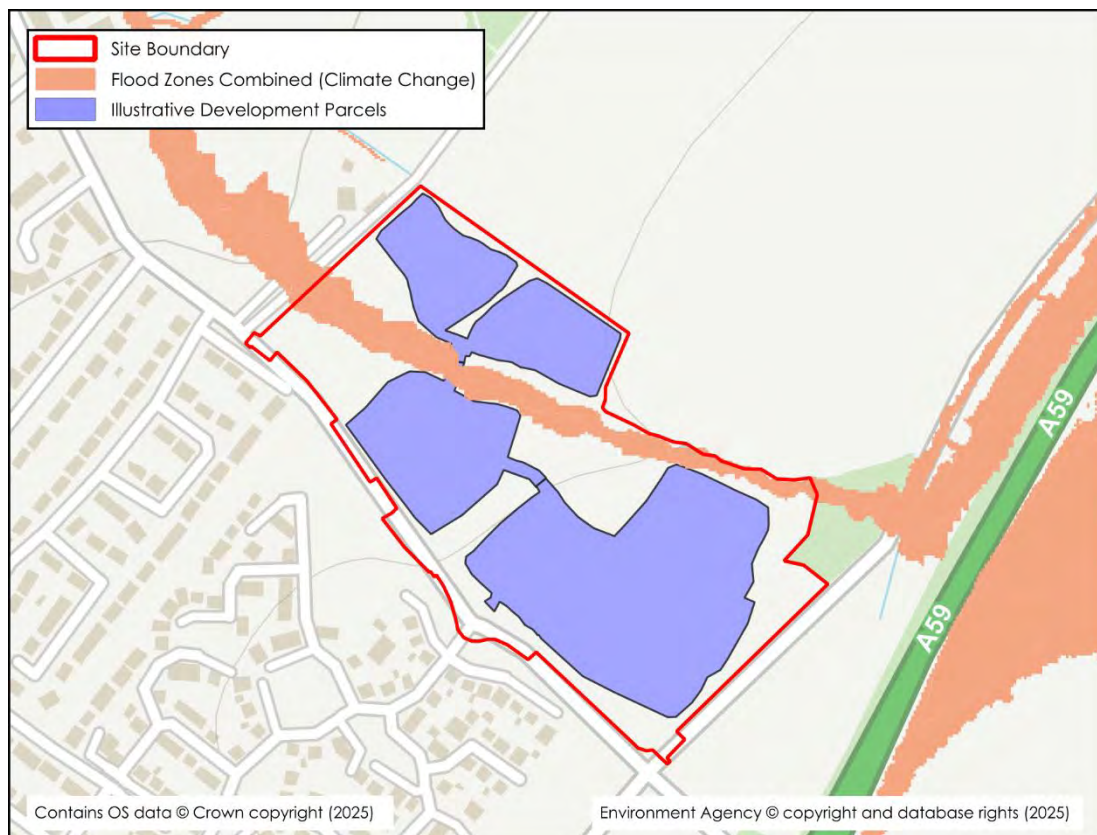
- 3.2 It should be noted that a lack of recorded flooding incidents does not necessarily mean the site and local area have never experienced flooding. Flooding incidents may not have been reported or observed.

<sup>10</sup> Lancashire Preliminary Flood Risk Assessment. Lancashire County Council, May 2011.

<sup>11</sup> Local Flood Risk Management Strategy for Lancashire. Lancashire County Council, November 2021

## 4. FLOOD RISK FROM RIVERS & ORDINARY WATERCOURSES (FLUVIAL)

- 4.1 Flooding from watercourses occurs when flows exceed the capacity of the channel or conduits, or where a restrictive hydraulic structure is encountered, which leads to water overtopping the banks into the floodplain.
- 4.2 As illustrated within **Figure 2.1**, an area of the site is located in Flood Zone 2 and 3, which is defined as land at a medium to high probability of flooding from rivers. However, there is currently no detailed modelling of the Shaw Brook within the vicinity of the site; the Flood Zone mapping is based upon strategic level generalised river modelling only.
- 4.3 The proposed development layout has been sequentially arranged to ensure that all 'More Vulnerable' development avoids the Shaw Brook and its floodplain. Land within Flood Zones has been designated for water-compatible uses only.
- 4.4 The Flood Map for Planning also includes Flood Zone Plus Climate Change extents which show how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century, ignoring the benefits of any existing flood defences. The Flood Zones plus climate change dataset uses the central allowance for the '2080s' epoch. As shown in **Figure 4.1** the 'More Vulnerable' areas of development are primarily removed from the combined extent.



**Figure 4.1: Flood Zones Plus Climate Change and Development Areas**

- 4.5 The proposed finished floor levels of all new buildings will be set a minimum of 150 mm above the adjacent ground level. This measure is intended to provide additional resilience against fluvial flooding events.

### **Flood Risk**

- 4.6 It can be concluded that the proposed development is at a low risk of flooding from rivers subject to proposed resilience measures.

