



# Flood Risk Assessment

Florence Arts Centre,

Egremont, Cumbria, CA22 2NR

December 2025



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# 1.0 Background

## 1.1 Brief

BDN Ltd. has been commissioned by Sue Mackay to undertake a Flood Risk Assessment (FRA) for the site which is to be developed to include a small extension, paved parking areas, play area, associated access improvements and landscaping works. This site-specific FRA has been completed to support the planning application.

A site location plan is shown in Figure 1.1; The site is located at Ordnance Survey Grid Ref: NY 01700 10300.

Developments have the potential to be at risk of a range of flooding mechanisms and increase the potential flood risk to the development and the surrounding area. As such flood risk is assessed with respect to risk to human life, damage to properties and the effect the development may have on surrounding watercourses, bodies of water and drainage systems. This Level 1 FRA has been prepared to examine the possible sources of flooding, within the context of the National Planning Policy Framework (NPPF) and Technical Guidance.

Consultation will be undertaken with the Environment Agency (EA), United Utilities (UU), and Copeland Borough Council (CBC) as part of the planning application. Data has also been gathered from several other sources including National Soil Research Institute (NSRI), local ground investigations, aerial photographs, Ordnance Survey (OS), evidence obtained from the EA online tools and anecdotal evidence.

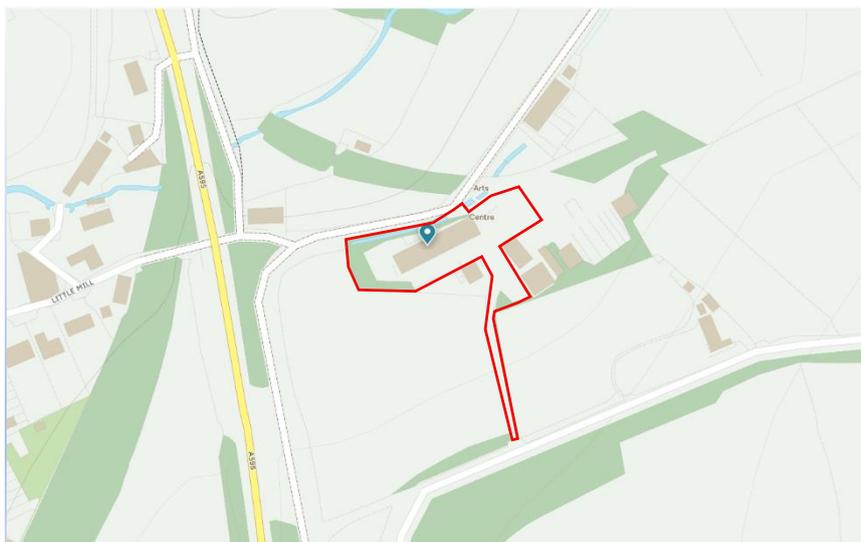


Figure 1.1 Ordnance Survey Map – Site Location

## 1.2 Report Scope

The objectives of this report are as follows: The Level 1 FRA is based on readily available existing information, including reference to Copeland Borough council Level 1 Strategic Flood Risk Assessment (SFRA) to confirm the extent of flood risk at the site. The report includes a review of site information and likely extent of any flood risk on the site; identification of any flooding or surface water management issues related to the development that may warrant further consideration; identification and scoping of other flood risks as required i.e., groundwater flooding; and determination of whether further assessment is required i.e., a Level 2 FRA.

An FRA should consider a range of flooding mechanisms to satisfy the following three key objectives:

- To assess flood risk to the proposed development and to demonstrate whether any residual risk to the development and its user would be acceptable.
- To assess the potential impact of the proposed development on flood risk elsewhere and to demonstrate that the development would not increase flood risk elsewhere; and
- To satisfy the requirements of national planning policy.

Flood risk should be considered alongside other spatial planning matters such as transport, housing, economic growth, natural resources, regeneration, biodiversity, the historic environment, and the management of other hazards. Policies should recognize the positive contribution that avoidance and management of flood risk can make to the development of sustainable communities, including improving local amenities and better overall quality of life.

An FRA should be carried out to an appropriate degree at all levels of the planning process. It should assess the risks of all forms of flooding to and from the development, considering climate change, and should inform the application of the sequential approach if applicable.

## 2.0 Relevant Policy, Legislation and Guidance

### 2.1 Potential Flood Mechanisms

The Level 1 FRA has been undertaken using the following legislation and guidance:

- National Planning Policy Framework
- Flood and Water Management Act
- Copeland Borough Council Level 1 Strategic Flood Risk Assessment
- Local Flood Risk Management Strategy for Cumbria County Council
- South West Lakes Catchment Flood Management Plan

### 2.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF), revised in December 2024, is a key part of the government's reform to make the planning system less complex and more accessible; to protect the environment and to promote sustainable growth.

