



Flood Risk Assessment

Scout Moor II Further Environmental Information

June 2026

P e l l F r i s c h m a n n

Scout Moor II Wind Farm

Flood Risk Assessment

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Prepared for

Cubico UK Development Limited

ARRIVE Blue building
10th Floor
Media City
Manchester
M50 2ST

Prepared by

Pell Frischmann

First Floor, South Wing
55 Baker Street
London
W1U 8EW



Pell Frischmann

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1 Introduction

1.1 Project Brief

- 1.1.1 This flood risk assessment (DS) has been prepared by Pell Frischmann on behalf of Cubico UK Development (Wind 1) Limited ('the Applicant' or 'Cubico'). It is submitted as part of Further Environmental Information in respect of the cross-boundary applications for full planning permission ('the Applications') relating to the construction and operation of a new onshore wind farm (to be known as 'Scout Moor II'), alongside a comprehensive moorland restoration scheme (the 'Proposed Development'), on land at Rooley Moor ('the Site').
- 1.1.2 The Site crosses the administrative boundaries of Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC') (collectively referred to as 'the Councils'). The Councils are the Local Planning Authorities ('LPA's') responsible for the determination of the Applications, which were originally submitted on 23 July 2025 and were validated by the Councils on 07 August 2025 (RBC ref. 2025/0267 and RMBC ref. 25/00680/FUL).
- 1.1.3 Following the completion of an extended period of statutory consultation on the Applications, the Applicant has evolved the Proposed Development to respond to comments received from statutory and non-statutory consultees, the public and other interested stakeholders and is hereby formally amending the Applications through the submission of Further Environmental Information ('FEI'). The FEI supersedes the information submitted in July 2025 ('the 2025 Submission') and will be subject to further statutory consultation by the Councils. A summary of the amendments to the Applications is set out in detail the Planning, Design and Access Statement (prepared by Turley), but in summary includes the reduction in turbine numbers from 'up to 17 turbines' to 'up to 12 turbines', alongside the relocation/repositioning of turbine positioning, access track layout and the layout and design of other associated infrastructure.
- 1.1.4 The purpose of this FRA is to review available information and assess the flood risk posed to the Site and the Proposed Development from a range of sources, now and in the future. The FRA has been carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG), in respect of flood risk and coastal change.
- 1.1.5 To complete the FRA, the following key stages of work have been undertaken:
- Collation of desk-based information and review of publicly available flood risk information including Environment Agency mapping and local data, policy, and guidance.
 - A desktop review of other data that has been made available such as topographical surveys, utility plans and Proposed Development layout drawings.
 - Consultation with relevant stakeholders, including The Environmental Agency (EA), United Utilities (UU) and the respective Lead Local Flooding Authorities (LLFA) for Rossendale (via Lancashire County Council) and Rochdale, to obtain further information on local risks and issues.
 - Provision of advice on appropriate flood risk mitigation measures for the Proposed Development.

1.2 Sources of Information

- 1.2.1 A review of relevant information and guidance from a range of sources has been undertaken and includes the following key documents;
- National Planning Policy Framework (NPPF), December 2024,
 - Planning Practice Guidance (PPG) – Flood Risk & Coastal Change, September 2025,
 - Environment Agency Flood Map for Planning and Risk of Flooding from Surface Water datasets from the DEFRA Spatial Data Catalogue
 - DEFRA MagicMap, 2024,
 - British Geological Survey Geology of Britain Viewer, 2024,

- British Geological Survey GeoIndex, 2024,
- Rossendale Borough Council, Strategic Flood Risk Assessment; prepared by JBA Consulting, 2016
- Bury, Rochdale and Oldham Strategic Flood Risk Assessment, prepared by JBA, December 2009.
- Rochdale Metropolitan Borough Council, Preliminary Flood Risk Assessment; prepared by JBA Consulting, 2011
- Rochdale Metropolitan Borough Council, Flood Risk Management Strategy 2014-2024; prepared by Rochdale Borough Council, March 2014
- Level 1 Strategic Flood Risk Assessment for Greater Manchester – Update, prepared by JBA Consulting, March 2019
- Level 2 Hybrid Strategic Flood Risk Assessment for Greater Manchester, prepared by JBA Consulting, October 2020

2 Background & Site Context

2.1 Site Location & Existing Use

- 2.1.1 The Site is located approximately 7.5 kilometres (km) north-west of Rochdale and approximately 5km to the south-east of Rawtenstall in moorland constituting part of the South Pennines. The location of the site is shown in **Figure 2-1**.



Figure 2-1 Site Location Plan

2.2 Proposed Development

- 2.2.1 The Proposed Development would include:

- Up to 12 wind turbines, each up to 180 metres (m) to tip;
- An onsite substation and underground electrical cabling infrastructure;
- A network of access tracks and track improvements;
- A temporary construction compound;
- Temporary laydown areas for materials and equipment;
- Two underground cable route options to connect the proposed substation to the national grid at the Rawtenstall Bulk Supply Point (BSP); and
- A comprehensive moorland restoration and management plan, comprising habitat enhancement and restoration works, as well as fencing.

- 2.2.2 A complete description of the Proposed Development is provided in the Environmental Statement (ES Volume I: Chapter 4), as well as the Planning, Design & Access Statement which are also submitted as part of the planning application and have been updated as part of the FEI submission.