### **Residual Flood Risk & Management**

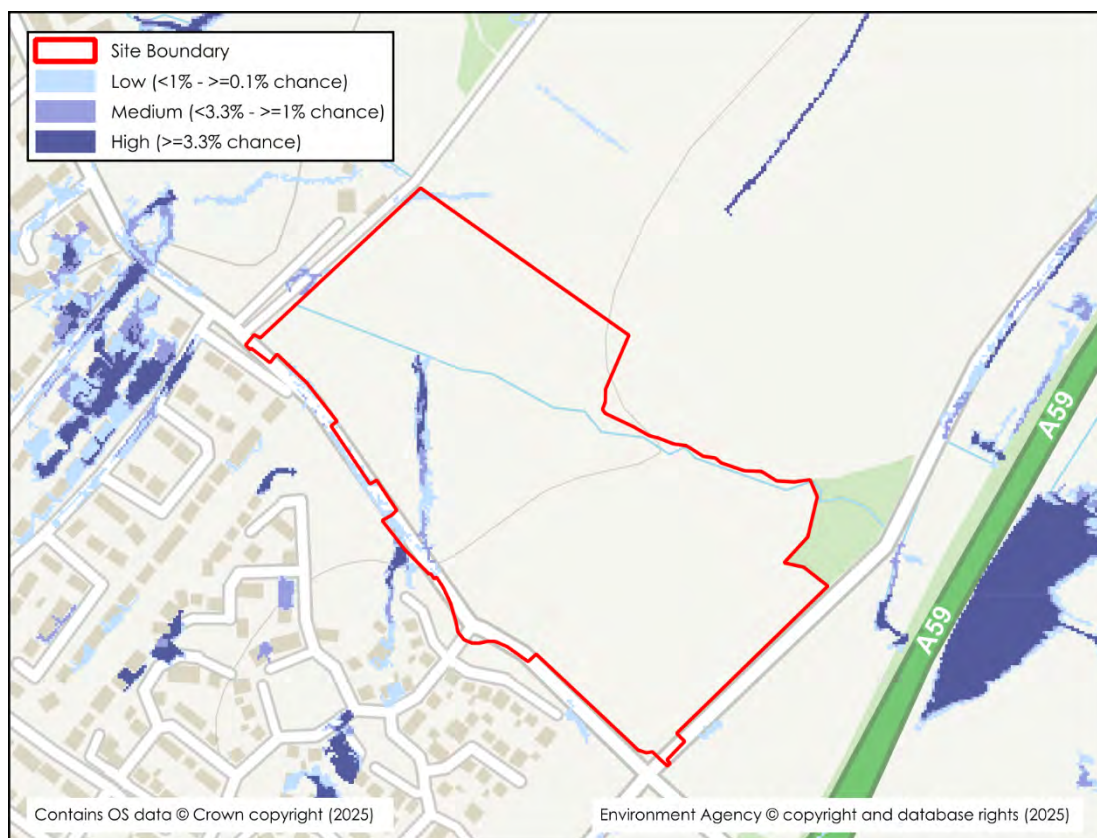
- 4.7 The available data suggests that the access/egress routes from Pendle Road and into the wider area are outside of the river floodplain. However, it may be beneficial for residents to be encouraged to sign up to receive EA flood alerts so that they are aware of potential incidents in the wider area that may affect their travel arrangements.
- 4.8 In line with riparian responsibilities, it is recommended that the Shaw Brook and any associated hydraulic structures within the ownership of the site are regularly inspected and maintained where necessary to ensure they remain in good operational condition and capable of conveying flows. This should be done in accordance with the latest LLFA and EA riparian guidance and best practice.
- 4.9 Any proposed crossings and culverts implemented over the Shaw Brook should be designed and constructed with an appropriate dimension and freeboard in line with the CIRIA C786 culvert, screen and outfall manual<sup>12</sup>

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<sup>12</sup> Culvert, screen and outfall manual, (CIRIA, 2019)

## 5. FLOOD RISK FROM SURFACE WATER

- 5.1 Surface water flooding can occur during prolonged or intense storm events when the infiltration potential of soils, and/or the capacity of drainage infrastructure is overwhelmed leading to the accumulation of surface water and the generation of overland flow routes.
- 5.2 RoFSW mapping has been collated and published by the EA; this shows the potential probability of flooding which could occur when rainwater does not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. This data can also identify the potential floodplain associated within small watercourses/ditches omitted from the Flood Map for Planning. An extract from the mapping is included as **Figure 5.1**. The dataset includes climate change up to 2060, which is the most precautionary projection currently published by the EA but does not extend for the entire development lifetime.
- 5.3 Although these projections do not cover the full development lifetime, the site's design and mitigation measures have been designed to account for the 1 in 100-year + 40% Climate Change storm and therefore accounts for the full development lifespan.
- 5.4 The mapping shows the majority of the site is at a very low probability of flooding from surface water.



**Figure 5.1: EA Risk of Flooding from Surface Water (Yearly Chance of Flooding between 2040 and 2060)**

- 5.5 The RoFSW data identifies the potential for an isolated overland flow route of low to high probability to form in the southwest of the site. This is representative of surface water runoff from within the site itself ponding within a shallow depression before flowing in a northerly direction and into the Shaw Brook. As the flow route is generated from within the site, it will be addressed by the sustainable drainage infrastructure that is incorporated as part of the proposed scheme. Moreover, further interrogation of the data indicates that there is very low probability of depths of this overland flow route exceeding 0.2m as shown in **Figure 5.2**.



**Figure 5.2: EA RoFSW Depths Exceeding 0.2m**

- 5.6 The proposed residential development will introduce new impermeable surfaces to the site that will increase the surface water runoff generated. To manage this within the site, surface water drainage infrastructure is included as part of the proposed development that will intercept, store, and slowly release storm water falling on the built development to the Shaw Brook. This will not only manage the surface water flood risk to the development, but it will also prevent the development from adversely affecting downstream flood risk. The surface water drainage strategy is discussed in detail with the accompanying SDS (ref: 255496-BWB-ZZ-XX-T-C-0002\_SDS).
- 5.7 The attenuated surface water runoff will be stored within SuDS basins located in the west and centre of the site, between the built development and the receiving watercourse. The basins are located at least 8m from Shaw Brook and are also outside of the Shaw Brook floodplain.

