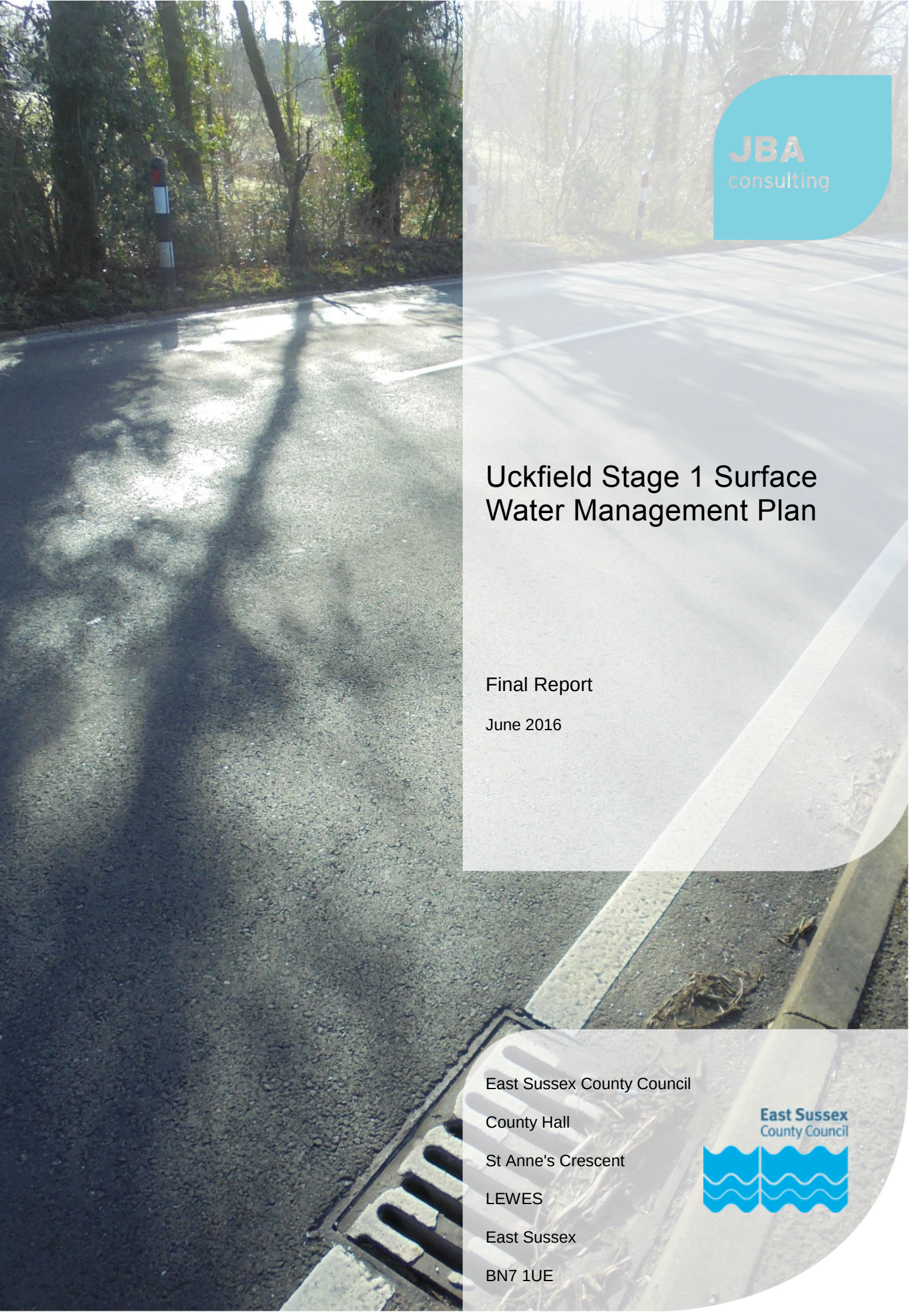


Uckfield Stage 1 Surface Water Management Plan

Final Report

June 2016

East Sussex County Council

County Hall

St Anne's Crescent

LEWES

East Sussex

BN7 1UE

JBA Project Manager

Rachel Huitson-Little
JBA Consulting
35 Perrymount Road
Haywards Heath
West Sussex
RH16 3BW

Revision History

Revision Ref / Date Issued	Amendments	Issued to
Draft v1/ April 2016	N/A	Nick Claxton and Revai Kinsella (East Sussex County Council)
Final v2/ June 2016	Address comments from ESCC	Nick Claxton and Revai Kinsella (East Sussex County Council)

Contract

This report describes work commissioned by Nick Claxton, on behalf of East Sussex County Council, by an email dated 1st September 2015. East Sussex County Council's representative for the contract was Nick Claxton. Jenny Hill and Zoe Carroll of JBA Consulting carried out this work.

Prepared by ..... Zoe Carroll BSc MSc
Assistant Analyst

..... Jennifer Hill BSc MSc
Senior Analyst

Reviewed by ..... Rachel Huitson-Little MSc CEnv MCIWEM C.WEM
Director

Purpose

This document has been prepared as a Draft Report for East Sussex County Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to East Sussex County Council.

Acknowledgements

JBA would like to acknowledge and thank the representatives of Uckfield Town Council, Wealden District Council, Southern Water, the Environment Agency and East Sussex County Council for all their assistance during this project.

Executive Summary

A Surface Water Management Plan (SWMP) is a study to understand the flood risk that arises from local flooding, which is defined by the Flood and Water Management Act 2010 as “flooding from surface runoff, groundwater, and ordinary watercourses”.

SWMPs are led by a partnership of flood risk management authorities who have responsibilities for aspects of local flood risk, including the County Council, Local Authority, the Environment Agency, sewerage undertaker, Internal Drainage Boards and other relevant authorities.

With East Sussex County Council as the Lead Local Flood Authority (LLFA), this has led to the production of the Uckfield Stage 1 SWMP in partnership with Wealden District Council, the Environment Agency and Southern Water. These organisations are members of a steering group which was established as part of the SWMP process. It is expected that partners will take forward actions independently, and convene as and when appropriate. Uckfield Town Council are proactive and it is hoped that they will support East Sussex County Council by monitoring hotspot areas and raising awareness on flood risk within communities in Uckfield. This awareness could enhance resilience as communities are prepared for flooding.

Uckfield is a historic town in East Sussex within the Wealden District. The estimated population in 2011 was 14,493[1] in an area of 7.5km^2. The surrounding area is predominately rural land with dispersed settlements, with the Ashford Forest immediately to the north of the town.

The project partners supplied all the available data on recorded incidents of flooding together with any modelling of flood risk.

To better understand the flood risk in Uckfield, a Source-Pathway-Receptor model was applied. The application of such a model facilitates flood risk mitigation by potentially addressing the source (often very difficult), blocking or altering the pathway and even removing the receptor e.g. by steering development away from risk areas.

Hotspots have been identified where there are repeated flood incidents and/or multiple flood mechanisms along with areas of predicted flood risk. The hotspots identified are:

- High Street
- Framfield Road
- Rocks Park Road
- Grange Road
- Lewes Road
- New Road
- Spring Meadow
- Snatt's Road
- Marklands Road

Within these hotspots a number of drainage assets have been identified. These have been partially mapped as part of the SWMP, however, as many of these are culverts, their exact route is difficult to determine without a specialist survey.

The flood risk history and risk data has been used to draw up three action plans to manage the local flood risk. Each of these action plans operate at a different scale, with the generic action plan relevant to all of Uckfield, the hotspot action plan relevant to the identified hotspots, and the incident specific action plan relating to individual flood incidents reported.

Prioritised actions in Uckfield include:

- asset inspection and documentation of flood risk assets;
- maintenance; and
- detailed flood risk mapping and options appraisals for the hotspots.

1 Office for National Statistics, Neighbourhood Statistics: 2011 Census Key Statistics: Uckfield (Parish)

Contents

Executive Summary ii

1 Introduction 1

1.1 What is a Surface Water Management Plan? 1
1.2 Summary of aims and objectives 1
1.3 Stages of SWMP development 2
1.4 Study area 2
1.5 Sources of flood risk 3

2 Preparation 9

2.1 Partnership approach 9
2.2 Data collation and review 9

3 Strategic Assessment 12

3.1 Flood history 12
3.2 Flood risk 15
3.3 Hotspots 22

4 Planning 34

4.1 The impact of climate change 34
4.2 Using SuDS 34
4.3 Local Development Framework 35
4.4 Constraints on development 35

5 SWMP action plan 39

5.1 Monitoring the action plan 39
5.2 Communicating the action plan 39
5.3 Generic action plan 39
5.4 Hotspots action plan 40
5.5 Incident specific actions 45
5.6 Way forward 45

Appendices I

A Data Quality Score II

B Flood History Table V

C Quantifying Surface Water Flood Risk XXI

D Incident Specific Action Plan XXII

List of Figures

Figure 1-1: Underlying Geology of Uckfield 3
Figure 1-2: Watercourses and topographic catchments in Uckfield 5
Figure 1-3: Conceptualisation of the integration of flooding mechanisms. 7
Figure 3-1: Recorded flood incidents in Uckfield 14
Figure 3-2: Main River flood risk 16
Figure 3-3: uFMfSW in Uckfield 17
Figure 3-4: Frism output for the number of residential receptors affected by surface water flooding at a 1 in 1000 year return period. 19
Figure 3-5: Groundwater flood risk in Uckfield 21
Figure 3-6: Hotspots identified in Uckfield 23
Figure 3-8: Framfield Road hotspot 26
Figure 3-9: Rocks Park Road hotspot 27
Figure 3-10: Grange Road hotspot 28
Figure 3-11: Lewes Road hotspot 29
Figure 3-12: New Road hotspot 30
Figure 3-13: Spring Meadow hotspot 31
Figure 3-14: Snatt's Road hotspot 32
Figure 3-15: Markland Way hotspot 33
Figure 4-1: Drainage Risk Areas in Uckfield 36

List of Tables

Table 2-1: Catchment data and data supplier. 9
Table 2-2: Flood risk modelling and supplier 10
Table 2-3: Flood history data and supplier 10
Table 2-4: Data quality scoring system 11
Table 2-5: Received data and allocated quality scoring 11
Table 3-1: Reported flood sources 13
Table 3-2: Number of receptors in Uckfield at risk from surface water flooding 18
Table 3-3: Flooding hotspots in Uckfield 22
Table 3-4: Properties at risk of surface water flooding at High Street hotspot 24
Table 3-5: Properties at risk of surface water flooding at the Framfield Road hotspot 25
Table 3-6: Properties at risk of surface water flooding at the Framfield Road hotspot 26
Table 3-7: Properties at risk of surface water flooding at the Grange Road hotspot 27
Table 3-8: Properties at risk of surface water flooding at the Lewes Road hotspot 28
Table 3-9: Properties at risk of surface water flooding at the New Road hotspot 29
Table 3-10: Properties at risk of surface water flooding at the Spring Meadow hotspot 30
Table 3-11: Properties at risk of surface water flooding at the Snatt's Road hotspot 31
Table 3-12: Properties at risk of surface water flooding at Markland Way hotspot 32
Table 4-2: Characteristics of drainage risk areas 35
Table 5-1: List of action plans 39
Table 5-2: Hotspot action plan 41

Abbreviations

AStGWF ..... Areas Susceptible to Groundwater Flooding
AStSWF ..... Areas Susceptible to Surface Water Flooding
CCTV ..... Close Circuit Television
DRN ..... Detailed River Network
ESCC ..... East Sussex County Council
ESI ..... Environmental Simulations International Limited
FMfSW ..... Flood Map for Surface Water
GIS ..... Geographical Information Systems
IAS ..... Impermeable Area Survey
IDB ..... Internal Drainage Board
IDD ..... Internal Drainage District
JBA ..... Jeremy Benn Associates
LFRMS ..... Local Flood Risk Management Strategy
LLFA ..... Lead Local Flood Authority
NRD ..... National Receptor Database
PEM ..... Public Enquiry Manager
RMA ..... Risk Management Authority
SFRA ..... Strategic Flood Risk Assessment
SHLAA ..... Strategic Housing Land Availability Assessment
SIRF ..... Sewer Incident Report Form
SSSI ..... Site of Special Scientific Interest
SuDS ..... Sustainable Drainage Systems
SWMP ..... Surface Water Management Plan
uFMfSW ..... updated Flood Map for Surface Water
UTC ..... Uckfield Town Council
WDC ..... Wealden District Council

1 Introduction

1.1 What is a Surface Water Management Plan?

A Surface Water Management Plan (SWMP) is a study to understand the flood risk that arises from local sources, which is defined by the Flood and Water Management Act 2010 as "flooding from surface runoff, groundwater, and ordinary watercourses".

SWMPs are led by a partnership of flood risk management authorities who have responsibilities for aspects of local flooding, including the County Council, District Council, sewerage undertaker, Internal Drainage Boards and other relevant authorities.

Uckfield has been identified as an area potentially at risk of local flooding in the East Sussex Local Flood Risk Management Strategy (LFRMS).

The purpose of a SWMP is to identify what the local flood risk issues are, the potential options to manage the flood risk or the damage caused and who should take these options forward. This is presented in an action plan which lists the partners who are responsible for each option. The action plan, which will be reviewed periodically, should be agreed by all project partners to manage the flood risk identified.

This SWMP was commissioned by East Sussex County Council (ESCC) to investigate the local flood risks across the urban centre of Uckfield, as part of its remit for strategic oversight of local flood risk management in East Sussex, under the Flood and Water Management Act 2010.

1.2 Summary of aims and objectives

The aims and objectives of the Uckfield Stage 1 SWMP are as follows:

1. Establishment of a local partnership
2. The consolidation of a comprehensive flood history for all relevant local flood risk sources
3. The identification, collation and mapping of all available flood data and its availability for future use, including an assessment of the reliability of the data
4. The identification, where possible from the available data, of flood-prone areas
5. The identification of areas where existing data may be missing, compromised or unreliable as a consequence of inappropriate local assumptions, additional local features (such as flood barriers) or for any other reason together with options to improve confidence in the overall outcome
6. The identification of areas where flood risk originates from a combination of sources (for example from rivers and highway run-off)
7. Identification of any proposed or allocated developments within the study area together with the likely impact on flood risk that they may have
8. The preparation of source pathway receptor models for all known incidents, risks, sources and flood-prone areas that have been identified
9. Where appropriate, the identification of any "easy win" opportunities that may become apparent without further detailed risk assessment
10. To provide the relevant Local Planning Authorities (LPA) with data in a form to support the review of strategic flood risk assessments
11. To provide a clear plan for further work that may be considered necessary to manage or improve clarity of the flood risks identified in the report. These should include, but are not limited to, ownership of the actions required for risk mitigation, a timescale for these actions together with indicative capital costs

1.3 Stages of SWMP development

The SWMP has been prepared across a series of three phases, as follows:

- Preparation: Building a partnership approach to local flood risk management through integrated working between the risk management authorities (RMAs). Gathering evidence of, and information about flooding.
- Risk Assessment: An initial assessment to determine the highest risk locations and the key issues upon which the action plan should focus. We will be using publicly available datasets in combination with local records of flooding to inform this assessment.
- Action Plan: Preparation of an action plan that recommends a range of actions for the reduction of flood risk across the SWMP area. The action plan will:
    - outline the actions required and where and how they should be undertaken;
    - set out which partner(s) or stakeholder(s) is/are responsible for implementing the actions and who will support them; and
    - identify priorities.

1.4 Study area

Uckfield is a town in East Sussex, located in the Low Weald of the Wealden District. The estimated population in 2011 was 14,493[2] within an area of 7.5km^2. The surrounding area is predominately rural land with dispersed settlements, with the Ashford Forest immediately to the north of the town.

The underlying geology of the area is a mixture of Lower Tunbridge Wells Sand Formation in the centre, Ardingly Sandstone Member, Grinstead Clay Member and the Upper Tunbridge Wells Sand Formation to the north of the River Uck; with Wadhurst Clay Formation and Ashdown Formation in the south of the River Uck. The majority of Uckfield's bedrock comprises of sandstone and siltstone. This mixture of geology has mixed permeability properties and therefore surface runoff rates will vary depending on localised soil and geology. However, in general Tunbridge Wells Sand Formation is more freely draining than the Ashdown Formation. This is because the siltstones in the Ashdown Formation have smaller pores between grains and therefore are more impermeable.

A small proportion of the study area's bedrock is overlain by superficial deposits, predominately located along the river channel. These superficial deposits include: Gravel, Clay, Silt and Sand. These deposits also have mixed permeability properties and surface runoff rates are likely to vary depending on localised soils and geology. A map of the geology of the study area is shown in **Error! Reference source not found.**.

2 Office for National Statistics, Neighbourhood Statistics: 2011 Census Key Statistics: Uckfield (Parish)

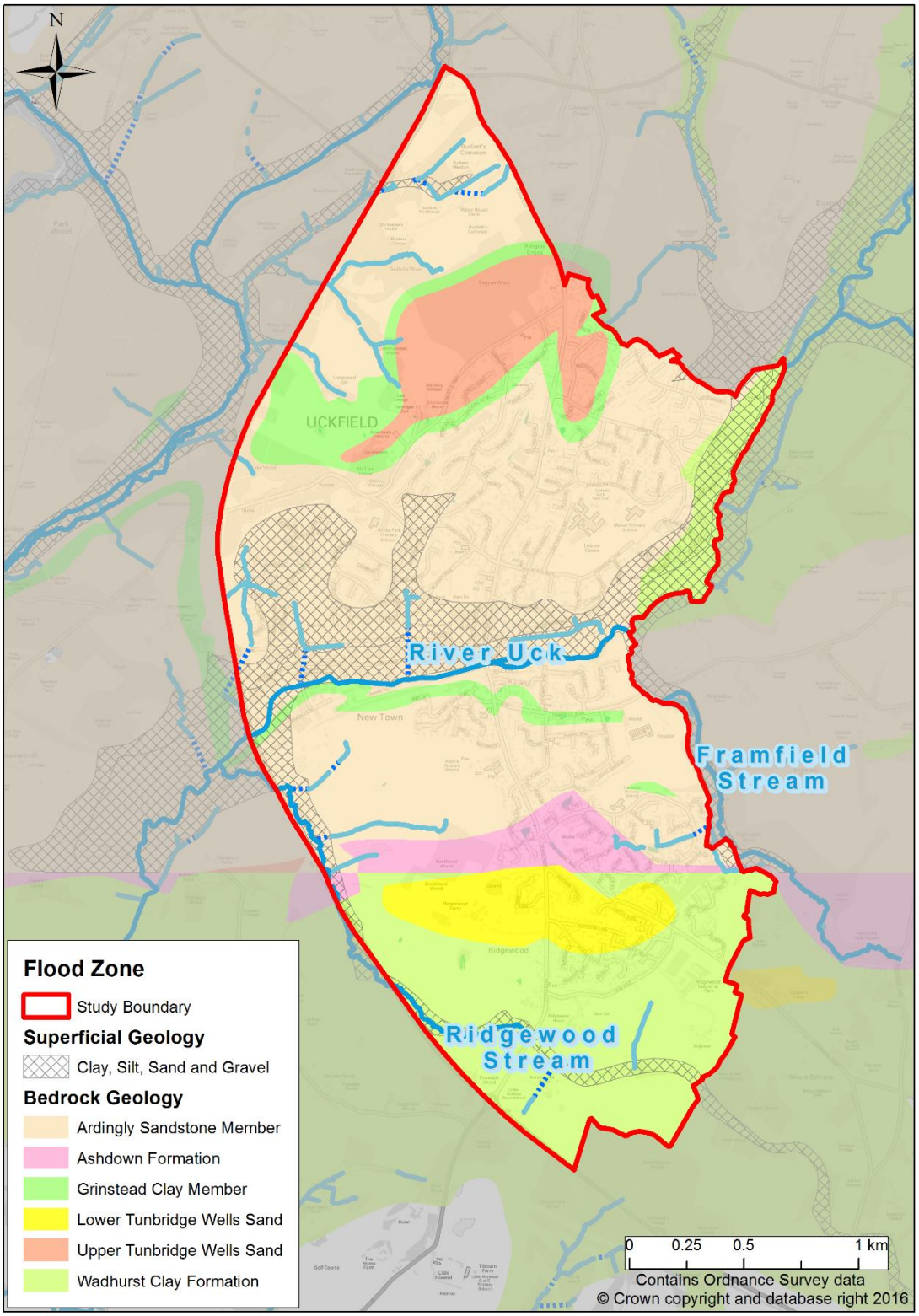


Figure 1-1: Underlying Geology of Uckfield

1.5 Sources of flood risk

This section identifies what the local flood risk issues are from each source, and summarises the flood history and predicted flood risk to the area.

1.5.1 Watercourses

Main river

A main river is any watercourse which is designated as such on the Environment Agency main river map, and for which the Environment Agency has responsibilities and powers. Main rivers are generally larger arterial watercourses but smaller watercourses can be designated if they pose a significant flood risk. Where fluvial or tidal flooding from main rivers is the sole source of flooding, it is the responsibility of the Environment Agency. Actions to mitigate fluvial flooding from main rivers are outside the scope of a SWMP, and are addressed in the Catchment Flood Management Plan and Flood Risk Management Plan, or other local more detailed studies. However, consideration of main river flooding should be made in SWMPs to examine how fluvial flooding interacts with other, local flood sources.

There are three main rivers in Uckfield: the River Uck, Framfield Stream and the Ridgewood Stream. The River Uck flows from north to south along the north-eastern extent of Uckfield, before continuing east to west through the centre of the town to the A22 where the river then flows north to south again. The Ridgewood Stream is a tributary of the River Uck that flows north-west through the south of Uckfield parish before converging with the River Uck outside of the study extent. The Framfield Stream is also a tributary of the River Uck that flows northward through the study area until it converges with the River Uck at the centre of Uckfield. A map showing the location of the watercourses is illustrated in Figure 1-2.

The River Uck converges with the River Ouse outside of the study area.

Ordinary watercourse

An ordinary watercourse is a statutory type of watercourse in England and Wales. They include rivers, streams, ditches and drains which do not form part of a main river. Wealden District Council (WDC) have permissive powers to carry out works on ordinary watercourses. However, only ESCC are responsible for consenting and enforcing works on ordinary watercourses.

The Environment Agency has identified that there is no Internal Drainage Board operating within Uckfield, and that the ordinary watercourses within Uckfield are operated independently by WDC.

Within the Uckfield study area there is a network of ordinary watercourses. These are upstream and downstream extensions or tributaries of the River Uck, Framfield Stream and Ridgewood Stream, as well as the River Ouse which converges with the Uck outside of the study extent. The location of each of the ordinary watercourses and their topographic catchments is illustrated in Figure 1-2.

Currently, no hydrological analysis or hydraulic modelling has been undertaken for any of the ordinary watercourses in Uckfield.

As part of this study, historic maps were analysed to identify any old watercourses that have not been identified by Environment Agency modelling. Through analysis of historic maps, many watercourses were identified under what is now the Bellbrook Industrial Estate. These watercourses are now culverted. Another watercourse was identified upstream of a tributary of the River Uck. This watercourse flows downstream from Upland Close, through a series of culverts, before becoming open adjacent to Scarletts Close, then flowing into a culvert under the Bellbrook Industrial Estate.

