FLOOD RISK & DRAINAGE STATEMENT

Smithfield Road,
Egremont

Reference: 15148/FRA.1

Date: March 2016

Version: 2

6a Union Quay
North Shields
Tyne and Wear
NE30 1HJ

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Figures and Appendices

CONFIDENTIALITY STATEMENT

This report is addressed to and may be relied upon by the following:

Wayne Dunn

CDL Architecture Design

This report has been prepared for the sole use and reliance of the above named parties. This report shall not be relied upon or transferred to any other parties without the express written authorisation of RWO Associates Limited. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party.

DOCUMENT HISTORY

VERSION	PURPOSE/DESCRIPTION	DATE
1	Draft – for client comment	23.03.2016
2	EA Flood zone and surface water flood maps updated.	05.06.2025

1.0 EXECUTIVE SUMMARY

This assessment has looked at the implications of the proposed development in relation to flood risk and surface water management.

The proposed development is at a low risk of flooding from watercourse based upon the available information. A minimum FFL has been recommended at 51.00m AOD to ensure this risk is minimum.

Other sources of flooding have been reviewed and identified as being as a low risk.

It is proposed to discharge surface water to the Skirting Beck at a restricted rate of 5l/s, subject to relevant approvals.

Any potential impact of the development can be adequately addressed by good drainage design.

2.0 INTRODUCTION

RWO Associates Ltd (RWO) has been instructed by our client to prepare a Flood Risk Assessment to support a planning application for a proposed new development at Smithfield Road, Egremont.

This report is a site specific Flood Risk Assessment to review the flood risk associated with the proposed development site.

The site is currently Greenfield in nature location plans are included in Appendix A.

3.0 THE SITE

The centre of the site is located at OS Grid reference 300437, 511145. The site is Greenfield in nature and is currently open grassland.

Figure 1 – Site Location (Red line indicates approximate extents)

The area of proposed development will consist of two new residential dwellings and associated infrastructure. To the North and East is a caravan park, to the South Smithfield Road and to the West is Skirting Beck. The proposed development site has an area of circa 0.148Ha.

4.0 PROPOSED DEVELOPMENT

The area of proposed development will consist of a new residential dwellings including access road, parking and associated infrastructure.

A proposed site layout is included in Appendix B and a topographical survey is included in Appendix C.

5.0 FLOOD RISK

Watercourse

The Skirting Beck is located on the Western extent of the proposed development site. The Environment Agency watercourse flood map has been reviewed, figure 1 below and shows that the proposed development site is located in Flood Zone 1, with a low probability of flooding. Utilising table 2 of the planning practice guidance the proposed development is classified as 'more vulnerable' as it is residential dwellings. Based on Table 3 of the planning practice guidance the proposed development is permitted for the for flood zones 1.

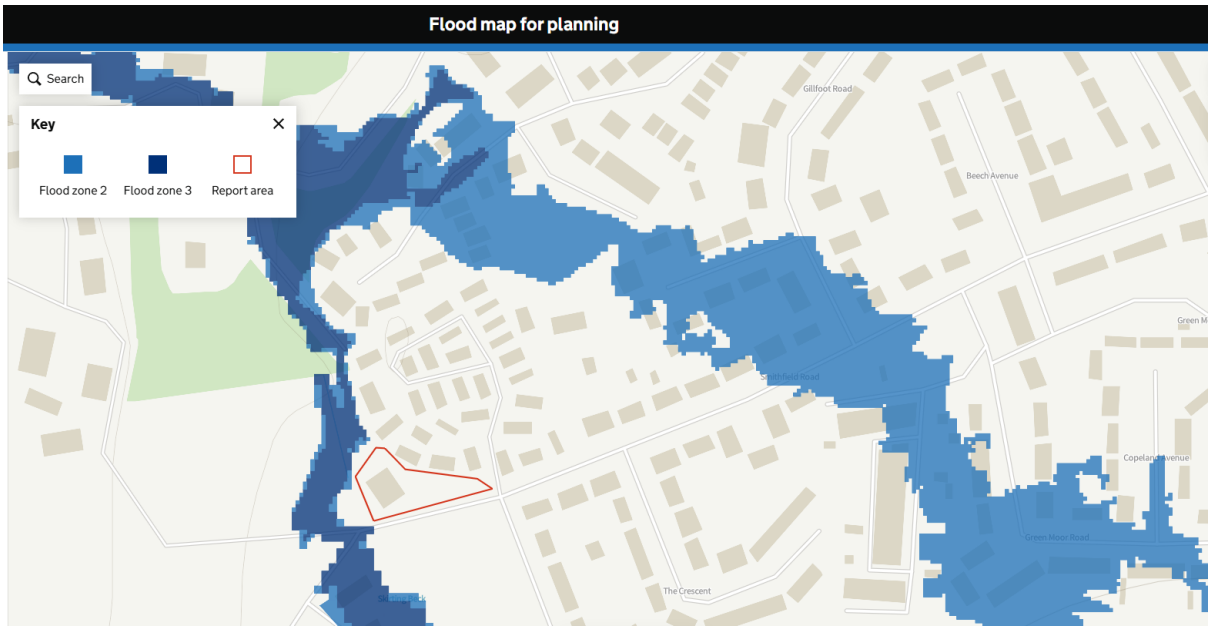


Figure 1 – Environment Agency online Flood maps for Planning (05.06.2025)

Based upon this the risk of flooding from watercourse can be defined as a low risk. It is recommended that FFL (Finished Floor Levels) are set in accordance with areas within Flood Zone 1 which would give a minimum FFL of 51.00m AOD based on comparison between the flood map and topographical survey.

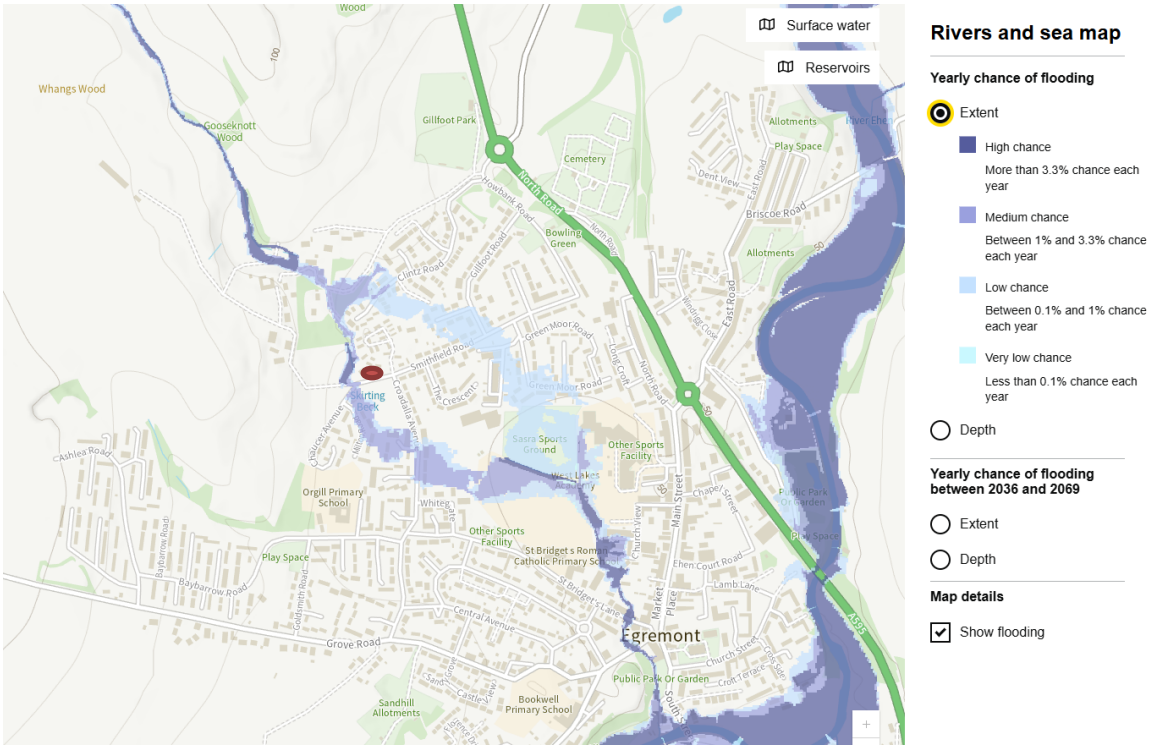


Figure 2 – Environment Agency online Rivers and Sea Map (05.06.2025)

Surface Water Flooding

The surface water flood maps have been reviewed to assess the risk of flooding from surface water in relationship to the proposed development site.

The watercourse on the Western boundary, the Skirting Beck has a low risk associated with this for pluvial flooding. Whilst to the North-West of the proposed development site there is a risk of surface water flooding, there is no risk associated with the development site itself.

Based upon the available information the site is at a low risk of surface water flooding.