- 5.8 Finished floor levels of the properties neighbouring the SuDS basins should be set a minimum of 300mm above its maximum possible water level to mitigate any residual risk of overtopping.
- 5.9 Additionally, finished floor levels throughout the proposed development should be raised a minimum of 150mm above immediate surrounding ground levels to help mitigate the residual risk of flooding from localised surface water runoff within the development.
- 5.10 Buildings are not to be sited in topographical low points or potential overland flow pathways. Ground levels should be profiled to encourage runoff and overland flows away from the built development and towards the nearest drainage point.
- 5.11 At this stage recommended mitigation measures are indicative and subject to review at detailed design.

### **Flood Risk**

- 5.12 While an isolated part of the site is currently at a low to high probability of surface water flooding, due to the proposed mitigation measures, the development will be at a low risk of flooding from surface water.

### **Residual Flood Risk & Management**

- 5.13 The proposed development should be designed with exceedance in mind, and the road network and landscaped areas should be used to convey overland flows above the capacity of the drainage networks towards the SuDS basin.
- 5.14 The EA RoFSW data identifies a low probability surface water flow route to impact Pendle Road. Like many roads, Pendle Road is understood to use kerb and gully drainage, i.e. the use of combined surface and sub-surface drainage measures to manage storm water runoff. The road is designed to direct surface water runoff down the kerb line and towards the sub-surface drainage features (the gullies). Therefore, surface water on the carriageway will be present during storm events, by design.
- 5.15 Any flooding on the road would be expected to be of a short duration, shallow in depth (<0.2m), and contained by the kerb/verge and directed away from the development. Given the low probability of this occurrence, it is not considered to be a significant constraint to access/egress from the development.
- 5.16 While safe access and egress to the site is considered achievable, residents may sign up to receive Met Office severe weather warnings so that they have advance warning of potential incidents within the wider area that may affect their travel arrangements.

## **6. FLOOD RISK FROM SEWERS & DRAINAGE SYSTEMS**

- 6.1 Sewer and flooding from drainage systems can occur when the capacity of the infrastructure is exceeded by excessive flows, because of a reduction in capacity due to collapse or blockage, or if the downstream system becomes surcharged. This can lead to the sewers flooding onto the surrounding ground via manholes and gullies, which can generate overland flows.
- 6.2 United Utilities have provided a plan of their sewer records within the vicinity of the site. This is included as **Appendix 3**. The records do not identify any public sewers to be located within the site. The nearest public sewers are a 225mm diameter foul and surface water network located in Pendle Road which flows in a westerly direction past the site.
- 6.3 The nearest foul manhole to the site is MH1103 and has a depth to invert of 1.42m. the nearest surface water manhole to the site is MH1101, however invert levels are not recorded.
- 6.4 Should the nearby sewer network be exceeded, any resultant flood water on Pendle Road would be conveyed away from the site in alignment with the local topography in the same manner as surface water runoff. However, there is no known historical record of flooding from these assets at the site.
- 6.5 The topographical survey does not identify the presence of any existing manholes or drainage infrastructure on site.
- 6.6 It is proposed to drain foul water from the development separately to surface water.
- 6.7 The flood risk management measures previously described to address the surface water flood risk are also applicable to address the flood risk from sewers and drainage systems. This includes the construction of new SuDS as part of the development proposals.

### **Flood Risk**

- 6.8 It can be concluded that the development is at a low risk of flooding from sewers & drainage systems.

### **Residual Flood Risk**

- 6.9 The residual surface water flood risks and the recommended measures to help manage these risks, as described in **Section 5**, are also applicable to help address the residual flood risk from sewers and drainage systems.
- 6.10 Additionally, it is recommended that an operation and maintenance plan is established during detailed design to ensure that the development's drainage systems are inspected and maintained for their lifetime.

## **7. FLOOD RISK FROM GROUNDWATER**

- 7.1 Groundwater flooding occurs when the water table rises above ground elevations, or it rises to depths containing basement level development. It is most likely to happen in low lying areas underlain by permeable geology. This is most common on regional scale chalk aquifers, but there may also be a risk on sandstone and limestone aquifers or on thick deposits of sands and gravels underlain by less permeable strata such as that in a river valley. The presence of springs and/or winterbourne streams near to a site are a good indicator that groundwater flooding may be an issue in the area.
- 7.2 The SFRA has no records of groundwater flooding or groundwater susceptibility mapping in the vicinity of the site.
- 7.3 Information published by the BGS indicates that the site is entirely underlain by bedrock of Clitheroe Limestone Formation and Hodder Mudstone Formation (Undifferentiated), which is classified as a Secondary A Aquifer. Secondary A Aquifers comprise permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
- 7.4 The site is entirely overlain by superficial deposits of Till (Devensian-Diamicton), which is defined as a Secondary (Undifferentiated) Aquifer. Secondary (Undifferentiated) Aquifers occur where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value. Artificial ground is not indicated to be present on site.
- 7.5 The BGS also holds historical records of borehole samples across the UK which include measurements of groundwater levels. These are measurements taken at one point in space and time and are not a substitute for a long-term record of groundwater levels. However, these can provide an indication of possible groundwater levels, that could be experienced. There are no borehole records within the site itself, however, there is one accessible record located approximately 20m east of the site and is within an area underlain by the same geology (reference: SD74SE85). The log was excavated to a depth of 301.4m bgl; however, no groundwater strikes are recorded.
- 7.6 Given the cohesive nature of the underlying ground, the probability of groundwater migration from off-site is considered to be minimal. This should be confirmed through ground investigation.
- 7.7 Any groundwater emergence would be expected to occur within the low lying Shaw Brook and its respective floodplain. The built development has been arranged to avoid these low-lying areas; any development proposed within the floodplain corridor (landscaping and amenity use) is water compatible.
- 7.8 No specific flood management or mitigation measures are required in relation to this source of flood risk.