2.3 Local Watercourses

- 2.3.1 A review of the OS OpenRivers dataset shows several named and unnamed watercourses within and around the Site. Naden Brook extends from Naden Higher Reservoir into the southwest of the Site, along with other unnamed watercourses. Cowm Brook extends from Cown Reservoir, along the western Site boundary, from which Fern Isle Brook enters the Site. Greens Clough watercourse, a tributary of the River Irwell, encroaches into the north of the Site.
- 2.3.2 Internal Drainage Board (IDB) mapping suggests that the Site and associated local watercourses are outside of any IDB catchment.



Figure 2-3 Local Watercourses



Figure 2-2 Local Watercourses, Western Site Boundary

- 2.3.3 Along the proposed grid connection routes, which are along sections of the public highway, road drainage is present in the form of gullies and sewers which will drain the surface water.

2.4 Topography

- 2.4.1 A review of the topographical survey, indicates that the Site generally falls from the peak of Hail Storm Hill towards the surrounding villages. Maximum elevations of approximately 477mAOD are found in the centre of the Site, falling to a minimum elevation of approximately 270mAOD in the south of the Site.
- 2.4.2 The Open Topo Map, shown in **Figure 2-4**, shows the elevations across the Site in the context of the wider environment.

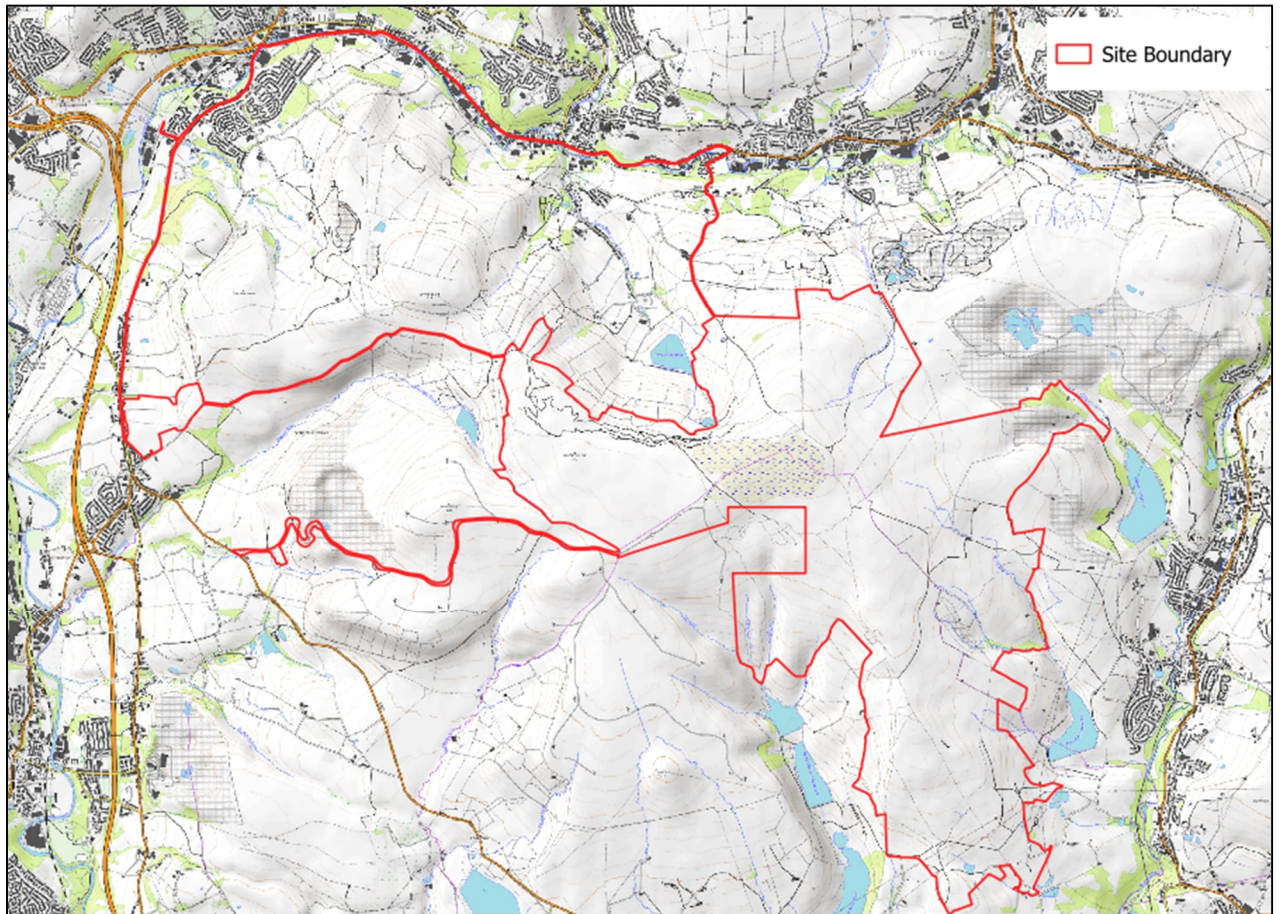


Figure 2-4 LiDAR Elevation Data

2.5 Geology

- 2.5.1 Geological Survey (BGS) mapping suggests the Site is underlain by a mixed superficial geology comprising primarily composed of Peat, across the north and west of the Site. There are limited areas identified as comprising Devensian Till, to the south, west and northeast, Head Deposits found to the east and to the west, and Glaciofluvial Deposits to the South at Turnshaw Hill. The remainder of the Site is shown to have no recorded superficial geology. An extract of the BGS superficial geology mapping is included as **Figure 2-5** and **Figure 2-6**.