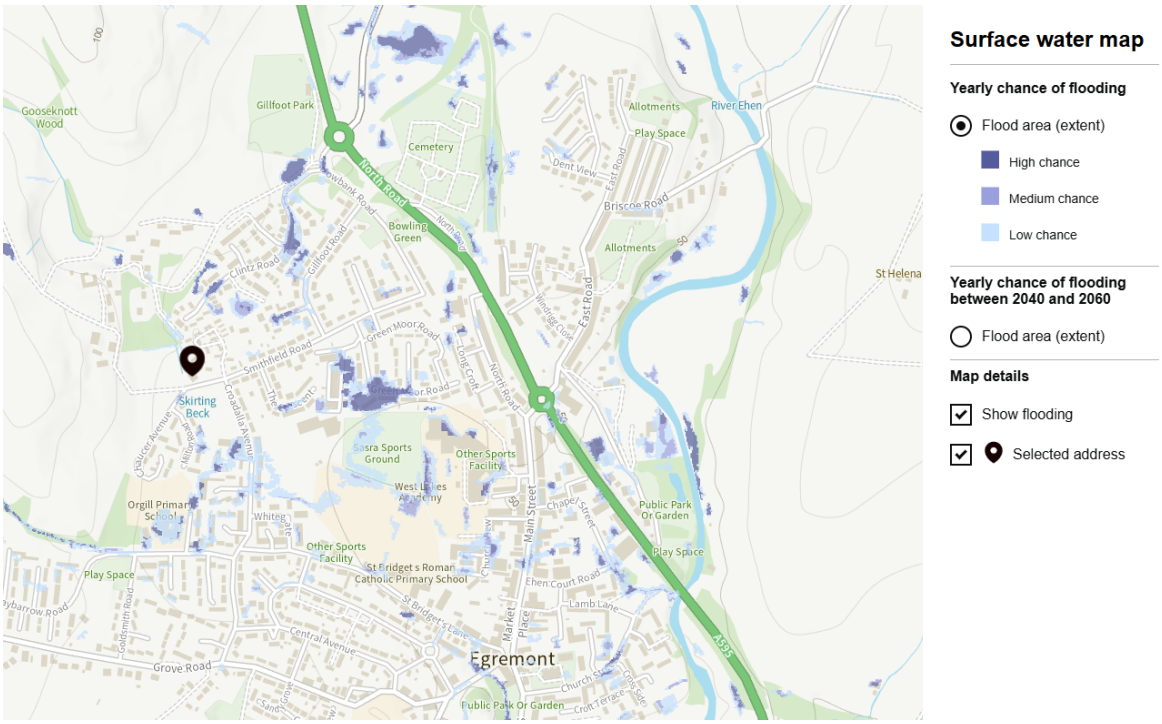


Figure 3 – Environment Agency online surface water flood maps (05.06.2025)

Ground Water Flooding

The BGS ground water flood maps have been reviewed to assess the risk of flooding from surface water in relationship to the proposed development site. They identify the site as having limited potential for groundwater flooding.

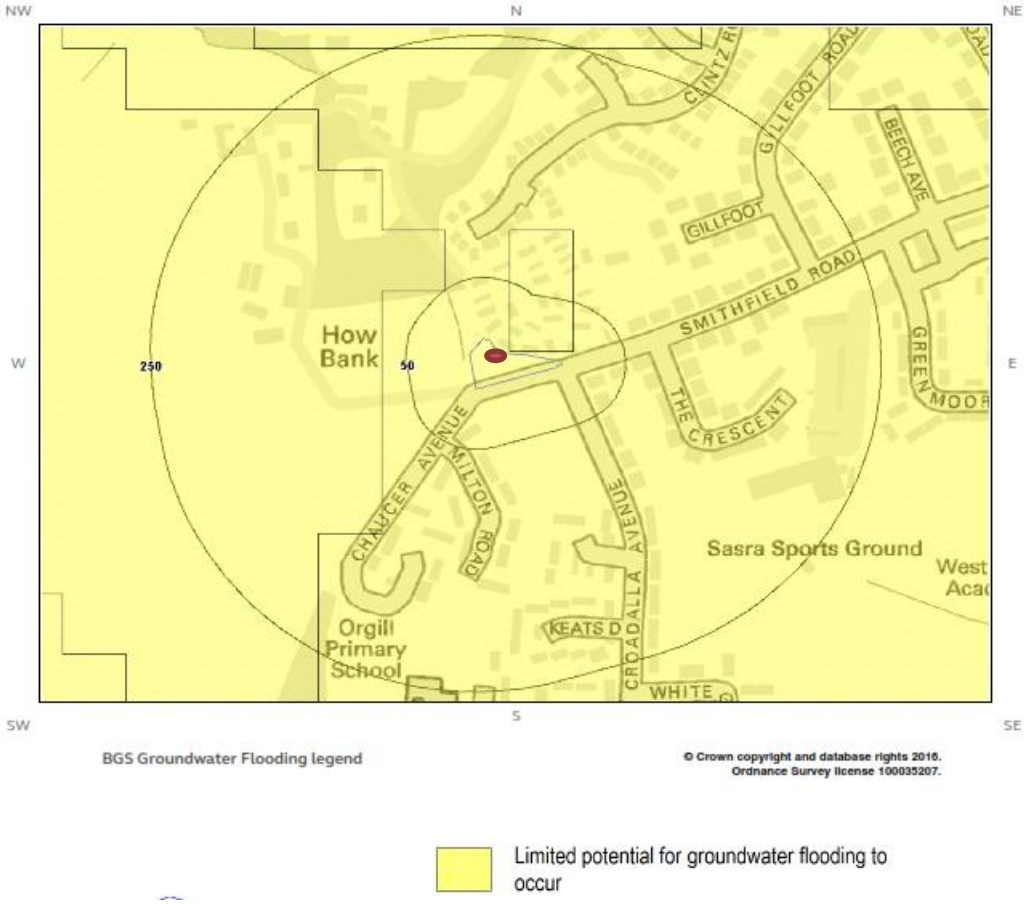


Figure 4 – BGS Ground water flood maps, red circle indicates site (23.2.2016)

Based upon the available information the site is at a low risk of surface water flooding.

Other Sources of Flooding

Other sources of flooding have been reviewed including reservoir and canal and are deemed a low risk based upon available information. The online Reservoir Flood maps have been reviewed and the proposed development is at a low risk of flooding.

Figure 5 – Environment Agency reservoir flood maps, red circle indicates site (05.06.2025)

Historic flood maps have also been reviewed and based upon the Environment Agency database there has been no flooding incidents at this site. It is noted that within the SFRA there is reference to flooding events from the Skirting Beck, these do not appear to have impacted upon the proposed development site.

The main risk of flooding from this site is to third party land. In order to ensure that the risk to third party land flooding is not increased, the proposed drainage system will need to be designed to ensure that:

- No surcharge for the 1 in 2 year event
- No flooding for the 1 in 30 year event
- No building or third party flooding for the 1 in 100 year event with a 30% allowance for climate

6.0 SURFACE WATER MANAGEMENT PLAN

As required under Building Regulations Part H a hierarchy as to the discharge of surface water needs be considered:

1. Discharge to soakaway or infiltration system,
2. Discharge to watercourse, subject to Environment Agency Approval,
3. Where other forms of outlet are not practicable, a discharge could be made to sewer.

It is understood that based upon anticipated ground conditions soil infiltration will not be feasible for the proposed development.

The Skirting Beck is located on the Western boundary of the proposed development site. The redline boundary has been utilised to calculate the runoff rate, with a total site area of 0.148a. The existing Greenfield runoff rate has been calculated utilising the IH124 method, giving a discharge rate of 1.10l/s. It is recommended a surface water discharge rate of 5l/s be utilised in accordance with good design practices to ensure a minimum orifice opening of 75mm, subject to relevant consents and approvals. Surface water run-off calculations are included in Appendix D.

As required under Building Regulations/Sewers for Adoption the surface water drainage system will need to be designed to;

- No surcharge for the 1 in 2 year event
- No flooding for the 1 in 30 year event
- No building flooding for the 1 in 100 year event with a 30% allowance for climate

Any flooding for the 100 year event with climate change will need to be stored on site to protect third party land from potential overland flows.

In order to manage the surface water and ensure the risk of flooding is minimised. is recommended that the all events up to and including the 100 year plus climate change events will be managed through source control. Consideration should be given to tanked permeable, skeletank source control and rainwater harvesting with additional attenuation.

Given the proposed site layout it is considered that skeletank source control would be the most viable option for ensuring surface water runoff is captured, controlled and conveyed at source. The skeletank brochure is included in Appendix E.

The Surface Water Management Plan (SWMP) as set out above will ensure compliance with current requirements.

7.0 CONCLUSIONS

This assessment has looked at the implications of the proposed development in relation to flood risk and surface water management.

The proposed development is at a low risk of flooding from watercourse based upon the available information. A minimum FFL has been recommended at 51.00m AOD to ensure this risk is minimum.

Other sources of flooding have been reviewed and identified as being as a low risk.

It is proposed to discharge surface water to the Skirting Beck at a restricted rate of 5l/s, subject to relevant approvals.

Any potential impact of the development can be adequately addressed by good drainage design.