## **Flood Risk**

- 7.9 Based on the available data, it is concluded that the risk of flooding from groundwater to the development is low.

## **Residual Flood Risk & Management**

- 7.10 It is recommended that groundwater levels are monitored during the construction phase and that the potential to encounter shallow groundwater levels should be considered during any excavations, as well as within the design of the earthworks, foundations and below ground infrastructure. Should shallow groundwater be encountered, a groundwater specialist should be consulted, and appropriate dewatering techniques should be employed as necessary.

## **8. OTHER SOURCES OF FLOOD RISK**

- 8.1 The site has been reviewed against data relating to other sources of flood risk, including the sea, canals, and reservoirs and large waterbodies. The data available in the SFRA and published by the EA identify no flood risk to the site from these sources. Therefore, they have not been considered in any further detail.

9. SUMMARY AND RECOMMENDATIONS

9.1 This report demonstrates that the proposed development is at an acceptable level of flood risk. In compliance with the requirements of NPPF and the PPG, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider area subject to suitable management of surface water runoff discharging from the site. A summary of the FRA is presented within **Table 9.1**.

Table 9.1: Flood Risk Assessment Summary

| Flood Source                     | Flood Risk to Development | Embedded Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Additional Mitigation for the Management of Residual Flood Risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Sea                          | None                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rivers and Ordinary Watercourses | Low                       | <ul style="list-style-type: none"><li>The 'More Vulnerable' development has been arranged to avoid the Shaw Brook floodplain. The built development is to be located above the surrounding ground levels.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"><li>It would be beneficial for residents to sign up to receive EA flood alerts so that they are aware of potential incidents in the wider area that may affect their travel arrangements.</li><li>In line with riparian responsibilities, it is recommended that the Shaw Brook and any associated hydraulic structures within the ownership of the site are regularly inspected and maintained where necessary to ensure they remain in good operational condition and capable of conveying flows. This should be done in accordance with the latest LLFA and EA riparian guidance and best practice.</li><li>Any proposed crossings and culverts implemented over the Shaw Brook should be designed and constructed with an appropriate dimension and freeboard in line with the CIRIA C786 culvert, screen and outfall manual.</li></ul> |
| Surface Water                    | Low                       | <ul style="list-style-type: none"><li>The development will address any shallow surface water ponding originating from within the site through implementation of a sustainable surface water drainage strategy.</li><li>The development will include new surface water drainage infrastructure that will provide attenuated storage to storm water runoff, preventing an increase in the runoff rate transmitted to the downstream watercourse.</li><li>Finished floor levels are to be raised a minimum of 150mm above immediate surrounding ground levels, and ground levels are to be profiled to encourage runoff and overland flows away from the built development and towards the nearest drainage point.</li><li>Finished floor levels of the properties neighbouring the SuDS basin should be set a minimum of 300mm above its maximum possible water level.</li></ul> | <ul style="list-style-type: none"><li>It is recommended that residents are encouraged to sign up to Met Office severe weather warnings so that they have advance warning of potential incidents in the area that may affect access/egress to the development.</li><li>The proposed development should be designed with exceedance in mind, and the road network and landscaped areas should be used to convey exceedance/ overland flows towards the SuDS Basin and/or the Shaw Brook, and away from the built development.</li></ul>                                                                                                                                                                                                                                                                                                                                         |
| Sewers & Drainage Infrastructure | Low                       | <ul style="list-style-type: none"><li>The flood risk management measures to address the surface water flood risk are also applicable to address the flood risk from sewers and drainage systems.</li><li>It is proposed to drain foul water from the development separately to surface water. The developer will work with the local sewer operator to ensure that any necessary reinforcement works to the downstream network have been made prior to occupation.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"><li>The recommended measures to help manage the residual risks from surface water are also applicable.</li><li>Additionally, it is recommended that an operation and maintenance plan is established to ensure that the development's drainage systems are inspected and maintained for their lifetime.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Flood Source               | Flood Risk to Development | Embedded Mitigation Measures | Additional Mitigation for the Management of Residual Flood Risk                                                                                                              |
|----------------------------|---------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Groundwater                | Low                       | -                            | <ul style="list-style-type: none"><li>Groundwater levels are to be monitored during the construction phase and appropriate dewatering implemented where necessary.</li></ul> |
| Canals                     | None                      | -                            | -                                                                                                                                                                            |
| Reservoirs and waterbodies | None                      | -                            | -                                                                                                                                                                            |

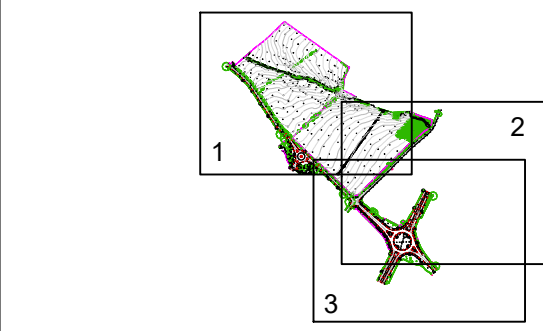
## **APPENDICES**

## **Appendix 1: Topographical Survey**



- Notes**
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
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  6. All coordinates and height data relate to OSGB(15) Pseudo Grid. Control stations are coordinated by means of GPS receiving real time corrections via OS smart net.
  7. All manhole data is collected from ground level therefore discrepancies may occur. More accurate data is only achievable via confined space entry.
  8. OS license number: 100022432