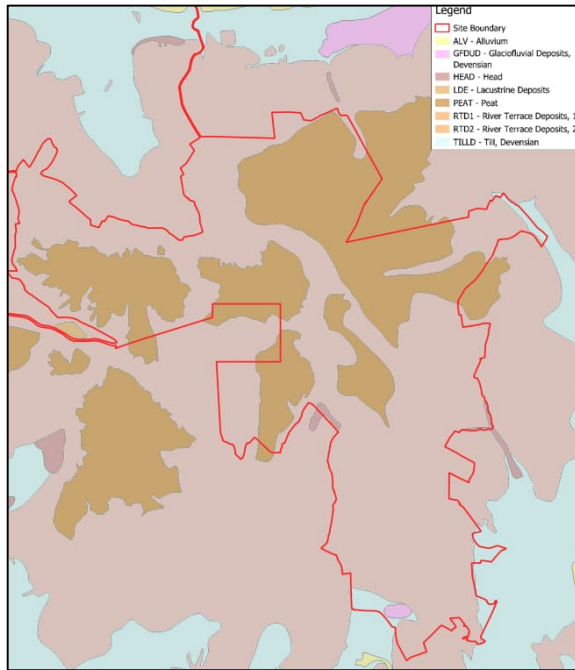


Figure 2-5 BGS Superficial Geology

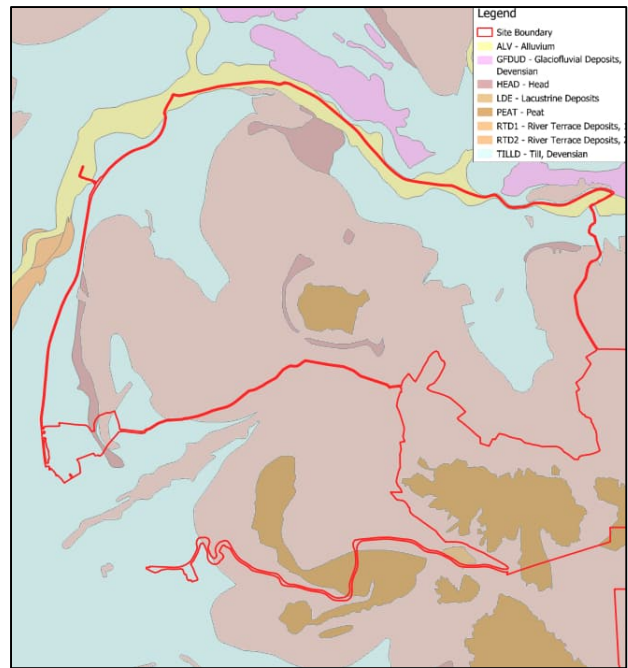


Figure 2-6 BGS Superficial Geology, Western Site Boundary

2.5.3 BGS mapping shows the northeast and south of the Site to be primarily underlain by a mixed bedrock geology comprising Great Arc Sandstone, Ganister Rock, Helpet Edge Rock, Pennine Lower Coal Measure Formation and Woodhead Hill Rock. The rest of the Site is underlain by Lower Haslingden Flags, Rossendale Formation, Rough Rock and Upper Haslingden Flags. The western extent of the Site is partially underlain by Marsden Formation. An extract of the BGS bedrock geology mapping is included as **Figure 2-8** and **Figure 2-7**.