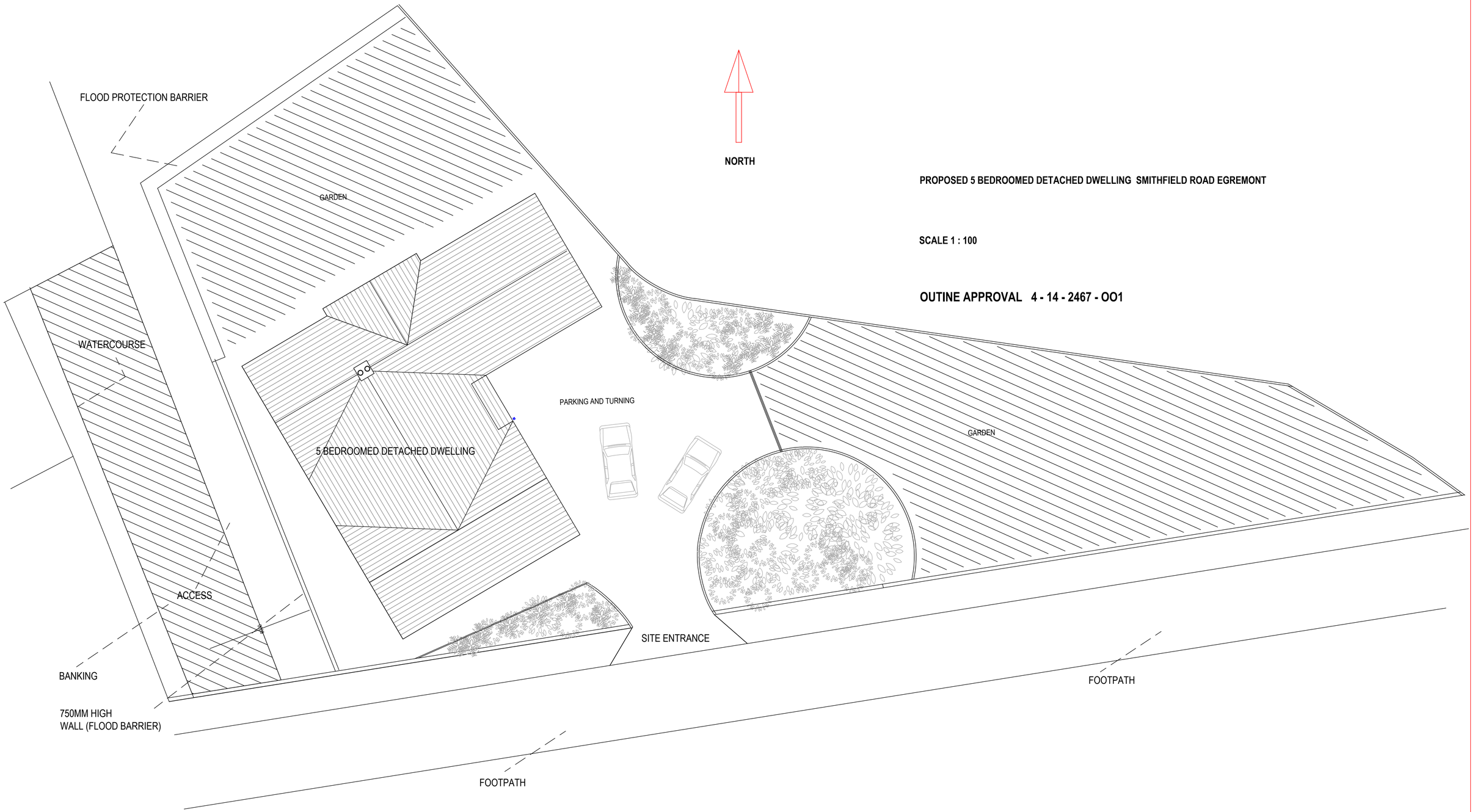
Ross Oakley
For and behalf of RWO Associates Limited
05/06/2025

Appendix A **Site Location Plan**

Site Location (Red line indicates approximate extents)

Location Map	
Site	Smithfield Road
Client	CDL Architecture Design
Job Number	15148

Appendix B **Proposed Site Layout**



NORTH

PROPOSED 5 BEDROOMED DETACHED DWELLING SMITHFIELD ROAD EGREMONT

SCALE 1 : 100

OUTINE APPROVAL 4 - 14 - 2467 - OO1

SCALE 1 : 100

ARCHITECTURE
cdl Planning & Design
Mob : 07786991404
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The Studio 26 Corporation Rd
Carlisle
Cumbria CA3 8XB
E Mail : cdlarcdesign@gmail.com

1/1

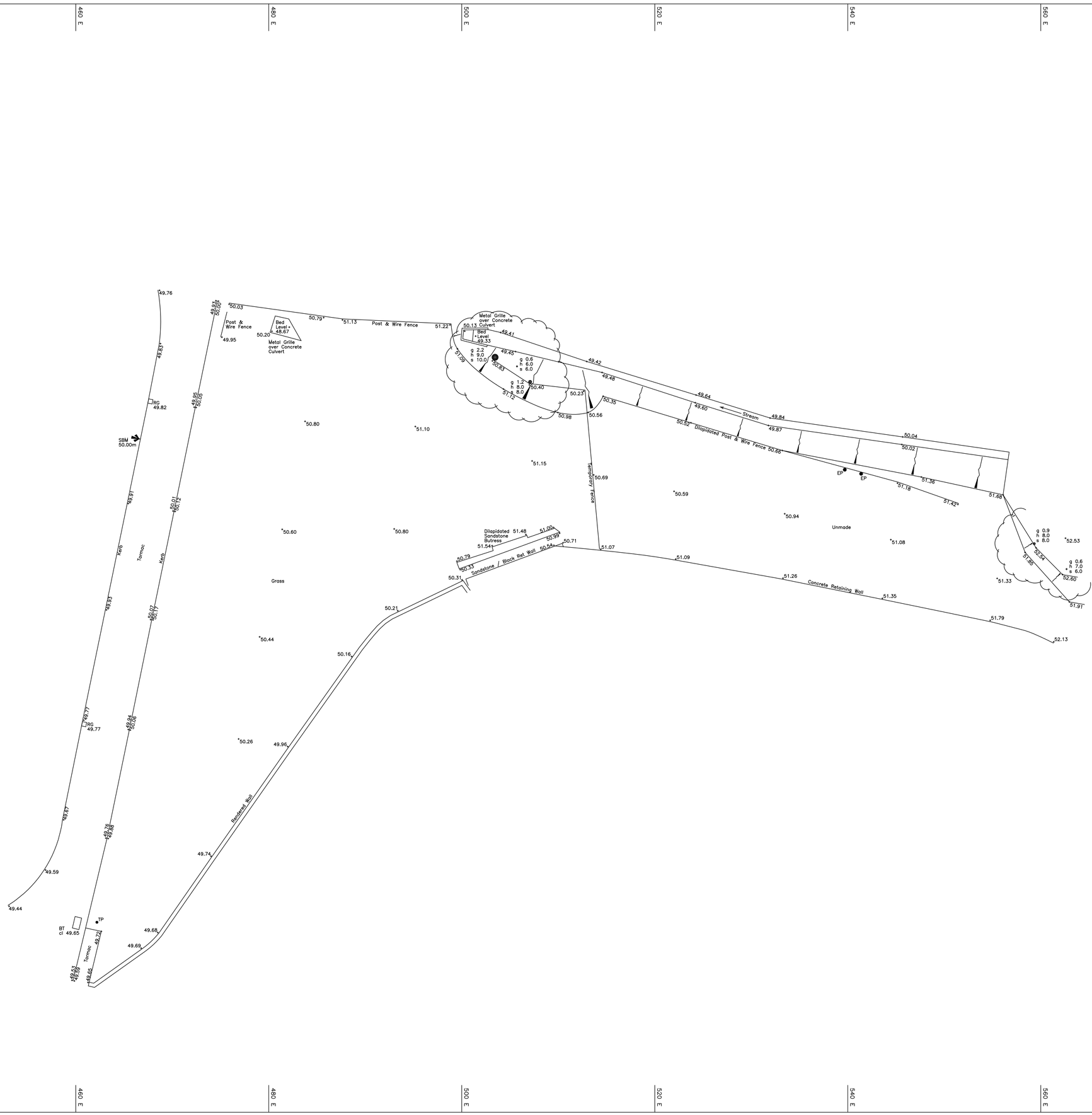
Client : WAYNE DUNN
Drwg No DS/WD/P/1/16
Scales :
Elevations :
Floor Plans :
Block Plan : 1 : 100
Location Plan :
Sections :
Date : MARCH 16 Checked By : DS

Status : PLANNING
Title : NEW BUILD
Address : SMITHFIELD ROAD EGREMONT

Notes/Amendments :

REVISION F

Appendix C **Topographical Survey**



Reference Information

This Survey has been undertaken to an accuracy consistent with a presentation scale of 1:200 . Interrogated dimensions will be within the tolerance associated with this and smaller scales only.

The survey is related to a locally established co-ordinate system and is orientated arbitrarily.

All levels are in metres and related to an Arbitrary Datum based upon:

SBM value 50.00m situated on top of the kerb on the opposite side of the road to the site, (PK Survey Nail).

Surveyed and Drawn By

GNW ASSOCIATES

BUILDING,ENGINEERING & LAND SURVEYORS

Studio 1
Edge Hill
Tree Road
Brampton
Cumbria
CA8 1TX

Tel: 016977-2835
Fax: 016977-42080
Email: gnwassociates@aol.com

Client

Red Raven Design Ltd.
2 Vale Cottages
Low Lorton
Cockermouth
CA13 9UR

Job Title

Site at Smithfield Park
Egremont
Site Survey

Scale 1:200

Date: April 2007

Sheet : 1 of 1 | Revision : 0

Drawing No. : S065-01

GNWA Job No : S065 | Checked : GNW

Appendix D Surface Water Run-off Calculations

Hydrological Data:-

FSR Hydrology:-

Location = EGREMONT (CUMB) Grid reference = NY0110
M5-60 (mm) = 18.5 r = 0.26
Soil runoff = 0.45 SAAR (mm/yr) = 1100
WRAP = 4 Area = England & Wales
Hydrological area = 10 Hydrological zone = 7

Soil classification for WRAP type 4
Clayey, or loamy over clayey soils with an impermeable layer at shallow depth.

Design data:-

Area = 0.00148 Km² - 0.148 Ha - 1480 m²

Calculation method:-

Runoff is calculated from:-

$$Q_{BAR(rural)} = 0.00108\ AREA^{0.89}\ .\ SAAR^{1.17}\ .\ SOIL^{2.17}$$

where

AREA = Site area in Km²
SAAR = Standard Average Annual Rainfall (mm/yr)
SOIL = Soil value derived from Winter Rainfall Acceptance Potential
$Q_{BAR(rural)}$ = Runoff (cumecs)

$Q_{BAR(rural)}$ is then multiplied by a growth factor - GC(T) - for different storm return periods derived from EA publication W5-074/A.