**Key Plan**



**Legend**

- OS Buildings**
- Surveyed Buildings
  - Building
  - Wall
  - Kerb Channel Line
  - Top of Kerb
  - Edge of Surface
  - Top of Bank
  - Bottom of Bank
  - Canopy / Overhang
  - Line Marking
  - Centre Line
  - Watercourse
  - Canter Line
  - Barrier
  - Fence
  - Gate
  - Overhead Powerline
  - Overhead Utilities
- Contour Lines**
- Inspection Chamber
  - Flow direction and pipe diameter
  - Station and Name
  - Monitoring Borehole
  - Tree / Bush / Sighting
  - Area of Vegetation / Extent of Tree Canopy
  - Hedge
  - Body of Water
  - Body of Water from OS
  - Spot Level
  - Assumed Surface
  - Water Drainage Line
  - Surface Water Drainage Line
- AP** Anchor Point **FBW** Fence Barbed Wire **LB** Litter Bin  
**BO** Back Gully **FCB** Fence Closed Board **LP** Lamp Post  
**BO** Bollard **FCL** Fence Chain Link **MH** Manhole  
**BS** Bus Stop **FEL** Fence Electric **MV** Service Marker  
**BT** British Telecom **FMP** Fence Metal Panel **PS** Fuel Box  
**C** Crest **FMR** Fence Metal Railing **PT** Post  
**CL** Cover Level **FOB** Fence Open Board **SP** Sign Post  
**CMP** Cable Marker **FPW** Fence Post & Wire **RE** Roadside Eye  
**PL** Plot **FSB** Fence Steel Palisade **ST** Stop Tap  
**CCTV/Security Camera** **FVM** Fence Wire Mesh **SV** Stop Valve  
**DC** Drainage **FPL** Finished Floor Level **TCB** Telephone  
**DP** Down Pipe **GV** Gas Valve **THL** Threshold Level  
**OK** Drop Kerb **OV** Gas Valve **TL** Traffic Light  
**EP** Electric **GY** Gully **TP** Telegraph Post  
**EL** Electric **HL** Height **TS** Traffic Signal  
**ER** Earth Rod **IC** Inspection Chamber **UTS** Unable to Survey  
**FL** Floodlight **IPL** Internal Floor Level **WL** Water Level  
**IL** Invert Level **WM** Water Meter  
**FL** Floodlight **WO** Wash Out (as a reduced level)

| Station Coordinates |              |               |            |
|---------------------|--------------|---------------|------------|
| Station Name        | Eastings (m) | Northings (m) | Height (m) |
| BWB01               | 375292.568   | 440949.227    | 111.446    |
| BWB02               | 375301.422   | 440979.386    | 111.053    |
| BWB03               | 375455.736   | 440852.290    | 116.392    |
| BWB04               | 375527.725   | 440790.522    | 117.429    |
| BWB05               | 375381.454   | 440825.349    | 113.006    |

|       |          |                             |       |     |
|-------|----------|-----------------------------|-------|-----|
| Drawn | 21.08.25 | First Issue                 | BH    | PQ  |
| Rev   | Date     | Details of Issue / Revision | Drawn | Rev |

**Issues & Revisions**

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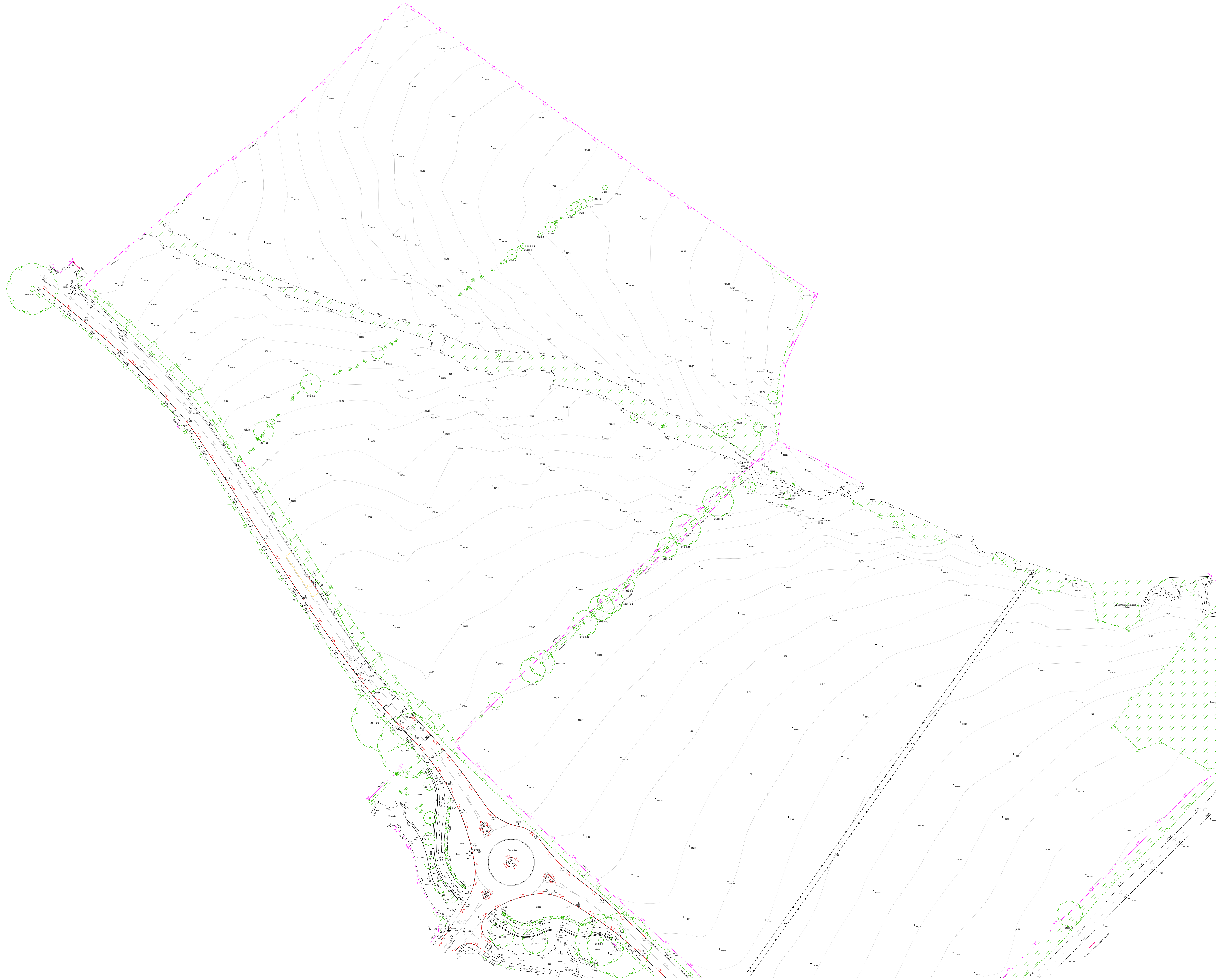
Client  
**Richborough Estates Ltd**