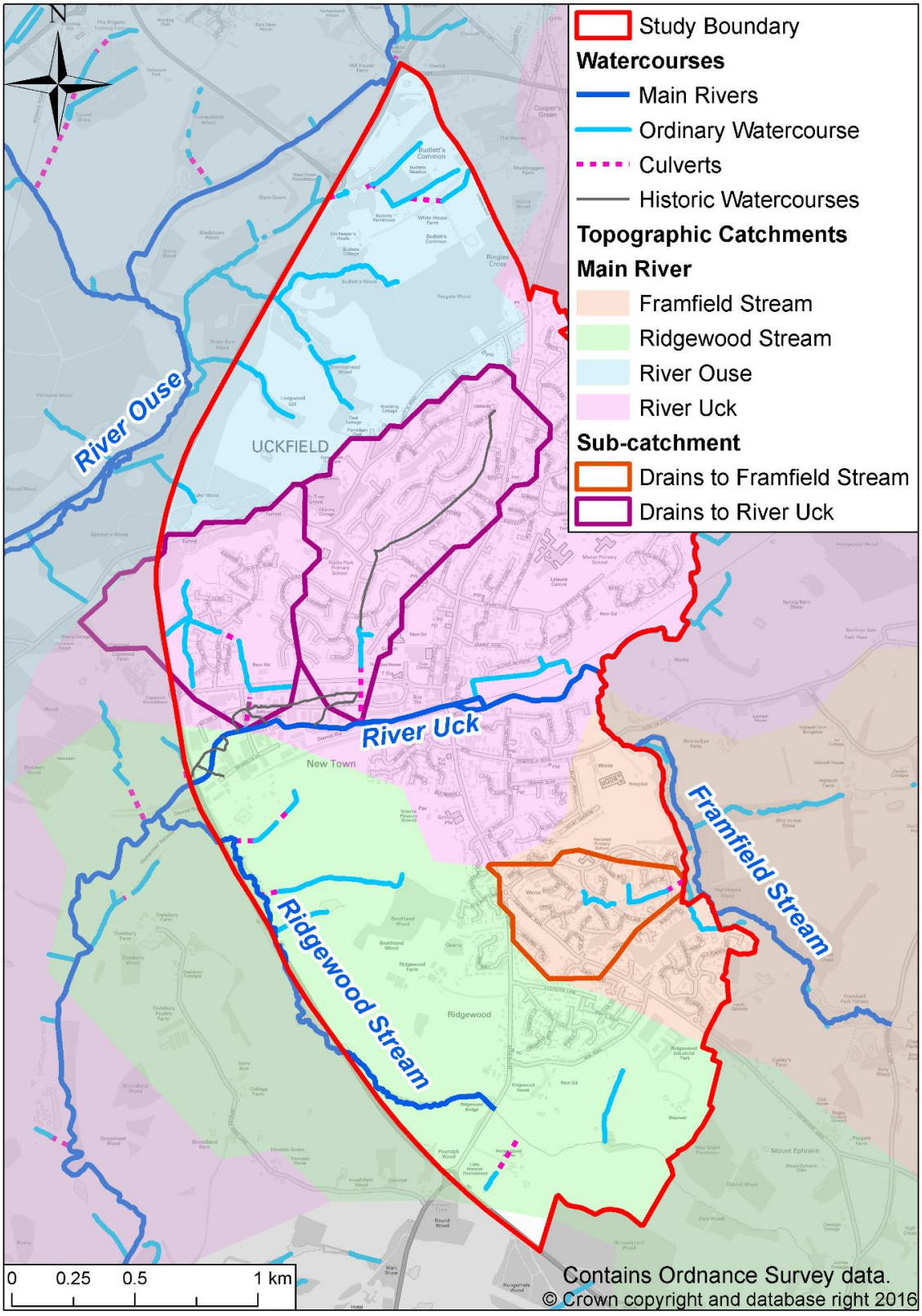


Figure 1-2: Watercourses and topographic catchments in Uckfield

1.5.2 Sewers

Sewers describe the below ground infrastructure for the conveyance of waste water. They are categorised by the type of waste water they remove. The categories include:

- Foul sewer
- Surface water sewer

- Combined sewer

Foul sewers convey sewage from houses and commercial properties to treatment works. Surface water sewers take runoff from domestic premises, yards and roofs, also (under agreement) highway drainage. Combined sewers convey a mix of both foul water and surface water.

Southern Water is responsible for the public sewer networks in this area. As a partner of the SWMP process, Southern Water has provided records of its assets in Uckfield. The historic town centre is served by a combined network, with the north west of the town having a foul only network. The newer developments to the north and south of the town have largely separate sewerage systems, with a foul network to convey industrial and household waste water, and a surface water sewer system to convey pluvial runoff.

This study concentrates mainly on surface water and combined sewer networks. The performance of these drainage networks relates directly to the proportion of rainfall which forms pluvial runoff and the inflow into ordinary watercourses from the surface water drainage network.

Sewer flooding from the foul network is the sole responsibility of Southern Water. However, foul water flooding has been considered in the SWMP to examine interactions between foul sewer surcharge and other, local flood sources. A storm response on a foul water sewer network is often caused by misconnections of surface water to foul sewers. Therefore, addressing the surface water issues in the catchment can, in some cases, help relieve problems on the foul water network.

Overloaded foul and combined sewer networks can result in sewer outflows which can present potential water quality and public health issues. Although water quality is not the principal driver for this project, a SWMP should provide a framework for improving the quality of water within the area. As a result, some actions resulting from the SWMP are most likely to improve the water quality in Uckfield.

1.5.3 Surface water

Surface water flooding occurs when rainfall fails to infiltrate to the ground or enter the drainage system. Ponding generally occurs at low points in the topography. The likelihood of flooding is dependent on not only the permeability of the surface, but also saturation of the receiving soils, the groundwater levels and the condition of the surface water drainage system (i.e. surface water sewers, ESCC highway authority drains and gullies, open channels, ordinary watercourses and SuDS).

The topography of Uckfield is generally steeply sloping towards the River Uck. This topography encourages rapid surface runoff which has high energy and has the power to erode exposed verges and carry soils and leaf litter. Much of this material is then deposited in the highway drainage and impedes drainage, the blocked drainage can exacerbate the surface water flooding problem.

1.5.4 Climate change

There is still considerable uncertainty regarding the localised impact of climate change, but it is likely that the risk of flooding will increase under a climate change scenario. This increased risk could manifest itself as more frequent flooding, increase in flood extent and an increase in flood depth.

Climate change is predicted to increase rainfall intensity in the future by up to 40%[3] under the new range of allowances published by the Environment Agency. This will increase the likelihood and frequency of surface water flooding, particularly in impermeable urban areas such as Uckfield.

1.5.5 Integrated flood risk

In an urban environment such as Uckfield, flooding mechanisms are often closely integrated. The flood mechanisms that operate in Uckfield and how they interact has been conceptualised in Figure 1-3.

[3] https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

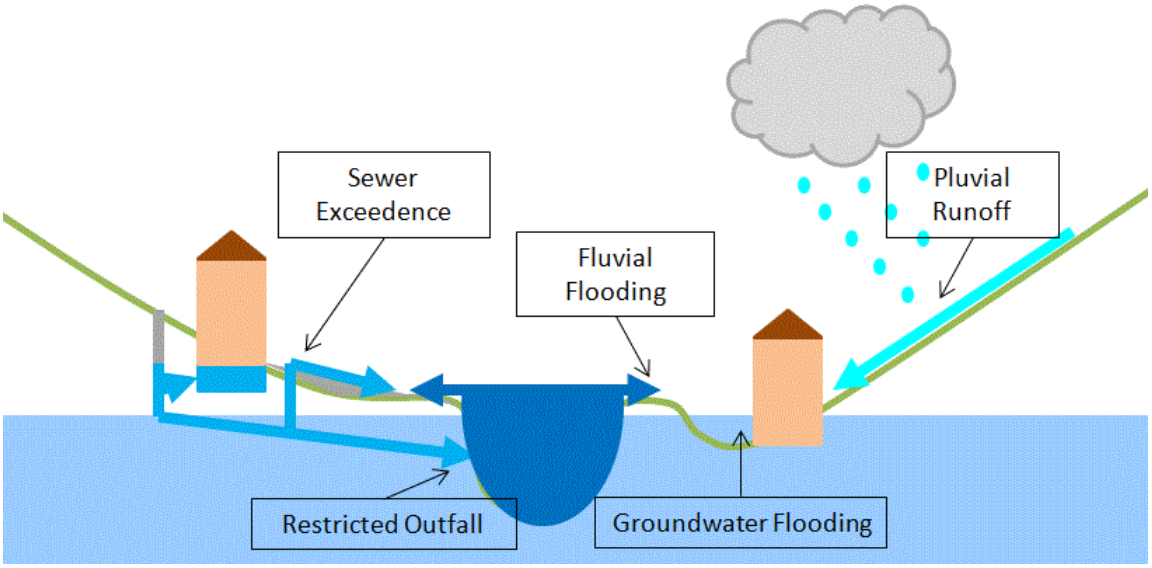


Figure 1-3: Conceptualisation of the integration of flooding mechanisms.

1.5.6 National mapping

The Environment Agency has undertaken a number of national scale modelling and mapping projects in order to understand relative flood risk across England and Wales.

Rivers and the sea

The map of Risk of Flooding from Rivers and the Sea in England and Wales was originally created on a national scale. The mapping is continually updated as more detailed, local flood mapping studies are undertaken by the Environment Agency. As discussed in section 1.5.1, flooding from fluvial (main river) sources or the sea alone is not within the scope of a SWMP, but this mapping can be useful to examine integration between fluvial and flooding from local sources. As there are three main rivers in Uckfield the map of Risk of Flooding from Rivers and the Sea is applicable to this SWMP.

Surface water

The sources of information available from the Environment Agency relating to the identification of potential surface water flood risk in Uckfield are the:

- Areas Susceptible to Surface Water Flooding (AStSWF) - Since July 2009, these maps have been available to Local Resilience Forums and Local Planning Authorities, and provided a starting point in understanding the broad areas where surface water flooding is likely to cause problems.
- Flood Maps for Surface Water (FMfSW) - these followed on from the AStSWF maps and provide a more realistic representation than the AStSWF maps in many circumstances.
- Updated Flood Maps for Surface Water (uFMfSW) – The Environment Agency have produced an updated version of the previous Flood Maps for Surface Water (FMfSW) dataset. The uFMfSW is the result of a more refined modelling methodology which aims to provide a more accurate representation of surface water flood risk across England and Wales.

As the updated Flood Map for Surface Water is the most up to date and detailed dataset available, this will form the basis of this study's surface water flood risk assessment.

Groundwater

The Areas Susceptible to Ground Water Flooding (AStGWF) map was provided by the ESCC. The AStGWF are identified in a 1 kilometre square grid of England and Wales. It shows the

proportion of each grid square where the geological and hydrogeological conditions show where groundwater might emerge.

The Environmental Simulations International Limited (ESI) Groundwater Flood Risk Map provides classification of groundwater flooding risk in four categories in a 50 metre grid of England and Wales. The risk classifications of negligible, low, moderate and high represent the likelihood and severity of flooding resulting from extreme groundwater levels within an estimated 1 in 200 year return period.

ESCC also have access to groundwater flood risk data from the British Geological Society (BGS) which was licenced to JBA for the duration of this project. This data is also mapped at a 50 metre grid resolution. The risk classifications are; limited potential for groundwater to occur, potential for groundwater flooding of property situated below ground level and potential for groundwater flooding to occur at the surface.

After comparing the ESI and BGS data, the BGS data has been used for this study as it was decided that this map better represented the risk in Uckfield.

2 Preparation

2.1 Partnership approach

Within Uckfield, flood risk is managed by multiple agencies, including the County Council, the District Council, the Environment Agency and Southern Water. Often, urban flooding is caused by multiple mechanisms, which are the responsibility of different organisations. Therefore, a holistic approach is required to solve and / or manage a flooding issue. As such, partnership working is a key emphasis in East Sussex's SWMP process. Although not a risk management authority, Uckfield Town Council have also been consulted with throughout the project. Their local knowledge has been a valuable input to the SWMP.

To fully understand flood risk in Uckfield, the SWMP collated all the available records of flood history and modelling of flood risk. This data has been collected from the project partners. The strategic assessment has been in part informed by this data. The assessment of data culminated with an action plan of next steps. This action plan attributes specific project partners as owners of the action. Again, the importance of partner engagement is crucial here so that agreed actions are followed through to completion.

The partnership approach also enables effective resource allocation and efficiencies to be achieved by sharing common duties between co-operating agencies.

2.1.1 Project partners

For the purpose of this project, partners are defined as organisations with responsibility for the decision that needs to be taken to manage flood risk. The partners involved in the Uckfield SWMP are:

- East Sussex County Council
- Wealden District Council
- Uckfield Town Council
- Environment Agency
- Southern Water

The project partners have supplied the data to inform this SWMP and have been attributed as action owners in Section 5: the SWMP action plan.

2.2 Data collation and review

Collectively, ESCC and JBA Consulting received data from each key partner in various forms.

The majority of the data was supplied as GIS points with associated attributes. As mapping is an effective method for communicating the risk, it was decided to keep the data in this format and add to the records with new data collected from other sources. The geo-spatial element of the data allowed for sensibility checking; for example, if fluvial points are located near a watercourse.

The quality of this data was assessed and is summarised according to a scoring system which is based on the scoring from the SWMP technical guidance[4]. A full list of data and its score is located in Appendix A. In summary, catchment data has been provided by the East Sussex County Council and the Environment Agency. A list of catchment data is displayed in Table 2-1.

Table 2-1: Catchment data and data supplier.

East Sussex County Council	Environment Agency
Bedrock and superficial deposits geology (under licence from BGS)	National Receptors Database (NRD)
	Main river centreline
Gully point locations	Detailed River Network (DRN)
	Aquifer designation

4 Defra (2010) Surface Water Management Plan Technical Guidance

The Environment Agency has produced flood risk mapping from groundwater, surface water and fluvial sources. The flood risk mapping provided for this project is listed in Table 2-2. Southern Water undertakes modelling to understand the flood risk from its sewerage network and a model has been developed covering Uckfield. However, it does not consider interactions with surface water and has not been used as part of the Uckfield SWMP because flooding from sewers alone is the responsibility of Southern Water. It would, however, be useful to make use of this model where more detailed SWMPs are required and it could form the basis of an integrated model.

Table 2-2: Flood risk modelling and supplier

Environment Agency	East Sussex County Council
Areas Susceptible to Ground Water Flooding	ESI Groundwater flood risk map
Updated Flood Map for Surface Water: 30, 100 and 1000 year return periods	BGS groundwater flood risk map
Risk of Flooding from Rivers and the Sea: 100 year and 1000 year return period	

ESCC as LLFA maintains a flood incident register outlining the location, data and description of reported flooding across the County. This data was utilised in the preparation of this SWMP. In addition, flood history records were provided to ESCC and JBA Consulting by the project partners. A list of flood history data sources is shown in Table 2-3.

Table 2-3: Flood history data and supplier

Source	Data
ESCC Highways	Highways Public Enquiry Manager (PEM) register
Fire and Rescue	Fire and Rescue Data (ADHOC2)
Southern Water	Sewer Incident Report Form (SIRF)
East Sussex County Council	ESCC Flooding Reports (CRM)
Wealden District Council	WDC Flooding Reports

A list of all data received during the Uckfield SWMP and the data quality score assigned is available in Appendix A.

2.2.1 Data quality scoring

Uncertainty can arise throughout any risk assessment and risk management process. Types of uncertainty can include:

- Model - models may not be accurate or complete
- Environmental - natural variability may not represent conceptual model assumptions
- Knowledge - scientific data may be incomplete
- Sample - sample measurements may be inaccurate or the validity may be queried
- Data - data may be extrapolated or interpolate from other sources.
- Scenario - scenarios might not fully describe the problem

Understanding the uncertainty is an important part of the SWMP process, as decisions are made based on the findings. It is important that all project partners and stakeholders are clear about what the limitations of the findings are before making decisions on the level of investment (resources and funding) that may be needed in the future.

The SWMP technical guidance emphasises the importance of understanding the quality of the data used to inform an SWMP. The guidance presents a scoring system to rank the data according to its quality. For Uckfield Stage 1 SWMP, this scoring system has been modified. The modified scoring system (in Table 2-4) was required because the majority of the data received a quality score of 2 and assumptions made with the data scored 3. This made it difficult

to distinguish between the value of these data sources. Therefore, a refined scoring system was developed to provide a more informative data score.

Table 2-4: Data quality scoring system

Data Quality Score	Description	Sub-category
1	Best possible, no better data available	N/A
2	Data with known deficiencies	2a) the known deficiencies are missing or duplicated data
		2b) the known deficiencies are missing and duplicated data
3	Assumption based on available data	3a) Assumptions confirmed with local data
		3b) Assumed data confirmed by cross referencing with other records
		3c) Assumed data based on a single dataset
4	Educated guess based on experience	N/A

Under this scoring system all supplied data receives a data quality scoring system of 1 or 2. Information that has been assumed from the data received scores of 3 or 4. The sub-categorisation of the data score distinguishes the relative quality of the data.

This confidence scoring system can be applied to the received data, the source-pathway-receptor model and the selected hotspots.

The flood history data used to inform this SWMP has been scored according to the data which was provided, and that which was missing. Table 2-5 lists the recorded flood incident data provided to inform the Uckfield SWMP and the data quality score associated with it.

Table 2-5: Received data and allocated quality scoring

Data	Data Quality Score
ESCC record of flooding (CRM)	1
ESCC Highways PEM register	2a
Southern Water SIRF	2a
Wealden District Council	2a
East Sussex Fire & Rescue	2b

3 Strategic Assessment

The Stage 1 SWMP for Uckfield provides a high level assessment of the local flood risk within the study area. The risk assessment details the level of risk across the study area, allowing for the identification of areas most susceptible and vulnerable to flooding. The assessment utilises flood incident records, together with flood risk maps.

3.1 Flood history

Flood incident data provided geographical information on where flooding has been recorded. The data provided by the partners was standardised using the Source-Pathway-Receptor model. A full list of the collated flood history is available in Appendix B.

3.1.1 Source-Pathway-Receptor model

The Source-Pathway-Receptor model is a concept that can provide an understanding of all sources of flood hazard. It is particularly useful in this context as it can be used to generalise the data gathered from numerous sources.

- Source - the origin of flood water
- Pathway - a route or means by which a receptor can be affected by flooding
- Receptor - something that can be adversely affected by flooding

Having applied the Source-Pathway-Receptor model it is possible to mitigate the flood risk by addressing the source (often very difficult), block or alter the pathway and even remove the receptor e.g. steer development away from risk areas.

3.1.2 Applying the Source-Pathway-Receptor model

The information contained within each flood history table varies between sources of data. Data collected by ESCC, WDC Council and Southern Water contain specifics on the flood source, the pathway and the receptor. In these instances applying the Source-Pathway-Receptor model can be informed completely from recorded data and requires no assumptions.

Data from ESCC Highway Authority Public Enquiry Manager (PEMs) reports always document the receptor and includes a description which often (but not always) explains the flood source and pathway. Whereas data from the emergency services lists the receptor and occasionally the flood source but not the flood pathway. Applying the source-pathway-receptor model to this data requires an element of professional judgement, which can be made based on the location of the flood point and through experience.

Cross referencing missing data with local, complete data can reduce the uncertainty surrounding assumptions. As a result, the confidence in assumptions can vary.

3.1.3 Historic flood sources

The flood history showed that there are a number of flood sources which impact Uckfield. The locations of incidents are distributed across the town, but there are reoccurring issues in some areas, particularly on High Street / Bell Lane in the town centre, Eastbourne Road / New Road to the south of Uckfield, and Snatt's Road to the north of Uckfield. The flood sources reported and areas impacted are summarised in Table 3-1, this also describes the average number of incidents at one location caused by the flood source.

Table 3-1: Reported flood sources

	Source	Mechanism	Geographic distribution	Area of concentration	Average freq.
Frequent	Surface water – highway drainage	Surface water exceed drainage capacity, typically related to blockage	Across the study area	High Street, Bell Lane, Eastbourne Road, Snatts Road	High (5+)
	Unknown	Not documented	Generally north of the River Uck	High Street, Olive Meadow, Tainter's Brook	Mid (3-4)
	Surface water – pluvial runoff	Rainfall rate exceeding infiltration rate or drainage capacity	Across the study area	Snatt's Road, Lewes Road, Framfield Road, Downsview Crescent	High (5+)
	Foul sewer – hydraulic overload	Pipes have limited capacity and all sewers will likely be overwhelmed depending on the storm return period	Generally north Uckfield	Manor Way, High Street, Hempstead Garden and Birling Way	Low (1-2)
	Groundwater	Water table raising above ground level	Generally, towards the north or south of Uckfield	Snatt's Road, Pipers Field	Low (1-2)
	Surface water – private drainage	Broken or blocked drainage not removing water	Across the study area	London Road, Baker Street	Low (1-2)
Rare	Surface water – drainage ditches	Exceeded capacity due to sediment build up	Across the study area	Heron Close, The Jays, London Road, Batchelor Road	Low (1-2)

Where the average frequency is low, it is assumed that the maintenance or capacity issues that occurred are likely to have been addressed post-event. However, the higher frequency surface water flooding events related to highway drainage or pluvial runoff are reoccurring and, therefore, are priority local flood sources in the Uckfield study area.

3.1.4 Mapping the flood history

Records of each recorded flood incident are depicted by coloured points in Figure 3-1. The Source-Pathway-Receptor model was applied to each point and the total number of repeated flood incidents was tallied. This enabled the point to be thematically mapped. The colour of the flood point depicts the flood source and asset affected, whereas the size of the flood point depicts the frequency of the flood incidents recorded at that location, from the same source.

The recorded flooding is scattered across the study region. However, there are clusters of historic flooding centred on the River Uck. These flood incidents are not often attributed to fluvial sources, rather flooding appears to be the result of a number of sources, which highlights the integrated nature of flooding in Uckfield.

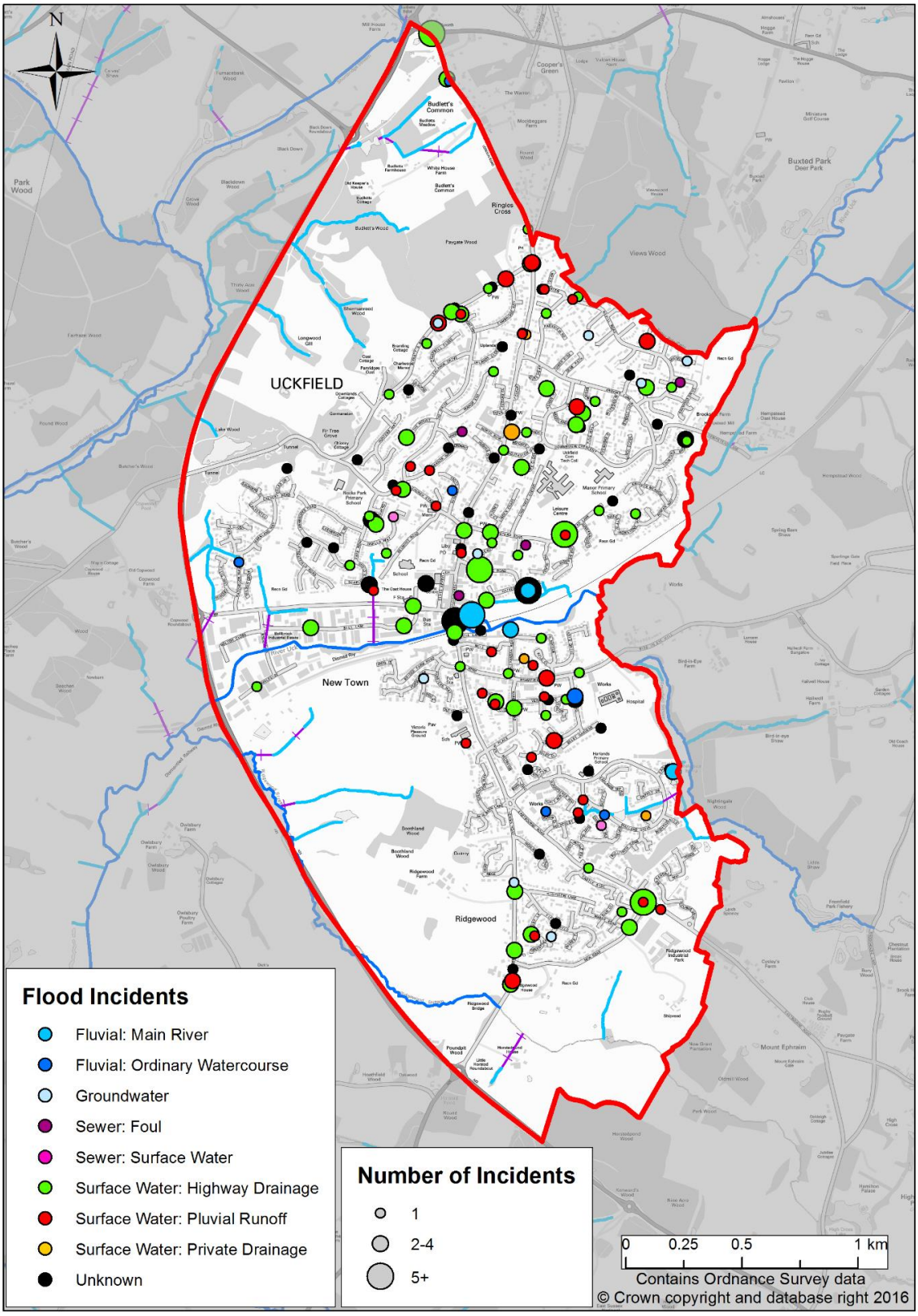


Figure 3-1: Recorded flood incidents in Uckfield

3.2 Flood risk

The assessment of flood risk utilised the Environment Agency's existing risk mapping as local flood risk modelling was beyond the scope of this Stage 1 SWMP. The flood risk considered includes flooding from main rivers, surface water and groundwater.