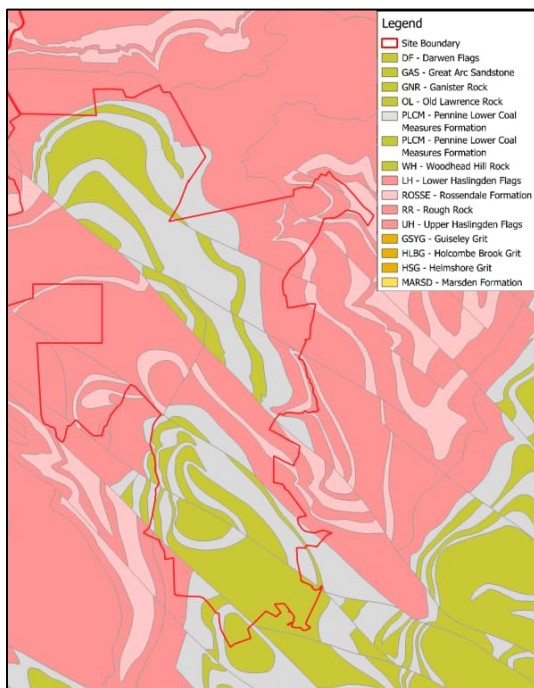


Figure 2-8 BGS Bedrock Geology

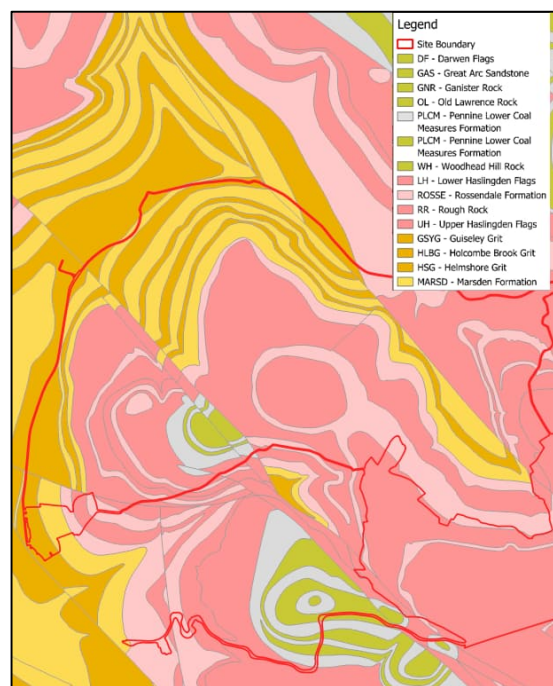


Figure 2-7 BGS Bedrock Geology, Western Site Boundary

- 2.5.4 Borehole records on BGS borehole GeoIndex shows the presence of two boreholes with the Site boundary. Pickershaw Slade (borehole reference SD81NE11), is situated within the south of the Site. Borehole records could not be obtained as they are listed as confidential. The Cowpe Moss borehole (borehole reference SD81NW36), is situated in the northeast of the Site, however no groundwater depth results were reported. Similarly, no groundwater depth results were reported for any of the boreholes within 4km of the Cowpe Moss Borehole.
- 2.5.5 Aquifer designations by DEFRA show the superficial drift classification to be Secondary Undifferentiated at the western extent of the Site. This is defined as when it is not possible to attribute a classification of Secondary A or B due to the rock type having variable characteristics, they contain only minor value. The Site is partially underlain by Secondary B in the southwest, adjacent to Rooley Moor Road. Secondary B is defined as predominantly lower permeability layers or drift deposits with lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as diffuse, thin permeable horizons, and weathering. Most of the Site is shown to be underlain by an Unproductive classification.
- 2.5.6 The bedrock strata has been wholly classified as Secondary A. This is defined as permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases forming an importance source of base flow to rivers.
- 2.5.7 The Site does not fall within a Source Protection Zone (SPZ), with the nearest Zone II – Outer Protection Zone found approximately 5km to the southeast of the Site.

3 Policy Context

3.1 National Planning Policy Framework & Planning Practice Guidance

- 3.1.1 The National Planning Policy Framework¹ (NPPF) was first published by the Ministry of Housing, Communities, and Local Government, with the most recent update being made in December 2024 by the Department for Levelling Up, Housing, and Communities.
- 3.1.2 The NPPF is the primary source of national planning guidance in England, setting out the Government's planning policies for England, and how they are expected to be applied by local council.
- 3.1.3 'Chapter 14: Meeting the challenge of climate change, flooding, and coastal change' outlines the guiding principles for managing flood risks as part of the planning process, notably paragraphs 170-182.
- 3.1.4 Annex 3 of the NPPF sets out the flood risk vulnerability classifications, whereby "wind turbines" are classified as "Essential Infrastructure".
- 3.1.5 The Flood Risk and Coastal Change Planning Practice Guidance² (PPG) sets out the vulnerability of different land uses to flooding. It encourages development to be in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider catchment and states that alternative sources of flooding, other than fluvial (river flooding), should be considered when preparing a Flood Risk Assessment. Table 2 of the PPG sets out a matrix of flood risk vulnerability and flood zone 'incompatibility'. This confirms that Essential Infrastructure in Flood Zone 1 does not require an exception test.
- 3.1.6 Therefore, this FRA has been completed in line with the guidance and requirements for the NPPF and associated PPG.

3.2 Local Planning Policy

- 3.2.1 As set out above, the Site spans the administrative boundaries of Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC'). On this basis, the adopted Development Plan for each authority is relevant to the assessment of the Proposed Development.
- 3.2.2 For Rossendale, the relevant Development Plan comprises the Rossendale Local Plan 2019 to 2036 (adopted December 2021) ('the Rossendale LP'). Rossendale LP Policies ENV9 (Surface Water Run-off, Flood Risk, Sustainable Drainage and Water Quality) and ENV1 (High Quality Development in the Borough) are the key policies of relevance to flood risk and drainage matters.
- 3.2.3 For Rochdale, the relevant Development Plan comprises the Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 ('PfE') (adopted 21 March 2024); Rochdale Core Strategy ('Rochdale CS') (adopted 19 October 2016); and Saved policies of the Rochdale Borough Unitary Development Plan ('Rochdale UDP') (adopted June 2006). The key policies of relevance to flood risk and drainage matters include PfE Policy JP-S4 (Flood Risk and the Water Environment); Rochdale CS Policy G6 (Enhancing Green Infrastructure); Rochdale CS Policy G8 (Managing Water Resources and Flood Risk) and Rochdale CS Policy DM1 (General Development Management Requirements).