Project Title  
**Land at Pendle Road, Clitheroe**

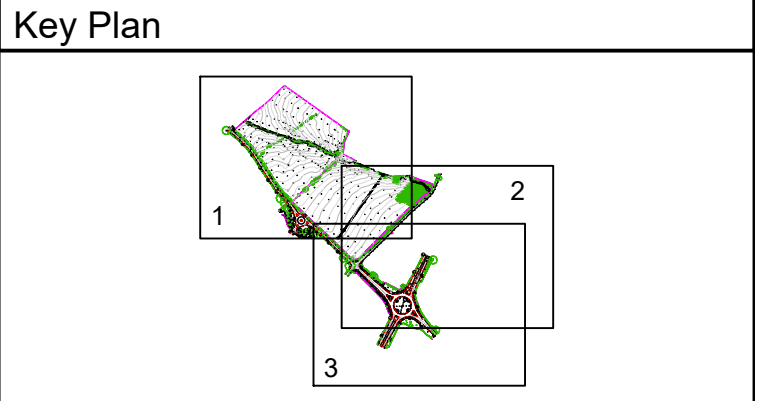
Drawing Title  
**Existing Site Plan  
Sheet 3 of 3**

Drawn: B Hepburn Reviewed: P Quelch  
BWB Ref: 255496 Date: 21.08.25 Scale: A3: 1:500

For Information  
Project - Originator - Zone - Level - Type - Role - Number Status Rev  
255496-BWB-03-ZZ-DR-G-0001 S2 P1



- Notes**
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  8. OS license number: 100022432



- Legend**
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  - Surface Water Drainage Line
- AP Anchor Point  
BG Back Gully  
BO Bollard  
BS Bus Stop  
BT British Telecom  
C Crest  
CL Cover Level  
CMP Cable Marker  
P Post  
CCTV/Security Camera  
DC Drainage  
Channel  
OK Drop Kerb  
DP Down Pipe  
Elec Electric  
EP Electricity Post  
ER Earth Rod  
FH Fire Hydrant  
FL Floodlight  
FBW Fence Barbed Wire  
FCB Fence Closed Board  
FCL Fence Chain Link  
FEL Fence Electric  
FMP Fence Metal Panel  
C Crest  
FMR Fence Metal Railing  
FOP Fence Open Board  
FPW Fence Post & Wire  
FVM Fence Wire Mesh  
FP Flagpole  
Gas  
GV Gas Valve  
GY Gully  
H Height  
IC Inspection Chamber  
IFL Internal Floor Level  
IL Invert Level  
Floodlight  
Litter Bin  
LP Lamp Post  
MH Manhole  
MV Service Marker  
PB Fuel Box  
PT Post  
RE Roadside Eye  
SM Sign Post  
SV Stop Valve  
TCB Telephone  
Call Box  
THL Threshold Level  
TL Traffic Light  
TP Telegraph Post  
TS Traffic Signal  
UTS Unable to Survey  
W Water Level  
WM Water Meter  
WO Wash Out

| Station Coordinates |              |               |            |
|---------------------|--------------|---------------|------------|
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|                  |                    |
|------------------|--------------------|
| Drawn: B Hepburn | Reviewed: P Quelch |
| BWB Ref: 255496  | Date: 21.08.25     |
| Scale: 1:500     |                    |

**Issues & Revisions**

| Rev | Date     | Details of Issue / Revision | By | Rev |
|-----|----------|-----------------------------|----|-----|
| P1  | 21.08.25 | First Issue                 | BH | PQ  |
|     |          |                             | Dw | Rev |

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**Client**  
**Richborough Estates Ltd**

**Project Title**  
**Land at Pendle Road, Clitheroe**

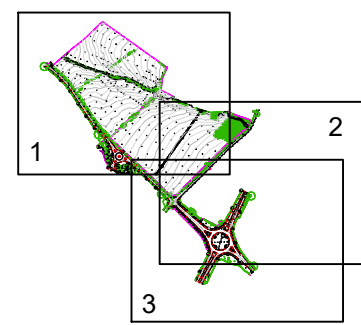
**Drawing Title**  
**Existing Site Plan**  
**Sheet 1 of 3**

|                                                            |                    |
|------------------------------------------------------------|--------------------|
| Drawn: B Hepburn                                           | Reviewed: P Quelch |
| BWB Ref: 255496                                            | Date: 21.08.25     |
| Scale: 1:500                                               |                    |
| <b>For Information</b>                                     |                    |
| Project - Originator - Zone - Level - Type - Role - Number | Status Rev         |
| 255496-BWB-01-ZZ-DR-G-0001                                 | S2 P1              |