3.2.1 Main river

Environment Agency Flood Zone data for Zones 2 and 3 was utilised in the analysis (Figure 3-2). Main river risk is outside the scope of a SWMP, and therefore no detailed assessment of this risk has been made. Nevertheless, it is important to consider that fluvial flooding could interact with other local flood sources at this location. This has been reflected in the analysis of the hotspots (section 3.3).

The main river flood risk is concentrated along the River Uck, Framfield Stream and Ridgewood Stream. Although there is a flood defence for the River Uck off the High Street, there are no areas shown to be benefitting from flood defences. On the Ridgewood Stream and Framfield Stream, the main areas of risk are outside of the urban area.

3.2.2 Surface water

As there is no detailed local modelling available for Uckfield, the data that has been used to inform this analysis is the uFMfSW (Figure 3-3).

The uFMfSW was not designed to assess the risk associated with ordinary watercourses or drainage channels. However, by highlighting low points and valleys in the topography some risk from ordinary watercourses is indirectly accounted for.

The surface water flood risk in Uckfield is most noticeable around Manor Way, Church Street and Rocks Park Road area. Other notable areas of surface water flood risk are Framfield Road, High Street, Uckfield Technical College and Grange Road. The number of receptors predicted to be at risk have been calculated in Section 3.2.3.

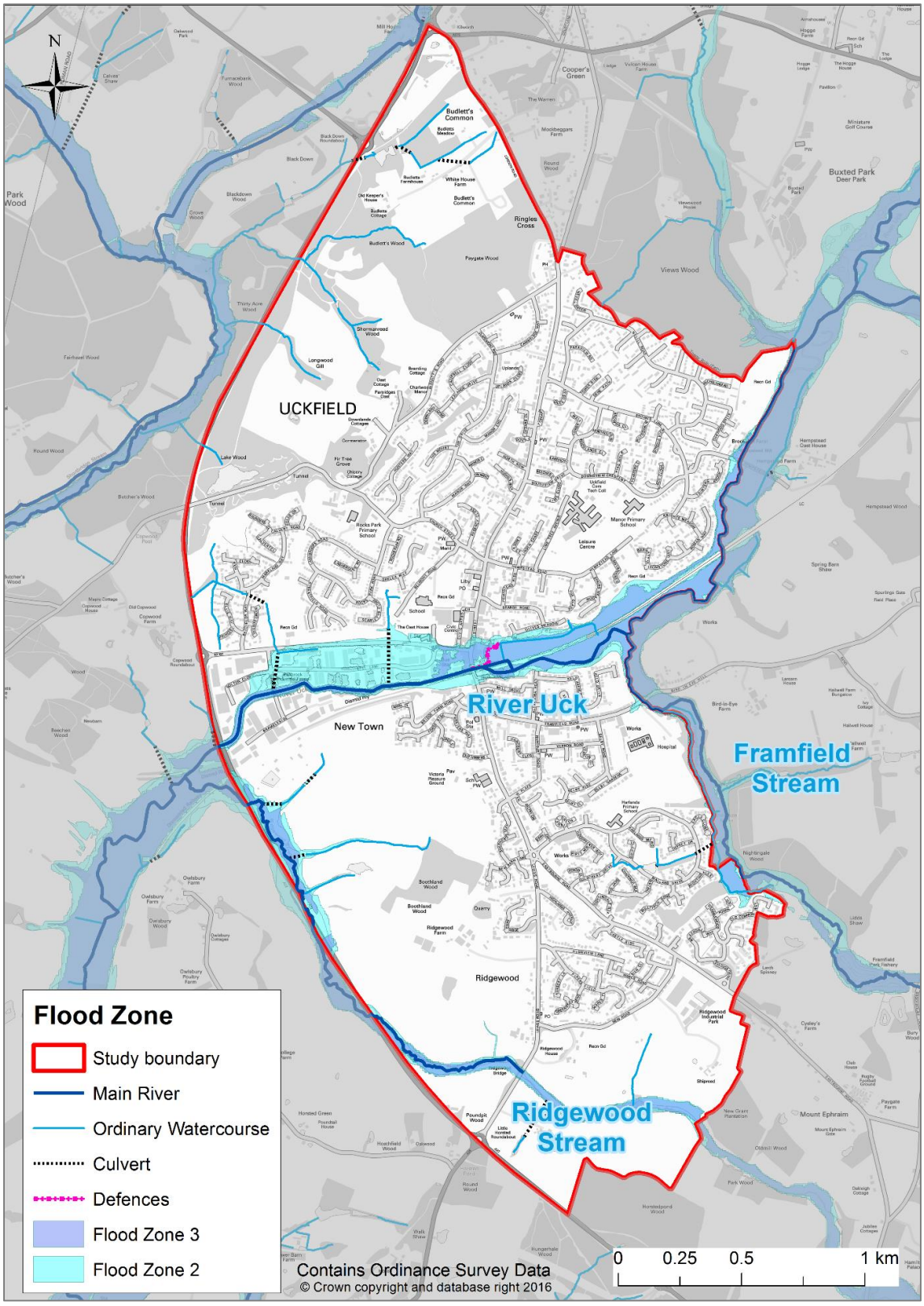


Figure 3-2: Main River flood risk

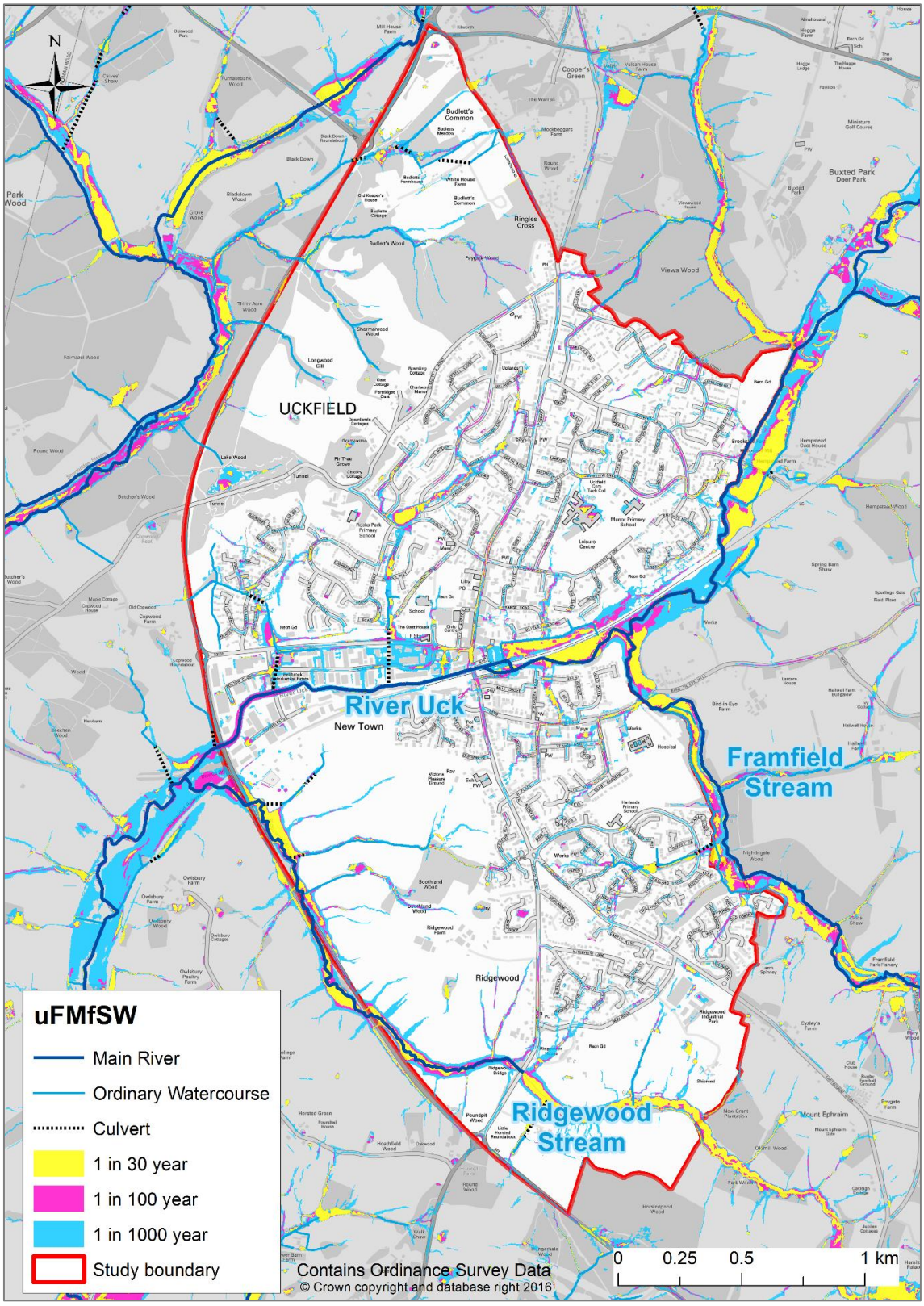


Figure 3-3: uFMfSW in Uckfield

3.2.3 Quantifying surface water flood risk

Using JBA's impact analysis software, Frism (Flood Risk Metrics), we have quantified the predicted surface water flood risk to property in Uckfield. The analysis has been based on the national scale updated Flood Map for Surface Water (uFMfSW). The analysis includes all available return periods which are 1 in 30 year, 1 in 100 year and 1 in 1000 year. The analysis follows the methodology used for the Extended Flood Risk Pack for ESCC, which JBA completed in 2012 which is available for reference in Appendix C.

The analysis covers the whole study area, divided into a 250 metre grid, and the receptors were extracted from the National Receptor Database (NRD). Table 3-2 displays the receptor count at risk from surface water in Uckfield as a whole. The receptors have been divided into three categories: dwellings, critical infrastructure and emergency responders. In this instance, critical infrastructure receptors include but are not limited to; educational institutions, care homes and vital services such as electricity sub-stations and water treatment works; whereas emergency responders include ambulance stations, fire stations and police stations. For the full list see Appendix C.

Table 3-2: Number of receptors in Uckfield at risk from surface water flooding

Return Period	Critical Infrastructure (NRD)	Dwellings (NRD)	Emergency responders (NRD)	Total
30	0	110	0	**110**
100	4	335	1	**340**
1000	8	1209	2	**1219**

Analysis indicates the majority of risk is to residential dwellings, with 1209 homes predicted to flood during a 1 in 1000-year event. All of these dwellings are classified as ground floor properties, but there is no information available on the threshold of the buildings. There are at least four critical infrastructure receptors predicted to flood in the 1 in 100-year event, and this rises to eight in a 1 in 1000-year return period event. No emergency responders are predicted to flood during the 1 in 30-year return period event, however at least one (fire station) is to flood in the 1 in 100-year return period event, with two (fire station and police station) flooding in the 1 in 1000 year return period event.

This assessment indicates that surface water flood risk to properties is high within Uckfield. To better understand the areas of greatest risk, Figure 3-4 shows the surface water flood risk to dwellings in a 1 in 1000 year return period event. In this figure, purple and dark blue colours represent a greater concentration of receptors predicted to be at risk.

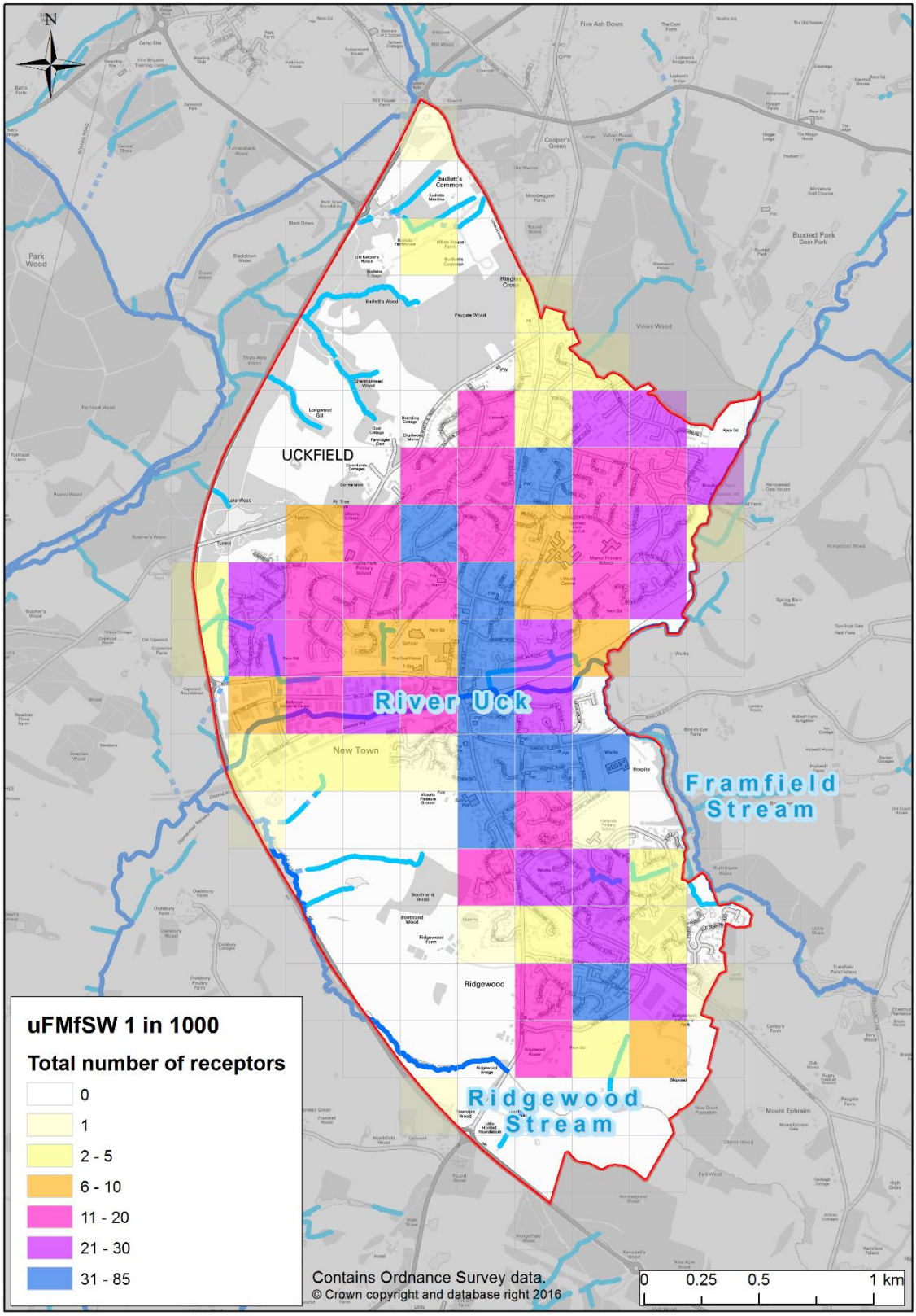


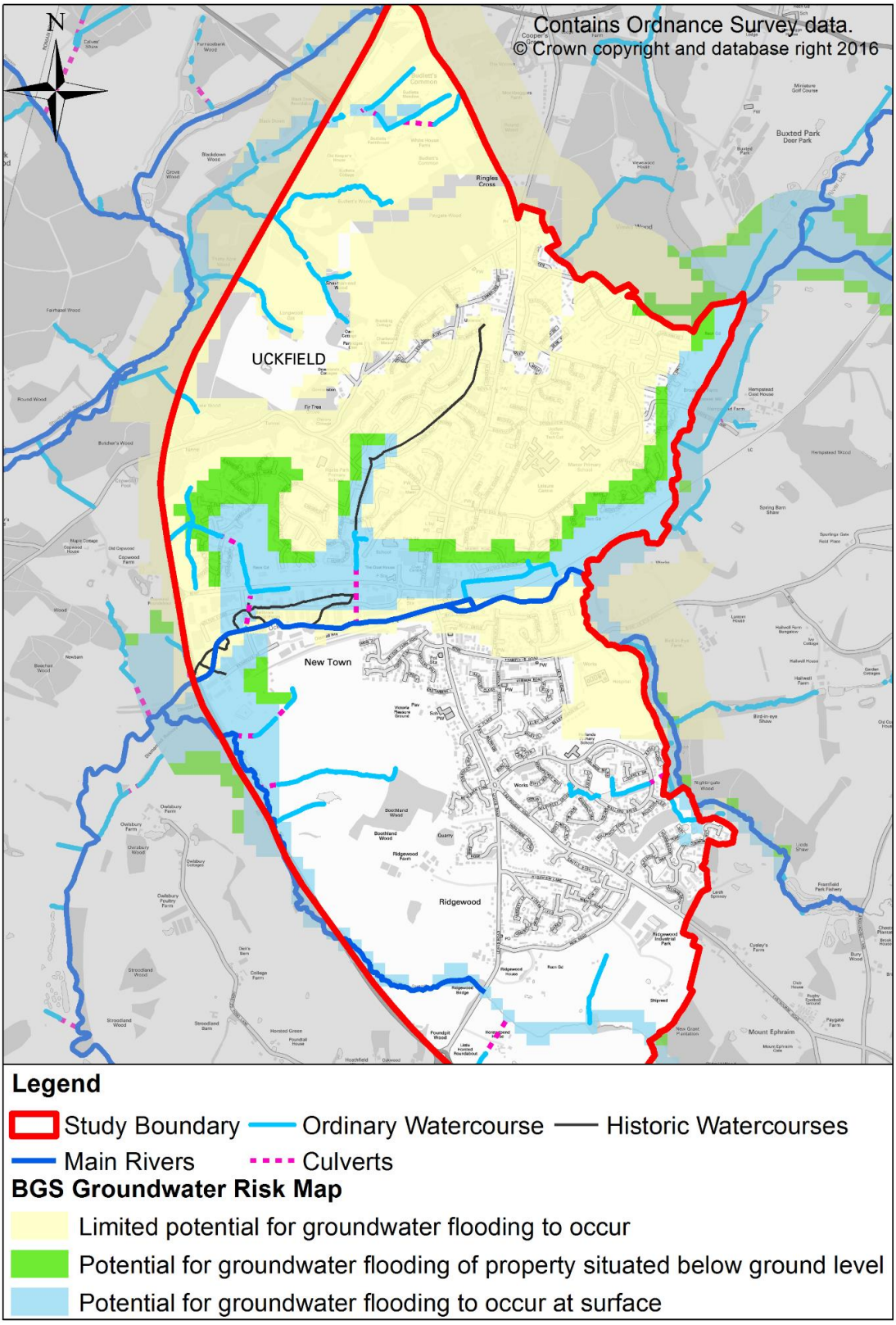
Figure 3-4: Frism output for the number of residential receptors affected by surface water flooding at a 1 in 1000 year return period.

Figure 3-4 highlights a number of cells where there are 11 or more properties at risk of surface water flooding during a 1 in 1000-year event. Particular areas at risk follow the River Uck through the centre of Uckfield, as well as along the High Street and the adjoining Lewes Road. It should be considered that flow restrictions at structures on ordinary watercourses are not included in the uFMfSW. Surface water flood risk can therefore be underestimated upstream of structures. The analysis also picks out that there are a high number of properties at risk of surface water flooding over the majority of urbanised Uckfield study area. The areas outside of surface water risk are areas of higher topography, such as those to the north of the study area. The area of low risk to the south west of Uckfield is greenfield and therefore would not be picked up in the Frism analysis.

The designation of the flooding hotspots has been informed in part by the outcome of this assessment, but more weight has been given to the flood history and local knowledge where flood risk has been realised.

3.2.4 Groundwater

The flood risk information used to inform this analysis was the BGS fifty metre resolution groundwater flood risk map, shown in Figure 3-5 indicates that the groundwater flood risk to Uckfield is focused on the fluvial corridors but that there is 'limited potential from groundwater flooding' across the northern half of the study area. Reported flood incidents suggest that groundwater flooding has occurred even in areas indicated to have limited potential of groundwater flooding. In Uckfield, the areas predicated to be at greatest risk include Markland Way, Rocks Park Road and Olives Meadow.



Licence No. 2013/140SuDS British Geological Survey © NERC & derived in part from Source Protection Zone data provided under licence from the Environment Agency © Environment Agency 2012.

Figure 3-5: Groundwater flood risk in Uckfield

3.3 Hotspots

The flood history points have been overlaid with predicted flood risk mapping. Together, the reported flood incidents and predicted flood risks identify clusters where the risk is concentrated. In this process, more weight has been given to the flood history, as this is where the flood risk has been realised.

There are nine hotspots identified in Uckfield. These have been ranked in terms of priority. The prioritisation process has considered the vulnerability of the receptor flooded (including consideration of internal or external flooding) and the frequency of flooding, in line with ESCC's policy in the Local Flood Risk Management Strategy. In addition, the prioritisation process has considered the risk of flooding from surface water storm event (based on the uFMfSW), and the depth of flooding recorded (where this information was available).

The hotspot pinpoints a location where flooding has or is likely to occur. However, it is important to consider that all activities in the sub-catchment draining to that point can impact the likelihood of flooding at the hotspot location.

A list of flooding hotspots, their priority ranking and a summary description of the flood risk at the location is available in Table 3-3. The hotspot areas are shown in Figure 3-6. Further detail on the hotspots is available in section 3.3.1 onwards. For each hotspot the number of properties at risk from surface water has been counted. The values reported include the hotspot and the surrounding area which is marked in pink on each of the maps in section 3.3.1 onwards.

Table 3-3: Flooding hotspots in Uckfield

Name	Rank	Description	Source
High Street	1	Internal flooding of commercial units and curtilage. 21 incidents have been reported	Integrated surface water and fluvial
Framfield Road	2	4 incidents of internal property flooding in 2014. 2 incidents of highway flooding	Integrated fluvial/surface water drainage and pluvial runoff
Rocks Park Road	3	2 incidents of internal property flooding and 1 incident of curtilage flooding in 2010. 1 incident of highway flooding	Surface water drainage
Grange Road	4	1 incident of internal property flooding. 4 incidents of highway flooding	Surface water drainage and pluvial runoff
Lewes Road	5	1 incident of internal property flooding, 2 incidents of curtilage flooding and 7 incidents of highway flooding	Surface water drainage and pluvial runoff
New Road	6	1 incidents of internal property flooding, 2 incidents of curtilage flooding, 4 incidents of highway flooding	Surface water drainage
Spring Meadow	7	1 incident of internal property flooding, 2 incidents of curtilage flooding and 6 incidents of highway flooding	Surface water drainage and pluvial runoff
Snatt's Road	8	3 incidents of internal property flooding, 2 incidents of curtilage and 2 incidents of highway flooding	Surface water drainage
Markland Way	9	1 incident of curtilage flooding. Area to be at high risk of flooding	Surface water pluvial runoff

The top eight hotspots all had surface water flooding occur when highway drainage and private drainage had malfunctioned. This highlights the importance of a joined up maintenance programme and awareness of drainage assets.

The hotspots often highlight areas where flood mechanisms are combined, such as the fluvial/surface water/unknown interaction of the two top priority hotspots of the High Street and Framfield Road. For some of the flood history records, source was not determined as a single flood mechanism and therefore was classified as 'unknown'. This demonstrates the importance

of considering how flood pathways interact. Considering one flood mechanism in isolation may result in a limited understanding of the interactions of flooding from different sources and pathways.

