Cambridgeshire's Local Flood Risk Management Strategy

2015- 2020

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Approvals

Name	Title	Signature	Date
Graham Hughes	Executive Director: Economy, Transport & Environment		
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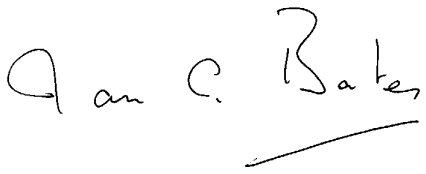
Foreword

Flooding has a devastating effect on people and communities. The flood events of 2007 resulted in a full review of Flood Risk Management in England by Sir Michael Pitt. Whilst the floods of 2007 did not hit Cambridgeshire hard, the challenges faced in the County, with over 50% of land below sea level, mean we must not be complacent.

The Government's response to Sir Michael Pitt's review resulted in new legislation – the Flood and Water Management Act 2010. This Act defines that all County Councils and Unitary Authorities will take on a new role as the Lead Local Flood Authority. Cambridgeshire County Council became a Lead Local Flood Authority. The Act has enabled strong partnerships to be formed between the Lead Local Flood Authority and the other Flood Risk Management Authorities in Cambridgeshire. We are very proud of the links that the Cambridgeshire Flood Risk Management Partnership has forged.

In line with the Act, our Lead Local Flood Risk Authority set about forming a strategy which not only sets out the important roles each of the Flood Risk Management Partners play; but how collectively we will manage flood risk in Cambridgeshire. We are delighted to see this strategy evolve, and this revised version demonstrates the progress that has been made in dealing with the many challenges of flooding in Cambridgeshire.



Cllr Ian Bates
Chair for Growth and Environment Committee

Cllr Steve Count
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Executive Summary

Flooding can occur at any time and anywhere and is expected to increase due to climate change. Cambridgeshire, as one of the lowest and flattest Counties of England, is very susceptible to flooding. This was evident most recently in August 2014 when just under 300 homes flooded internally following extreme summer storms across Cambridgeshire.

This strategy concurs with the Environment Agency's National Flood and Coastal Erosion Risk Management Strategy.

The strategy has been developed jointly with the members of Cambridgeshire Flood Risk Management Partnership. It encompasses the historical flooding issues in and around Cambridgeshire, focusing on the efficiencies and effectiveness of local solutions within the communities.

Cambridgeshire County has a rich environmental and historical character that must be protected for future generations. The Local Flood Risk Management Strategy recognises this heritage and provides the necessary framework for fostering partnerships between flood risk management officers, particularly in delivering flood risk management schemes.

The strategy sets out the roles and responsibilities of flood risk management partners within the County, highlighting the position of the County Council as the Lead Local Flood Authority under the Flood and Water Management Act 2010.

There are 5 key objectives within the strategy:

- Understanding flood risk in Cambridgeshire;
- Managing the likelihood and impact of flooding;
- Helping Cambridgeshire's citizens to understand and manage their own risk;
- Ensuring appropriate development in Cambridgeshire; and
- Improving flood prediction, warning and post flood recovery.

Though flooding is inevitable, with these key objectives, the strategy aims to coordinate, minimise and manage its impacts within Cambridgeshire.

The strategy explains the various funding avenues for flood risk management activities and emphasises the need for local partnership and contributions in delivering local flood schemes.

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1. Background

In England, 5.2 million properties are at risk of flooding. Of these, 1.4 million are at risk from rivers or the sea, 2.8 million are at risk from surface water and 1 million are at risk from both. This risk was realised in many parts of the country during the summer floods of 2007, and most recently in August 2014 when 300 homes flooded in the County.

1.1 National Context

1.1.1 Following the 2007 floods Sir Michael Pitt, commissioned by Government, produced the 'Lessons learned from the 2007 summer floods'. The Government accepted the 92 recommendations made in the report, and in 2010 the recommendations were transposed into UK Law in the form of the Flood and Water Management Act 2010. Under this Act county councils and unitary authorities were given new roles and responsibilities for local flood risk management.

1.1.2 One of the requirements of the Flood and Water Management Act 2010 is for the Environment Agency to 'develop, maintain, apply and monitor a strategy for flood and coastal erosion risk management in England'. The Environment Agency has, jointly with Defra, developed a national strategy that reflects Government policy on flood risk management and related issues. The strategy, entitled a National Flood and Coastal Erosion Risk Management Strategy for England describes what needs to be done by all organisations involved in flood risk management. These organisations include local authorities, Internal Drainage Boards, water and sewerage companies, highway authorities, and the Environment Agency.