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  - 7. All manhole data is collected from ground level therefore discrepancies may occur. More accurate data is only achievable via confined space entry.
- OS license number: 1000204232

### Key Plan



### Legend

- [illegible]

| Station Coordinates |              |               |            |
|---------------------|--------------|---------------|------------|
| Station Name        | Eastings (m) | Northings (m) | Height (m) |
| BWB01               | 375292.568   | 440949.227    | 111.446    |
| BWB02               | 375301.422   | 440979.386    | 111.053    |
| BWB03               | 375455.736   | 440852.290    | 116.392    |
| BWB04               | 375527.725   | 440790.522    | 117.429    |
| BWB05               | 375381.454   | 440825.349    | 113.006    |

|     |          |                             |     |     |
|-----|----------|-----------------------------|-----|-----|
| P1  | 21.08.25 | First Issue                 | BH  | PQ  |
| Rev | Date     | Details of issue / revision | Drw | Rev |

## Issues & Revisions



Client

## Richborough Estates Ltd

## Land at Pendle Road, Clitheroe

**Existing Site Plan**  
**Sheet 2 of 3**

|          |           |       |           |           |       |
|----------|-----------|-------|-----------|-----------|-------|
| Drawn:   | B Hepburn |       | Reviewed: | P Quelch  |       |
| BWB Ref: | 255496    | Date: | 21.08.25  | Scale@A0: | 1:500 |

### For Information

|                                                            |        |     |
|------------------------------------------------------------|--------|-----|
| Project - Originator - Zone - Level - Type - Role - Number | Status | Rev |
| 255496-BWB-02-ZZ-DR-G-0001                                 | S2     | P1  |

## **Appendix 2: Illustrative Development Framework Plan**



KEY

- SITE BOUNDARY
- SITE ACCESS VIA PENDLE ROAD
- RESIDENTIAL DEVELOPMENT
- PUBLIC OPEN SPACE
- PRIMARY STREET
- SECONDARY STREET
- TERTIARY STREET
- PRIVATE LANES
- ACTIVE TRAVEL ROUTES
- EXISTING PUBLIC RIGHTS OF WAY
- PEDESTRIAN ACCESS POINT TO WIDER MOVEMENT INFRASTRUCTURE
- EMERGENCY VEHICLE, PEDESTRIAN, AND CYCLIST ACCESS
- PLAY SPACES
- EXISTING VEGETATION
- TREE PLANTING
- SUSTAINABLE DRAINAGE
- EXISTING WATERCOURSE

KEY PRINCIPLES

- PRIMARY ACCESS POINT VIA PENDLE ROAD;
- PRIMARY MOVEMENT ROUTES;
- SECONDARY STREET;
- TERTIARY STREET;
- FOCAL SQUARES ALONG PRIMARY AND SECONDARY MOVEMENT ROUTES;
- ACTIVE TRAVEL ROUTES;
- MAXIMUM OUTWARD FACING DEVELOPMENT OVER NEWLY CREATED PUBLIC OPEN SPACE;
- RETAINED WATERCOURSE ROUTE;
- MAXIMUM RETENTION OF EXISTING VEGETATION;
- AREA OF PLAY;
- RETAINED CONTEXTUAL VIEWS THROUGH SITE;
- DEVELOPMENT SET BACK TO RETAIN VIEWS OF THE PENDLE HILL; AND
- SITE LOW POINTS UTILISED FOR SUSTAINABLE DRAINAGE SOLUTIONS.

PENDLE ROAD, CLITHEROE – ILLUSTRATIVE DEVELOPMENT FRAMEWORK PLAN



### **Appendix 3: Sewer Records**

ariya shademani

Waterfront House, Floor 5  
Station St, United Kingdom  
Nottingham, United Kingdom  
NG2 3DQ

FAO:

**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](mailto:propertysearches@uuplc.co.uk)**

**Your Ref: 255496**

**Our Ref: UUPS-ORD-684874**

**Date: 16/10/2025**

**Dear Sirs**

**Location: 1 NORTH GATE, CLITHEROE, BB7 1FS**

I acknowledge with thanks your request dated 15/10/2025 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

## TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

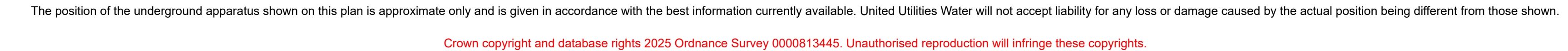
These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus)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