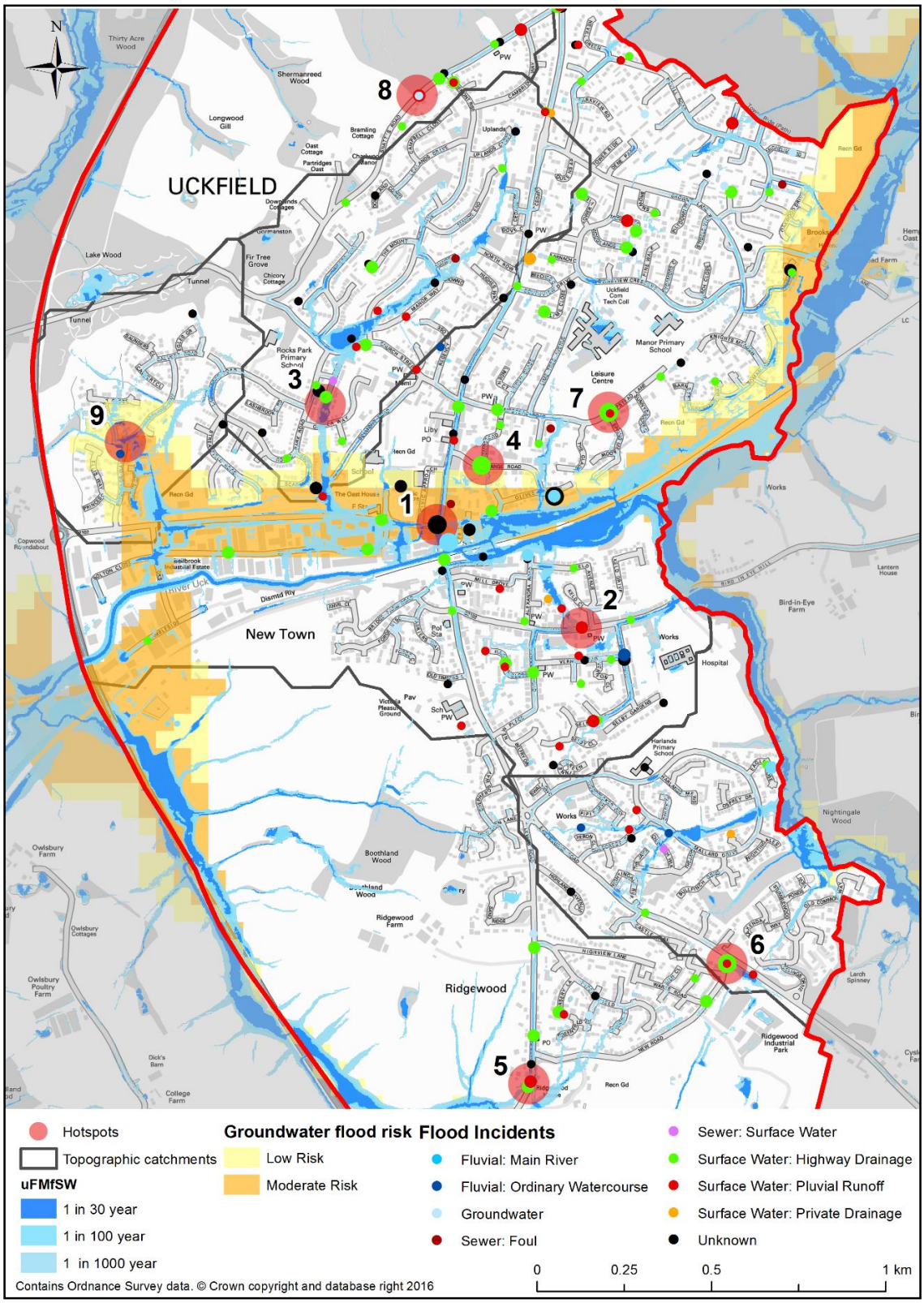


Figure 3-6: Hotspots identified in Uckfield

Despite there being a number of flood incidents recorded outside of the hotspot areas, they have been discounted as flood hotspots. The reason for this is that the analysis has found that the flooding has not occurred at the same location on more than two occasions, or that the

flooding has not affected the buildings within the area internally. The majority of these incidents are related to highway drainage malfunctions or hydraulic overload due to blockages.

The area of high surface water flood risk just north of Church Street was also not included as a hotspot. This area is an topographical low point, where surface water is predicted to collate. As the area is currently an open space, there are no receptors at this location.

3.3.1 High Street

High Street is the highest priority hotspot in Uckfield, with the greatest number of properties at risk. WDC has identified this area to have flooded at least twice in the last eight years. The flooding has impacted a number of commercial properties along High Street. Flooding of High Street creates significant disruption as it is the only crossing point of the River Uck in the town.

The main sources of flooding within this area are fluvial (from the River Uck) and surface water (caused by pluvial runoff and exceedance of drainage capacity). The flood incidents recorded are shown in Figure 3-7. The last fluvial flood in Uckfield was in 2000 and resulted in the flooding of High Street. The most recent surface water events were in 2007 and 2010.

A fluvial flood defence has since been installed in the supermarket car park off River Way. It was observed on the site visit that this flood defence is a small ramp and wall less than a metre high. This defence is designed to protect against a 1 in 50-year flood event. In addition, a number of the commercial properties on the High Street adopted Property Level Protection after the 2010 event to increase their resilience to surface water flooding.

There is a complex network of highway drainage and surface water sewers at the lower end of the High Street, which discharge to the River Uck via Bell Lane. The mill on the River Uck constricts fluvial flows during flood events. This can cause backing up and rising water levels upstream of the mill, which in turn can lock the surface water sewer and highway drainage outfalls to the river, impeding their discharge. This can lead to localised surface water flooding as there is not enough capacity in the drainage to remove the surface water.

There is an ongoing highway improvement scheme which includes sustainable drainage in the form of tree pits. In preparation for this scheme, ESCC commissioned a CCTV survey of the existing drainage infrastructure at the southern end of the High Street which identified that many of the surface water drains are fractured or cracked. Later phases of the improvement works will focus on the bus station on Bell Lane.

The uFMfSW predicts a surface water flow path down High Street to the River Uck. The Frism count for properties at risk of surface water flooding is shown in Table 3-4.

Table 3-4: Properties at risk of surface water flooding at High Street hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	13	53	147

The site visit confirmed this natural flow path, as the topography of High Street is very steep and sharply falls towards the River Uck. However, the surface water drainage system does not follow this natural flow path as it is routed westwards onto Bell Lane. This is hydraulically inefficient.

Many of the sources of flooding within this area are unknown, due to many of the descriptions of the flood incident data being recorded as a request for sandbags. It is unknown whether these sandbags were requested following a fluvial flood warning or were requested to protect from surface water runoff.

The main receptors of flooding are the highways junction of High Street and B2102, and multiple commercial properties (internal and external) within the area. The road here is lower and forms a natural pond for surface water runoff (as shown in Figure 3-7)

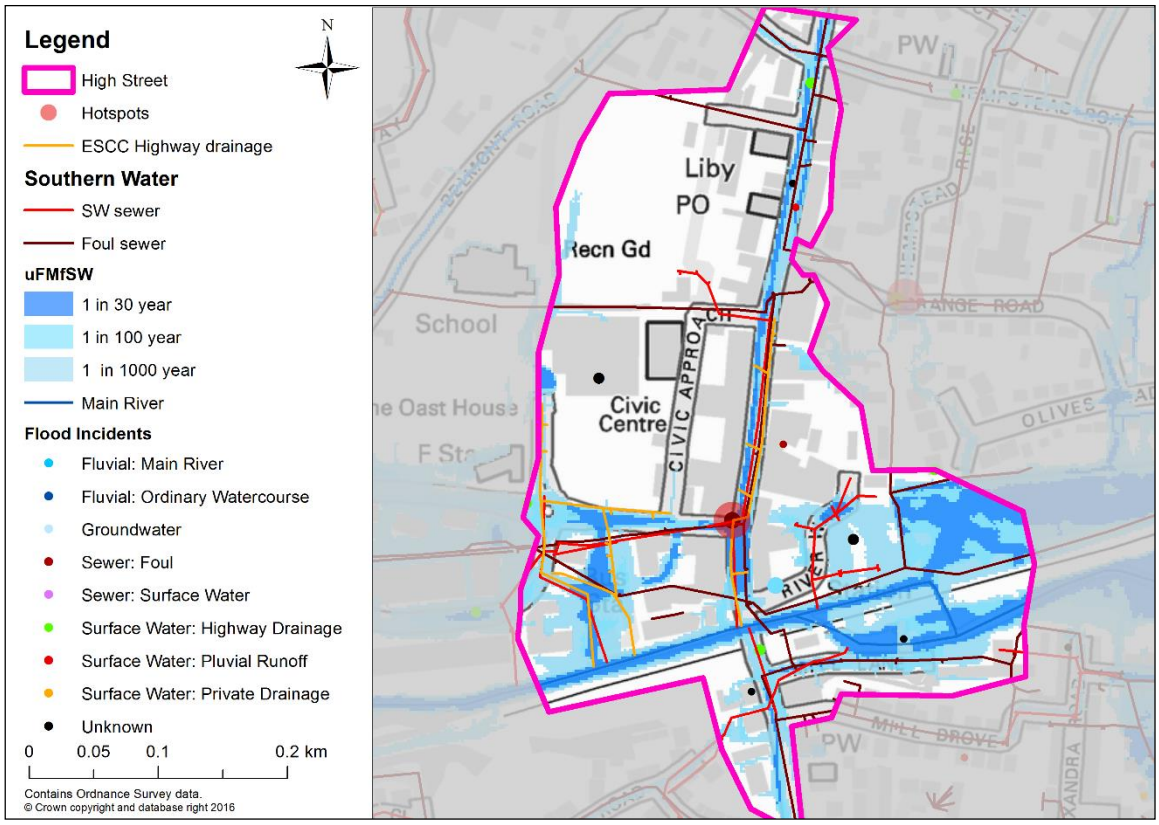


Figure 3-7: High Street hotspot

3.3.2 Framfield Road

Framfield Road is the second highest ranked hotspot in Uckfield. The main flooding mechanism is pluvial runoff, which has caused 4 incidents of internal flooding. There could also be fluvial flooding as the River Uck is located at the north of the area.

The hotspot within this area is centred at the junction of Framfield Road and Baker Street, where the topography is naturally lower and forms a flow path for surface water runoff to the River Uck, as predicted by uFMfSW. The origin of this flow path is Harcourt Road. The Frism count for properties at risk of surface water flooding is shown in Table 3-5. Compared to other hotspots, Framfield Road has the second highest number of properties at risk.

Table 3-5: Properties at risk of surface water flooding at the Framfield Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	16	37	153

The other main flow pathway in this area is along Selby Road to Selby Rise. Nine surface water flooding incidents from pluvial runoff have been reported in the Framfield Road area. Two storm events have caused properties on Framfield Road to flood internally from water flowing into the properties through the airbricks.

Several reports of flooding have been attributed to poor drainage on Framfield Road causing pluvial runoff to continue onto Baker Street and the surrounding roads. Baker Street is a private road and therefore it is unknown what drainage is in place but no surface water drainage has been observed, as a result, runoff from Framfield Road cannot be positively drained in Baker Street.

The reported receptors include residential properties, residential / commercial curtilage and highways.

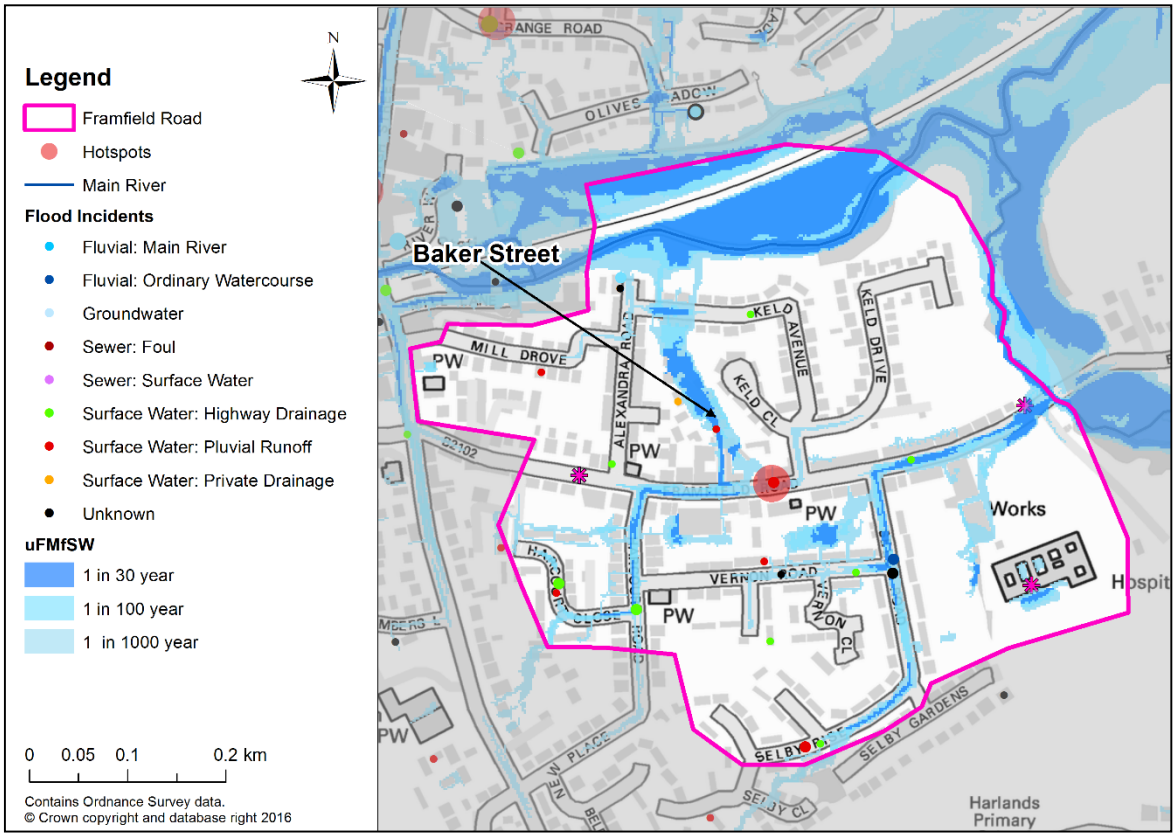


Figure 3-8: Framfield Road hotspot

3.3.3 Rocks Park Road

The Rocks Park Road area has been identified as the third highest priority hotspot in Uckfield.

The sources of the flood incidents reported are surface water, caused by drainage exceedance and blockage. These incidents have occurred along the surface water flow path predicted by the uFMfSW. The Frism count for properties at risk of surface water flooding is shown in Table 3-6. Compared to other hotspots, Rocks Park Road has the joint third highest number of properties at risk.

Table 3-6: Properties at risk of surface water flooding at the Framfield Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	9	24	46

The desktop investigation using historic maps has identified an unnamed ordinary watercourse that feeds to the River Uck. This was partially identified in the DRN and the culverted watercourse was marked on the Southern Water sewer assets as a surface water sewer. The outlet for this watercourse has previously been reported to have blocked and caused flooding of residential curtilage along Belmont Road.

Two incidents of internal flooding were recorded on Rocks Park Road in 2010, as a result of hydraulic overloading of the culverted watercourse. This indicates that capacity of the culvert could be an issue. The area also has a high frequency of flooding incidents with source 'unknown', recorded as requests for sandbags for Rocks Park Road and Scarletts Close.

The historic mapping also indicates a historic pond/lake along this flow path just north of Oaklea Way (Figure 3-9). However, it is known from the Southern Water assets that there is now a culvert underlying this area. The area remains low and the uFMfSW predicts water would pond here.

Residential properties and curtilage are the main receptors in this hotspot due to the route of the flow path. The area to the north of Church Street, where the uFMfSW has identified an area of ponding, has one storey residential properties and therefore would be a highly vulnerable receptor. The highways have also been reported to flood.

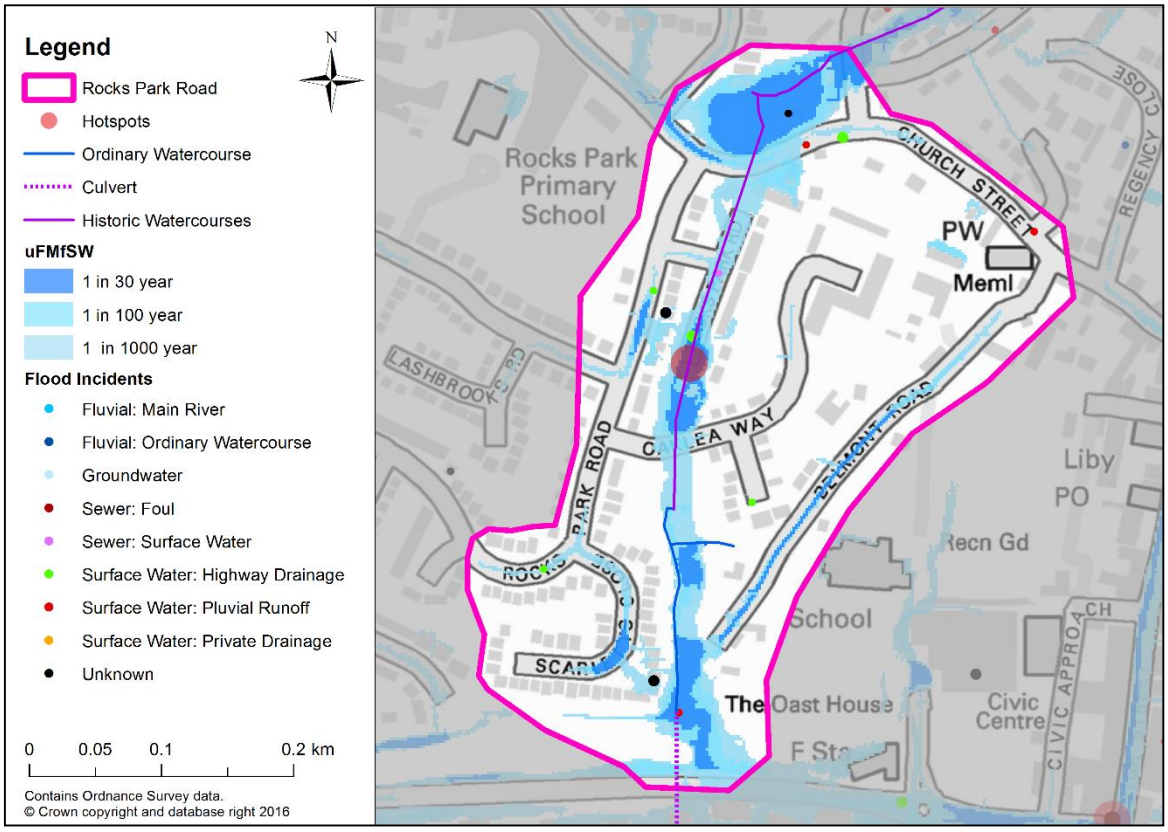


Figure 3-9: Rocks Park Road hotspot

3.3.4 Grange Road

The fourth ranked hotspot in Uckfield is at the junction of Hempstead Rise and Grange Road (Figure 3-10). The area has been designated due to the high surface water flood risk. The Frism count for properties at risk of surface water flooding is shown in Table 3-7. Compared to other hotspots, Grange Road has the sixth highest number of properties at risk.

Table 3-7: Properties at risk of surface water flooding at the Grange Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	7	15	29

The main source of flooding in this area is from surface water reported to be caused by ineffective highway drainage. The main receptor of flooding is the highway, with five incidents of highway flooding recorded in the area.

A residential property lower than Grange Road is the other main receptor of surface water flooding. It has been reported to have flooded in 2010 when the drainage was blocked and overwhelmed. A resident confirmed on the day of the site visit that drainage issues within this area have been ongoing for 20 years and that the drainage tends to block regularly.

The drains at the hotspot were observed to be blocked on the day of site visit. It was also observed that the junction of Hempstead Rise and Grange Road forms a low point within the road. The uFMfSW identified the junction to have a high risk of surface water flooding (1 in 30 year return period), however there is no observed flow path for flooding in this area.

The other flooding source in the Grange Road priority area is on Olives Meadow, where it was reported a residential property internally flooded as a result of a blocked ordinary watercourse in 1997.

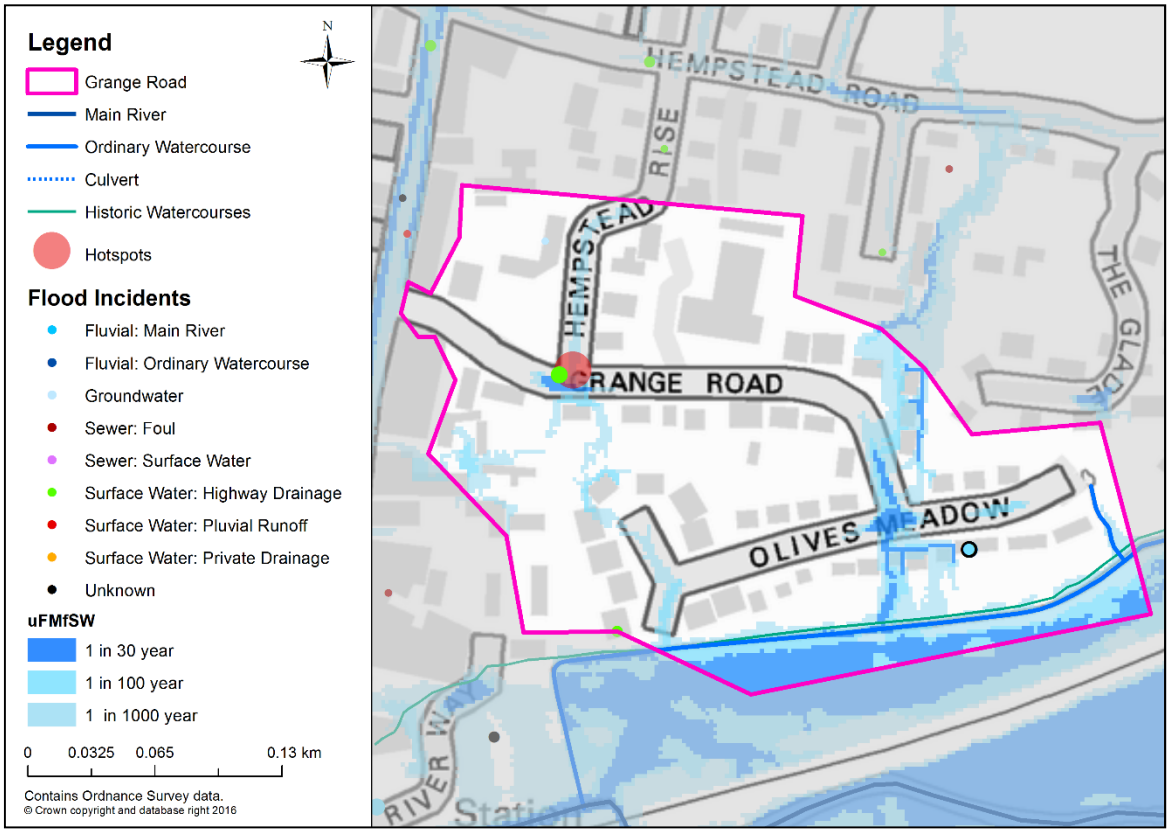


Figure 3-10: Grange Road hotspot

3.3.5 Lewes Road

Lewes Road is the fifth highest hotspot in Uckfield. The area has been designated due to the observations made on the site visit day, and the high amount of flood incidents recorded since 2010.

The main source of flooding in this area is surface water, in the form of pluvial runoff and blocked drainage. The topography of Lewes Road descends towards the south making it a natural flow path for surface water, as identified by the uFMfSW. The flow path curves off opposite Ridgewood Path to the lower ground of the adjacent fields. The Frism count for properties at risk of surface water flooding is shown in Table 3-8. Compared to other hotspots, Lewes Road has the eighth highest number of properties at risk.

Table 3-8: Properties at risk of surface water flooding at the Lewes Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	0	4	22

In 2014, a residential property was reported as flooded internally. The source of the flooding was surface water runoff from Lewes Road which was because the highway drainage was blocked. During the site visit, it was observed that the property is situated lower than the road and that the local topography would direct surface water from Lewes Road and towards this property. Therefore, it is important that the drainage here is kept clear as when operating it is able to divert surface water away from the property. During the site visit, it was noted that the drainage along the eastern side of Lewes Road was blocked, as shown in Figure 3-11. The drains were blocked with a mixture of sediment, leaves and gravel. It was observed that many of the residential drives along the road are of gravel composition which may contribute to blocking of drainage along the road.