Calculated data:-

For areas less than 50Ha, a modified calculation which multiplies the 50Ha runoff value by the ratio of the site area to 50Ha is used
Reducing factor used for these calculations is 0.003

Mean Annual Peak Flow $Q_{BAR(rural)}$ = 1.10 l/s

RWO Associates Limited www.rwoassociatesuk.com	Job No.		
	Sheet no. 2		
	Date 23/03/16		
Project 15148 - IH124	By	Checked	Reviewed
Title IoH 124 Runoff calcs for EGREMONT (CUMB)			

Values for $Q_{BAR(rural)}$

Ret. per.	m³/hr	l/s	l/s/ha	Ret. per.	m³/hr	l/s	l/s/ha
1yr	3.376	0.938	6.337	100yr	8.341	2.317	15.655
2yr	3.694	1.026	6.933	100yr+20%	10.009	2.780	18.786
5yr	4.806	1.335	9.020	100yr+30%	10.843	3.012	20.352
10yr	5.481	1.523	10.288	200yr	9.533	2.648	17.892
30yr	6.673	1.854	12.524	500yr	10.843	3.012	20.352
50yr	7.348	2.041	13.791	1000yr	12.075	3.354	22.663

Growth factors -

1yr	2yr	5yr	10yr	30yr	50yr	100yr	200yr	500yr	1000yr
0.85	0.93	1.21	1.38	1.68	1.85	2.10	2.40	2.73	3.04

The above is based on the Institute of Hydrology Report 124
to which you are referred for further details (see Sect 7).
Note that the 200 and above year growth curves were taken from W5-074.

Appendix E Skeletank Brochure

Skeletank®
by Charcon Hydro Solutions

Drainage Systems for Housing

For Infiltration, Attenuation and Rainwater Recycling

Skeletank®

By Charcon Hydro Solutions

Ideally suited for under driveways & lawned areas of individual homes.

Skeletank® attenuation module

Innovative Source Control Solution for Residential Developments

Skeletank® systems provide solutions for the management of surface water runoff from residential developments. These systems meet the requirements of all current drainage legislation and guidance. The modular, lightweight and easily installed components are used to manage runoff within the boundaries of individual properties.

Reduced Drainage Works

These source control solutions allow developers to improve their cash-flow by significantly reducing expensive and time consuming up-front drainage works.

Design Flexibility

Skeletank® systems offer designers the opportunity to provide a bespoke, cost-effective solution to suit individual site requirements. Systems can be designed on a plot-by-plot basis to provide infiltration, attenuation or rainwater recycling options in combination with both pervious and impervious surfacings.

Accreditation

Skeletank® attenuation and infiltration systems assist developers and designers in meeting the requirements of SUR1.

The inclusion of a Skeletank® rainwater recycling system can also assist in attaining accreditation to Level 4 and above of The Code for Sustainable Homes. A Skeletank® rainwater recycling system may also provide an attractive benefit to potential purchasers.

Modular System

Skeletank® systems are suitable for new developments and are also ideal for the retro-fitting of SuDS measures to existing properties and housing estates. Their modular nature and shallow construction ensures a safe, cost-effective and rapid installation.

Key Services

- Design and specification service
- On-site technical support
- Ground investigation service
- Complete integrated surface water management solutions

System Benefits

- Manages surface water runoff at source (within the curtilage of each plot) in accordance with the SuDS management train as defined in CIRIA C697 -The SuDS Manual
- The use of SuDS techniques can assist with local authority approval
- Provides highly efficient, tailored solutions for infiltration, attenuation or rainwater recycling to suit site-specific requirements
- Minimises volume requirements for adoptable attenuation systems
- Reduces up-fronts costs and improves cash-flow management
- Minimises excavation, which is especially cost-effective where adverse site conditions exist e.g. high water tables, shallow bedrock or underlying contamination
- Provides CDM benefits due to shallow excavations
- Modular and lightweight components allow ease of installation and flexibility of design
- Most Skeletank® systems provide a minimum of 1 level of treatment as defined in CIRIA C697 - The SuDS Manual
- Manufactured in the UK using recycled and recyclable materials
- Ideal for both new-build and retrofit
- Diffusion modules fully compliant with sub-base replacement clauses of BS7533-13:2009 - Pavements constructed with clay, natural stone or concrete pavers

Find out more about Skeletank® at:

www.skeletank.co.uk

Skeletank® Attenuation

Modular source control system

A Skeletank® attenuation system manages surface water at source on a plot-by-plot basis in accordance with current best practice.

The range of modular components includes flow control, inspection and filter chambers which are compatible with standard pipework.

The shallow construction ensures a safe, rapid and cost-effective installation. In addition, the low head resulting from the shallow construction allows flow rates from each plot to be restricted to extremely low rates, typically 0.2 litres/second.

Skeletank® Infiltration

Modular infiltration systems for landscaped or trafficked areas

Skeletank® infiltration systems provide highly efficient infiltration fields for the dispersal of surface water at source. The range of modular components includes LDC units for landscaped areas and high strength HPDC soakaway units for trafficked areas.

Wherever possible, infiltration is the preferred method for the management of surface water runoff, as set out in all current legislation and guidance.

Skeletank® Diffusion

Balanced dispersal of surface water into permeable aggregate

Skeletank® HPDC diffuser units provide an ideal solution for the balanced dispersal of rainwater into and out of open-graded aggregate. When using this technique the aggregate layer provides one level of treatment in accordance with CIRIA C697 – The SuDS Manual.

Skeletank® HPDC units are fully compliant with the sub-base replacement clauses of BS7533-13:2009 – Pavements constructed with clay, natural stone or concrete pavers.

Skeletank® Rainwater Recycling

Modular recycling system for sustainable living

The Skeletank® attenuation system is adaptable to operate as a rainwater recycling system, while maintaining full flow control effectiveness.

The modular components make the system especially effective for retrofit to existing properties. Systems are designed to be fully compliant with BS8515:2009.

Office Locations

Skeletank® Enquiries
Office 13 Bracondale House
141 Buxton Road
Stockport
Cheshire
SK2 6EQ

01614 563476
skeletank@charconcs.com

Charcon Construction Solutions Group
Registered office: Bardon Hall, Markfield, Leicestershire, LE67 9PJ
Registered in England No. 00245717

www.charconcs.com

Skeletank®
by Charcon Hydro Solutions

www.skeletank.co.uk

An Aggregate Industries business

CONTRACTORS HEALTH & SAFETY ASSESSMENT SCHEME
Accredited Contractor
www.chas.gov.uk

buildoffsite member

Brochure Ref: CCS-HS-SKELETANK-V.02.4

Appendix F **Flood Data**

Flood map for planning

Your reference	Location (easting/northing)	Created
Smithfield Road	**300446/511139**	**29 May 2025 09:27**

Your selected location is in flood zone 1, an area with a low probability of flooding.

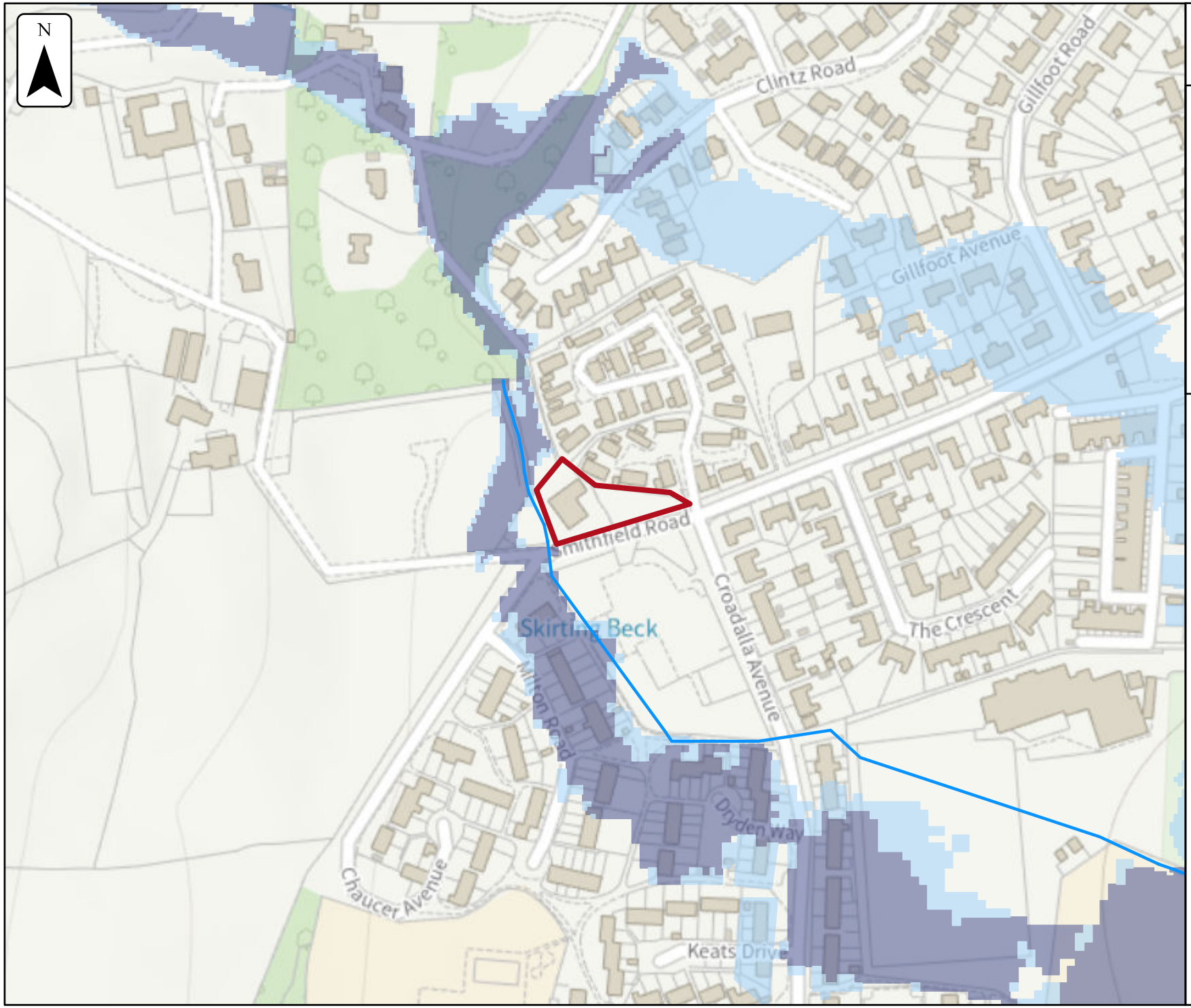
You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- in an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

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.