3.3 Level 1 Strategic Flood Risk Assessment for Greater Manchester

- 3.3.1 The Strategic Flood Risk Assessment for Greater Manchester³ (SFRA) was published in March 2019. The SFRA provides a comprehensive spatial analysis of flood risks across the Greater Manchester area.

¹ UK Government (September 2025); *National Planning Practice Guidance*; prepared by UK Government.

² UK Government (August 2022); *Planning Practice Guidance*; prepared by UK Government

³ Level 1 Strategic Flood Risk Assessment for Greater Manchester (March 2019); prepared by JBA Consulting

Commissioned by the Association of Greater Manchester Authorities (AGMA) and completed in 2008, this assessment serves as a foundational tool for local planning authorities to manage flood risks effectively.

3.4 Greater Manchester Level 2 Hybrid Strategic Flood Risk Assessment

- 3.4.1 The Greater Manchester Level 2 Hybrid Strategic Flood Risk Assessment⁴ (SFRA) was published in October 2020 and builds upon the Level 1 SFRA by providing detailed flood risk analyses for specific development sites across the Greater Manchester area. Commissioned by the Greater Manchester Combined Authority (GMCA), this assessment aims to support sustainable development by identifying and mitigating flood risks from all sources.

3.5 Local Strategic Flood Risk Assessment (SFRA)

- 3.5.1 The Rossendale Borough Council Strategic Flood Risk Assessment⁵ (SFRA) was published in November 2016. The SFRA comprises two key components: Level 1 and Level 2 assessments. These documents are integral to the local planning process, ensuring that flood risks are adequately considered in development planning.
- 3.5.2 Together, the Level 1 and Level 2 SFRAs provide a comprehensive framework for managing flood risks in Rossendale, aligning with national planning policies and supporting sustainable development.

⁴ Greater Manchester Level 2 Hybrid Strategic Flood Risk Assessment (October 2020); prepared by JBA Consulting

⁵ Rossendale Strategic Flood Risk Assessment (SFRA) 2016; prepared JBA consulting

4 Assessment of Flood Risk

4.1 Desk-Based Information

- 4.1.1 The NPPF states that all potential sources of flood risk must be identified and appraised. Flooding can occur from a variety of sources individually, or in combination and can result from both natural and artificial processes.
- 4.1.2 **Table 4.1** provides an initial desk-based review of the level of flood risk from all sources, which are then assessed in further details where the risk is considered significant and merits further investigation.

Table 4.1 Desk-Based Assessment of Flood Risk

Sources of Flood Risk	Degree of Risk			Comments
	Significant	Moderate	Low	
Fluvial			X	The Site is wholly within Flood Zone 1.
Coastal & Tidal			X	The Site is removed from the extent of tidal flooding, now and in the future.
Groundwater			X	Low potential susceptibility to groundwater flooding across the area.
Surface Water		X		A significant flow path can be seen running through the Site.
Sewers			X	Limited extent of sewers in the immediate vicinity with low risk from sewers along roads.
Canals			X	None nearby.
Reservoirs & Waterbodies			X	Low risk posed.

4.2 Fluvial Flood Risk

- 4.2.1 The Environment Agency has produced a resource known as the Flood Map for Planning, which identifies areas at risk of flooding from Main Rivers and the sea. An extract of this mapping is included for reference as **Figure 4-1** and **Figure 4-2**.
- 4.2.2 The mapping shows the Site to be entirely within Flood Zone 1 (Low Probability), which is defined in the NPPF as land having less than 0.1% annual probability of river or sea flooding. The nearest extents of Flood Zones 2 and 3 (Medium and High Probability respectively), are found at Naden Higher Reservoir and Naden Middle Reservoir to the southwest of the Site. This Flood Zone extent does not encroach into the Site boundary.
- 4.2.3 As such, the Site is considered to be at low risk of flooding from fluvial sources and local watercourses.
- 4.2.4 It was noted during consultation with the Whitworth Flood Forum that they have experienced severe flooding on several occasions, and most notably during Boxing Day of 2015. This event was Storm Eva, which affected a large area of northern England with a month's worth of rain falling during the event. Due to its topographic location, Whitworth received a significant amount of surface runoff from the surrounding hills as they were saturated from preceding rainfall events. This flood event did not impact the Site, however it was noted to ensure the Proposed Development did not exacerbate any flood events. This is expanded upon in Section 5.3.