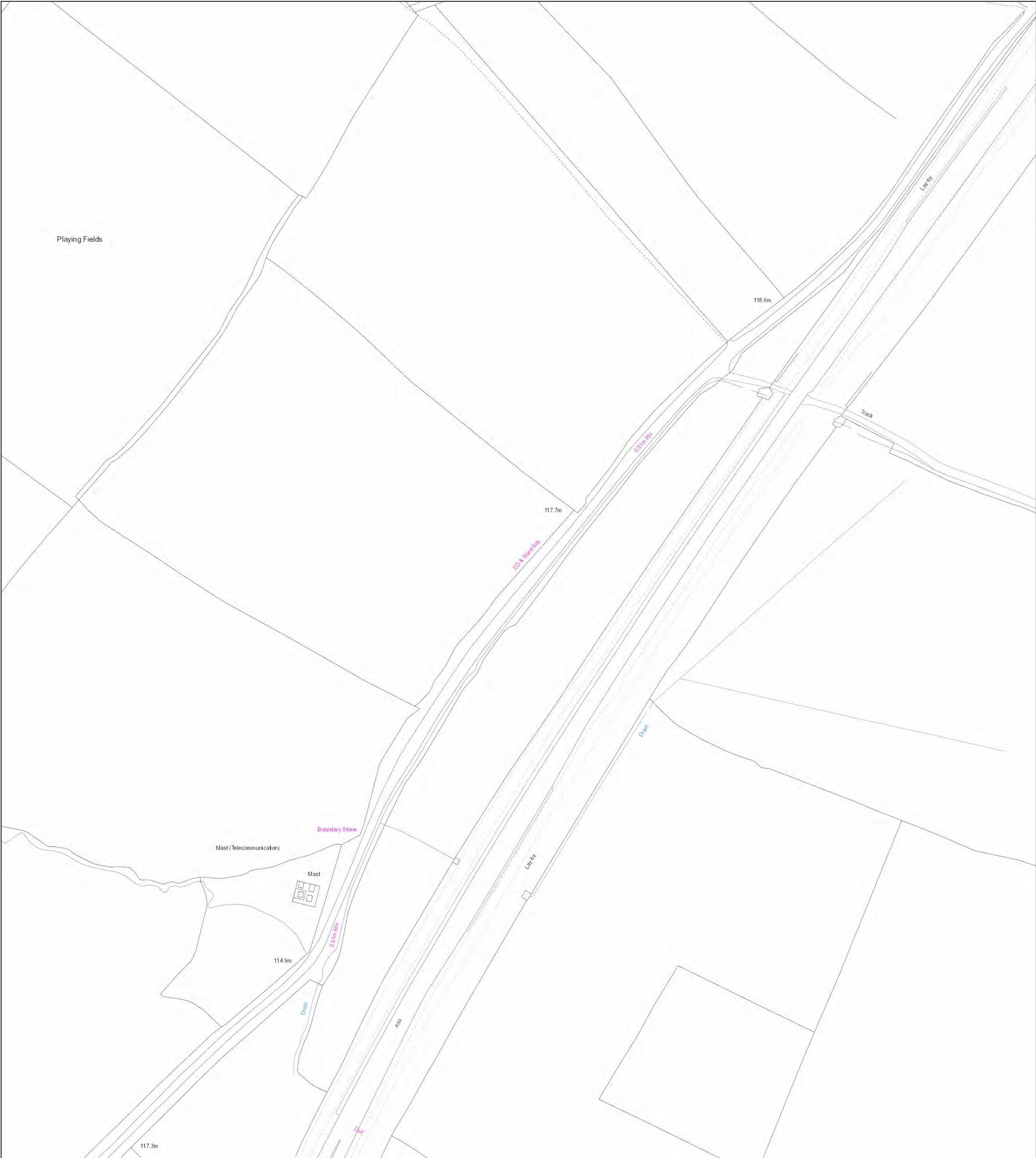






**SEWER  
RECORDS**

 **United  
Utilities**



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.

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| Refo | Cover | Func | Invert | Size x | Size y | Shape | Matl | Length | Grad |
|------|-------|------|--------|--------|--------|-------|------|--------|------|
|------|-------|------|--------|--------|--------|-------|------|--------|------|

| Refo | Cover | Func | Invert | Size x | Size y | Shape | Matl | Length | Grad |
|------|-------|------|--------|--------|--------|-------|------|--------|------|
|------|-------|------|--------|--------|--------|-------|------|--------|------|

LEGEND

|           |      |               |          |               |
|-----------|------|---------------|----------|---------------|
| Abandoned | Foul | Surface Water | Combined | Public Sewer  |
|           |      |               |          | Private Sewer |
|           |      |               |          | Section 104   |
|           |      |               |          | Rising Main   |
|           |      |               |          | Sludge Main   |
|           |      |               |          | Overflow      |
|           |      |               |          | Water Course  |
|           |      |               |          | Highway Drain |

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

- Manhole

Head of System

Extent of Survey

Rodding Eye

Inlet

Discharge Point

Vortex

Penstock

Washout Chamber

Valve

Air Valve

Non Return Valve

Soakaway

Gully

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Orifice Plate
- Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

Lamp Hole

T Junction / Saddle

Catchpit

Valve Chamber

Vent Column

Vortex Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

Ww Treatment Works

Ww Pumping Station

Septic Tank

Control Kiosk

DNM Network Monitoring Point

Change of Characteristic

MANHOLE FUNCTION

- FO Foul
- SW Surface Water
- CO Combined
- OV Overflow

SEWER SHAPE

- CI Circular
- TR Trapezoidal
- EG Egg
- AR Arch
- OV Oval
- BA Barrel
- FT Flat Top
- HO HorseShoe
- RE Rectangular
- UN Unspecified
- SQ Square

SEWER MATERIAL

- AC Asbestos Cement
- BR Brick
- PE Polyethylene
- RP Reinforced Plastic Matrix
- CO Concrete
- CSB Concrete Segment Bolted
- CSU Concrete Segment Unbolted
- CC Concrete Box Culvertted
- PSC Plastic / Steel Composite
- GRC Glass Reinforced Plastic
- DI Ductile Iron
- PVC Polyvinyl Chloride
- CI Cast Iron
- SI Spun Iron
- ST Steel
- VC Vitrified Clay
- PP Polypropylene
- PF Pitch Fibre
- MAC Masonry, Coursed
- MAR Masonry, Random
- U Unspecified

Address or Site Reference:

1 NORTH GATE,  
CLITHEROE,  
BB7 1FS

OS sheet Number: SD7541SE

Scale: 1:1250

Date: 16/10/2025

Nodes: 0

Sheet: 4 of 4

Printed by: Property Searches