In addition, the Technical Guidance to the NPPF published by the Department for Communities and Local Government has also been reviewed in relation to flood risk. This document provides additional guidance to ensure the effective implementation of the planning policy set out in the NPPF on development in areas at risk of flooding.

The NPPF aims to prevent inappropriate development in areas at risk of flooding and to ensure that, where development is necessary in areas at risk of flooding, it is safe without increasing flood risk elsewhere. Local Authorities should only consider development in flood risk areas appropriate were informed by a site-specific FRA, based upon the EA's Standing Advice on flood risk.

The NPPF requires that a site-specific 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 EA); and where proposed development or a change of use to a more vulnerable class may be subject to other sources of flooding. This means that the FRA should identify and assess the risks of all forms of flooding to and from the development and demonstrate how flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account.

Development should be directed as far as practicable towards Flood Zone 1 areas (Low Probability (< 0.1% Annual Exceedance Probability (AEP) of fluvial/ sea flooding)) to avoid fluvial flood risks wherever this is possible. For development proposed in Flood Zone 1, if the development area is greater than 1 hectare an FRA will still be required to address design issues related to the control of surface water runoff and climate change, as well as considering any other potential sources of flood risk for the development site.

### 2.3 The Flood and Water Management Act 2010

The Flood and Water Management Act 2010 determined the need for flood risk to be managed within the framework of National Strategies for England and Wales and within Local Strategies for each Local Flood Authority Area. The national strategy for England sets out the principles for flood risk management and which organisations are responsible for implementation.

In accordance with the national strategy for England, Lead Local Flood Authorities (LLFAs) have been allocated responsibility for developing independent Local Flood Risk Management Strategies (LFRMS's) to address sources of local flooding. Each LFRMS identifies which local organisation is accountable for

managing flood risk and establishes partnership agreements, as well as undertaking an assessment of flood risk and developing plans / actions, for tackling these risks.

## **2.4 Copeland Borough Council Level 1 Strategic Flood Risk Assessment**

The Level 1 Strategic Flood Risk Assessment (SFRA), August 2007, was undertaken to provide a robust assessment of the extent and nature of the risk of flooding and its implications for land use planning. The principal aim is to set out flood risk constraints to help inform the preparation of the Local Development Framework.

The SFRA is focused on collecting readily available flood risk information from a number of key stakeholders, the aim being to help identify the number and spatial distribution of flood risk sources present throughout Copeland Borough administrative area to inform the application of the Sequential Test and, where necessary, the requirement for the Exception Test.

## **2.5 Local Flood Risk Management Strategy for Cumbria County Council**

The flood and Water Management Act 2010 requires that every lead local flood authority develops and maintains a local flood risk management strategy. The purpose of this strategy is to guide the activities undertaken by Risk Management Authorities operating in Cumbria.

The Cumbria Council LFRMS develops as new evidence, expertise and resources influence the measures outlined in the strategy. The measures identified in the Cumbria County Council LFRMS provide a long-term programme of works and initiatives, such as planning controls, community engagement and improvement and maintenance work, which will be prioritised and programmed to deliver affordable reductions in local flood risk.

## **2.6 South West Lakes Catchment Flood Management Plan**

The Catchment Flood Management Plan (CFMP) is a plan produced by the EA to aid the understanding of the scale and extent of flooding now and in the future and set policies for managing flood risk within the catchment. The CFMP's aim is to promote more sustainable approaches to managing flood risk. The CFMP summarises the need to manage future flood risk with four main messages:

- Flood defences cannot be built to protect everything.
- Climate change will be the major cause of increased flood risk in the future.
- The floodplain is our most important asset in managing flood risk; and
- Development and urban regeneration provide a crucial opportunity to manage the risk.

## **3.0 Site and Surroundings**

### **3.1 Site Location and Description**

The site is an existing arts centre located off Little Mill in Egremont with an approximate area of 0.46ha. The site is on the east side of Egremont, east of the A595 Egremont Bypass and is surrounded by pasture.

A new one way system will be introduced for access. Access to the site will be provided from Little Mill to the south of the site with the existing access to the north changed to be an exit only.

### **3.2 Topography**

A detailed topographical survey has been undertaken for the development site; generally the site falls to the north and west. Levels in the east of the site are approximately 55.00mAOD and 53.00mAOD to the west and north. There is a retaining wall to the north of the site beyond which the unnamed beck is located approximately 3m below the levelled part of the site. The beck flows from the east from an approximate elevation 50.3mAOD at the access to approximately 48.8mAOD at the western extent of the site. Refer to Appendix A.

### **3.3 Hydrology**

The Ordnance Survey maps, and EA maps show that the River Ehen is located approximately 300m west of the site with a smaller watercourse, Black Beck approximately 105m north west of the site extents. The topographical survey shows an unnamed beck running along Little Mill at the northern extents of the site.