Environment Agency

Flood map for planning

Your reference
Smithfield Road

Location (easting/northing)
300446/511139

Scale
1:2,500

Created
29 May 2025 09:27

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

0 20 40 60 m

Report Reference: CMAPS-CM-513287-31982-230316

Client Reference: 31982

Report Date 23 Mar 2016

Report Delivery Method: Email - pdf

Client Email: andy@centremaps.com

Groundsure Floodinsight

Address: 3 Smithfield Road, Egremont, CA22 2QF

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Floodinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 01886 832972 quoting the above CENTREMAPS reference number.

Yours faithfully,

CENTREMAPS

Enc.
Groundsure Floodinsight

Groundsure Floodinsight

Address:	**3 Smithfield Road, Egremont, CA22 2QF**
Date:	**23 Mar 2016**
Reference:	**CMAPS-CM-513287-31982-230316**
Client:	**CENTREMAPS**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	05-Oct-2008
Grid Reference:	300455,511140
Site Size:	0.14ha

Contents Page

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed.

Section 1: Environment Agency Flood Zones	
1.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
1.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
1.3 Are there any Flood Defences within 250m of the study site?	No
1.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
1.5 Are there any Proposed Flood Defences within 250m of the study site?	No
1.6 Are there any areas used for Flood Storage within 250m of the study site?	No

Section 2: Risk of Flooding from Rivers and the Sea (RoFRaS)	
2.1 What is the Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating for the study site?	High

Section 3: Historic Flood Events	
3.1 Has the site been subject to past flooding as recorded by the Environment Agency?	No

Section 4: JBA Surface Water (Pluvial) Flood	
4.1 Is the site or any area within 50m at risk of Surface Water (Pluvial) Flooding?	Yes

Section 5: Surface Water Features	
5.1 Are there any surface water features within 250m of the study site?	Yes

Section 6: Groundwater Flooding	
6.1 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
6.2 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 7: BGS Geological Indicators of historic flooding	
7.1 Are there any geological indicators of historic flooding within 250m of the study site?	Yes

Section 8: JBA Reservoir and Canal Data	
8.1 Is the property located in an area identified as being at potential risk in the event of a reservoir failure?	No
8.2 Is the property located in an area identified as being at potential risk in the event of a canal break?	No

Additional Matters

Riparian ownership

If your land abuts a river, stream or ditch, you may have responsibility to maintain this watercourse, even if Title Deeds show the property boundary to be adjacent to the watercourse. This includes the responsibility for clearing debris and obstructions which may impede the free passage of water and fish, and also includes the responsibilities to accept flood flows through your land, even if these are caused by inadequate capacity downstream. There is no duty in common law for a landowner to improve the drainage capacity of a watercourse. Please contact Groundsure if you need further advice on riparian ownership issues relating to this property.

Sewerage Flooding

Extreme rainfall events may overwhelm sewerage systems and cause local flooding. The water and sewerage companies within the UK are required to maintain 'DG5 – At Risk Registers' which record properties that have flooded from sewers and/or are considered to be at risk of flooding from sewers in the future. If your property is on the 'At Risk' Register, this may be recorded within a standard CON29 Drainage and Water search.

Using this Report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

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1. Environment Agency Flood Map for Planning (from rivers and the sea)

Environment Agency Flood Map for Planning Legend

- Search Centre
- Search Buffers (m): 100, 250
- Zone 2 Floodplain
- Zone 3 Floodplain
- Flood Defences
- Area used for Flood Storage
- Proposed Flood Defence Scheme
- Area Benefiting from Flood Defences

Report Reference: CMAPS-CM-513287-31982-230316
Client Reference: 31982

1. Environment Agency Flood Zones

1.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 1 – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	0.0	On Site	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
2	28.0	S	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
3	138.0	S	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
4	164.0	SE	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
5	191.0	S	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
6	229.0	NW	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)

1.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 1 – Flood Map for Planning.

The following floodplain records are represented as green shading on the Flood Map (1):

ID	Distance (m)	Direction	Update	Type
13	43.0	S	23-Feb-2016	Zone 3 - (Fluvial Models)
14	229.0	NW	23-Feb-2016	Zone 3 - (Fluvial Models)

1.3 River and Coastal Flood Defences

Are there any Flood Defences within 250m of the study site ? No

This search consists only of flood defences present in the dataset provided by the Environment Agency. Any relevant data is represented on Map 1 – Flood Map for Planning.

Database searched and no data found.

1.4 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

Any relevant data is represented on Map 1 – Flood Map for Planning.

1.5 Areas of Proposed Flood Defences

Are there any Proposed Flood Defences within 250m of the study site? No

* This illustrates the number of households that move from 'very significant' or 'significant' to 'moderate' or 'low' probability of flood risk bands if the proposed flood scheme is to be implemented.

Any relevant data is represented on Map 1 – Flood Map for Planning.

Guidance: This search consists only of proposed flood defences present in the dataset provided by the Environment Agency. Please note that proposed flood defence schemes will not influence the current RoFRaS ratings for the site.

1.6 Areas used for Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

Flood Storage Areas are considered part of the functional floodplain, and are areas where water has to flow or be stored in times of flood. Technical Guidance to the National Planning Policy Framework states that only water-compatible development and essential infrastructure should be permitted within flood storage areas, and existing development within this area should be relocated to an area with a lower risk of flooding. Any relevant data is represented on Map 1 – Flood Map for Planning.

Notes on Flood Zone Data:

This data relates solely to flooding from rivers or the sea. The Environment Agency estimate that over 2.5 million properties are at risk of flooding within England and Wales. River flooding occurs when a watercourse cannot cope with the water draining into it from the surrounding land. This can happen, for example, when heavy rain falls on an already waterlogged catchment. Coastal flooding results from a combination of high tides and stormy conditions. If low atmospheric pressure coincides with a high tide, a tidal surge may happen which can cause serious flooding.

The Groundsure Floodinsight Report comments upon whether a property lies in proximity to Environment Agency Zone 2 and Zone 3 floodplains. The Government's Technical Guidance to the National Planning Policy Framework explains how flood risk should be considered at all stages of the planning and development process in order to reduce future damage to property and potential loss of life. The Government looks to planning authorities to ensure that flood risk is properly taken into account in the planning of developments to reduce the risk of flooding and the damage which floods cause.

Flood Zones enable planning authorities to apply the sequential test (see Technical Guidance to the National Planning Policy Framework) for development proposals and prevent inappropriate development.

Technical Guidance to the National Planning Policy Framework defines the flood zones as: -

Zone 1 – little or no risk with an annual probability of flooding from rivers and the sea of less than 0.1%

Zone 2 – low to medium risk with an annual probability of flooding of 0.1-1.0% from rivers and 0.1-0.5% from the sea.

Zone 3 – high risk with an annual probability of flooding of 1.0% or greater from rivers, and 0.5% or greater from the sea.

Flood Zone 3b/Flood Storage Areas - very high risk with the site being used as part of the functional flood plain or as a Flood Storage Area.

The flood zones are the main constraint map underpinning decisions on development and flood risk.

Existing Flood Defences

Flood defences seek to reduce the risk of flooding and to safeguard life, protect property, sustain economic activity and the natural environment. Flood defences are designed to protect against flood events of a particular magnitude, expressed as risk in any one year. For example, defences in urban areas may be built to provide protection against flood events of a size which might occur on average once in one hundred years or less.

Proposed Flood Defences

This information is taken from the Environment Agency's database of Areas to Benefit from New and Reconditioned Flood Defences under the Medium Term Plan (MTP). The dataset contains funding allocation for the first financial year (from April). Funding for the following four financial years is not guaranteed, being only indicative, and will be reviewed annually. Projects within the Medium Term Plan qualify for inclusion in this dataset if:

- the investment leads to a change in the current standard of protection (change projects);
- the investment is a replacement or refurbishment in order to sustain the current standard of protection (sustain projects);
- the project has an initial construction budget of £100,000 or more; and
- the project is included within the first five years of the MTP

The data includes all the Environment Agency's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards. The number of households and areas of land contributing to DEFRA's Outcome Measures (OM) are also attributed i.e. could benefit from major work on flood defences.

These data also contain Intermittence Flood Maintenance Programme that show the annual maintenance programme of work scheduled to be carried by the Environment Agency, Local Authority or Internal Drainage Board on flood defences. Data details routine maintenance as well as intermittent work that has been funded for the coming year. The data contains a start and end coordinate defining the relevant river section where work is planned.

Information Warning

Please note that the maps show the areas where investment is being made to reduce the flood and coastal erosion risk and are not detailed enough to account for individual addresses. Individual properties may not always face the same risk of flooding as the areas that surround them. Also, note that funding figures are indicative and any use or interpretation should account for future updates where annual values may change.

Every possible care is taken to ensure that the maps reflect all the data possessed by the Environment Agency and that they have applied their expert knowledge to create conclusions that are as reliable as possible. The Environment Agency consider that they have created the maps as well as they can and so should not be liable if the maps by their nature are not as accurate as might be desired or are misused or misunderstood, despite their warnings. For this reason, they are not able to promise that the maps will always be accurate or completely up to date.

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Flood Storage Areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval.