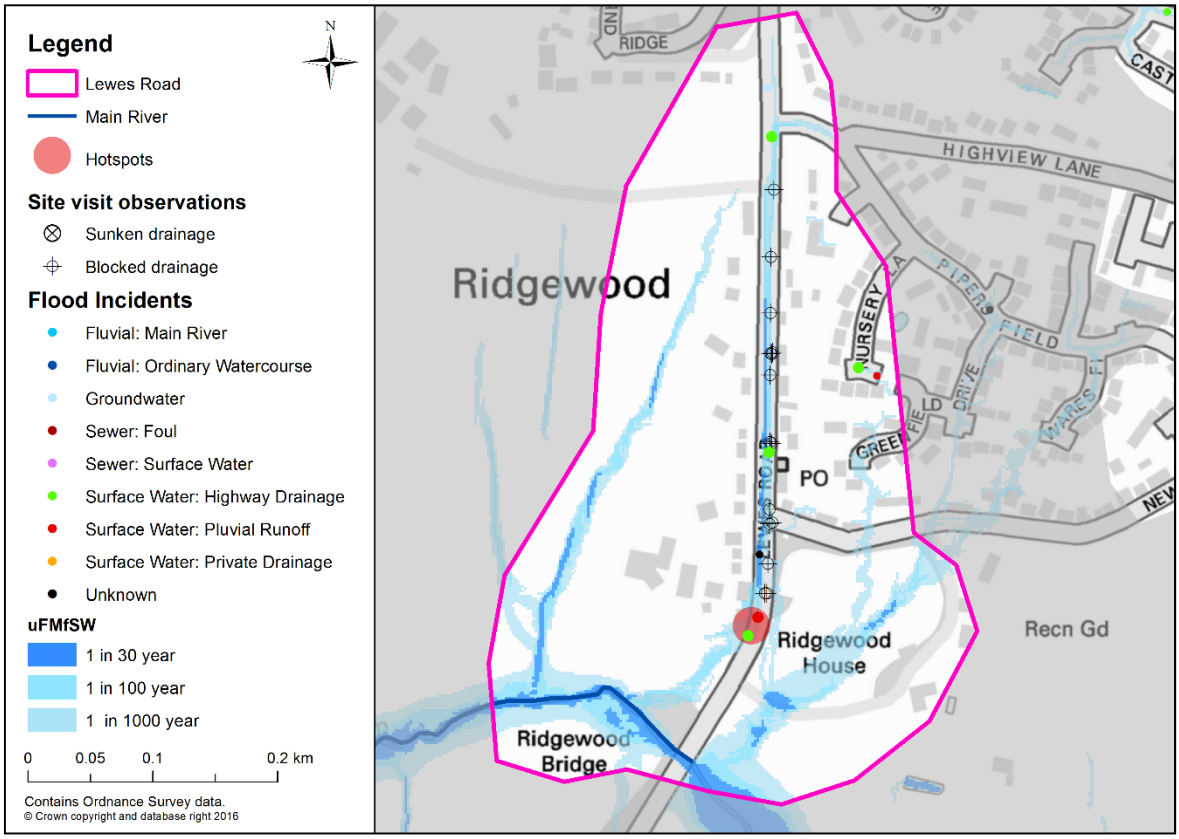


Figure 3-11: Lewes Road hotspot

3.3.6 New Road

The sixth hotspot identified in Uckfield is at the junction of Eastbourne Road and New Road. The area was designated due to one internal flooding incident and four highway flooding incidents being recorded within this area.

The main source of flooding within this area (as identified in Figure 3-12) is surface water flooding from blocked or sunken drainage. The site visit observed that sunken and blocked drainage along Eastbourne Road was a particular issue within this area. The main receptor of is the highways, with only one incident of internal flooding of the basement of a New Road property reported in 2012.

The uFMfSW shows that there is little surface water flood risk within the area. The highest risk area of surface water flooding is located on an open field, at a lower elevation to the raised Eastbourne Road. However, this area of high risk backs onto the properties of New Road and therefore could be the source of the flooding of basements recorded in 2012. The Frism count for properties at risk of surface water flooding is shown in Table 3-9. Compared to other hotspots, New Road has the seventh highest number of properties at risk.

Table 3-9: Properties at risk of surface water flooding at the New Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	3	7	23

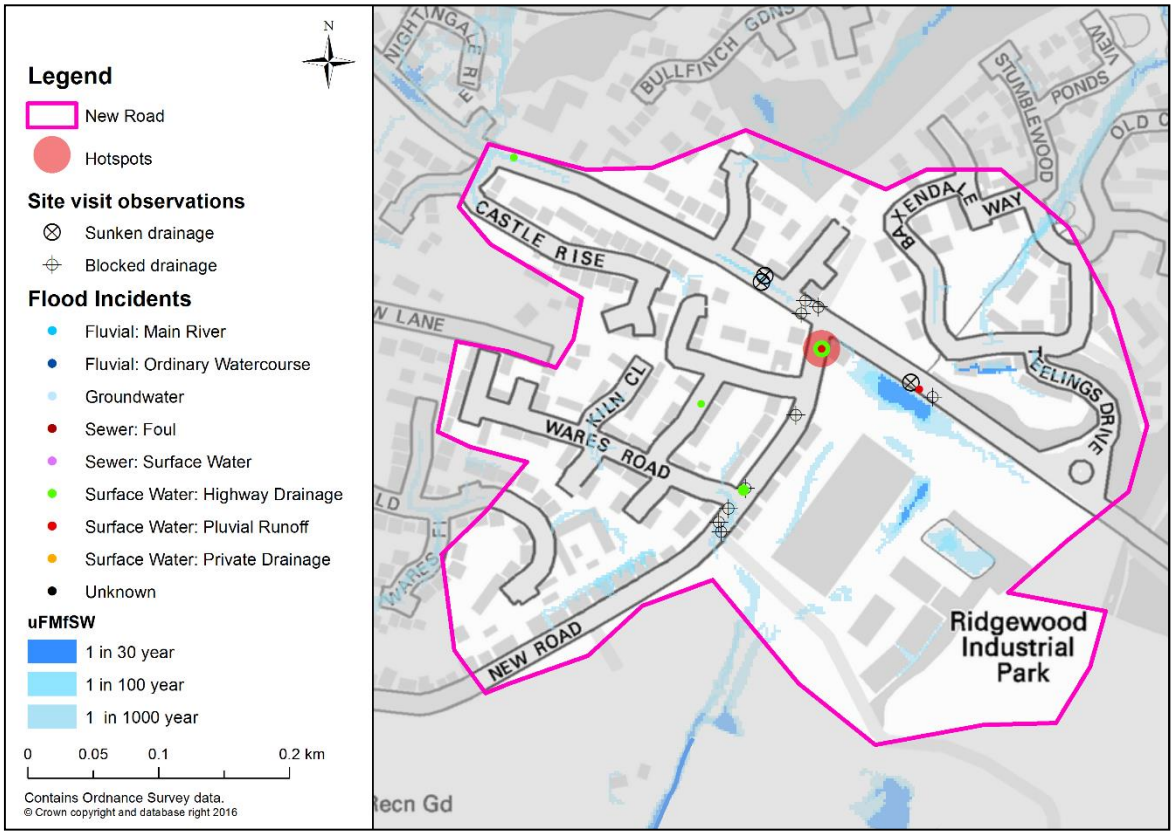


Figure 3-12: New Road hotspot

3.3.7 Spring Meadow

Spring Meadow is the seventh hotspot in Uckfield. This area has been designated due the ongoing surface water issues within the area since 2010.

The main source of flooding in this area is from pluvial runoff. Video evidence from the 9th of March 2016 suggests that the source of the runoff is the Uckfield Communication Technical College. This could relate the construction of an all-weather pitch in 2010 which has the potential to generate more runoff than the previous greenfield land use. As no drainage design information for the all-weather pitch was supplied as part of the planning process, the drainage arrangement is unknown, as a result it cannot confirmed as the source of the runoff. However, the uFMfSW does not predict a surface water flow path down Spring Meadow, therefore it unlikely to be a significant natural topographic flow path. The Frism count for properties at risk of surface water flooding is shown in Table 3-10. Compared to other hotspots, Spring Meadow has the fifth highest number of properties at risk as the analysis has picked up the properties at risk in Hempstead Gardens.

Table 3-10: Properties at risk of surface water flooding at the Spring Meadow hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	6	18	61

If the all-weather pitch is the source of surface water runoff, then management of this surface water could be a quick win solution.

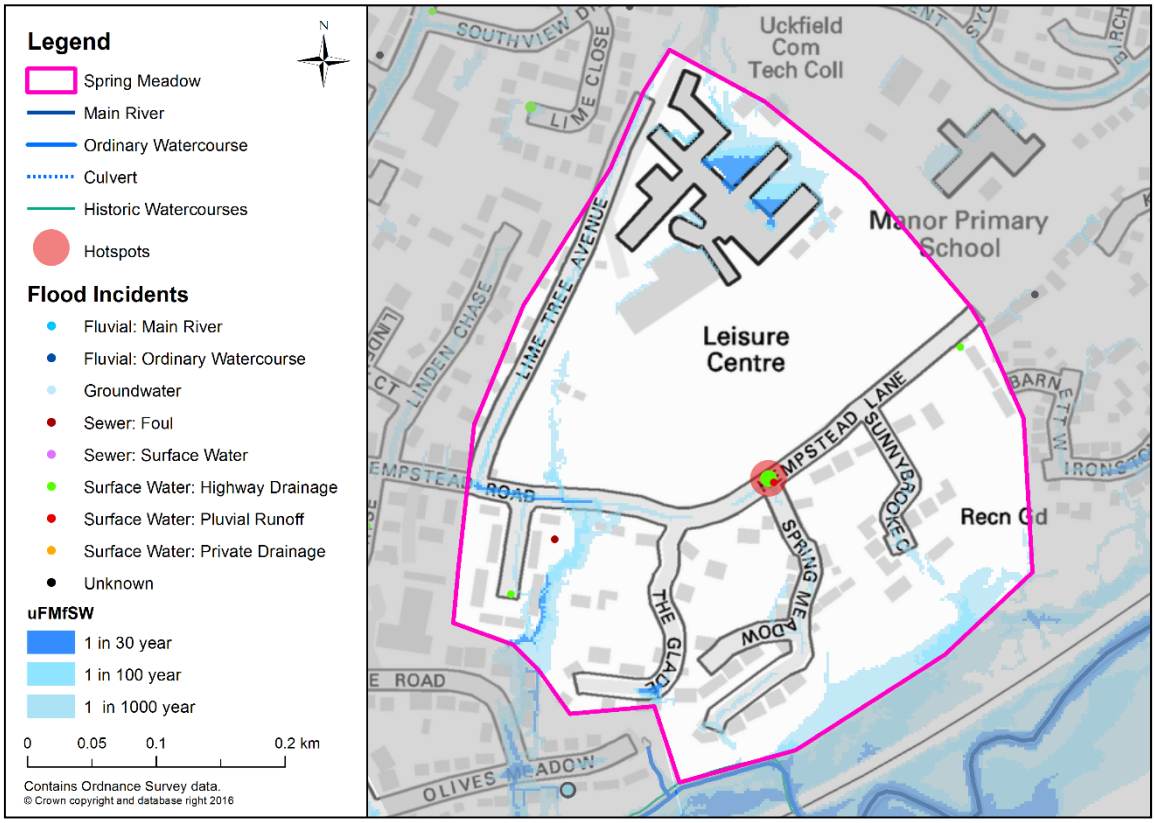


Figure 3-13: Spring Meadow hotspot

3.3.8 Snatt's Road

Snatt's Road has been identified as the eighth hotspot in Uckfield (Figure 3-14). The hotspot was located at Claremont Place, where there have been three reports of internal flooding. The reported source of flooding was surface water, linked to blocked drainage, and the receptors were residential basements. However, the surface water flood risk is low at the location and as the receptor was a basement, it is possible that the true source of the flooding was groundwater.

Other flood incidents reported on Snatt's Road suggest that the main source of flooding is surface water from the highway, caused by blocked drainage. During the site visit, it was observed that the drainage along the north eastern end of Snatt's Road was blocked, especially on the northern side, adjacent to the cemetery.

No properties are identified as being at risk in the uFMfSW. The Frism count for properties at risk of surface water flooding is shown in Table 3-11.

Table 3-11: Properties at risk of surface water flooding at the Snatt's Road hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	0	0	0

At the junction of Snatt's Road and London Road there have been multiple flood incidents recorded. However, these have not been included in the hotspot analysis as ESCC recently undertaken extensive drainage improvement works at this junction to manage the surface water.

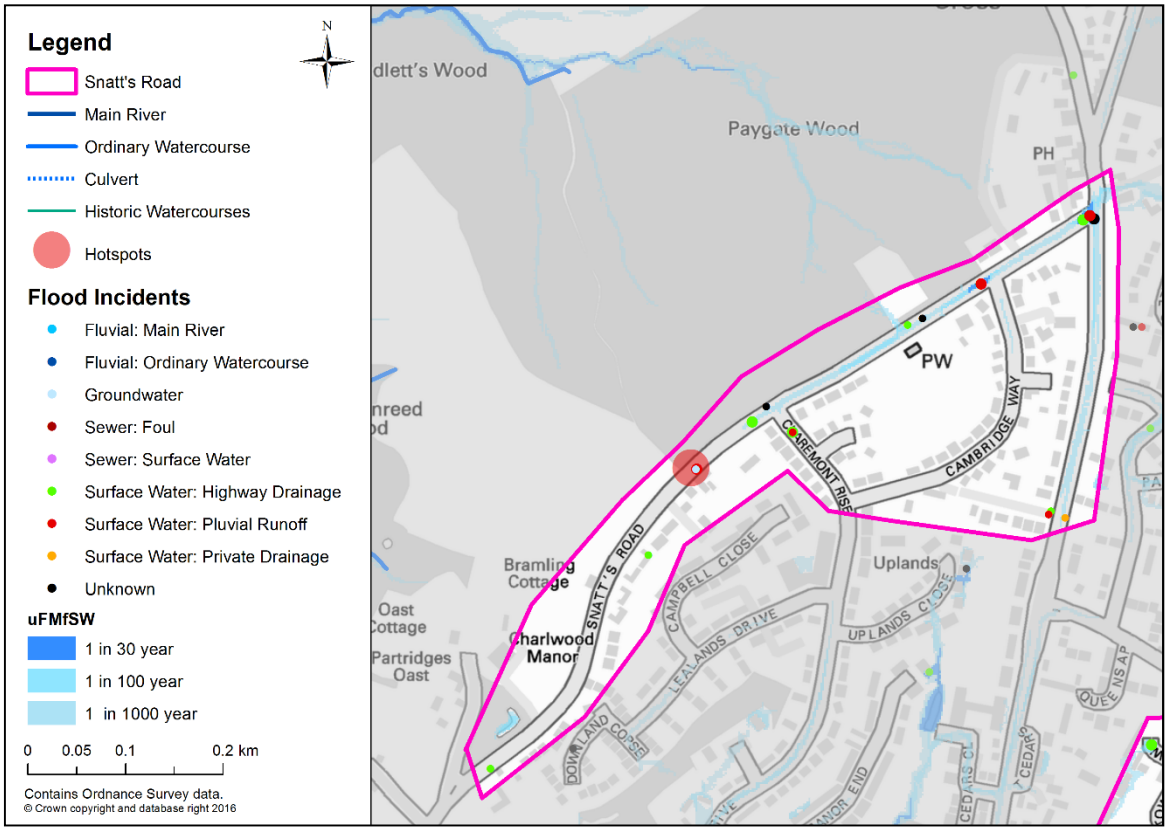


Figure 3-14: Snatt's Road hotspot

3.3.9 Markland Way

Markland Way has been identified as the lowest priority hotspot in Uckfield and is the only hotspot to not have recorded internal flooding from any source. The area was included as a hotspot because there is a potential for flooding from surface water and ordinary watercourses. The Frism count for properties at risk of surface water flooding is shown in Table 3-12. Compared to other hotspots, Markland Way has the third highest number of properties at risk. In addition, the uFMfSW has identified numerous surface water flooding flow paths (Figure 3 15).

Table 3-12: Properties at risk of surface water flooding at Markland Way hotspot

Return period:	1 in 30	1 in 100	1 in 1000
Properties at risk	9	24	62

WDC has stated that in December 2015 the culvert located within the recreation ground adjacent to Markland Road became blocked, and that the maintenance team were sent to unblock the culvert before water could back up. It is this maintenance that is essential to manage the potential flood risk in the area.

Three watercourses have been identified within the priority area. The watercourse within the recreation ground is culverted from the B2102, under the Bellbrook Industrial Estate and discharges to the River Uck. There is also a section of culvert under Batchelor Way. WDC became aware the trash screen at Batchelor Way became blocked in December 2015 and they undertook clearance. This incident lead to fluvial flooding of residential curtilage but no properties were flooded internally.

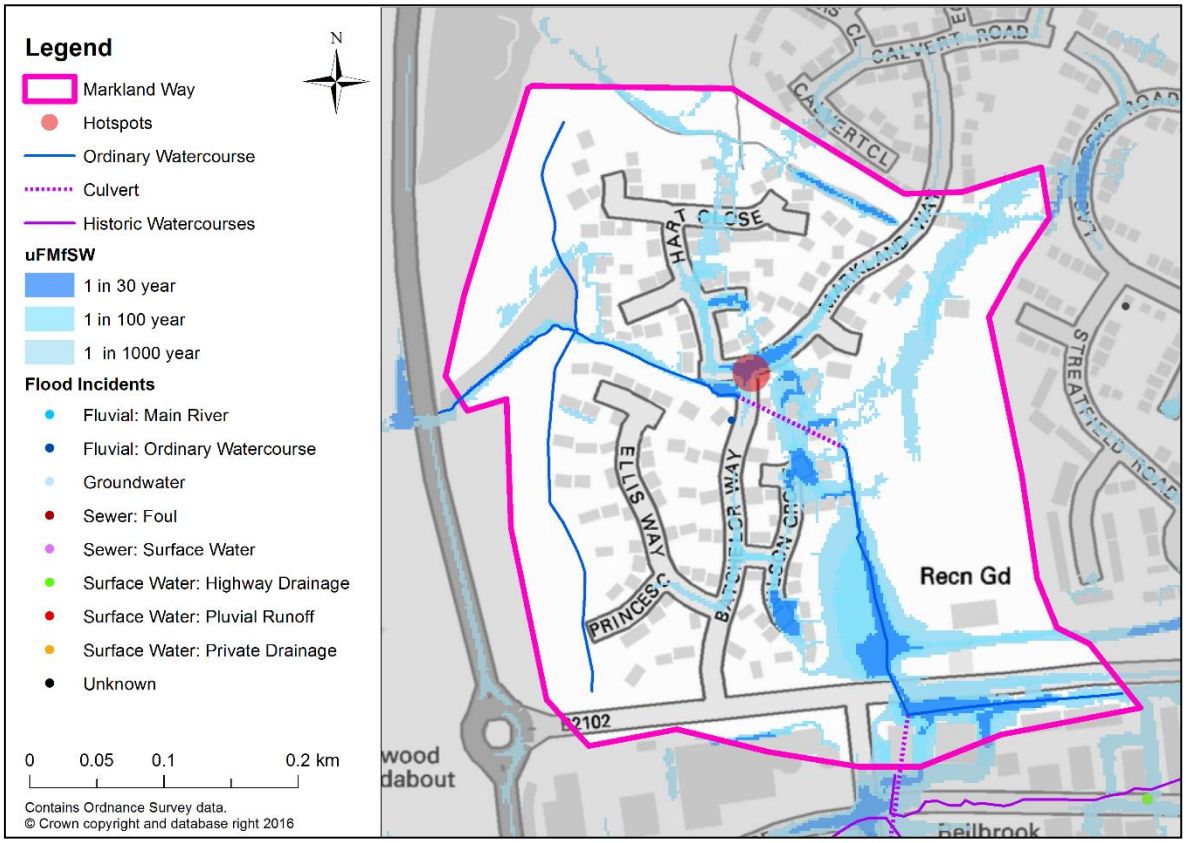


Figure 3-15: Markland Way hotspot

4 Planning

The purpose of this section is to consider how flood risk in Uckfield could change in the future as a result of development. The section considers how appropriate planning policy could enable sustainable development which manages the flood risk to and from a site. This information can then be used by project partners and the LPA so that strategic planning decisions can take account of flood risk.

4.1 The impact of climate change

Flood Risk Assessments (FRAs) are required to demonstrate that the future implications of climate change have been considered, and risks managed where possible for the lifetime of the proposed development as part of a planning application. Updated guidance for climate change allowances for FRAs was released by the Environment Agency in February 2016[5]. This provided predictions of anticipated change for

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

This new guidance should be referred to when considering the future flood risk to proposed developments and it should be considered that the risk flooding may increase in the future.

4.2 Using SuDS

Surface water flooding is exacerbated by urbanisation when natural, permeable land uses are replaced with impermeable surfaces. However, the impact can be reduced if East Sussex County Council guidance is followed to manage surface water. The guidance recommends the use of sustainable drainage systems (SuDS) which mimic natural systems and provide solutions to surface water runoff and pollution.

'SuDS' is an overarching term for various surface water management techniques. The components perform tasks such as capturing rain water, retaining and attenuating surface water or filtering pollutants, and many SuDS techniques have multiple benefits. More information on the philosophy of SuDS, including technical information on design, construction and maintenance is available in CIRIA's SuDS Manual[6] (2015).

Changes in the development management procedure in 2015 now require the LPA to consult the LLFA in regard to surface water drainage on major planning applications. This provides an opportunity for the LLFA to consider if the proposed discharge rate is appropriate. The LPA may take the advice of LLFA, but has no duty to do so.

In preparation for this role, ESCC partnered with other LLFA in 2013 to prepare the SuDS guidance document - 'Water. People. Places'[7], which encourages the integration of SuDS into the development layout. In 2015, East Sussex County Council prepared an additional local guidance document, setting SuDS into an East Sussex context[8]. The documents are both available on the East Sussex website at https://new.eastsussex.gov.uk/environment/flooding/sustainabledrainagesystems/. Together these two guidance documents have been adopted as County Council policy on SuDS, supporting and assisting the delivery of the Local Flood Risk Management Strategy.

For minor developments, East Sussex County Council have designed a local tool which advise what SuDS techniques are appropriate at the site according to local drainage characteristics. It is recommended that this tool, available at http://www.eastsussex.suds-tool.co.uk/ is used during the development process.

[5] https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

6 CIRIA (2015) The SuDS Manual (C753) http://www.ciria.org/Memberships/The_SuDs_Manual_C753_Chapters.aspx

7 South East Seven (2013) Water. People. Places. A guide for master planning sustainable drainage into developments. https://eastsussexgovuk.blob.core.windows.net/media/1994/se7-suds-masterplanning_low_res_reduced.pdf

8 East Sussex County Council (2015) Guide to Sustainable Drainage Systems in East Sussex. https://eastsussexgovuk.blob.core.windows.net/media/1995/guide-to-sustainable-drainage-systems-in-east-sussex2.pdf

4.3 Local Development Framework

Wealden District Council are the Local Planning Authority in Uckfield. The Core Strategy for Wealden allocated the number of new dwellings needed in the district by 2030. The sites where development is allocated are decided by the Local Planning Authority and a Strategic Flood Risk Assessment is undertaken to steer development away from areas of highest flood risk. It is important that the LLFA is consulted during the site allocation process so local drainage issues are recognised.

The Wealden Core Strategy allocated 1000 dwellings in Uckfield and this full allocation now has been granted planning consent. Wealden District Council has indicated the location of these development sites, the details of which are provided in Table 4-1.

Table 4-1: Potential development areas allocated in Uckfield

Reference	Development	Central OS NGR point	Development type	No. of permitted dwellings
LWU	Land at West Uckfield	547021,119842	Mixed	1,000
LNMD	Land north of Mallard Drive, Uckfield	548082,120467	Residential	146

As permissions for the development sites listed above are granted and in total meet the housing requirement for Uckfield until 2030, it is unlikely that additional large scale development will be allocated in Uckfield in the next 15 years. However, minor developments and areas of infill are anticipated. Therefore, it is important to consider the constraints on and impact of future developments.

4.4 Constraints on development

This section examines how key drainage issues identified in Uckfield as part of this SWMP should be considered during development by both planners and developers.

4.4.1 Drainage risk areas

Drainage Risk Areas (DRAs) are spatial groupings which represent the drainage characteristics, based on the different ground conditions present, and their ability to drain surface water. The identification of DRAs in East Sussex was developed to support the County Council's new role as a statutory consultee to the planning system. The drainage risk areas consider how topography, geology and flood risk could impact drainage of a site to inform appropriate designs.

The county has been divided into four types of DRA. The properties of each DRA are listed in Table 4-2 and the DRA in Uckfield are shown in **Error! Reference source not found.**.