1.1.3 The strategy sets out a statutory framework, guiding principles and objectives that will help communities, the public sector and other organisations to work together to manage flood risk. It supports local decision-making and engagement in flood risk management, making sure that risks are managed in a coordinated way both locally, and across catchments. The National Strategy can be found here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228898/9780108510366.pdf

1.1.4 The national strategy guiding principles are:

Community focus and partnership working
The flood risk management authorities should work in partnership with communities to understand the community perspective of flooding, help communities understand and actively prepare for the risks and encourage them to have direct involvement in decision-making and risk management

actions. Partnership working is also required to ensure that risk is managed in a coordinated way beyond authority boundaries, for example across catchments, with lead local flood authorities working together.

A catchment based approach

In understanding and managing flood and coastal risks locally, it is essential to consider the impacts on other parts of the catchment. Authorities must seek to avoid passing risk on to others within the catchment without prior agreement.

Sustainability

Flood risk management authorities should support communities by managing risks in ways that take account of all impacts and the whole-life costs[1] of investment in risk management. The risk management solutions should be forward-looking, taking account of potential risks that may arise in the future and be adaptable to climate change. They should also work with natural processes where possible and enhance the environment.

Proportionate, risk-based approaches

It is not technically, economically or environmentally feasible to prevent flooding altogether. A risk-based management approach targets resources to those areas where they have greatest effect. Risk management measures consider both the probability over time of a flood happening and the consequences that might arise if it did, for example by assessing the average annual damages that arise from floods.

Multiple benefits

As well as reducing the risks to people and property, flood risk management can bring significant economic, environmental and social benefits. It can enhance and protect the built, cultural heritage, biodiversity, rural and natural environments by preventing loss and damage to habitats and heritage assets and reducing pollution, for example, through the use of Sustainable Drainage Systems. It can contribute to regeneration and income generation, protect infrastructure and transport links and contribute to economic growth.

Beneficiaries should be encouraged to invest in risk management

The benefits achieved when flood risks are managed are in many cases localised and lead to personal or private gain through the protection of specific individuals, communities and businesses. They can also be public, through the reduction of future costs to society arising from incident recovery. The Government is keen to ensure that wherever possible alternative sources of funding can be secured in each area to reflect the local benefits that would be delivered. Any funding found locally can

[1] Whole life costs refers to the total cost of ownership over the life of an asset.

supplement the amounts available nationally and mean as many communities as possible can be protected.

1.2 Local Context

1.2.1 Under the Flood and Water Management Act 2010, Cambridgeshire County Council is designated as a 'Lead Local Flood Authority' and as such has the responsibility for developing, maintaining and applying a local flood risk strategy in Cambridgeshire. It is intended that local authorities should reflect the content, guiding principles, aims and objectives of the national strategy in the development of their local flood risk management strategies. The development of the strategy has required input from the designated 'Risk Management Authorities' who have a duty to act consistently with the strategy – in Cambridgeshire they are:

- District and City Councils;
- Internal Drainage Boards;
- Anglian Water Services Limited;
- Cambridge Water Company;
- Highway Authority; and
- The Environment Agency.

1.2.2 This strategy will clarify roles and responsibilities for local flood risk, and the duties and permissive powers that Risk Management Authorities have. It will also build on the existing partnerships developed in Cambridgeshire. The strategy will also provide a framework for local communities to develop local partnerships and solutions to the flood risks they face and underpin a partnership approach to funding flood resilience projects.

1.2.3 Although this strategy's remit under the Flood and Water Management Act (2010) is to address flooding from surface water, ground water and ordinary watercourses, this document will also look to provide guidance on other forms of flooding, such as main river; a responsibility of the Environment Agency.

1.2.4 <u>Local Objectives</u>
Reflecting the Government's strategic objectives at a local level, Cambridgeshire's Risk Management Authorities have developed the following objectives for managing flood risk:

The Local Objectives are:

- ***Objective 1:*** *Understanding flood risk in Cambridgeshire;*
- ***Objective 2:*** *Managing the likelihood of flooding;*
- ***Objective 3:*** *Helping Cambridgeshire's citizens to manage their own risk;*
- ***Objective 4:*** *Ensuring appropriate development in Cambridgeshire; and*
- ***Objective 5:*** *Improving flood prediction, warning and post flood* recovery.

These objectives and related actions are discussed in more detail later in this strategy.

1.2.5 <u>The Cambridgeshire Flood Risk Management Partnership</u>
Anticipating the requirements of the Flood and Water Management Act 2010, and noting the Government's response to the Pitt Review recommendations, Cambridgeshire County Council formed Cambridgeshire's Flood Risk Management Partnership in June 2009. The partnership is made up of representatives from Cambridgeshire County Council (including the elected member that sits on the Regional Flood and Coastal Committees), district councils, Environment Agency, Anglian Water Services Ltd, Cambridgeshire's Internal Drainage Boards, Cambridgeshire Fire and Rescue Service and Cambridgeshire Constabulary.