### **3.4 Drainage**

It is proposed that surface water from the access road to the south should drain to the adjacent field. Surface water from the car park area will be collected and discharged to the unnamed watercourse which runs along the northern extents of the site.

Existing foul drainage is collected by a septic tank. This is to be replaced by a foul water treatment plant which can then discharge to same unnamed watercourse north of the site boundary. The unnamed water course flows to the west and ultimately to the River Ehen.

As the impermeable area of the site is proposed to increase , the discharge rate will need to be limited to the greenfield runoff rate.

### **3.5 Water Mains**

The site is assumed to be served by a United Utilities supply system located within the surrounding highway.

### **3.6 Flood Defence**

The site does not benefit from any type of flood defence.

### **3.7 Reservoir**

There are no reservoirs within 1km of the site boundary.

### 3.8 Geology and Hydrology

A Phase 2 Geoenvironmental Appraisal (refer to Appendix B) has been completed by Spire Geotechnical for the site;

Made ground was recorded to depths of between 0.40m and 2.60m. The made ground generally included a granular fill consisting of a silty sandy gravel, gravel overlies a clay fill. The granular fill was generally observed as compacted, and included a range of anthropogenic deposits, including brick, ballast, sandstone etc. The made ground overlies firm and stiff clay deposits, and locally loose sand deposits, the latter of which was recorded in the south at the location of the track roadway. Whilst not encountered within the boreholes or trial pits, trapped/perched shallow groundwaters may be present, and appropriate pumps/dewatering equipment should be available to manage excess ingress into excavations/trenches.

## 4.0 Current Site Flood Classification

### 4.1 Flood Risk and Probability

The risk framework outlined in the SFRA defines the flood risk using the categories in Table 4.1a. The EA flood map defines the geographical extent of fluvial flooding for Flood Zones 1, 2, 3a and 3b.

Flood Zone	Definition	Probability
Flood Zone 1	At risk from flood event greater than the 1 in 1000-year event (greater than 0.1% annual probability).	Low Probability
Flood Zone 2	At risk from flood event between the 1 in 100 and 1 in 1000-year event (between 1% and 0.1% annual probability)	Medium Probability
Flood Zone 3a	At risk from a flood event less than or equal to the 1 in 100-year event.	High Probability
Flood Zone 3b	Land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood or otherwise defined by the Local Planning Authority. This zone also comprises land where water has to flow or be stored in times of a flood.	Functional Floodplain

**Table 4.1a** Fluvial Flood Zone Definition

Flooding is a natural process that can present a range of different risks depending on its form. Flood practitioners and professionals define the risks presented by flooding according to an Annual Exceedance Probability (AEP), or as having a 'return period'.

Flood Risk includes the statistical probability of an event occurring and the scale of the potential consequences. Flood risk is estimated from historical data and expressed in terms of the expected frequency of a flood of a given magnitude. The 10-year, 50 year and the 100-year floods have a 10%, 2%, and 1% chance of occurring in any given year, respectively. However, over a longer period the probability of flooding is considerably greater.

For example, for the 100-year return period flood:

- There is a 1% chance of the 100-year flood occurring or being exceeded in any single year.
- A 26% chance of it occurring or being exceeded in a 30-year period: and
- A 51% chance of it occurring or being exceeded in a 70-year period.

Table 4.1b below provides a summary of the relevant AEP and corresponding return period events of a particular severity.

AEP	Definition
100%	1 in 1 Year
10%	1 in 10 Years
2%	1 in 50 Years
1%	1 in 100 Years
0.5%	1 in 200 Years
0.1%	1 in 1000 Years

**Table 4.1b** Definition of AEP and Return Period Flood Events

## 4.2 Flood Risk Vulnerability and Flood Zone Compatibility

In terms of flood risk vulnerability, the proposed development is classified as “Less Vulnerable” in the NPPF and SFRA which includes buildings used for leisure.

The SFRA states that the suitability of all sites in flood risk terms will be subject to ratification by the EA, a detailed site-specific FRA being prepared to support any planning application and demonstration that surface water runoff from the development will pose no detrimental impact to off-site areas.

The proposed development of the site is Less Vulnerable development and as such is suitable for Flood Zones 1, and 2, and would require an exception test for 3a.

The area defined as Flood zone 3 is confined to the northern extent of the site, beyond the existing retaining wall. The remainder of the site is located within Flood Zone 1 so the proposed development will not be impacted by flooding. Due to the classification of the development and area to be developed no exception test is required. Refer to Appendix C for the EA flood map for planning.