Table 4-2: Characteristics of drainage risk areas

	DRA1	DRA2	DRA3	DRA4
Groundwater depth	Low (>5m)	Low (>5m)	High (<3m)	High (<3m)
Infiltration potential	High potential for infiltration	Opportunity for bespoke techniques	Opportunity for bespoke techniques	Significant restraints
Surface water extent	High	Low	Medium - high	High
Geologies	Sandstones	Clays	Clays	Clays with localised chalk

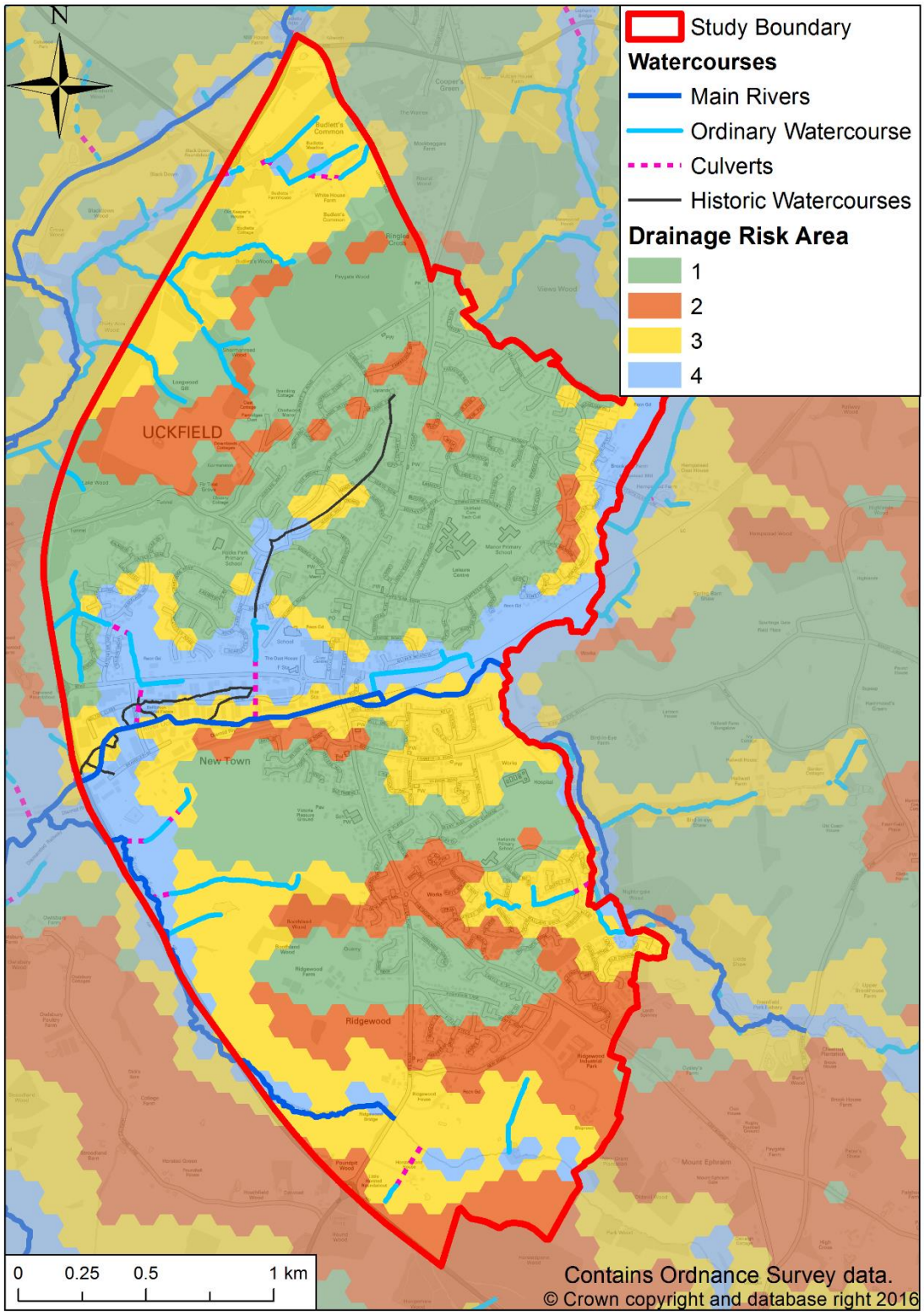


Figure 4-1: Drainage Risk Areas in Uckfield

Planned development should consider which DRA it falls within and should undertake local assessments to confirm this county wide assessment is true for this site. The drainage design should consider opportunities and constraints to drainage as listed in Table 4-3.

Table 4-3: Opportunities and constraints to drainage associated with each DRA

	Opportunity	Constraint
DRA1	Good infiltration potential	Surface water runoff
DRA2	Some infiltration potential	Impermeable bedrock
DRA3	Some infiltration potential	Surface water runoff Impermeable bedrock
DRA4	Drainage restricted	High water table Fluvial/ coastal flood risk

4.4.2 Local drainage constraints

In addition to the Drainage Risk Areas listed above, specific issues have been identified in Uckfield as part of this SWMP which could restrict future development. These include; surface water flood risk, culverted watercourses and groundwater flood risk and are explained below.

4.4.2.1 Surface water flood paths

Due to the steep relief, urbanisation and relatively impermeable geology in Uckfield, there are a number of areas of high flood risk. These areas are illustrated in **Error! Reference source not found.** and include the High Street, Church Street, Markland Way and Framfield Road. Surface water flood risk could impact development at any location if insufficiently considered, but these areas are particularly at risk.

When planning applications are received in areas indicated as high surface water flood risk, planners should look for a sequentially designed site, which places high vulnerability receptors away from areas of greatest risk. The surface water drainage strategy prepared by the developer, should consider how the existing surface water flood risk can be managed, in addition to how the runoff generated at the site will be managed to avoid increasing flood risk elsewhere.

4.4.2.2 Culverted watercourses

During this assessment it was identified that the surface water sewer underlying Manor Way follows the course of a historic river. Therefore, it is possible that this surface water sewer is also carrying fluvial flows. The area affected is illustrated in **Error! Reference source not found.**. If fluvial flows are conveyed in this culvert, the capacity available for surface water discharge could be restricted.

When planning applications are received in this sub-catchment, planners should advise developers of this potential restriction to discharge. The developer should design a surface water drainage strategy that considers the potential restriction on flows which may require an assessment of available capacity to demonstrate the sustainability of the proposed scheme.

4.4.2.3 Groundwater flood risk

The flood history has shown that groundwater flooding has impacted properties in Uckfield, particularly basements. Areas of the highest groundwater risk, as identified in BGS groundwater flood risk modelling, are illustrated in **Error! Reference source not found.**.

When planning applications are received for these areas, planners should consider if proposed land use is appropriate – particularly if basements or basement dwellings form part of the application. The onus should be on the developer to provide evidence that the groundwater flood risk has been fully considered and plans are in place to manage this flood risk.

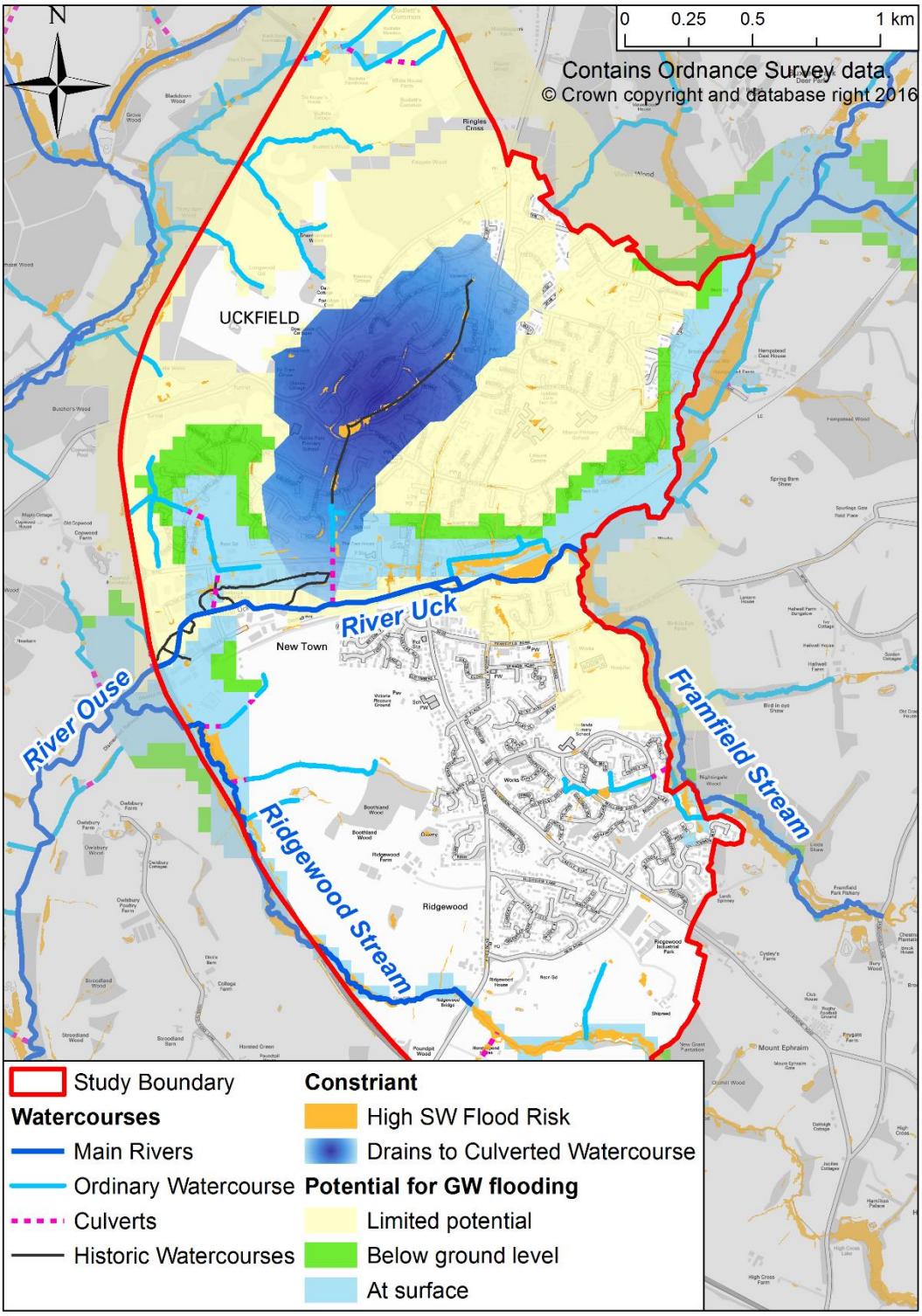


Figure 4 2: Areas of constraint for development

It should be noted that drainage issues can arise through development and these constraints to development could change as Uckfield expands.

5 SWMP action plan

This section sets a plan for managing the flood risk identified in this SWMP. The action plan uses all the information collated during the SWMP process to recommend measures to reduce or mitigate the flood risk in Uckfield. The actions are dependent on the identified flood mechanisms.

5.1 Monitoring the action plan

It is proposed that the monitoring and reporting of the implementation of the action plan will be undertaken locally and it is expected that partners will take forward actions independently, and convene as and when appropriate.

5.2 Communicating the action plan

The action plan is divided into three components, each of which look at mitigating flood risk at a different scale. The three action components are: the generic plan, the hotspot action plan and the incident specific action plan. The geographic area and purpose of each action plan is explained in Table 5-1 below.

Table 5-1: List of action plans

Geographic area	Action plan	Purpose
Study area wide	Generic action plan (Section 5.3)	Outline broad scale actions applicable across the study area
Hotspots	Hotspots action plan (Section 5.4)	Recommend strategic actions to manage the flood risk in hotspots
Specific points where flooding has been reported	Incident specific action plan (Section 5.5)	Propose specific activities in response to a reported flood incident

5.3 Generic action plan

Some of the actions derived from this SWMP are applicable to the whole SWMP area of Uckfield. Actions to mitigate these issues are listed in the generic action plan.

5.3.1 Ongoing maintenance of the partnership

To successfully undertake the action plan and continue to improve the management of flood risk in the area, it is important to maintain the links between the risk management authorities involved in the production of the SWMP. The ongoing partnership will discuss the implementation of the proposed actions, review opportunities for operational efficiency and review any legislative changes. It is proposed that the monitoring and reporting on the implementation of the action plan will be undertaken locally.

5.3.2 Planning

Applying the existing planning policy of promotion of sustainable drainage systems to control the quantity and rate of runoff of surface water should help manage risk of increase surface water runoff.

In addition, planners should be aware of areas where drainage constraints on either the foul or surface water systems have been identified. Bespoke local level investigation will be required here to better understand how the constraint could impact planned development.

It is recommended that the Local Planning Authority incorporate the findings of this SWMP, thereby raise issues to developers through its Local Plan to allow for flood risk reduction during the planning process.

5.3.3 Asset maintenance

Currently ESCC Highways is revising its asset maintenance programme. The objective is to optimise the routine asset inspection and maintenance to prevent flooding occurring as a result

of malfunctioning gullies. This change in programme could have benefits across Uckfield. In particular, it is recommended that Lewes Road, Grange Road, Framfield Road and Eastbourne Road be considered for an enhanced cleansing regime due to the number of flooding incidents reported here.

In addition to highway drainage, the flood history on Lewes Road, Snatt's Road and Grange Road has highlighted the need to free drainage of blockages to manage flood risk.

Southern Water also have a number of drainage assets in Uckfield. Under new rules from the regulator OFWAT, Southern Water have begun a proactive asset management system, rather than reactive. As a result, maintenance works should be undertaken before a flood incident occurs due to a blockage or collapse.

5.3.4 Flood incident reporting

To enhance understanding of flood risk in Uckfield, it is recommended that a consistent system of recording future flood incidents is implemented across all organisations that may record incidents, including details of the flood source, dates of the incident and depth of flooding.

5.4 Hotspots action plan

For the hotspots identified in section 3.3, strategic actions have been recommended to address integrated flood mechanisms operating in these areas. Table 5-2 identifies the recommended actions.

Table 5-2: Hotspot action plan

Rank	Hotspot	Actions	Action Owner
1	High Street	**1. Kerb inlets and tree pits (ongoing)** Ongoing drainage works are in progress, as observed on the site visit. To manage the surface water flow down the High Street, ESCC are installing tree pits. To enhance the tree pits, it is recommended that kerb inlets are also installed along the High Street, especially in the location of the hotspot at the Bell Lane/High Street junction. **2. CCTV survey of existing drainage under Bell Lane** Required in the Bell Lane Bus Station area where a complicated drainage system is installed. Phase 3 of ongoing drainage improvement works in Uckfield town centre will include this area, offering further opportunities to better manage surface water in the future. **3. More efficient drainage through Bell Lane (including online tanks)** Once a CCTV survey has been undertaken, more efficient drainage should be installed with online tanks in order to store floodwaters before discharging into the River Uck. The sizing and location of these tanks should be determined through a hydraulic modelling study. The current drainage arrangement includes two 90-degree bends as runoff is piped from the High Street towards Bell Lane before discharging in to the River Uck. This is hydraulically inefficient and investigations should be undertaken to understand the viability of re-routing drainage directly south down the High Street (towards the River Uck). **4. Community outreach to check condition of PLP measures** It is recommended that Uckfield Town Council and Wealden District Council work together to check residents are ready and understand how to utilise the existing PLP when needed. **5. Investigate issuing local surface water flood warnings** Uckfield Town Council could register with the Met Office Hazard Manager to receive warnings of extreme rainfall. When required, this warning could be disseminated to the High Street occupiers so they are prepared to install the PLP when required.	ESCC Highways ESCC Highways ESCC Highways UTC with WDC UTC
2	Framfield Road	**1. Manage at the source utilising rainwater harvesting** Encourage the installation of rainwater harvesting SuDS by the public in order to improve the surface water flood risk in the area. It is recommended that an incentive scheme is provided for the local residents and business. Southern Water currently offer a scheme, but it is uncertain for how long this	ESCC with SW

Rank	Hotspot	Actions	Action Owner
		will run. **2. Intercept flow into improved highway drainage (discharging to public sewer)** Improve highway drainage with additional gully pots. It is likely that these would have to discharge to the existing surface water sewerage owned by Southern Water. 2. There is also an opportunity to manage the overland flow via a channel on Baker Street, if the ESCC/WDC are willing to adopt the private road. By doing so, the surface water flow could be directed away from the properties, reducing the risk of internal flooding.	ESCC Highways with SW
3	Rocks Park Road	**1. Investigate route, condition and capacity of identified culverted watercourse (utilising CCTV survey)** A culverted watercourse has been identified but it is currently now known what the condition, connections or capacity of this culvert is. Before, undertaking any work to increase connections to the culvert as assessment of current flow is required to understand the risk of backing up. **2. Improve drainage into underlying culverted watercourse** If capacity is available, the connectivity between the surface and the culvert could be improved using gullies to allow drainage of overland flow. **3. Increase culvert capacity within upstream storage area** One opportunity identified during the site inspection was the low lying land north of Church Street has a potential site to provide upstream storage. If this could be designed without exacerbating risk to Church Lane, there is an opportunity that this would increase available capacity at Rocks Park Road and Oaklea Way.	ESCC ESCC with ESCC highways ESCC
4	Grange Road	**1. Unblock existing drainage** During the site inspection, it was noted that the highway drainage was blocked at the junction of Hempstead Rise/Grange Road, the area where the flooding issue has been identified. It is therefore recommended that the existing drainage is unblocked as a first step. **2. Formalise a surface water flow route around property** Surface water flow ponds at the junction, and therefore it is recommended that a surface water flow path around the property adjacent to the junction should be formalised. It has been identified that an opportunity to install a drainage ditch along the edge of the pavement on Grange Road could be utilised, along with raising the kerb of the pavement in order to provide more protection to the	ESCC Highways Land owner

Rank	Hotspot	Actions	Action Owner
		property. **3. Increase resilience utilising PLP** Properties adjacent to the junction of Grange Road and Hempstead Rise could be made more resilient to surface water flooding using PLP measures. **4. Surface water attenuation** A further measure to improve the surface water flood risk in this area, if required, would be to investigate the opportunity for temporary storage in the green space opposite the junction.	Property owner ESCC
5	Lewes Road	**1. Unblock existing drainage** During the site investigation it was observed that the drainage along the eastern side of Lewes Road was entirely blocked. The initial action would be to unblock this drainage and improve the maintenance along the stretch of road. It is also recommended that the source of sedimentation is investigated and a land management plan is set up based on the investigation's findings. **2. Re-route surface water overland away from property using raised kerbs with inlet drainage** The uFMfSW has identified a surface water flow path that travels south down Lewes Road before moving west through a residential property which has reported flooding. It is therefore recommended that an investigation into re-routing the surface water flow overland away from the property by utilising raised kerbs with inlet drainage be undertaken. **3. Increase resilience utilising PLP** If steps made to improve surface water drainage at Lewes Road are unsuccessful, properties could be made more resilient to surface water flooding using PLP measures.	ESCC Highways ESCC Highways Property owner
6	New Road	**1. Increase resilience utilising PLP** Basements at risk of flood should consider a waterproof coating and installing a sump pump to manage groundwater or surface water ingress. **2. Improve highway drainage** During the site visit it was observed that the drainage along Eastbourne Road was either blocked or sunken. It is recommended that the drainage in this area is improved in order to avoid future flood incidents.	Property owner ESCC Highways
7	Spring Meadow	**1. Review drainage arrangement of all-weather pitch**	ESCC

Rank	Hotspot	Actions	Action Owner
		Flood incident reports in this area have linked the all-weather pitch at the Uckfield Communication Technical College to the increasing surface water flow down Spring Meadow. The college is owned by ESCC and therefore it is their responsibility to undertake a review of the drainage arrangement of the all-weather pitch installed at the school in 2010. **2. Retrofit SuDS** There are opportunities for retrofitted SuDS and additional drainage to be installed along Hempstead Lane in order to manage the surface water. Hempstead Lane has many green verges which could be utilised for rain gardens and roadside swales. An investigation should be undertaken in order to understand what SuDS would be most effective in this area.	ESCC
8	Snatt's Road	**1. Unblock existing drainage** It was also noted during the site investigation, that the drainage on Snatt's Road next to the cemetery was fully blocked. As part of the initial action plan, the existing drainage along the road should be unblocked to decrease the risk of surface water overland flow. **2. Property Level Protection** Waterproof coating in the basement and installing a sump pump at Claremont's Place to manage surface water and groundwater flooding.	ESCC Highways Property owner
9	Markland Way	**1. Maintain culvert inlet at Batchelor Way** It is recommended that this maintenance is increased in the future so that the culvert does not become blocked before action is taken. Maintenance of the other culverts/watercourses in the area should also be increased. **2. Monitor flood incidents at this location** Due to the lack of flood incidents reported, the area should be monitored carefully and reviewed annually in order to understand the flood risk in this area. It is therefore recommended that UTC should also help monitor the flooding situation, to better inform the flood risk of Uckfield. If flood incidents do occur, it is recommended that detailed modelling is undertaken to refine the existing broad scale uFMfSW. This would provide a more accurate understanding of the areas at risk from flooding.	WDC UTC

5.5 Incident specific actions

A suitable action has also been set for every flood incident on the Uckfield flood history table. The unique ID allocated to each flood incident has also been used in the site specific action plan for cross referencing. A full list of actions is available in the Incident Specific Action Plan in Appendix D.

To enable effective delivery of the action plan, it has been colour coded according to priority. The prioritisation process considered

- the date of the last recorded incident;
- the frequency of recorded flooding; and
- the vulnerability of the receptors.

There are four classifications of action priority: high, medium, low and complete. All of the high priority actions correspond to recent flood records which have a high frequency or affect a more vulnerable receptor. The low priority actions refer to one off flood events, generally old records and low vulnerability receptors. Completed actions have been added where work has already been undertaken, to avoid duplicating efforts.

5.6 Way forward

Whilst ESCC has taken responsibility for leading on the Stage 1 SWMP, it is recommended that the responsibility for monitoring the progress of the action plan and maintaining the links between the partners would be better served at the local level. Thus the immediate next step should be to agree who will lead the delivery of the action plan and the continuation of the partnership.

It is also recommended that the progress of the SWMP to the more detailed stages should be focused on the areas where repeated flood incidents have been recorded together with high predicted flood risk. For the Uckfield SWMP area, further detailed assessment is recommended in some of the hotspot areas, including the High Street, Rocks Park Road and Framfield Road hotspot. This should include CCTV survey and integrated hydraulic modelling to better understand the risk of flooding. Where required this could also lead to a flood risk mitigation options appraisal.

Finally, as part of an iterative process of revision, the outputs of the SWMP should be incorporated into future revisions of the East Sussex Local Flood Risk Management Strategy.