A flood storage area may take the form of a wet or dry reservoir. A wet reservoir is a water storage facility in which storage can be effected by allowing water levels to rise during flood times. A dry reservoir is typically adjacent to a river and comprises an enclosed area that accepts water only at peak times. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and the Environment Agency, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

2. Environment Agency RoFRaS Flooding Map

Environment Agency RoFRaS Flooding legend

Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

2. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS)

2.1 Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating (River and Coastal)

What is the highest risk of flooding onsite? High

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS Flood Risk
1	0.0	On Site	Very Low
2	0.0	On Site	High
3	0.0	On Site	Low
4	2.0	W	Low
5	4.0	W	High
6	14.0	S	Low
7	20.0	S	Low

Notes on RoFRaS data:

This information is based on the very latest Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) data. This data has been created by dividing the flood plain into 50m squares, or smaller areas where a square if intersected by a river or coastline. These are called impact cells. The method then calculates the likelihood that the centre of each impact cell will start to flood using a number of different flood scenarios.

A number of insurance companies providing cover for flood risk use this data as the basis of their risk model, although they may also utilise additional information such as claims histories, which may further influence their decision. Where a high risk of flooding is identified flood risk insurance may be difficult to obtain without further work being undertaken. Property owners of sites within Low and Medium risk areas are still considered to be at risk of flooding and insurance premiums may be increased as a result. Owners of properties within Low, Medium and High risk areas are advised to sign up to the Environment Agency's Flood Warning scheme. The probability estimates for RoFRaS risk bands are as follows:

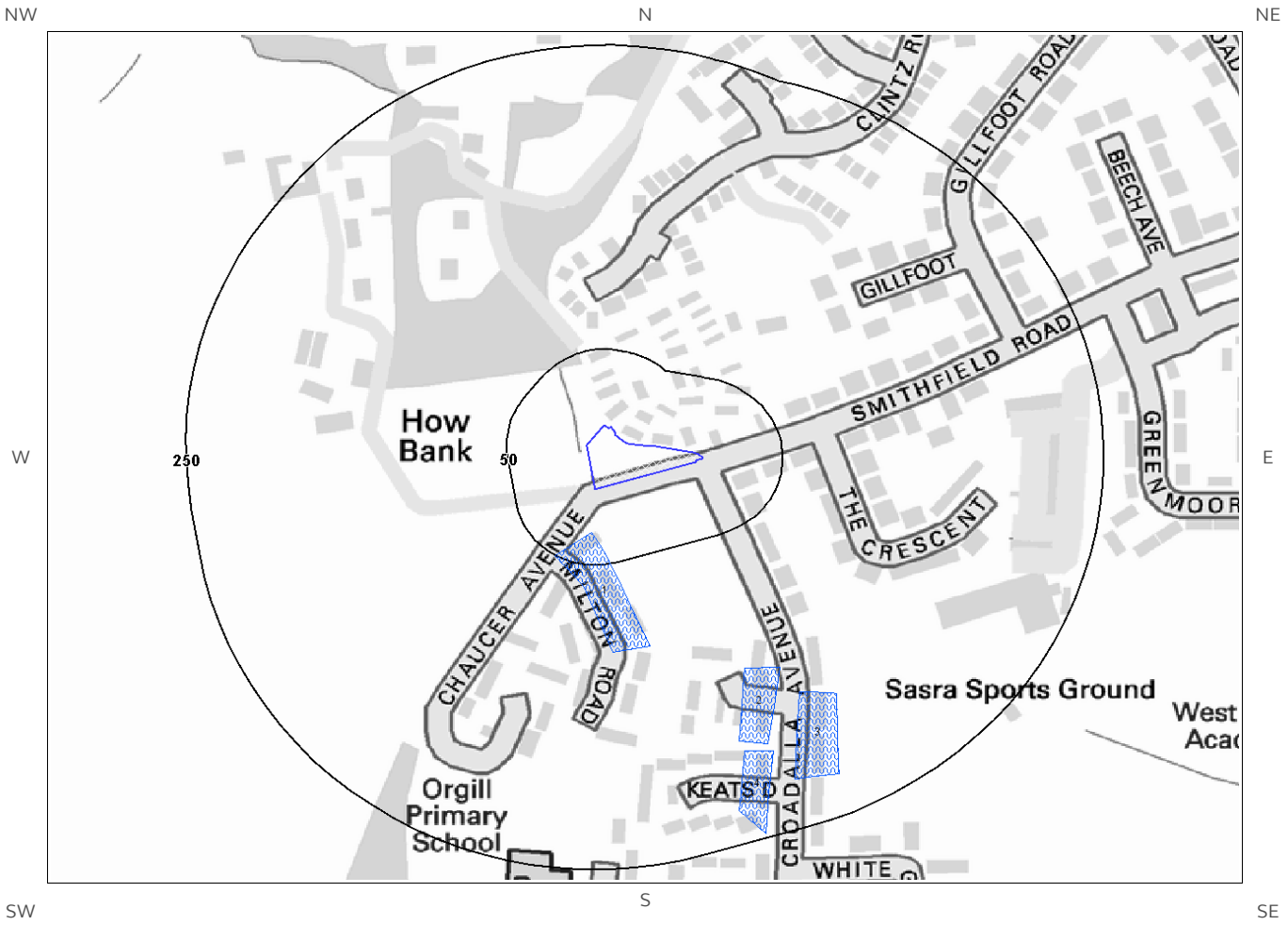
Very Low – the chance of flooding from rivers or the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

Low – the chance of flooding from rivers or the sea is considered to be less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

Medium – the chance of flooding from rivers or the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 100 (1%) in any given year.

High – the chance of flooding from rivers or the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

3. Environment Agency Historic Flooding Events Map



Environment Agency Historic Flooding Events legend

Site Outline

125
250
Search Buffers (m)

Historic Flood Events

3. Environment Agency Historic Flooding Events

3.1 Historic Flood Outlines

Has the site or any area within 250m been subject to historic flooding as recorded by the Environment Agency? Yes

This database shows the individual footprint of every flood event recorded by the Environment Agency and previous bodies.

Any records found within the search radius are displayed on Map 3 – Historic Flooding Events.

ID	Distance	Direction	Event Name	Date of Flood	Flood Source	Flood Cause	Type of Flood
1	28.0	S	Flooding 05_11_1999	Start Date: 05-11-1999 End Date: 05-11-1999	unknown	unknown	Fluvial Tidal
2	138.0	S	Flooding 05_11_1999	Start Date: 05-11-1999 End Date: 05-11-1999	unknown	unknown	Fluvial Tidal
3	164.0	SE	Flooding 05_11_1999	Start Date: 05-11-1999 End Date: 05-11-1999	unknown	unknown	Fluvial Tidal
4	191.0	S	Flooding 05_11_1999	Start Date: 05-11-1999 End Date: 05-11-1999	unknown	unknown	Fluvial Tidal

Notes on Historic Flooding data:

Over 21,000 separate events are recorded within this database, dating back to 1947. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that the Environment Agency do not currently have records of flooding within the area. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

4. JBA Surface Water (Pluvial) Flood Map

JBA Surface Water (Pluvial) Flood Legend

Site Outline

125
250
Search Buffers (m)

Highly Significant
Significant
High
Moderate to High
Moderate
Low to Moderate
Low

4. JBA Surface Water (Pluvial) Flooding

Surface Water (pluvial) flooding is defined as flooding caused by rainfall-generated overland flow before the runoff enters a watercourse or sewer. In such events, sewerage and drainage systems and surface watercourses may be entirely overwhelmed.

Surface Water (pluvial) flooding will usually be a result of extreme rainfall events, though may also occur when lesser amounts of rain falls on land which has low permeability and/or is already saturated, frozen or developed. In such cases overland flow and 'ponding' in topographical depressions may occur.

What is the risk of pluvial flooding at the study site? High

Guidance: The site or an area in close proximity has been assessed to be at High Risk of surface water (pluvial) flooding. This indicates that this area would be expected to be affected by surface water flooding in a 1 in 75 year rainfall event to a depth of between 0.1m to 0.3m

The following pluvial (surface water) flood risk records within 50m of the study site are shown on the JBA Surface Water Flooding Map:

Distance	Direction	Risk
0.0	On Site	High
0.0	On Site	Low
0.0	On Site	Low
4.0	W	High
4.0	W	Significant
10.0	NW	Low
10.0	W	Low
16.0	W	High
17.0	NW	Low
19.0	W	High
22.0	W	High
24.0	W	High
24.0	W	Low
28.0	W	High
31.0	W	Low to Moderate