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

**Table 4.2** Flood Zone Compatibility with Vulnerability Classification

## 4.3 Flood Assessment

Potential sources of flooding and associated mechanisms for review are as follows:

- Tidal Sources - Potential flooding resulting from tidal sources.
- River (Fluvial and Tidal) Sources - Potential flooding resulting from watercourses near to the site or from the sea.
- Groundwater Flooding- Potential flooding because of rising groundwater levels.
- Overland/Surface water (Pluvial) Flooding - Potential flooding because of surface water flows from adjacent land.
- Sewers and Drains - Potential flooding resulting from sewers or drains.
- Canals and Artificial Waterways - Potential flooding resulting from failure or overtopping canal networks.
- Reservoir/Lake Flooding - Potential flooding resulting from overtopping or bursting of reservoirs or lakes.
- Infrastructure - Potential flooding because of failed or burst water mains; and
- Climate Change – Potential rise in sea levels and estimated peak flows of watercourse.

## 4.4 Tidal Flooding

Coastal flooding occurs when sea levels rise above the normal tidal range. This can happen anywhere around the coast, including the estuaries. Tidal flooding is a result of one or a combination of high tides, storm or tidal surges, wave action and high sea levels combining with high river flows.

The site is located inland and does not lie within an area at risk of tidal flooding. Tidal flooding is therefore not a flood risk associated with this proposed development and requires no further consideration.

## 4.5 River (Fluvial) Flooding

The proposed site is considered as Less Vulnerable development and as such is suitable for development within Flood Zones 1, 2 and possibly 3a. The EA mapping service which is used to confirm the extent of a flood zone within the vicinity of a site shows that the area to be developed on the site will not be at risk of flooding, as shown in Figure 4.5a.

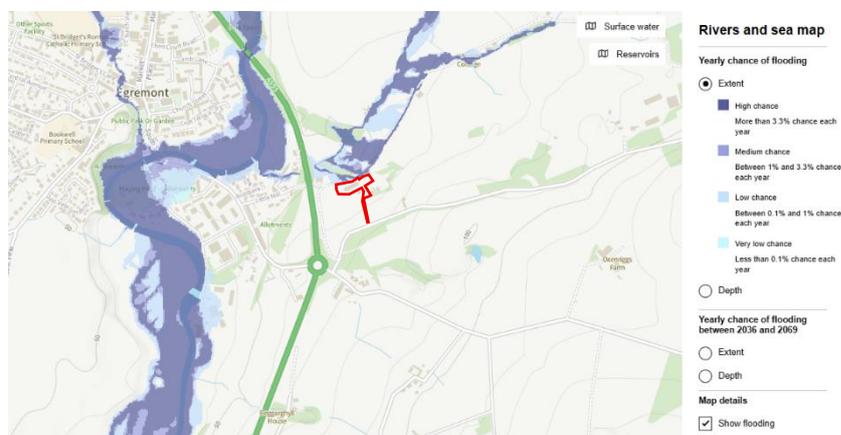


Figure 4.5a Environment Agency – Fluvial Flood Map (Present)

Fluvial flooding occurs when water courses receive an increased volume of surface water run-off. This can be exacerbated by new developments introducing increased areas of impermeable surfaces to the catchment and reducing the time of entry of flows to the water course.

A detailed review of EA modelling and site levels confirms that, with the proposed FFL and mitigation measures, the development can be made safe without increasing flood risk elsewhere.

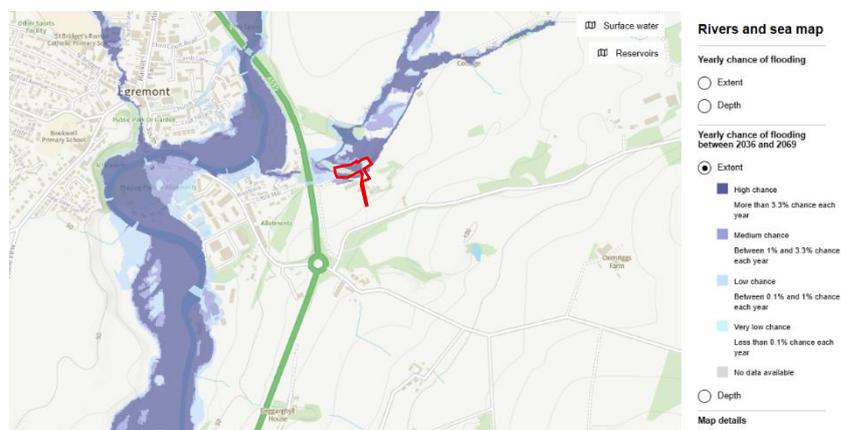


Figure 4.5b Environment Agency – Fluvial Flood Map (Future)

Figure 4.5b shows the yearly chance of fluvial flooding between 2036 and 2069. Future modelling indicates that the development will still have no chance of fluvial flooding. Therefore, it is considered that the existing FFL can remain without any additional works required.

Based on the guidance within the NPPF the site is suitably located with respect to fluvial flooding.