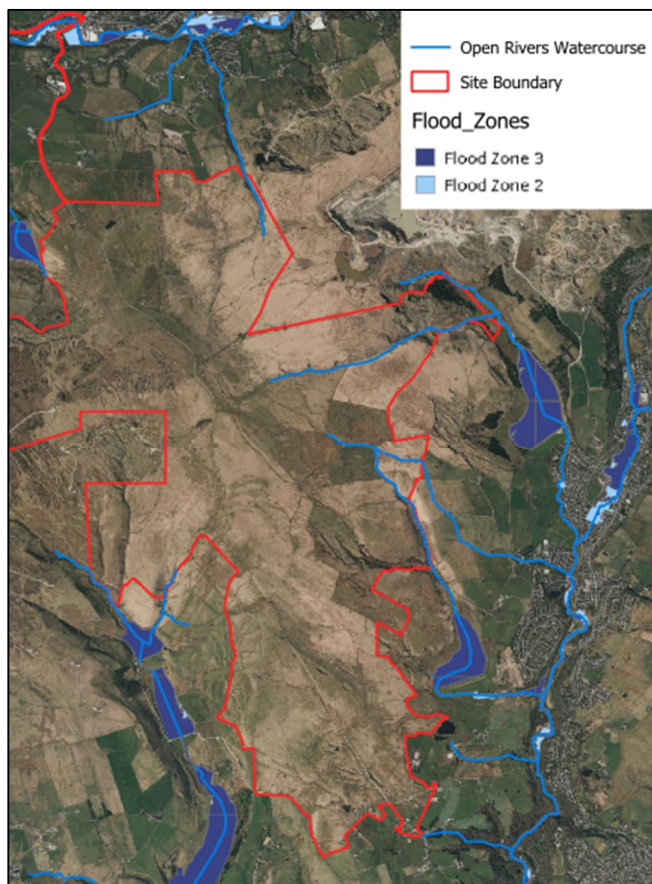


Figure 4-1 Flood Map for Planning

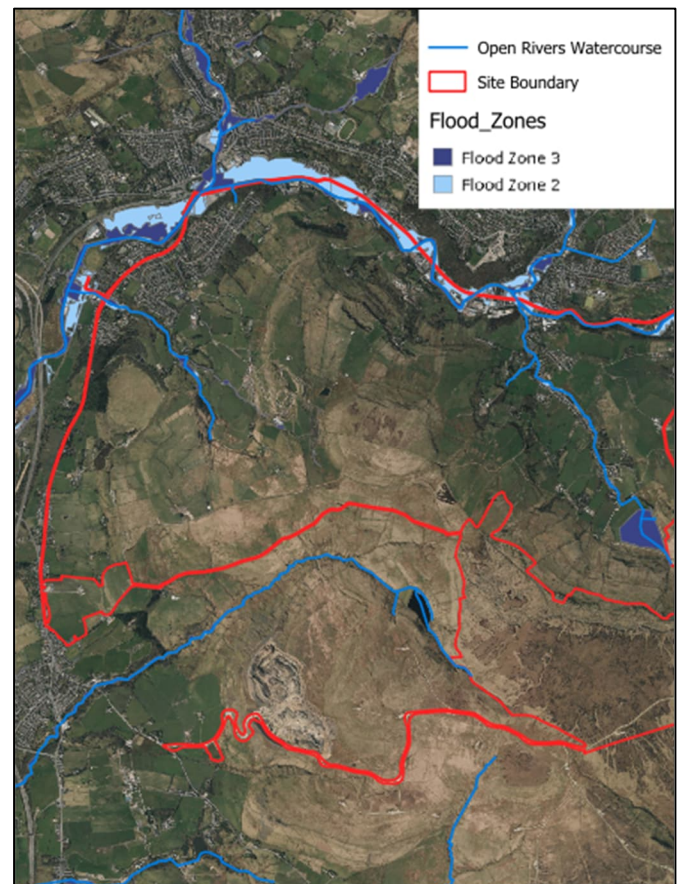


Figure 4-2 Flood Map for Planning, Western Site Boundary

4.3 Coastal & Tidal

- 4.3.1 The Site is located within Flood Zone 1 (Low Probability) and is sufficiently removed from the floodplain extent, which would include tidal influences.
- 4.3.2 Therefore, the risk of flooding from coastal or tidal related events is negligible.

4.4 Surface Water (Pluvial)

- 4.4.1 The risk of flooding from surface water has been mapped by the EA on a strategic scale to understand areas that may be susceptible to ponding or significant overland flow of surface water during periods of extreme rainfall. An extract of the latest mapping is included for reference as **Figure 4-3** and **Figure 4-4**
- 4.4.2 The mapping indicates the Site to generally be at a low risk of flooding from surface water. Despite this, surface water flow routes are identified through the centre of the Site, following the approximate route of the watercourses extending from Naden Brook Higher Reservoir, situated outside of the Site boundary to the southwest, and from Cwm Reservoir, situated to the west of the Site boundary. These flow paths have been considered within the drainage strategy (report ref: Scout Moor II Technical Appendix 14.10 – Drainage Strategy).
- 4.4.3 It should be noted, the mapping used by the EA to provide the risk of flooding from surface water does not take into account continual losses to the ground through infiltration. Whilst infiltration rates are likely to be low due to the underlying geologies. It is likely there would be some loss, resulting in a reduction of the flows through the centre of the Site.

- 4.4.4 Due to the above, the risk posed to the Site from surface water flooding is considered to be moderate and thus mitigation will be required.