Appendices

A Data Quality Score

Project	Status	Description/Title	Data Requested	Received From	Source	Data Received	Media Type	Data Quality Score
CATCHMENT DATA								
2015s3710 Uckfield SWMP	Received	Digital River Network	21/12/2015	Nick Claxton	Environment Agency	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Geology (bedrock and superficial deposits)	21/12/2015	Nick Claxton	Environment Agency	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Groundwater Source Protection Zone	21/12/2015	Nick Claxton	Environment Agency	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	NRD/NLPG	21/12/2015	Nick Claxton	Environment Agency	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Main River	21/12/2015	Nick Claxton	Environment Agency	19/01/2016	ArcGIS Files	1
PREVIOUS STUDIES								
2015s3710 Uckfield SWMP	Received	East Sussex PFRA	21/12/2015	Nick Claxton	East Sussex County Council	19/01/2016	PDF	1
2015s3710 Uckfield SWMP	Received	East Sussex LFRMS	21/12/2015	Nick Claxton	East Sussex County Council	19/01/2016	PDF	2a
FLOOD RISK DATA								
2015s3710 Uckfield SWMP	Received	Flood Map for Surface Water (1 in 30, 1 in 100 and 1 in 1000)	21/12/2015	Nick Claxton	Environment Agency	04/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Flood Map for Rivers and Seas (1 in 100 and 1 in 1000)	21/12/2015	Nick Claxton	Environment Agency	04/01/2016	ArcGIS Files	1

Project	Status	Description/Title	Data Requested	Received From	Source	Data Received	Media Type	Data Quality Score
2015s3710 Uckfield SWMP	Received	Areas Susceptible to Groundwater Flooding (AStGWF)	21/12/2015	Nick Claxton	Environment Agency	04/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Groundwater Flood Map	04/03/2015	Fiona Hartland	East Sussex County Council	04/03/2016	ArcGIS Files	1
FlOOD HISTORY DATA								
2015s3710 Uckfield SWMP	Received	Highways PEM Flooding	21/12/2015	Fiona Hartland	East Sussex County Council	19/01/2016	Excel File	2b
2015s3710 Uckfield SWMP	Received	WDC Flood Reports	22/12/2015	Graham Kean	Wealden District Council	19/01/2016	Excel File	2b
2015s3710 Uckfield SWMP	Received	Southern Water - Sewer Incident Report Form (SIRF)	21/12/2015	Mike Tomlinson	Southern Water	11/02/2016	Mapinfo Table File	2a
2015s3710 Uckfield SWMP	Received	ESCC Flooding Reports	21/12/2015	Fiona Hartland	East Sussex County Council	19/01/2016	Excel File	2b
ASSETS								
2015s3710 Uckfield SWMP	Received	Highways information on maintenance and clearance of gullys	21/12/2015	Fiona Hartland	East Sussex County Council	29/01/2016	PDF	1
2015s3710 Uckfield SWMP	Received	Gully point data	21/12/2015	Fiona Hartland	East Sussex County Council	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Uckfield CCTV for High Street	21/12/2015	Fiona Hartland	East Sussex County Council	29/01/2016	DWG	1
2015s3710 Uckfield SWMP	Received	Conway inspection for High Street	21/12/2015	Fiona Hartland	East Sussex County Council	29/01/2016	PDF	1

Project	Status	Description/Title	Data Requested	Received From	Source	Data Received	Media Type	Data Quality Score
2015s3710 Uckfield SWMP	Received	Uckfield Asset List	03/02/2015	Fiona Hartland	East Sussex County Council	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Clip of drainage assets	21/12/2015	Fiona Hartland	East Sussex County Council	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Land drainage	03/02/2015	Fiona Hartland	East Sussex County Council	29/01/2016	ArcGIS Files	1
2015s3710 Uckfield SWMP	Received	Foul/Surface water model of Uckfield	03/02/2015	Mike Tomlinson	Southern Water	20/02/2016	ArcGIS Files	1

B Flood History Table

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blocked watercourse	Commercial Curtilage: High Street	7	01/08/1995	WDC	547350	120979	FMR01
Overland flow from watercourse	Residential Property: Alexandra Road	4	01/07/1997	WDC	547593	121075	FMR02
Blocked watercourse	Residential Property: Olives Meadow	3	01/10/2000	WDC	547517	120906	FMR03
Blocked watercourse	Residential Curtilage: Eagle Close	2	25/11/2013	CRM	548217	120295	FRM04
Blocked watercourse	Private Road: Selby Road	2	01/10/1994	WDC	547794	120605	FOW01
Overland flow from watercourse	Residential Property: Regency Close	1	01/11/2000	WDC	547266	121505	FOW02
Culvert blocked	Residential Curtilage: Heron Close	1	01/01/2001	WDC	547669	120122	FOW03
Culvert blocked	Residential Curtilage: The Jays	1	04/09/2013	CRM	547921	120106	FOW04
Culvert blocked	Residential Property: London Road	1	02/01/2013	Highways PEMs	547253	123270	FOW05
Culvert blocked	Residential Curtilage: Batchelor Way	1	23/01/2015	ESCC	546347	121197	FOW06

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Rising water from drains	Residential Property: Claremont Place	1	28/07/2014	CRM	547205	122227	GW01
Garden waterlogged	Residential Curtilage: Greenfield Drive	1	01/10/1992	WDC	547693	119582	GW02
Garden waterlogged	Residential Curtilage: Forge Rise	1	01/12/1997	WDC	547143	120696	GW03
Overland flow	Residential Curtilage: Viewswood Path	1	10/04/2001	WDC	547853	122174	GW04
Garden waterlogged	Residential Curtilage: Senlac Green	1	01/04/2005	WDC	548081	121968	GW05
Water seeping through walls of property	Residential Property: Hempstead Lane	1	01/03/2007	WDC	547376	121233	GW06
Road breaking up from groundwater	Highway: Cuckmere Path	1	04/10/2013	CRM	548277	122064	GW07
Water spurting out from drain	Highway: Lewes Road	1	12/09/2014	CRM	547533	119817	GW08
Hydraulic overload	Highway: High Street	1	08/10/2014	SW	547295	121052	SF01
Hydraulic overload	Highway: Manor Way	1	10/10/2014	SW	547309	121759	SF02

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Hydraulic overload	Highway: Hempstead Garden	1	28/07/2014	SW	547582	121269	SF03
Hydraulic overload	Highway: Birling Way	1	10/10/2014	SW	548247	121971	SF04
Hydraulic overload	Residential Curtilage: Rocks Park Road	1	09/10/2014	SW	547013	121391	SSW01
Hydraulic overload	Highway: The Jays	1	16/12/2014	SW	547907	120061	SSW02
Capacity of drainage exceeded during heavy rain	Residential Curtilage: Rocks Park Road	3	05/08/2010	Highways PEMs	546938	121360	SWH01
Capacity of drainage exceeded during heavy rain	Highway: Alexandra Road	1	23/09/2006	East Sussex Fire & Rescue	547508	120716	SWH02
Blockage of drainage prevented efficient drainage	Commercial Curtilage: Lewes Road	2	10/12/2009	Highways PEMs	547534	119524	SWH03
Capacity of drainage exceeded during heavy rain	Highway: Snatts Road	3	40186	Highways PEMs	547602	122483	SWH04
Blockage of drainage prevented efficient drainage	Highway: Vernon Road	1	40288	Highways PEMs	547756	120606	SWH05
Drainage raised above surrounding area	Highway: High Street	3	23/04/2010	Highways PEMs	547317	121333	SWH06
Fault in pavement	Residential Curtilage: Keld Avenue	1	25/06/2010	Highways PEMs	547649	120869	SWH07

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blocked drainage providing path to property	Residential Property: Montacute Way	4	04/08/2010	Highways PEMs	547829	121838	SWH08
Blockage of drainage prevented efficient drainage	Residential Property: Woodlands Close	2	04/08/2010	Highways PEMs	547800	121790	SWH09
Capacity of the drainage exceeded during heavy rain	Residential Property: Nursery Lane	2	04/08/2010	Highways PEMs	547606	119592	SWH10
Capacity of the drainage exceeded during heavy rain	Residential Curtilage: Eagle Close	1	06/08/2010	Highways PEMs	548202	120304	SWH11
In pipe blockage prevented efficient drainage	Residential Curtilage: Bridge Farm Road/New Town	1	25/08/2010	Highways PEMs	547299	120746	SWH12
Blockage of drainage prevented efficient drainage	Highway: Harcourt Road/Vernon Road	4	27/08/2010	Highways PEMs	547533	120568	SWH13
Removed manhole prevented efficient drainage	Highway: Lewes Road/Highview Lane	2	02/09/2010	Highways PEMs	547536	119778	SWH14
Blockage of drainage prevented efficient drainage	Residential Curtilage: Bellbrook Industrial Estate	2	09/06/2010	Highways PEMs	546658	120914	SWH15
Blockage of drainage prevented efficient drainage	Residential Curtilage: New Road	2	26/07/2010	Highways PEMs	548029	119623	SWH16
Blockage of gullies prevented efficient drainage	Commercial Property: Cambridge Way/Snatts Road	1	05/03/2014	CRM	547422	122375	SWH17
Sunken drainage prevented effiencient drainage	Highway: Rocks Park Road	1	22/01/2010	Highways PEMs	546826	121184	SWH18

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blockage of drainage prevented efficient drainage	Residential Property: The Mount	2	04/08/2010	Highways PEMs	547070	121734	SWH19
Blockage of gullies prevented efficient drainage	Residential Property: Grange Road	6	05/08/2010	Highways PEMs	547383	121164	SWH20
Pathway drainage not efficient	Residential Curtilage: Ironstone Way	1	12/08/2010	Highways PEMs	548055	121406	SWH21
Rising water from blocked drainage	Residential Curtilage: Birling Way	1	18/10/2010	Highways PEMs	548210	121950	SWH22
Blockage of drainage and gullies prevented efficient drainage	Highway: Tainters Brook	1	05/08/2010	Highways PEMs	548275	121719	SWH23
Blockage of drainage prevented efficient drainage	Highway: Church Street	2	12/01/2011	Highways PEMs	547052	121511	SWH24
Blockage of drainage prevented efficient drainage	Residential Property: Manor End	1	01/08/1996	WDC	547444	122019	SWH25
Blockage of gullies prevented efficient drainage	Residential Curtilage: Olives Meadow	2	01/12/2000	WDC	547413	121033	SWH26
Blockage of gullies prevented efficient drainage	Residential Curtilage: Vernon Road	1	01/12/2000	WDC	547669	120536	SWH27
Capacity of drainage exceeded during heavy rain	Residential Property: New Road	6	03/04/2012	Highways PEMs	548089	119731	SWH28
Blockage of gully prevented efficient drainage	Residential Property: Tower View	2	01/01/1995	WDC	547670	121942	SWH29

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blockage of gully prevented efficient drainage	Residential Curtilage: Manor End	1	01/08/1996	WDC	547444	122019	SWH30
Blockage of drainage prevented efficient drainage	Residential Curtilage: Lewes Road	2	21/10/2013	CRM	547517	119377	SWH31
Drainage higher than road infrastructure	Residential Curtilage: The Potteries	1	21/10/2013	CRM	547997	119689	SWH32
Blockage of gullies prevented efficient drainage	Highway: Brambleside	1	20/11/2013	CRM	546425	120661	SWH33
Blockage of drainage prevented efficient drainage	Residential Property: Snatt's Road	1	03/01/2014	CRM	546994	121920	SWH34
Blockage of gullies prevented efficient drainage	Highway: London Road/A26	7	07/01/2014	CRM	547178	123475	SWH35
Blockage of drainage prevented efficient drainage	Highway: Selby Rise	1	07/01/2014	CRM	547714	120429	SWH36
Blockage of drainage prevented efficient drainage	Residential Curtilage: Larnach Close	1	14/01/2014	CRM	547585	121756	SWH37
Blockage of drainage prevented efficient drainage	Highway: Claremont Rise	3	21/01/2014	CRM	547304	122265	SWH38
Water from highway seeping into airbricks. Blocked drainage	Residential Property: Framfield Road	2	30/01/2014	CRM	547673	120697	SWH39
Capacity of drainage exceeded during heavy rain	Residential Curtilage: Oaklea Way	1	19/06/2014	CRM	546983	121234	SWH40

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Capacity of drainage exceeded during heavy rain	Highway: Claremont Place/Snatt's Road	3	14/07/2014	CRM	547263	122276	SWH41
Broken joint in drainage system prevented efficient drainage	Residential Curtilage: Hempstead Road	4	22/07/2014	CRM	547430	121324	SWH42
Blockage of drainage prevented efficient drainage	Residential Curtilage: Nevill Road	2	29/07/2014	CRM	548106	121949	SWH43
Blockage of gullies prevented efficient drainage	Highway: Framfield Road	1	29/07/2014	CRM	547813	120722	SWH44
Blockage of drainge prevented efficient drainage	Residential Curtilage: Hempstead Road	6	29/07/2014	CRM	547749	121317	SWH45
Blockage of drainage prevented efficient drainage	Highway: Bell Farm Road	3	29/07/2014	CRM	547097	121007	SWH46
Blockage of drainage prevented efficient drainage	Residential Curtilage: Lime Close	4	01/08/2014	CRM	547564	121606	SWH47
Blockage of drainage prevented efficient drainage	Highway: Rocks Park	1	01/08/2014	CRM	546909	121395	SWH48
Blockage of drainage prevented efficient drainage	Residential Curtilage: Nevill Road	1	Unknown	CRM	547808	122341	SWH49
Blockage of drainage prevented efficient drainage	Residential Curtilage: Claremont Road	1	Unknown	CRM	547156	122139	SWH50
Road waterlogged believed to be from overcapacity of drain	Highway: Cambridge Way	1	09/09/2014	CRM	547567	122181	SWH51

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blockage of drainage prevented efficient drainage	Highway: Southview Drive/London Road	1	10/06/2011	Highways PEMs	547488	121680	SWH52
Blockage of drainage prevented efficient drainage	Residential Curtilage: Hempstead Rise	1	25/10/2011	Highways PEMs	547437	121280	SWH53
Drainage higher than surrounding area	Commercial Curtilage: High Street	2	20/12/2011	Highways PEMs	547278	120893	SWH54
Blockage of drainage prevented efficient drainage	Highway: Nevill Road	1	22/10/2012	Highways PEMs	547671	122269	SWH55
Blockage of drainage prevented efficient drainage	Highway: London Road	2	02/01/2013	Highways PEMs	547243	123280	SWH56
Blockage of gullies prevented efficient drainage	Residential Property: Eastbourne Road	1	04/03/2013	Highways PEMs	547853	119878	SWH57
Blockage of gullies prevented efficient drainage	Highway: Bell Lane	2	15/05/2013	Highways PEMs	547058	120923	SWH58
Blockage of drainage prevented efficient drainage	Highway: Harcourt Road	4	28/10/2014	ESCC	547454	120594	SWH59
Blockage of gullies prevented efficient drainage	Highways: Ringles Close	1	24/10/2014	ESCC	547592	122632	SWH60
Blockage of gullies prevented efficient drainage	Residential Curtilage: Hempstead Garden	1	23/10/2014	ESCC	547547	121224	SWH61
Blockage of drainage prevented efficient drainage	Highways: Sunnybrook Close	1	23/10/2014	ESCC	547898	121419	SWH62

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Blockage of drainage prevented efficient drainage	Highways: Brows Close	1	10/11/2014	ESCC	547881	121890	SWH63
Rainfall ponds at bottom of the hill	Highway: Snatts Road/London Road	2	09/11/2010	Highways PEMs	547609	122487	SWPR01
Rainfall ponds at bottom of the hill	Highway: London Road/Uplands Drive	1	09/09/2014	CRM	547567	122181	SWPR02
Overland flow from highway into property	Residential Property: Manor Way	1	04/08/2010	Highways PEMs	547168	121592	SWPR03
Heavy rainfall flowing into cellar	Commercial Property: Bell Lane	1	07/12/2010	Highways PEMs	547305	121237	SWPR04
Heavy rainfall flowing onto garden	Residential Curtilage: New Road	1	14/08/2013	CRM	548164	119700	SWPR05
Heavy rainfall flowing onto garden	Residential Curtilage: Church Street	1	27/08/2013	CRM	547024	121505	SWPR06
Heavy rainfall flowing onto garden	Residential Property: Claremont Place	2	03/01/2014	CRM	547206	122227	SWPR07
Drainage higher than road infrastructure causing ponding of water on roads	Highway: Claremont Rise	1	21/01/2014	CRM	547304	122265	SWPR08
Runoff off hard-standing to residential properties	Residential Property: Framfield Road	2	30/01/2014	CRM	547673	120697	SWPR09
Capacity of the drainage exceeded during heavy rain	Highway: Cambridge Way	3	04/03/2014	CRM	547497	122417	SWPR10

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Rainfall ponds on road rising to pavement	Commercial Curtilage: Hempstead Road	1	27/08/2014	CRM	547753	121314	SWPR11
Defective soakaway	Residential Curtilage: Nevill Road	1	01/01/1993	WDC	547784	122329	SWPR12
Overland flow from pond, block outlet	Residential Curtilage: Belmont Road	1	01/11/1993	WDC	546928	121075	SWPR13
Capacity of the drainage exceeded during heavy rain	Commercial Curtilage: Selby Rise	2	01/01/1995	WDC	547705	120428	SWPR14
Overland flow from highway into property	Residential Property: Baker Street	1	01/08/1997	WDC	547614	120752	SWPR15
Overland flow from highway into property	Residential Property: The Drive	1	01/08/1997	WDC	547086	121609	SWPR16
Overland flow from Redrow Development Site	Residential Property: Goldcrest Drive	1	01/11/1997	WDC	547808	120117	SWPR17
Overland flow from Redrow Development Site	Residential Property: Mallard Drive	1	01/11/1997	WDC	547829	120173	SWPR18
Rainfall ponds at bottom of the hill	Residential Curtilage: Meadow Place	1	01/11/2000	WDC	547395	120631	SWPR19
Garden waterlogged	Residential Curtilage: Selby Rise	1	01/11/2000	WDC	547608	120356	SWPR20
Overland flow from new development	Residential Curtilage: Mill Drove	1	24/10/2001	WDC	547436	120810	SWPR21

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Overland flow from highway	Highway: New Town	1	20/10/2011	Highways PEMs	547326	120416	SWPR22
Ponding of water behind wall	Residential Curtilage: Harcourt Close	1	01/07/1991	WDC	547451	120585	SWPR23
Runoff off hard-standing to residential properties	Residential Property: Vernon Road	1	01/11/2002	WDC	547663	120617	SWPR24
Inadequate drainage. Pluvial runoff into house	Residential Property: West View	2	01/07/2007	WDC	547662	122373	SWPR25
Capacity of drainage exceeded during heavy rain	Residential Property: Montacute Way;	1	Unknown	ESCC	547803	121867	SWPR26
Overland flow into basement	Residential Property: New Road	1	03/04/2012	Highways PEMs	548089	119731	SWPR27
Sediment runoff during heavy rainfall	Residential Curtilage: Pudding Cake Lane	4	10/12/2012	Highways PEMs	547197	121439	SWPR28
Rainfall ponds at bottom of the hill	Highway: Lewes Road	1	17/01/2013	Highways PEMs	547525	119392	SWPR29
High pressure flows running into garden	Residential Curtilage: Nevill Road	2	24/10/2014	ESCC	548106	122149	SWPR30
Capacity of drainage exceeded during heavy rain	Residential Property: Nursery Lane	1	04/11/2014	ESCC	547621	119586	SWPR31
Unknown	Private Road: North Row	2	01/01/1994	WDC	547523	121758	SWPD01

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Overland flow off road	Residential Curtilage: Baker Street	1	01/08/2004	WDC	547575	120780	SWPD02
Overland flow off road	Residential Curtilage: Kingfisher Close	1	01/08/2004	WDC	548100	120104	SWPD03
Defective soakaway	Residential Curtilage: Nevill Road	1	01/01/1993	WDC	547784	122329	SWPD04
Rainfall ponds at bottom of the hill	Residential Curtilage: Meadow Place	1	01/11/2000	WDC	547395	120631	SWPD05
Blockage of drainage prevented efficient drainage	Highways: Uplands Drive	1	29/10/2014	ESCC	547584	122177	SWPD06
Unknown - sandbags requested	High Street	1	04/08/2010	Highways PEMs	547336	121411	U01
Unknown - sandbags requested	Tainters Brook	3	10/08/2010	Highways PEMs	548271	121725	U02
Unknown - sandbags requested	Residential Property: West View	1	01/01/1995	WDC	547653	122373	U03
Overland flow	Footpath: Selby Road	2	01/10/1993	WDC	547794	120605	U04
Flooding of shop	Commercial Property: Bell Lane	2	01/10/1993	WDC	547153	121104	U05
Ponding of garden	Residential Curtilage: Vernon Road	1	01/10/1993	WDC	547680	120604	U06

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Unknown - sandbags requested	Residential Property: Manor Way	1	01/12/1993	WDC	547250	121689	U07
Unknown - sandbags requested	Residential Curtilage: The Mount	1	01/01/1994	WDC	547060	121743	U08
Unknown - sandbags requested	Residential Property: Mill Lane	1	01/12/1994	WDC	547389	120902	U09
Unknown - sandbags requested	Residential Property: Selby Gardens	1	01/12/1994	WDC	547907	120481	U10
Unknown - sandbags requested	Residential Property: Egles Grove	1	01/01/1995	WDC	546555	121600	U11
Unknown - sandbags requested	Residential Property: Linnet Green	1	01/01/1995	WDC	547590	120302	U12
Overland flow	Commercial Curtilage: High Street	1	01/06/1997	WDC	547519	121830	U13
Unknown - sandbags requested	Commercial Property: High Street	1	01/08/1997	WDC	547271	120861	U14
Unknown - sandbags requested	Commercial Property: High Street	2	01/01/1998	WDC	547350	120979	U15
Unknown - sandbags requested	Commercial Property: Highlands Avenue	1	01/01/1998	WDC	547641	119938	U16
Unknown - sandbags requested	Commercial Property: Mallard Drive	1	01/01/1998	WDC	547853	120296	U17

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Garden waterlogged	Commercial Property: High Street	1	01/09/1999	WDC	547303	121255	U18
Garden waterlogged	Residential Curtilage: Hughes Way	1	01/11/1999	WDC	547447	121646	U19
Unknown - sandbags requested	Residential Property: Alexandra Road	1	01/10/2000	WDC	547516	120895	U20
Unknown - sandbags requested	Residential Property: Pipers Field	1	01/10/2000	WDC	547711	119639	U21
Unknown - sandbags requested	Residential Property: Goldcrest Drive	1	01/10/2000	WDC	547814	120092	U22
Unknown - sandbags requested	Residential Property: Rocks Park Road	1	01/10/2000	WDC	546641	121282	U23
Unknown - sandbags requested	Residential Property: Rocks Park Road	2	01/10/2000	WDC	546918	121378	U24
Unknown - sandbags requested	Residential Property: Rocks Park Road	1	01/10/2000	WDC	546755	121258	U25
Unknown - sandbags requested	Residential Property: Scarlets Close	2	01/10/2000	WDC	546909	121099	U26
Unknown - sandbags requested	Residential Property: Selby Road	1	01/10/2000	WDC	547287	120535	U27
Unknown - sandbags requested	Residential Property: Senlac Green	1	01/10/2000	WDC	548030	122003	U28

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Unknown - sandbags requested	Residential Property: The Drive	1	01/10/2000	WDC	547011	121529	U29
Unknown - sandbags requested	Residential Property: Uplands Close	1	01/10/2000	WDC	547482	122125	U30
Unknown - sandbags requested	Residential Property: Woodlands Close	1	01/10/2000	WDC	547818	121778	U31
Unknown - sandbags requested	Residential Property: Barnet Way	1	01/11/2000	WDC	547956	121460	U32
Unknown - sandbags requested	Commercial Property: High Street	11	01/11/2000	WDC	547279	120945	U33
Unknown - sandbags requested	Residential Property: Olives Meadow	5	01/11/2000	WDC	547593	121075	U34
Unknown - sandbags requested	Residential Property: Olives Meadow	1	01/11/2000	WDC	547641	121684	U35
Unknown - sandbags requested	Uckfield Fire Station	1	01/11/2000	WDC	547079	121942	U36
Unknown - sandbags requested	Residential Property: Hunters Way	1	01/01/2008	WDC	546858	121637	U37
Unknown - sandbags requested	Highway: Snatt's Road	2	19/11/2010	Highways PEMs	547615	122484	U38
Unknown - sandbags requested	Residential Curtilage: Lewes Road	1	14/01/2014	CRM	547527	119443	U39

Pathway	Receptor	Frequency	Date	Data Source	X	Y	Identifier
Garden waterlogged	Highway: Snatt's Road	1	03/02/2014	CRM	547437	122382	U40
Ponding of water	Residential Curtilage: Snatt's Road	1	27/02/2013	Highways PEMs	547277	122292	U41
Unknown - sandbags requested	Residential Property: Browns Lane	1	07/03/2013	Highways PEMs	548149	121792	U42

C Quantifying Surface Water Flood Risk

Group name	Sub-class
Ambulance Station	AMBULANCE STATION
Education	ADULT EDUCATION
	EDUCATION
	FIRST SCHOOL
	FURTHER EDUCATION
	FURTHER EDUCATION COLLEGE
	HIGH SCHOOL
	HIGHER EDUCATION
	INFANT SCHOOL
	JUNIOR SCHOOL
	MIDDLE SCHOOL
	NURSERY
	PRIMARY SCHOOL
	PRIVATE PRIMARY SCHOOL
	SCHOOL
	SCHOOL FOR THE DEAF
	SECONDARY SCHOOL
	SPECIAL SCHOOL
	TECHNICAL COLLEGE
	UNIVERSITY
	PRE SCHOOL EDUCATION
Electricity	ELECTRICITY GENERATING
	ELECTRICITY SUB STATION
Fire Station	FIRE STATION
Gas	GAS DISTRIBUTION
	GAS MONITORING
	GAS PRODUCTION AND DISTRIBUTION
	GAS REGULATING
	GAS STORAGE
Health	DAY CARE
	HOSPICE
	HOSPITAL
	MENTAL HEALTH CENTRE
	NATIONAL HEALTH SERVICE WALK IN CENTRE
	NURSING HOME
	MEDICAL SERVICES
	MORTUARY
	SURGERY
Police	POLICE HEADQUARTERS
	POLICE STATION
	POLICE SERVICES
Waste Water	SEWAGEFILTRATION
	SEWAGEOUTFALL
	SEWAGEPUMP HOUSE
	SEWAGEPUMPING
	SEWAGERECYCLING
	SEWAGESTORAGE
	SEWAGETREATMENT
Water Treatment	WATER TREATMENT
	PUMP HOUSE

D Incident Specific Action Plan

.

Uckfield Stage 1 Surface Water Management Plan

Action Plan

Welcome to the Uckfield SWMP Action Plan. This spreadsheet lists all the actions proposed to mitigate flood risk in Uckfield.