## 4.6 Groundwater Flooding

Groundwater flooding generally occurs during intense, long-duration rainfall events, when infiltration of rainwater into the ground raises the level of the water table until it exceeds ground levels. Groundwater flooding may take weeks or months to dissipate as groundwater flow is much slower than surface water flow and water levels thus take much longer to fall. Groundwater flooding is sporadic in time and location, but when it does occur, it usually lasts longer than surface water flooding and interferes with property and infrastructure (such as roads). Groundwater levels may also rise as a result of reactivating springs.

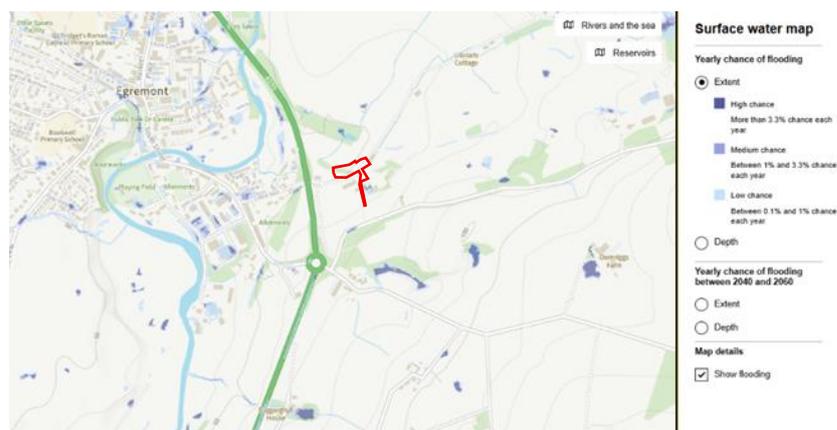
Based on the geological information available it is unlikely that the geological strata would be highly responsive to rainfall events and therefore the changes in groundwater level over time are unlikely to be significant resulting in groundwater flooding issues.

The information available suggests that the site is not at risk from groundwater flooding.

## 4.7 Overland/Surface Water (Pluvial) Flooding

Pluvial and overland flow results from rainfall that fails to infiltrate the surface and travels over the ground surface. This is exacerbated by low permeable urban development or low permeability soils and geology (such as clayey soils). Overland flow is likely to occur at the base of an escarpment and low points in terrain. Local topography and built form can have a strong influence on the direction and depth of flow. The design of development down to a micro-level can influence or exacerbate this. Overland flow paths should be considered in spatial planning for urban developments. In addition, surface water flooding can be exacerbated if development increases the percentage of impervious area.

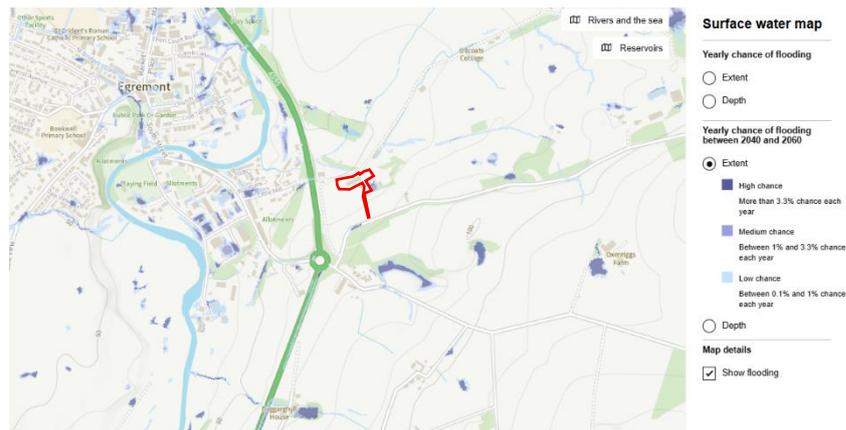
The EA flood map as shown in Figure 4.7a has identified that there is a very low risk (<0.1% annually) of surface water flooding on the site.



**Figure 4.7a** Environment Agency Pluvial Flood Map (Present)

Further mapping of future pluvial flood risk (Figure 4.7b) indicates an increase in annual flood probability across the greater site between 2040 and 2060. When analysing the future flooding

predictions, it can be found that while the area around the site has an increased chance of flooding the site remains with a very low chance (< 0.1% annually) of flooding.



**Figure 4.7b** Environment Agency Pluvial Flood Map (Future)

There will be no change to the flood risk of the surrounding areas and flow routes from the proposed development as surface water will be managed on site. By managing surface water runoff, the risk of flooding elsewhere has not been increased, and the performance of the flood route has been maintained.

The location of the proposed access to the site will not affect the existing overland flow path. On this basis, the proposals for the development will not increase the risk of flooding in the area.

With the surface water management of the site in line with the above principles no further consideration of this flooding mechanism is required.