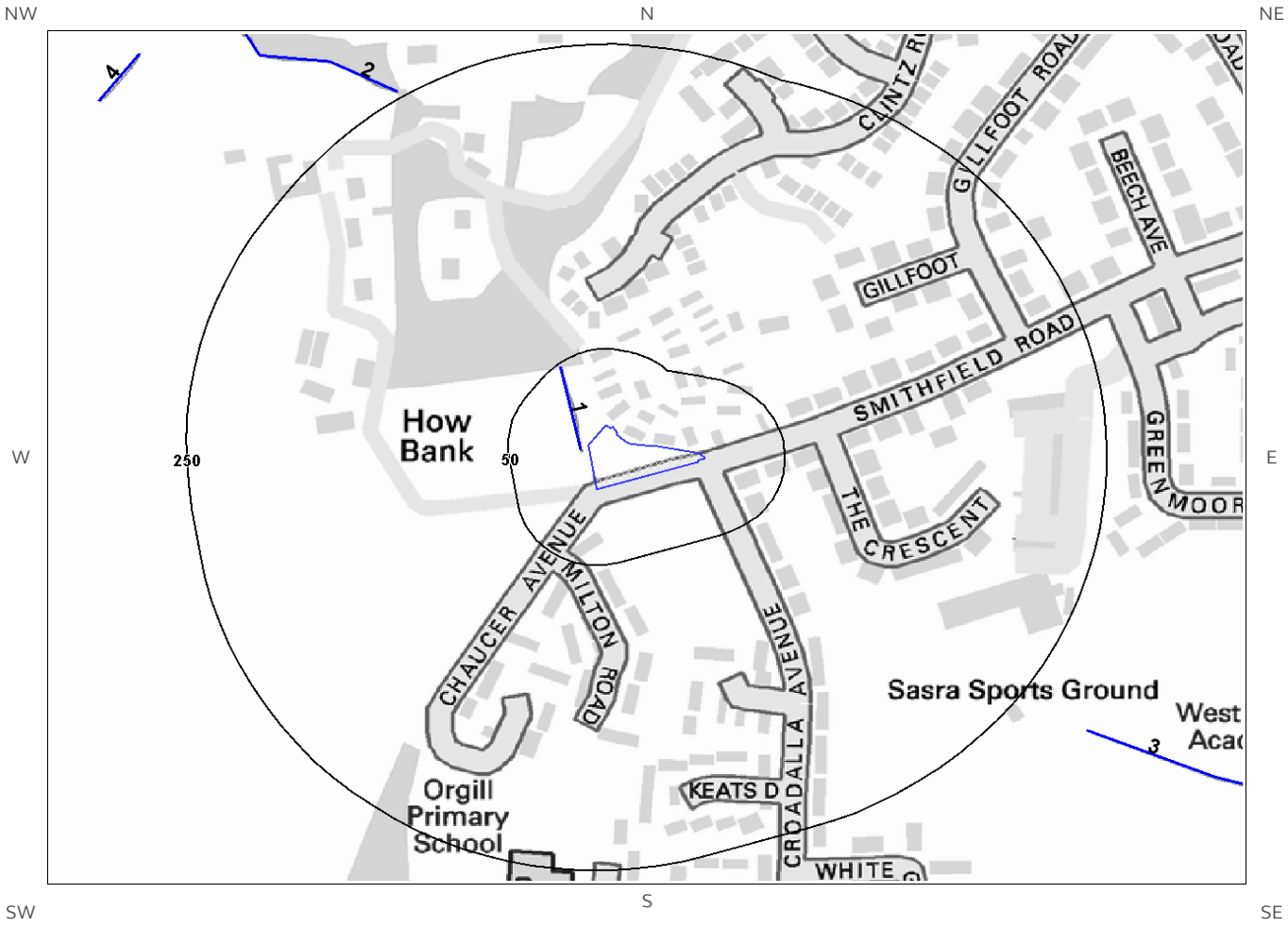
Notes on Surface water (Pluvial) Flooding data:

JBA Consulting surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally vulnerable to surface water or "pluvial" flooding. This data set was produced by simulating 1 in 75 year, 1 in 200 year and 1 in 1000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.

The model provides the maximum depth of flooding in each 5m "cell" of topographical mapping coverage. The maps include 7 bands indicating areas of increasing natural vulnerability to surface water flooding. These are:-

- **Less than 0.1m in a 1 in 1000 year rainfall event** - Negligible
- **Greater than 0.1m in a 1 in 1000 year rainfall event** - Low
- **Between 0.1m and 0.3m in a 1 in 200 year rainfall event** – Low to Moderate
- **Between 0.3m and 1m in a 1 in 200 year rainfall event –** Moderate
- **Greater than 1m in a 1 in 200 year rainfall event** – Moderate to High
- **Between 0.1m and 0.3m in a 1 in 75 year rainfall event** – High
- **Between 0.3m to 1m in a 1 in 75 year rainfall event** - Significant
- **Greater than 1m in a 1 in 75 year rainfall event** – Highly Significant

5. Surface Water Features map



Surface Water Features legend

Site Outline

Surface Water Feature (wider than 5m)

50
250
Search Buffers (m)

Surface Water Feature (narrower than 5m)

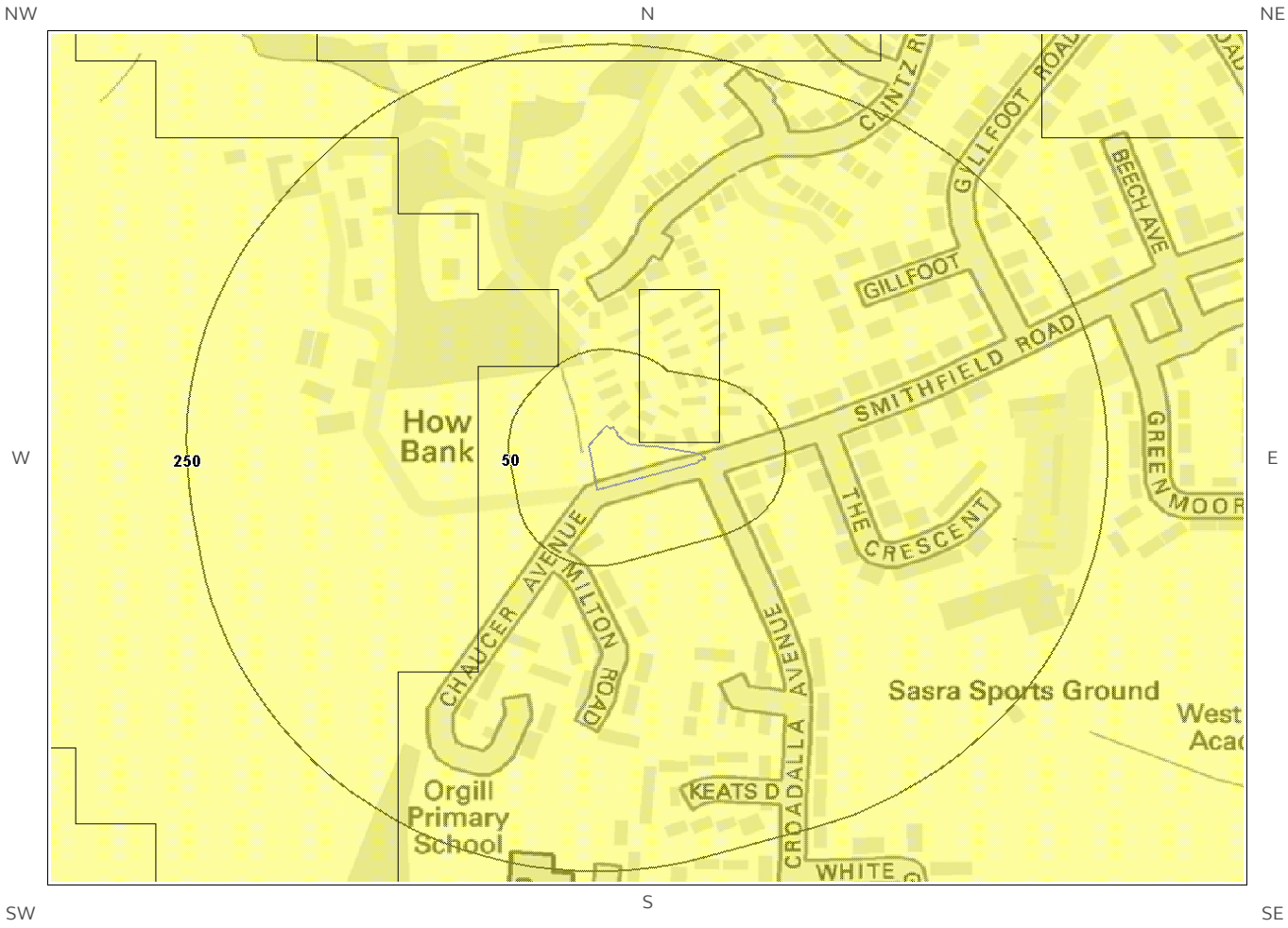
5. Surface Water Features

Are there any surface water features within 250m of the study site? Yes

The following surface water records are represented on mapping:

ID	Distance (m)	Direction
1	6.0	W

6. BGS Groundwater Flooding Map



BGS Groundwater Flooding legend

Site Outline

50
250
Search Buffers (m)

Limited potential for groundwater flooding to occur

Potential for groundwater flooding of property below ground level

Potential for groundwater flooding to occur at surface

6. Groundwater Flooding

6.1 Groundwater Flooding Susceptibility Areas

Are there any British Geological Survey groundwater flooding susceptibility flood areas within 50m of the boundary of the study site? Yes

What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions? Limited potential for groundwater flooding

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

6.2 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Low

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

Notes on Groundwater Flooding data:

The BGS Susceptibility to Groundwater Flooding hazard dataset identifies areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface.

Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

The susceptibility data is suitable for use for regional or national planning purposes where the groundwater flooding information will be used along with a range of other relevant information to inform land-use planning decisions. It might also be used in conjunction with a large number of other factors, e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information, to establish relative, but not absolute, risk of groundwater flooding at a resolution of greater than a few hundred metres. The susceptibility data should not be used on its own to make planning decisions at any scale, and, in particular, should not be used to inform planning decisions at the site scale. The susceptibility data cannot be used on its own to indicate risk of groundwater flooding.

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7. BGS Geological Indicators of Flooding

Are there any geological indicators of flooding within 250m of the study site? Yes

This dataset identifies the presence of superficial geological deposits which indicate that the site may be, or have been in the past, vulnerable to inland and/or coastal flooding. This assessment does not take account of any man-made factors such as flood protection schemes, and the data behind the report are purely geological.