The actions have colour coded according to prioritised:

High Priority Actions: a list of actions which should be undertaken immediately
Medium Priority Actions: a list of actions to undertake once high priority actions are complete
Low Priority Actions: a list of actions to undertake once medium priority actions are complete
Completed Actions: listing all the actions already undertaken in Bexhill

The information includes:

Unique ID: for cross reference with the flood history table
Source: describing the flood source
Pathway: describing the route of flood water
Receptor: describing the type and location of the property affected
Action: describing the mitigation measure
Co-ordinates: describing the location of the reported incident
Action Owner: the project partner leading delivery of the action
Action Supporter: the project partner assisting in delivering of the action
Date of last incident: describing when the incident was reported
Indicative Cost: providing an indication of action cost
Low: £0 - 5,000; Medium: £5,001 - 10,000; High: £10,001 +
Status: describing the current standing of the action

East Sussex County Council

JBA consulting

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
High Street								
Sewer: Foul	Hydraulic overload	Highway: High Street	As part of the strategic action for the High Street, investigation of existing drainage assets is required	Southern Water	ESCC, WDC	08/10/2014	High	
Surface Water: Highway Drainage	Drainage raised above surrounding area	Highway: High Street	As part of the strategic action for the High Street, investigation of existing drainage assets is required	ESCC Highways		23/04/2010	High	
Surface Water: Highway Drainage	Drainage higher than surrounding area	Commercial Curtilage: High Street	As part of the strategic action for the High Street, investigation of existing drainage assets is required	ESCC Highways		20/12/2011	High	
Fluvial: Main River	Blocked watercourse	Commercial Curtilage: High Street	Inspect location of blockage. If blockage exists, undertake necessary clearance. Monitor to watercourse to prevent future blockages.	WDC		01/08/1995	Medium	
Unknown	Unknown - sandbags requested	High Street	Monitor future flooding at this location.	ESCC Highways		04/08/2010	Low	
Unknown	Overland flow	Commercial Curtilage: High Street	Monitor future flooding at this location.	WDC		01/06/1997	Low	
Unknown	Unknown - sandbags requested	Commercial Property: High Street	Monitor future flooding at this location.	WDC		01/08/1997	Low	
Unknown	Unknown - sandbags requested	Commercial Property: High Street	Monitor future flooding at this location.	WDC		01/01/1998	Low	
Unknown	Garden waterlogged	Commercial Property: High Street	Monitor future flooding at this location.	WDC		01/09/1999	Low	
Unknown	Unknown - sandbags requested	Commercial Property: High Street	Monitor future flooding at this location.	WDC		01/11/2000	Low	
Framfield Road								
Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Highway: Alexandra Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	East Sussex Fire & Rescue		23/09/2006	High	
Surface Water: Pluvial Runoff	Overland flow from highway into property	Residential Property: Baker Street	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	WDC		01/08/1997	High	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Harcourt Road/Vernon Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	ESCC Highways		27/08/2010	High	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Residential Curtilage: Vernon Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	WDC		01/12/2000	High	
Surface Water: Pluvial Runoff	Runoff off hard-standing to residential properties	Residential Property: Framfield Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	ESCC		30/01/2014	High	
Surface Water: Highway Drainage	Water from highway seeping into airbricks. Blocked drainage	Residential Property: Framfield Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	ESCC		30/01/2014	High	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Highway: Framfield Road	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	ESCC		29/07/2014	High	
Surface Water: Private Drainage	Overland flow off road	Residential Curtilage: Baker Street	As part of the strategic action for the Framfield Road, investigation of existing drainage assets is required	WDC		01/08/2004	High	
Fluvial: Ordinary Watercourse	Blocked watercourse	Private Road: Selby Road	Carry out investigations to understand cause of reported incidents	WDC		01/10/1994	Low	
Surface Water: Highway Drainage	Fault in pavement	Residential Curtilage: Keld Avenue	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		25/06/2010	Low - Medium	
Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status

*Indicative costs
Low: £0 - 5,000
Medium: £5,001 - 10,000
High: £10,001 +

Surface Water: Highway Drainage	Blockage of drainage prevented efficient draiange	Highway: Vernon Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		20/04/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Selby Rise	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		07/01/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Harcourt Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		28/10/2014	Low - Medium	
Surface Water: Pluvial Runoff	Capacity of the drainage exceeded during heavy rain	Commercial Curtilage: Selby Rise	Carry out investigations to understand cause of reported incidents	WDC		01/01/1995	Low - Medium	
Surface Water: Pluvial Runoff	Garden waterlogged	Residential Curtilage: Selby Rise	Carry out investigations to understand cause of reported incidents	WDC		01/11/2000	Low - Medium	
Surface Water: Pluvial Runoff	Overland flow from new development	Residential Curtilage: Mill Drove	Carry out investigations to understand cause of reported incidents	WDC		24/10/2001	Low - Medium	
Surface Water: Pluvial Runoff	Ponding of water behind wall	Residential Curtilage: Harcourt Close	Carry out investigations to understand cause of reported incidents	WDC		01/07/1991	Low - Medium	
Surface Water: Pluvial Runoff	Runoff off hard-standing to residential properties	Residential Property: Vernon Road	Carry out investigations to understand cause of reported incidents	WDC		01/11/2002	Low - Medium	
Unknown	Overland flow	Footpath: Selby Road	Monitor future flooding at this location.	WDC		01/10/1993	Low	
Unknown	Ponding of garden	Residential Curtilage: Vernon Road	Monitor future flooding at this location.	WDC		01/10/1993	Low	
Unknown	Unknown - sandbags requested	Residential Property: Mill Lane	Monitor future flooding at this location.	WDC		01/12/1994	Low	
Unknown	Unknown - sandbags requested	Residential Property: Selby Gardens	Monitor future flooding at this location.	WDC		01/12/1994	Low	
Unknown	Unknown - sandbags requested	Residential Property: Alexandra Road	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Selby Road	Monitor future flooding at this location.	WDC		01/10/2000	Low	

Rocks Park Road

Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Residential Curtilage: Rocks Park Road	As part of the strategic action for Rocks Park Road, investigate SuDS as highway drainage and improve drainage into culverted watercourse	ESCC Highways		05/08/2010	High	
Surface Water: Highway Drainage	Sunken drainage prevented effiencient drainage	Highway: Rocks Park Road	As part of the strategic action for Rocks Park Road, investigate SuDS as highway drainage and improve drainage into culverted watercourse	ESCC Highways		22/01/2010	High	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Church Street	As part of the strategic action for Rocks Park Road, investigate SuDS as highway drainage and improve drainage into culverted watercourse	ESCC Highways		12/01/2011	High	
Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Residential Curtilage: Oaklea Way	As part of the strategic action for Rocks Park Road, investigate SuDS as highway drainage and improve drainage into culverted watercourse	ESCC		19/06/2014	High	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Rocks Park	As part of the strategic action for Rocks Park Road, investigate SuDS as highway drainage and improve drainage into culverted watercourse	ESCC		01/08/2014	High	

Sewer: Surface Water	Hydraulic overload	Residential Curtilage: Rocks Park Road	Carry out investigations to understand cause of reported incidents	Southern Water		09/10/2014	Low	
Surface Water: Pluvial Runoff	Heavy rainfall flowing onto garden	Residential Curtilage: Church Street	Carry out investigations to understand cause of reported incidents.	ESCC		27/08/2013	Low	
Unknown	Unknown - sandbags requested	Residential Property: Rocks Park Road	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Rocks Park Road	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Rocks Park Road	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Scarlets Close	Monitor future flooding at this location.	WDC		01/10/2000	Low	

Grange Road

Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Residential Property: Grange Road	As part of the strategic action for the Grange Road, investigation of existing drainage assets is required and surface water re-routing	ESCC Highways		05/08/2010	Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Residential Curtliage: Olives Meadow	As part of the strategic action for the Grange Road, investigation of existing drainage assets is required and surface water re-routing	WDC		01/12/2000	Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Hempstead Rise	As part of the strategic action for the Grange Road, investigation of existing drainage assets is required and surface water re-routing	ESCC Highways		25/10/2011	Medium	
Fluvial: Main River	Blocked watercourse	Residential Property: Olives Meadow	Carry out investigations to understand cause of reported incidents.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Olives Meadow	Monitor future flooding at this location.	WDC		01/11/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Olives Meadow	Monitor future flooding at this location.	WDC		01/11/2000	Low	

Lewes Road

Groundwater	Water spurting out from drain	Highway: Lewes Road	As part of the strategic action for Lewes Road, investigate SuDS as highway drainage.	ESCC		12/09/2014	Medium - High	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient draiange	Commercial Curtilage: Lewes Road	As part of the strategic action for Lewes Road, investigate SuDS as highway drainage.	ESCC Highways		10/12/2009	Medium - High	
Surface Water: Highway Drainage	Removed manhole prevented efficient drainage	Highway: Lewes Road/Highview Lane	As part of the strategic action for Lewes Road, investigate SuDS as highway drainage.	ESCC Highways		02/09/2010	Medium - High	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Lewes Road	As part of the strategic action for Lewes Road, investigate SuDS as highway drainage.	ESCC		21/10/2013	Medium - High	
Surface Water: Pluvial Runoff	Rainfall ponds at bottom of the hill	Highway: Lewes Road	As part of the strategic action for Lewes Road, investigate SuDS as highway drainage.	ESCC Highways		17/01/2013	Medium - High	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Unknown	Unknown - sandbags requested	Residential Curtilage: Lewes Road	Monitor future flooding at this location.	ESCC		14/01/2014	Low	

New Road								
Surface Water: Pluvial Runoff	Overland flow into basement	Residential Property: New Road	As part of the strategic action for New Road, basements should be made flood resilient.	ESCC Highways		03/04/2012	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: New Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		26/07/2010	Low - Medium	
Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Residential Property: New Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		03/04/2012	Low - Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Residential Property: Eastbourne Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		04/03/2013	Low - Medium	
Surface Water: Pluvial Runoff	Heavy rainfall flowing onto garden	Residential Curtilage: New Road	Carry out investigations to understand cause of reported incidents.	ESCC		14/08/2013	Low	
Spring Meadow								
Groundwater	Water seeping through walls of property	Residential Property: Hempstead Lane	As part of the strategic action for Spring Meadow, investigate SuDS as highway drainage.	WDC		01/03/2007	Medium - High	
Surface Water: Highway Drainage	Broken joint in drainage system prevented efficient drainage	Residential Curtilage: Hempstead Road	As part of the strategic action for Spring Meadow, investigate SuDS as highway drainage.	ESCC		22/07/2014	Medium - High	
Surface Water: Highway Drainage	Blockage of drainge prevented efficient drainage	Residential Curtilage: Hempstead Road	As part of the strategic action for Spring Meadow, investigate SuDS as highway drainage.	ESCC		29/07/2014	Medium - High	
Surface Water: Pluvial Runoff	Rainfall ponds on road rising to pavement	Commercial Curtilage: Hempstead Road	As part of the strategic action for Spring Meadow, investigate SuDS as highway drainage.	ESCC		27/08/2014	Medium - High	
Snatt's Road								
Groundwater	Rising water from drains	Residential Property: Claremont Place	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		28/07/2014	Medium	
Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Highway: Snatts Road	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC Highways		08/01/2010	Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Commercial Property: Cambridge Way/Snatts Road	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		05/03/2014	Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Property: Snatt's Road	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		03/01/2014	Medium	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Claremont Rise	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		21/01/2014	Medium	

Surface Water: Highway Drainage	Capacity of drainage exceeded during heavy rain	Highway: Claremont Place/Snatt's Road	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		14/01/2014	Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Claremont Road	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		Unknown	Medium	
Surface Water: Highway Drainage	Road waterlogged believed to be from overcapacity of drain	Highway: Cambridge Way	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		09/09/2014	Medium	
Surface Water: Pluvial Runoff	Drainage higher than road infrastructure causing ponding of water on roads	Highway: Claremont Rise	As part of the strategic action for the Snatt's Road, investigation of existing drainage assets is required	ESCC		21/01/2014	Medium	
Surface Water: Pluvial Runoff	Rainfall ponds at bottom of the hill	Highway: Snatts Road/London Road	Carry out investigations to understand cause of reported incidents.	ESCC Highways		09/11/2010	Medium	
Surface Water: Pluvial Runoff	Heavy rainfall flowing onto garden	Residential Property: Claremont Place	Carry out investigations to understand cause of reported incidents.	ESCC		03/01/2014	Medium	
Unknown	Unknown - sandbags requested	Highway: Snatt's Road	Monitor future flooding at this location.	ESCC Highways		19/11/2010	Low	
Unknown	Garden waterlogged	Highway: Snatt's Road	Monitor future flooding at this location.	ESCC		03/02/2014	Low	
Unknown	Ponding of water	Residential Curtilage: Snatt's Road	Monitor future flooding at this location.	ESCC Highways		27/02/2013	Low	

Markland Way

Fluvial: Ordinary Watercourse	Culvert blocked	Residential Curtilage: Batchelor Way	Inspect highway culvert. If blockage exists, undertake necessary clearance. Monitor to culvert to prevent future blockages. Monitor future flooding at this location	ESCC		23/01/2015	Low - Medium	

Other areas

Fluvial: Main River	Blocked watercourse	Residential Curtilage: Eagle Close	Inspect watercourse. If blockage exists, undertake necessary clearance. Monitor to watercourse to prevent future blockages.	ESCC		25/11/2013	Low - Medium	
Fluvial: Ordinary Watercourse	Overland flow from watercourse	Residential Property: Regency Close	Carry out investigations to understand cause of reported incidents.	WDC		01/11/2000	Low - Medium	
Fluvial: Ordinary Watercourse	Culvert blocked	Residential Curtilage: Heron Close	Inspect highway culvert. If blockage exists, undertake necessary clearance. Monitor to culvert to prevent future blockages.	WDC		01/01/2001	Low - Medium	
Fluvial: Ordinary Watercourse	Culvert blocked	Residential Curtilage: The Jays	Inspect highway culvert. If blockage exists, undertake necessary clearance. Monitor to culvert to prevent future blockages.	ESCC		04/09/2013	Low - Medium	
Fluvial: Ordinary Watercourse	Culvert blocked	Residential Property: London Road	Inspect highway culvert. If blockage exists, undertake necessary clearance. Monitor to culvert to prevent future blockages.	ESCC Highways		02/01/2013	Low - Medium	
Sewer: Foul	Hydraulic overload	Highway: Manor Way	Upgrade highway drainage.	SW		10/10/2014	Medium	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Sewer: Foul	Hydraulic overload	Highway: Hempstead Garden	Upgrade highway drainage.	SW		28/07/2014	Medium	
Sewer: Foul	Hydraulic overload	Highway: Birling Way	Upgrade highway drainage.	SW		10/10/2014	Medium	
Sewer: Surface Water	Hydraulic overload	Highway: The Jays	Upgrade highway drainage.	SW		16/12/2014	Medium	

Groundwater	Garden waterlogged	Residential Curtliage: Greenfield Drive	Carry out investigations to understand cause of reported incidents.	WDC		01/10/1992	Low - Medium	
Groundwater	Garden waterlogged	Residential Curtilage: Forge Rise	Carry out investigations to understand cause of reported incidents.	WDC		01/12/1997	Low - Medium	
Groundwater	Overland flow	Residential Curtilage: Viewswood Path	Carry out investigations to understand cause of reported incidents.	WDC		10/04/2001	Low - Medium	
Groundwater	Garden waterlogged	Residential Curtilage: Senlac Green	Carry out investigations to understand cause of reported incidents.	WDC		01/04/2005	Low - Medium	
Groundwater	Road breaking up from groundwater	Highway: Cuckmere Path	Carry out investigations to understand cause of reported incidents.	ESCC		04/10/2013	Low - Medium	
Surface Water: Highway Drainage	Blocked drainage providing path to property	Residential Property: Montacute Way	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		04/08/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Property: Woodlands Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		04/08/2010	Low - Medium	
Surface Water: Highway Drainage	Capacity of the drainage exceeded during heavy rain	Residential Property: Nursery Lane	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		04/08/2010	Low - Medium	
Surface Water: Highway Drainage	Capacity of the drainage exceeded during heavy rain	Residential Curtilage: Eagle Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		06/08/2010	Low - Medium	
Surface Water: Highway Drainage	In pipe blockage prevented efficient drainage	Residential Curtilage: Bridge Farm Road/New Town	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		25/08/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Bellbrook Industrial Estate	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		09/06/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Property: The Mount	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		04/08/2010	Low - Medium	
Surface Water: Highway Drainage	Pathway drainage not efficient	Residential Curtilage: Ironstone Way	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		12/08/2010	Low - Medium	
Surface Water: Highway Drainage	Rising water from blocked drainage	Residential Curtilage: Birling Way	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		18/10/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage and gullies prevented efficient drainage	Highway: Tainters Brook	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC Highways		05/08/2010	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Property: Manor End	Inspect highway drainage. If blockage exists, undertake necessary clearance.	WDC		01/08/1996	Low - Medium	
Surface Water: Pluvial Runoff	Overland flow from highway into property	Residential Property: Manor Way	Carry out investigations to understand cause of reported incidents.	ESCC Highways		04/08/2010	Low - Medium	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Surface Water: Highway Drainage	Blockage of gully prevented efficient drainage	Residential Property: Tower View	Inspect highway drainage. If blockage exists, undertake necessary clearance.	WDC		01/01/1995	Low - Medium	
Surface Water: Highway Drainage	Blockage of gully prevented efficient drainage	Residential Curtilage: Manor End	Inspect highway drainage. If blockage exists, undertake necessary clearance.	WDC		01/08/1996	Low - Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Highway: Brambleside	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		20/11/2013	Low - Medium	

Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Highway: London Road/A26	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		03/01/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Larnach Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		14/01/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Nevill Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		29/07/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Bell Farm Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		29/07/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Lime Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		01/08/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Residential Curtilage: Nevill Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		Unknown	Low - Medium	
Surface Water: Private Drainage	Defective soakaway	Residential Curtilage: Nevill Road	Undertake remedial works to private drainage.	WDC		01/01/1993	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Southview Drive/London Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	Highways PEMs		10/06/2011	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: Nevill Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	Highways PEMs		22/10/2012	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highway: London Road	Inspect highway drainage. If blockage exists, undertake necessary clearance.	Highways PEMs		02/01/2013	Low - Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Highway: Bell Lane	Inspect highway drainage. If blockage exists, undertake necessary clearance.	Highways PEMs		15/05/2013	Low - Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Highways: Ringles Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		24/10/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of gullies prevented efficient drainage	Residential Curtilage: Hempstead Garden	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		23/10/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highways: Sunnybrook Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		23/10/2014	Low - Medium	
Surface Water: Highway Drainage	Blockage of drainage prevented efficient drainage	Highways: Browns Close	Inspect highway drainage. If blockage exists, undertake necessary clearance.	ESCC		10/11/2014	Low - Medium	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Surface Water: Pluvial Runoff	Heavy rainfall flowing into cellar	Commercial Property: Bell Lane	Carry out investigations to understand cause of reported incidents.	ESCC Highways		07/12/2010	Low - Medium	
Surface Water: Private Drainage	Rainfall ponds at bottom of the hill	Residential Curtilage: Meadow Place	Undertake remedial works to private drainage.	WDC		01/11/2000	Low - Medium	
Surface Water: Private Drainage	Blockage of drainage prevented efficient drainage	Highways: Uplands Drive	Undertake remedial works to private drainage.	ESCC		29/10/2014	Low - Medium	
Surface Water: Highway Drainage	Drainage higher than road infrastructure	Residential Curtilage: The Potteries	Monitor future flooding at this location.	ESCC		21/10/2013	Low	
Surface Water: Pluvial Runoff	Rainfall ponds at bottom of the hill	Highway: London Road/Uplands Drive	Monitor future flooding at this location.	ESCC		09/09/2014	Low	

Surface Water: Pluvial Runoff	Capacity of the drainage exceeded during heavy rain	Highway: Cambridge Way	Monitor future flooding at this location.	ESCC		04/03/2014	Low	
Surface Water: Pluvial Runoff	Defective soakaway	Residential Curtilage: Nevill Road	Monitor future flooding at this location.	WDC		01/01/1993	Low	
Surface Water: Pluvial Runoff	Overland flow from pond, block outlet	Residential Curtilage: Belmont Road	Monitor future flooding at this location.	WDC		01/11/1993	Low	
Surface Water: Pluvial Runoff	Overland flow from highway into property	Residential Property: The Drive	Monitor future flooding at this location.	WDC		01/08/1997	Low	
Surface Water: Pluvial Runoff	Overland flow from Redrow Development Site	Residential Property: Goldcrest Drive	Monitor future flooding at this location.	WDC		01/11/1997	Low	
Surface Water: Pluvial Runoff	Overland flow from Redrow Development Site	Residential Property: Mallard Drive	Monitor future flooding at this location.	WDC		01/11/1997	Low	
Surface Water: Pluvial Runoff	Rainfall ponds at bottom of the hill	Residential Curtilage: Meadow Place	Monitor future flooding at this location.	WDC		01/11/2000	Low	
Surface Water: Pluvial Runoff	Overland flow from highway	Highway: New Town	Monitor future flooding at this location.	ESCC Highways		20/10/2011	Low	
Surface Water: Pluvial Runoff	Sediment runoff during heavy rainfall	Residential Curtilage: Pudding Cake Lane	Monitor future flooding at this location.	ESCC Highways		10/12/2012	Low	
Surface Water: Pluvial Runoff	Inadequate drainage. Pluvial runoff into house	Residential Property: West View	Monitor future flooding at this location.	WDC		01/07/2007	Low	
Surface Water: Pluvial Runoff	Capacity of drainage exceeded during heavy rain	Residential Property: Montacute Way;	Monitor future flooding at this location.	ESCC		Unknown	Low	
Surface Water: Pluvial Runoff	High pressure flows running into garden	Residential Curtilage: Nevill Road	Monitor future flooding at this location.	ESCC		24/10/2014	Low	
Surface Water: Pluvial Runoff	Capacity of drainage exceeded during heavy rain	Residential Property: Nursery Lane	Monitor future flooding at this location.	ESCC		04/11/2014	Low	
Surface Water: Private Drainage	Unknown	Private Road: North Row	Monitor future flooding at this location.	WDC		01/01/1994	Low	
Surface Water: Private Drainage	Overland flow off road	Residential Curtliage: Kingfisher Close	Monitor future flooding at this location.	WDC		01/08/2004	Low	
Unknown	Unknown - sandbags requested	Tainters Brook	Monitor future flooding at this location.	ESCC Highways		10/08/2010	Low	
Unknown	Unknown - sandbags requested	Residential Property: West View	Monitor future flooding at this location.	WDC		01/01/1995	Low	

Source	Pathway	Receptor	Action	Action Owner	Action Supporter	Date of Incident	Indicative Cost*	Status
Unknown	Flooding of shop	Commercial Property: Bell Lane	Monitor future flooding at this location.	WDC		01/10/1993	Low	
Unknown	Unknown - sandbags requested	Residential Property: Manor Way	Monitor future flooding at this location.	WDC		01/10/1993	Low	
Unknown	Unknown - sandbags requested	Residential Curtilage: The Mount	Monitor future flooding at this location.	WDC		01/12/1993	Low	
Unknown	Unknown - sandbags requested	Residential Property: Eagles Grove	Monitor future flooding at this location.	WDC		01/01/1994	Low	
Unknown	Unknown - sandbags requested	Residential Property: Linnet Green	Monitor future flooding at this location.	WDC		01/01/1995	Low	
Unknown	Unknown - sandbags requested	Commercial Property: Highlands Avenue	Monitor future flooding at this location.	WDC		01/01/1998	Low	
Unknown	Unknown - sandbags requested	Commercial Property: Mallard Drive	Monitor future flooding at this location.	WDC		01/01/1998	Low	

Unknown	Garden waterlogged	Residential Curtilage: Hughes Way	Monitor future flooding at this location.	WDC		01/11/1999	Low	
Unknown	Unknown - sandbags requested	Residential Property: Pipers Field	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Goldcrest Drive	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Senlac Green	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: The Drive	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Uplands Close	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Woodlands Close	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Barnet Way	Monitor future flooding at this location.	WDC		01/10/2000	Low	
Unknown	Unknown - sandbags requested	Uckfield Fire Station	Monitor future flooding at this location.	WDC		01/11/2000	Low	
Unknown	Unknown - sandbags requested	Residential Property: Hunters Way	Monitor future flooding at this location.	WDC		01/01/2008	Low	
Unknown	Unknown - sandbags requested	Residential Property: Browns Lane	Monitor future flooding at this location.	ESCC Highways		07/03/2013	Low	

Offices at

Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Isle of Man
Limerick
Newcastle upon Tyne
Newport
Peterborough
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
Warrington

Registered Office

South Barn
Broughton Hall
SKIPTON
North Yorkshire
BD23 3AE
United Kingdom

t:+44(0)1756 799919
e:info@jbaconsulting.com

Jeremy Benn Associates Ltd

Registered in England
3246693

Visit our website

www.jbaconsulting.com