## 4.8 Sewer Flooding

Flooding can occur when the sewerage infrastructure becomes overwhelmed by heavy rainfall (due to inadequate capacity) or blockages in drain systems (such as silt or debris accumulation). Works above or adjacent to existing sewer networks may also damage buried pipeline to the extent that it leads to flooding through damage during excavations or through damage causing blockages below ground.

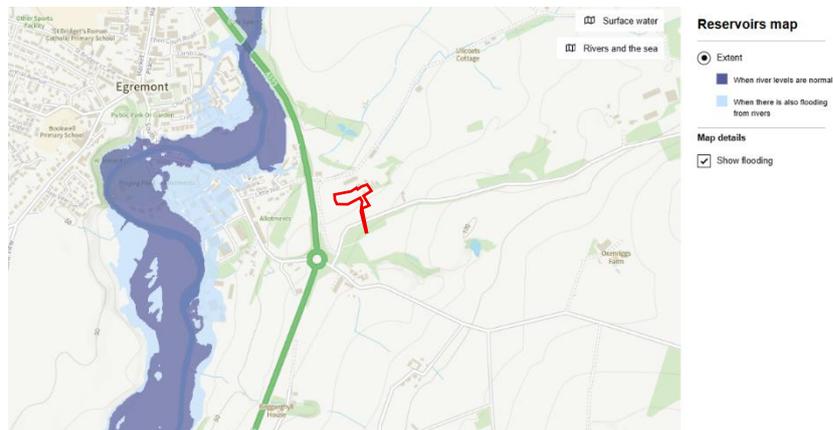
There are not understood to be any flooding incidents caused by incapacity within the sewerage network affecting the site and as a new foul water treatment plant is proposed to discharge to the unnamed watercourse north of the site, no further consideration of this flooding type is required.

## 4.9 Canals and Artificial Waterways

There are no canals or artificial waterways within 1km of the site. As such flood risk is considered low as such no further consideration of this flooding type is required.

## 4.10 Reservoirs and Lakes

When reservoirs and lakes flood, there can be implications beyond the immediate area of the water body. The EA flood map shown in Figure 4.10, shows that in the very unlikely event of a failure of a body of water upstream, the site would still not be at risk of flooding.



**Figure 4.10** Environment Agency Reservoir Flood Map

## 4.11 Water Mains

Based on the site topography and assumed water main locations, the risk to the development is considered low and as such no further consideration of this flooding type is required.

## 4.12 Climate Change

UK Climate Projections is a climate analysis tool that forms part of the Met Office Hadley Centre Climate Programme. The UKCP18 project uses cutting-edge climate science to provide updated observations and climate change projections out to 2100 in the UK and globally.

Climate change will be the major cause of increased flood risk in the future. The CFMP suggests that for climate change the EA tested the following changes up to 2125:

- In the Flood Risk and Coastal Change section of the planning guidance, it is understood that to adequately take climate change into account for the site, it should be within the upper end allowance category for Table 1 peak river flow allowances by river basin district (use 1981 to 2000 baseline). As such a 61% allowance for climate change should be allowed.
- A total sea level rise of 1430 mm by the year 2125. This will increase the probability of tidal flooding and increase the length of time that watercourses will not be able to flow freely to the sea at high tide (tide-locked).
- Climate change was shown to have a significant impact on flood risk.

The Analysis of UK Climate Projections 2022 (UKCP18) found that:

- For the most recent decade (2009-2018), winters have been on average 5% wetter than 1981-2010 and 12% wetter than 1961-1990. Summers in the UK have also been wetter, by 11% and 13%, respectively. However, very long-period natural variations are also seen in the longer observational record. These show periods in earlier parts of the historical record with similar levels of UK summer rainfall to 2009-2018, illustrating the importance of considering long-period natural variations.
- Total rainfall from extremely wet days (days exceeding the 99th percentile of the 1961-1990 rainfall) increased by around 17% in the decade (2008-2017)<sup>3</sup>, for the UK overall. However, changes are largest for Scotland and not significant for most of southern and eastern England.
- Mean sea level around the UK has risen by about 17 cm since the start of the 20th century (when corrected for land movement).

Climate change allowances are predictions of anticipated change for:

- peak river flow
- peak rainfall intensity
- sea level rise
- offshore wind speed and extreme wave height

To increase resilience to flooding and coastal change, allowances should be made for climate change in the flood risk assessment.

There are allowances for different climate scenarios over different epochs, or periods of time, over the coming century. They include figures for extreme climate change scenarios.

Rainfall patterns across the UK are not uniform and vary on seasonal and regional scales and will continue to vary in the future.

It has been predicted that the UK's coastal flood risk will increase under all the emission scenarios used in UKCP18, because of mean sea level rise. This will result in an increase in the frequency and magnitude of extreme water levels around the UK coastline. This increase in coastal flood risk combined with an increase in precipitation in winter is likely to result in more frequent flooding in various parts of the UK.