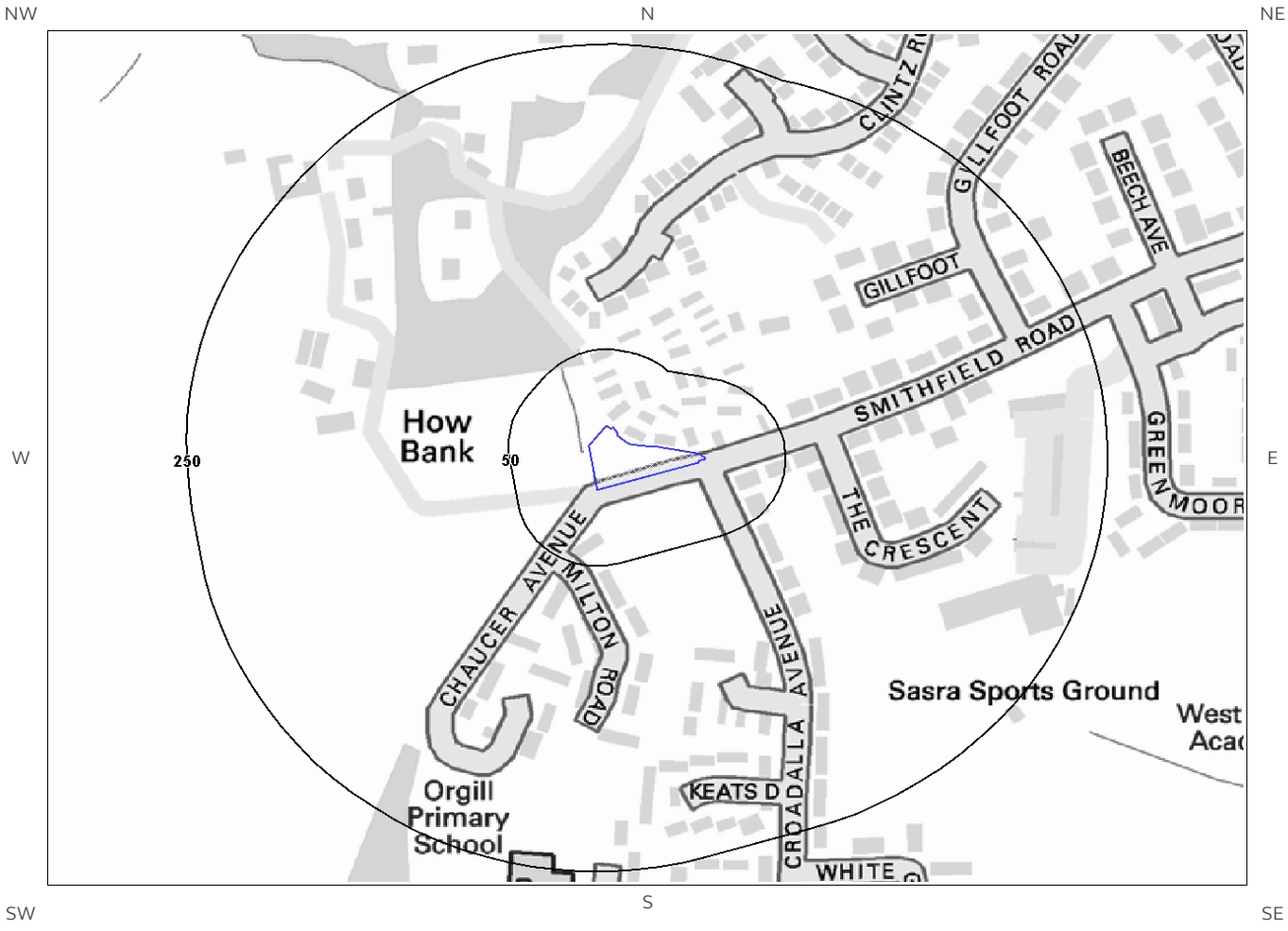
Distance	Direction	Description
0.0	On Site	Higher flood potential from rivers: the first areas to experience the effects of inland flooding in a river catchment.

Notes on BGS Geological Indicators of Flooding data:

The BGS Geological Indicators of Flooding (GIF) data set is a digital map based on the BGS Digital Geological Map of Great Britain at the 1:50,000 scale (DiGMapGB-50). It was produced by characterising Superficial (Drift) Deposits on DiGMapGB-50 in terms of their likely vulnerability to flooding, either from coastal or inland water flow. These Superficial Deposits are considered 'recent' in geological terms, most having been formed in the later parts of the Quaternary geological period (i.e. within the last few tens of thousands of years). Observations made during recent major inland and coastal flooding events have demonstrated that the erosion and deposition of these recent geological sediments have produced subtle topographical variations, resulting in landforms such as fluvial and coastal floodplains. The mapping of these landforms, in conjunction with the fluvial and/or coastal deposits that underlie them, has in turn determined the extent of previous coastal and inland flooding.

On this basis, the floodplains which are at greatest risk from flooding can be both visualised and defined by Superficial Deposits as depicted on geological maps. These include deposits such as river alluvium and lacustrine (lake) alluvium, as well as the First River Terrace or 'Floodplain terrace' (raised flat areas adjacent to or within floodplains, which represent the level of the floodplain prior to the most recent episode of down-cutting). Older and higher river terraces have been excluded as they lie outside the geologically defined floodplain. Areas at risk from coastal inundation are similarly characterised by a range of estuarine or marine deposits that include, for example, tidal flats.

8. JBA Canal Break map



JBA Canal Break legend

Site Outline

50
250
Search Buffers (m)

Areas at risk from Canal Breach

8. JBA Reservoir and Canal Data

8.1 JBA Reservoir Failure Impact Modelling

Is the property located in an area identified as being at potential risk in the event of a reservoir failure? No

JBA consulting have modelled the flooding impact from 1,700 reservoirs in England and Wales, should there be a catastrophic failure of a reservoir wall or embankment. This data is not displayed on mapping.

Guidance: None required

Notes on Reservoir Failure Impact data:

This dataset identified areas that are most likely to flood following the sudden catastrophic failure of a reservoir and is provided by JBA Consulting. JBA has identified over 1,700 reservoirs that pose a risk to people and property. These maps identify properties that would flood in the unlikely event of the failure of the reservoir's dam or embankment. Empirical methods were used to predict the flow that would result from the failure which was then modelled onto high resolution Digital Terrain Models (DTM) using JBA's advanced 2D hydraulic modelling techniques. The model provides the maximum depth of flooding in each cell of the DTM.

8.2 JBA Canal Break Modelling

Is the property located within 500m of an area identified as being at potential risk in the event of a canal break? No

Database searched and no data found.

Notes on Canal Break modelling data

Canal failure mapping includes two types of failure:

- Breach of raised canal embankments - failure of the embankment due to weaknesses; these are typically caused by erosion or animal burrowing but can also arise from poor maintenance.
- Aqueduct failure - an aqueduct is where the canal passes over infrastructure such as roads, railways and subways, or over other canals and rivers. Failures of these are typically caused by the collapse of the underlying culvert.

A length of over 1,700km of canal covering England, Wales and Scotland was modelled. The canal modelling is restricted to the areas where LIDAR is available as the raised embankments are more defined in the LIDAR than in the Photogrammetry data. Each canal is categorised as part of the Merchant Shipping Notice (MSN 1776 (M)). The majority of the modelled canals are categorised as A, with a few exceptions, which fell under category B.

- Category A: narrow rivers and canals where the depth of water is generally less than 1.5m.
- Category B: wider rivers and canals where the depth of water is generally 1.5m or more and where the significant wave height could not be expected to exceed 0.6m at any time.
- Category C: tidal rivers and estuaries and large, deep lakes and lochs where the significant wave height could not be expected to exceed 1.2m at any time.
- Category D: tidal rivers and estuaries where the significant wave height could not be expected to exceed 2m at any time.

The canal map provides flood extent data only and show flooded areas with a depth greater than 0.1m.

Contact Details

CENTREMAPS

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Groundsure@centremaps.co.uk
Open Space, Upper Interfields, Malvern, Worcester, WR14 1UT

British Geological Survey Enquiries

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Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

Environment Agency

Floodline tel: 0845 988 1188
General enquiry tel: 08708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk

JBA Risk Management

South Barn
Broughton Hall
Skipton
BD23 3AE
Tel: 01756 799919

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Local Authority

Authority: Copeland Borough Council
Phone: 0845 054 8600
Web: http://www.copeland.gov.uk
Address: The Copeland Centre, Catherine Street, Whitehaven, Cumbria, CA28 7SJ

Getmapping PLC

Virginia Villas, High Street, Hartley Witney
Hampshire RG27 8NW
Tel: 01252 845444
Website: http://www1.getmapping.com/

Standard Terms and Conditions

1 Definitions

I**n these terms and conditions unless the context otherwise requires:**
"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.
"Client" means the party or parties entering into a Contract with Groundsure.
"Commercial" means any building or property which is not Residential.
"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than
(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and
(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).
"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.
"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.
"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.
"Data Reports" means reports comprising factual data with no accompanying interpretation.
"Fees" has the meaning set out in clause 5.1.
"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.
"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.
"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.
"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.
"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.
"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.
"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.
"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.
"Residential" means any building or property used as or intended to be used as a single dwelling.
"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.
"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.
"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.
"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.
"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.
2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.
2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.
2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.
2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.
2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1The Client shall comply with the terms of this Contract and
(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and
(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.
3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.
3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.
3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.
3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.
3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.
4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;
(i) the Beneficiary,
(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.
4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.
4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").
5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.
5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to
(i) full payment of all relevant Fees and
(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.
6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure

acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.
6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.
6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.
6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.
7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.
7.4 Groundsure shall not be liable for

(i) loss of profits;
(ii) loss of business;
(iii) depletion of goodwill and/or similar losses;
(iv) loss of anticipated savings;
(v) loss of goods;
(vi) loss of contract;
(vii) loss of use;
(viii) loss or corruption of data or information;
(ix) business interruption;
(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;
(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
(xiii) loss or damage to a computer, software, modem, telephone or other property; and
(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.
7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.
8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.
9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event
(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.
12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.
12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.
12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.
12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;
(ii) fire, storm, flood, tempest or epidemic;
(iii) Acts of God or the public enemy;
(iv) riot, civil commotion or war;
(v) strikes, labour disputes or industrial action;
(vi) acts or regulations of any governmental or other agency;
(vii) suspension or delay of services at public registries by Third Party Data Providers;
(viii) changes in law; or
(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent
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