Figure 4-3 Surface Water Flooding

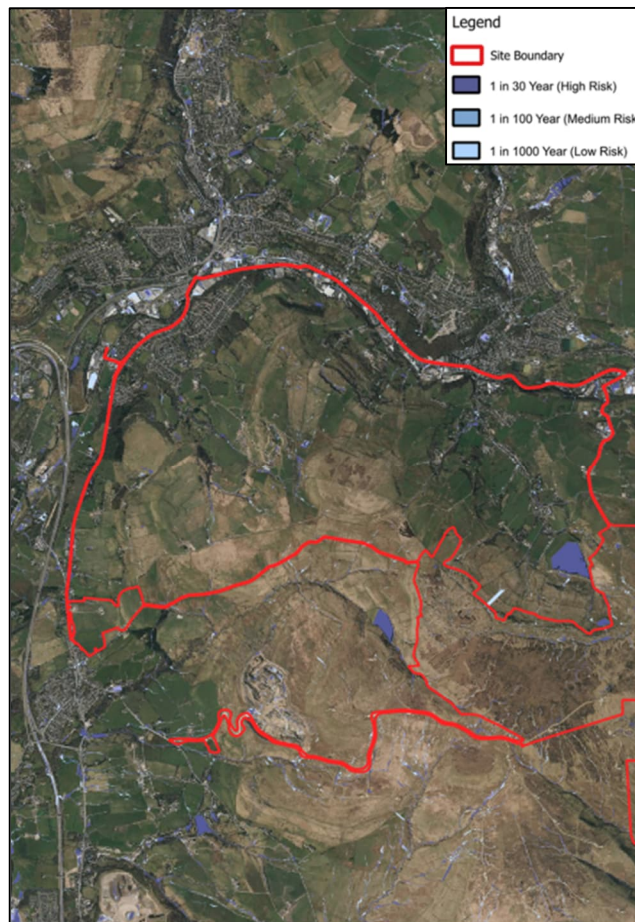


Figure 4-4 Surface Water Flooding, Western Site Boundary

- 4.4.5 The proposed scheme has been designed to avoid areas of surface water flood risk wherever possible. However, due to site constraints and the nature of the existing environment, some sections of the scheme remain within areas identified as being at risk. This was unavoidable despite efforts to minimise exposure to areas of surface water conveyance. The extent of the residual flood risk can be seen in **Figure 4-5**.
- 4.4.6 Where such areas could not be avoided, micro-siting will be employed to further reduce potential impacts. Details of mitigation measures are included in Section 5 and also within the drainage strategy report.



Figure 4-5 Surface Water Flooding with Scheme Overlay

4.5 Sewers

- 4.5.1 Flooding from sewers typically results from the network capacity being exceeded or blockage of key elements. Flooding usually occurs by way of surcharging manholes, gullies or other features that allow water from sewers to reach the surface, resulting in overland flows that can affect nearby properties.
- 4.5.2 Records do not show private sewer infrastructure or the existence of a private sewer network within the upland Site boundary. Along the grid connection routes, the public highway is served by a network of road gullies and sewers. It is assumed that the majority of these will be adopted as they are within the public highway, and as such with appropriate maintenance, it is considered that flood risk from these would be low.
- 4.5.3 Given the above, the Site is considered to be at low of flooding from sewers.

4.6 Canals

- 4.6.1 There are no canals present that pose a risk to the Site, as such the risk of flooding from this source is considered to be negligible.

4.7 Reservoirs

- 4.7.1 The EA has produced strategic scale mapping showing the potential risk of flooding from the failure of large waterbodies and reservoirs, if the relevant impounding structure were to fail.
- 4.7.2 This mapping confirms that despite the proximity of reservoirs to the south, southeast and northwest of the Site, the extent of the flooding will not encroach within the Site boundary.
- 4.7.3 Therefore, the risk of flooding from reservoirs or large waterbodies is considered to be low.

4.8 Impact of the Proposed Development

- 4.8.1 The Site is not within defined fluvial floodplains and is unlikely to detrimentally affect floodplain volumes or conveyance routes.
- 4.8.2 The introduction of an increased impermeable footprint on the Site would give rise to an increase in the rates and volumes of water being discharged if not managed appropriately. This could result in increases in flood risk downstream and would require suitable mitigation. The drainage strategy report covers the management of surface water flows.

5 Flood Risk Mitigation

5.1 Sequential Assessment

- 5.1.1 All types of development are considered acceptable uses within Flood Zone 1 (Low Probability) in line with the Sequential Test guidance included within the NPPF and PPG.
- 5.1.2 The Site is inherently sequentially preferable due to its location within Flood Zone 1 and concluded to be at low risk from other sources and therefore passes the requirements of the Sequential Test.
- 5.1.3 As noted previously some sections of the Proposed Development remain within areas identified as being at risk from surface water runoff or within identified overland flow pathways. In order to address this, micro-siting will be employed to further reduce potential impacts as much as possible, marginally altering the location of any infrastructure components on site to ensure minimal impact. However, this will not be possible for all locations, and infrastructure such as access tracks will cross existing conveyance routes.
- 5.1.4 Where new infrastructure or hardstanding is proposed on site, existing overland flow paths may be severed, preventing the surface water from its natural flow through the catchments. In order to maintain these flow paths, interception drains should be included on the upslope side of any hardstanding to capture the clean runoff and route it around to the downslope side. This can be by means of swale or drainage ditch, which is then piped to the downslope side and released in a controlled way, such as unlined filter drain or swale. This linear discharge is to ensure there is no increase in flood risk or erosion from a point discharge.
- 5.1.5 The details of these interception drains will be covered at the detailed design stage, which can be secured via planning condition.
- 5.1.6 The proposed laydown area along the access track to the site is situated in a location where existing drainage channels for the existing track route into the New Gate Brook. At this location it is proposed to intercept this drainage channel and any others adjacent to it and divert it around the new hardstanding area. This new channel would be a natural channel to replicate the existing and would route the flows to the same downstream location without increasing any flow rates or downstream flood risk. The runoff generated from the new laydown area hardstanding will be captured and attenuated separately as noted within the drainage strategy report.