The impact of climate change will increase the risk of flooding from several of the mechanisms considered, therefore it is recommended that the resident of the property sign up to the EA flood 19 warning service and consider appropriate protection measures.

Technical Guidance to the NPPF and the PPG include for an increase in the peak rainfall intensity of up to 45%, as well as increase in peak flows in watercourses of up to 61% within 100 years. This will significantly affect smaller urban catchments, leading to rapid runoff into and subsequent increased flows within watercourses, surface water flooding, surcharging of gullies, drains and sewer flooding. CFMPs have also considered flood risk for the next 50-100 years and have considered the flood risk drivers of climate change, urban development, and changes in land use.

Catchment models and the Modelling and Decision Support Framework (MDSF) software were used in the CFMP to test sensitivity to the flood risk drivers across the catchments in the study area.

The location of future urban developments and flood defences within a catchment can heavily influence flood risk in the area and has the potential to further increase flood risk at areas downstream of such developments. Impacts include the lowering of the SoP offered by flood defences and the carrying capacity of culverts, drains, sewers, and watercourse channels. This potentially leads to areas being at risk of flooding that were previously not at risk and highlights the increasing conflicts and pressures that are emerging between climate change scenarios and future development aspirations.

The NPPF sets out important objectives to tackle climate change, sea level rise and avoid flood risk. The purpose of design policies should be to ensure that developments are sustainable, durable, and adaptable to natural hazards such as flooding. Following this guidance, it should be possible to mitigate against increased flood risk through incorporating 'flood proofing' measures such as raised finished floor levels into the development design, and/or development of compensatory storage and flood storage basins. The Adaptation Strategies for Climate Change in the Urban Environment (ASCCUE) project is a study undertaken collaboratively by the University of Manchester, The University of Cardiff, University of Southampton, and Oxford Brookes University. One of the aspects examined was surface

water runoff during extreme rainfall events. With an increase in development, there comes an increase in the number of impermeable areas thus leading to increased runoff during storm events

## 5.0 Conclusion and Recommendations

### 5.1 Conclusions

This Level 1 FRA concludes that:

- Tidal Flooding – The Environment Agency mapping shows that the site is not at risk of flooding therefore no further assessment is required with respect to tidal flooding
- River Flooding (Fluvial) – The Environment Agency mapping shows that the area of the watercourse immediately north of the site is in Flood Zone 3 but the area of the site to be developed (Less Vulnerable) is located within Flood Zone 1. The existing FFL will remain which will ensure the development is safe for its lifetime and does not increase flood risk elsewhere.
- Groundwater Flooding - there is a low risk of groundwater flooding occurring at the site; therefore, no further assessment is required with respect to groundwater flooding.
- Surface Water (Overland) Flooding - the Environment Agency mapping shows that area of the development on the site is at no risk of surface water flooding. The proposed development will not change the surface water flow regime for the site.
- Sewer Flooding - There are no known previous flooding incidents from the sewers located surrounding the site and as such there is low risk of sewer flooding affecting the site.
- Canals and Artificial Waterways Flooding – the location of canals and artificial waterways are sufficiently far from the site and therefore unlikely to result in flood risk and as such will not require further assessment.
- Reservoirs and Lakes – The Environment Agency mapping shows that the site is not at risk of flooding and as such no further consideration is required for this type of flooding.
- Water Mains – The assumed location of existing potable water infrastructure around the development suggests that any flooding would be directed away from the site and does not require further assessment.
- Climate Change - the potential impacts of climate change will increase the risk of flooding but with proposed measures implemented as outlined above this requires no further consideration.

### 5.2 Recommendations

The Level 1 FRA shows that the site of the proposed development is not at risk of flooding.

A review of the available flood risk data shows that the proposed development can be considered safe for its lifetime and compliant with the NPPF, SFRA and EA flood risk guidance.

The proposed development should be considered suitably located based on the land use and flood zone classification.

# Appendix A – Topographical Survey

Revision Notes:

Survey Note:

Survey on planar grid, referenced to OSGB36 at the following point:  
 301683.13mE  
 510278.30mN  
 Heights are relative to Ordnance Datum Newlyn, using Geoid Model OSGM15.  
 Contours @ 0.5m intervals.