5.2 Development Levels

- 5.2.1 There are no specific requirements for finished floor levels to address the low risk of fluvial flooding. However, it is recommended that appropriate design of external levels and their relation to building thresholds considers the residual risk from groundwater flooding and overland flows.
- 5.2.2 In particular, finished floor levels should be designed so there is a nominal threshold above surrounding ground levels, in accordance with the relevant building regulations and external levels should be designed so any surface flows shed away from buildings and towards positively drained areas.

5.3 Surface Water Drainage Strategy

- 5.3.1 A surface water drainage strategy has been prepared for the Proposed Development, and details are provided as part of the Drainage Strategy Report by Pell Frischmann (report ref: Scout Moor II Drainage Strategy 230509 Rev S03).
- 5.3.2 The surface water drainage strategy for the Proposed Development will ensure that there will be no increase in flows from the additional hardstanding and impermeable areas, and no increase in downstream flood risk. This will be achieved through the use of SuDS to treat and attenuate the surface water, prior to it being discharged at the equivalent greenfield runoff rates.

- 5.3.3 Existing sub-catchments for the watercourses in and around the Site have been assessed, and flows will continue to route to their existing sub-catchments to not alter hydrological conditions.
- 5.3.4 As noted previously, the Whitworth Flood Forum had stated that Whitworth had experienced severe flooding on several occasions, with a notable event during Storm Eva in 2015. Due to its topographic location, Whitworth received a significant amount of surface runoff from the surrounding hills as they were saturated from preceding rainfall events.
- 5.3.5 As development within the higher moorland areas can have an impact upon surface runoff in the lower catchment, the drainage strategy has been developed to ensure that there would be no increase in peak flows within any watercourses or channels routing from the Site, thus ensuring any future rainfall events would not be made worse by the Proposed Development.
- 5.3.6 It should also be noted that the sub-catchments that receive runoff from the Proposed Development drain into the River Spodden downstream of Whitworth and so there would be no impact upon flows through the town.

5.4 Moorland Restoration and Management Plan

- 5.4.1 The proposed moorland restoration works comprising part of the Proposed Development offer not only ecological and biodiversity benefits but also present a valuable opportunity to contribute to natural flood management within the wider catchment.
- 5.4.2 Degraded moorland, particularly areas of drained or eroded peat, typically exhibits reduced water retention capacity and more rapid surface runoff, which can exacerbate downstream flood risk during periods of heavy rainfall. In contrast, restored moorland and peatland habitats act as natural hydrological buffers. By re-wetting peatlands and restoring vegetation cover, the landscape regains its ability to hold and slowly release water over time.
- 5.4.3 Specifically, the restoration proposals are expected to:
- Increase the catchment's water storage capacity, reducing the volume and velocity of water entering watercourses during storm events.
 - Improve soil structure and vegetation cover, which enhances infiltration and reduces surface runoff.
 - Attenuate peak flows, helping to "flatten" the hydrograph and decrease the severity of flood events downstream.
 - Stabilise eroded areas, reducing sediment transport and improving water quality in nearby rivers and streams.
- 5.4.4 Although the primary objective of the restoration is ecological enhancement, these secondary benefits to flood risk resilience offer an important co-benefit of the project.

6 Conclusions & Recommendations

- 6.1.1 This Flood Risk Assessment has been written to support an application for full planning permission for the development known as Scout Moor II. The Proposed Development is considered “Essential Infrastructure” due to its land use (in accordance with Annex 3 of the NPPF) and is considered a suitable development within Flood Zone 1.
- 6.1.2 To summarise the findings of the FRA:
- The Site is wholly within Flood Zone 1 (Low Probability).
 - Local documentation and geology suggests the Site is at low risk of groundwater flooding.
 - The Site is considered to be at moderate risk of flooding from surface water, with a surface water flow route identified through the centre of the Site.
 - There are no identified public surface or foul sewers within the upland area of the Site. Drainage and sewers along the grid connection routes are considered to be low risk.
 - There are no canals nearby to the Site that would pose a risk of flooding, therefore the risk of flooding from the Site is negligible.
- 6.1.3 Recommendations are made in respect of appropriate consideration of finished floor levels and external level design to manage the residual risk of overland flows by conveying water away from infrastructure/buildings and towards positively drained areas.
- 6.1.4 Interception drainage is recommended to capture existing overland flows and route them around any components of the Proposed Development, to maintain existing conveyance routes within the catchments. This will ensure the Proposed Development is free from flood risk, while also ensuring no impact upon the hydrological conditions within each sub-catchment. Further details are included within the associated Drainage Strategy report.
- 6.1.5 In accordance with the requirements of the NPPF, this FRA has demonstrated that the Proposed Development could proceed without being subject to significant flood risk, and also complies with relevant local plan policies relating to flood risk.
- 6.1.6 Furthermore, the Proposed Development will not result in increased flood risk to third parties if there is suitable management of surface water runoff. Further details are included within the Drainage Strategy report and a detailed drainage scheme will be secured via planning condition.