Survey Key:

- |  |                                 |
|--|---------------------------------|
|  | Cover                           |
|  | Man Hole                        |
|  | Fire Hydrant                    |
|  | WS Water Supply                 |
|  | LP Lamp Post                    |
|  | EP Electricity Pole             |
|  | TP Telegraph Pole               |
|  | Anchor Point                    |
|  | Bench Mark                      |
|  | Bore Hole                       |
|  | AV Air Valve                    |
|  | FP Fire Point                   |
|  | SV Stop Valve                   |
|  | CATV Cable TV                   |
|  | TBGH Top of Bottom Gate Hanging |

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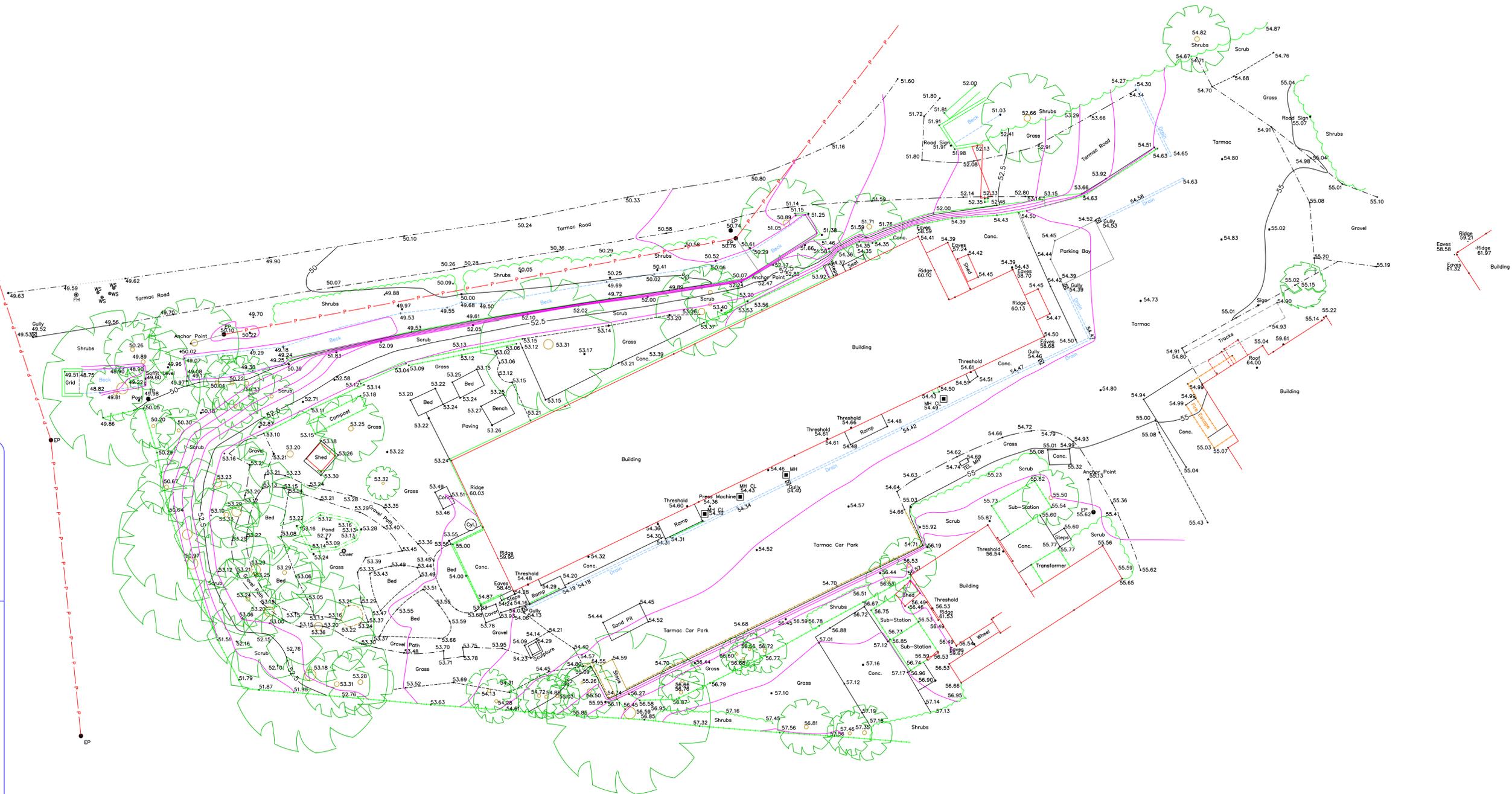
Client: BDN LTD

Project: Florence Arts Centre, Egremont

Site Survey: November 2024

Scale: 1:200 @ A1

Crew: AC, SN Chk: HT Ref: PGR



# Appendix B – Environment Agency Flood Map for Planning

# Flood map for planning

Your reference  
**S4726**

Location (easting/northing)  
**301706/510290**

Created  
**8 December 2025 14:50**

**Your selected location is in flood zone 3, an area with a high probability of flooding.**

## This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see <https://www.gov.uk/guidance/flood-risk-assessment-standing-advice>)

## Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>

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### Flood map for planning

Your reference  
**S4726**

Location (easting/northing)  
**301706/510290**

Scale  
**1:2,500**

Created  
**8 Dec 2025 14:50**

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