1.2.6 The partnership is responsible for ensuring that the objectives and actions agreed in this strategy are delivered where possible; thus enabling Cambridgeshire County Council to fulfill its leadership role in flood risk management.

1.2.7 The partnership has data sharing agreements in place to ensure that data is handled professionally and confidentially between partners. For example Cambridgeshire County Council and Anglian Water Services have a licence agreement in place that stipulates how data can be shared and used.

1.2.8 The work of the partnership is subject to annual overview and scrutiny by Cambridgeshire County Council's Economy and Environment Committee.

1.2.9 The content of this strategy has been guided by a range of legislative and strategic documents produced by key stakeholders. The documents that have been considered are listed in Appendix 1 - Detailed list of legislation relevant to the development of the strategy.

1.2.10 Regional Flood and Coastal Committees (RFCCs)

The Regional Flood and Coastal Committees have been established to take forward much of the work previously carried out by Regional Flood Defence Committees, with an extended remit to include coastal erosion. They play an important local role in guiding the Environment Agency's flood and coastal activities, approving programmes of work for their areas and continuing to raise local levies under existing arrangements to fund local priorities. It is intended that they will also have a wider role in assisting the review of local authority risk assessments, maps and plans required by the Flood Risk Regulations 2009.

1.2.11 Regional Flood and Coastal Committees help to provide governance for the Environment Agency flood and coastal erosion risk management functions and cover all flood risks that are not the responsibility of the water companies. Membership consists of elected members from the relevant Lead Local Flood Authorities and independent members with relevant experience appointed by the Environment Agency. They have three key purposes:

- To ensure there are coherent plans for identifying, communicating and managing flood and coastal erosion risks across catchments and shorelines;
- To promote efficient, targeted and risk-based investment in flood and coastal erosion risk management that optimises value for money and benefits for local communities. This includes managing the spending of both Government Flood Defence Grant in Aid and Local Levy paid by Lead Local Flood Authorities; and
- To provide a link between the Environment Agency, Lead Local Flood Authorities, other flood risk management authorities and other relevant bodies to engender mutual understanding of flood and coastal erosion risks in its area.

1.2.12 Cambridgeshire is split between two different Regional Flood and Coastal Committees:

- Anglian Northern; and
- Anglian Central.

Regional Flood and Coastal Committees are the key decision making bodies for allocating funding from both Flood Defence Grant in Aid, local levies which are raised from Lead Local Flood Authorities, precepts which are collected from Internal Drainage Boards and general drainage charges which are raised from landowners. These are the key streams of funding for flood alleviation schemes from fluvial, coastal and local flooding. They also contribute towards individual property flood resilience schemes and the river maintenance programme. These committees, therefore, have a

hugely important role in deciding which areas receive support for flood risk management activities. How funding is calculated and allocated is discussed in detail in the ‘Funding and Delivery’ chapter of this document.

2 Objective 1: Understanding flood risk in Cambridgeshire

2.1 Cambridgeshire

Cambridgeshire is approximately 304,400 hectares in size and is comprised of one upper tier authority - Cambridgeshire County Council and five second tier local authorities: Cambridge City Council; East Cambridgeshire District Council; Fenland District Council; Huntingdonshire District Council; and South Cambridgeshire District Council (see figure 1 – Main settlements and Main Rivers in Cambridgeshire).

2.1.1 Cambridgeshire spans two Environment Agency catchments: the 'Cambridgeshire and Bedfordshire' and 'Lincolnshire and Northamptonshire' areas. The majority of Cambridgeshire sits in the 'Cambridgeshire and Bedfordshire' area, although the upper parts of Fenland and Huntingdonshire sit in the 'Lincolnshire and Northamptonshire' area. Cambridgeshire encompasses 62 Internal Drainage Board catchments.

2.1.2 The water and sewerage undertaker for the County is Anglian Water Services Limited and Cambridge Water Company also provides water services.

2.1.3 The population of the county in 2013 was approximately 635,000 and this is expected to increase by an average of 26% by 2036, with the largest predicted growth in Cambridge City of 28% by 2031. The number of households in 2013 was approximately 262,000 and this is predicted to increase by an average of 26% by 2036.

2.1.4 Historically people settled close to a natural water supply. Therefore, many of the large settlements we see today have been built around major river systems, with many properties built on low lying land close to the river, often the natural floodplain. These settlements are typical of urban settlements across the country and are generally at risk from surface water flooding, some settlements being more at risk than others. This risk is made worse by some of these settlements having rivers flowing through them. Urban settlements generally suffer from surface water flood risk due to the historic design of the underground drainage system. Although this is now recognised as a problem and higher design standards are in place, developments in previous decades have not taken higher rainfall events into consideration.

2.1.5 There is also a significant historic element to these settlements, which can also be an issue with regards to flood risk management.

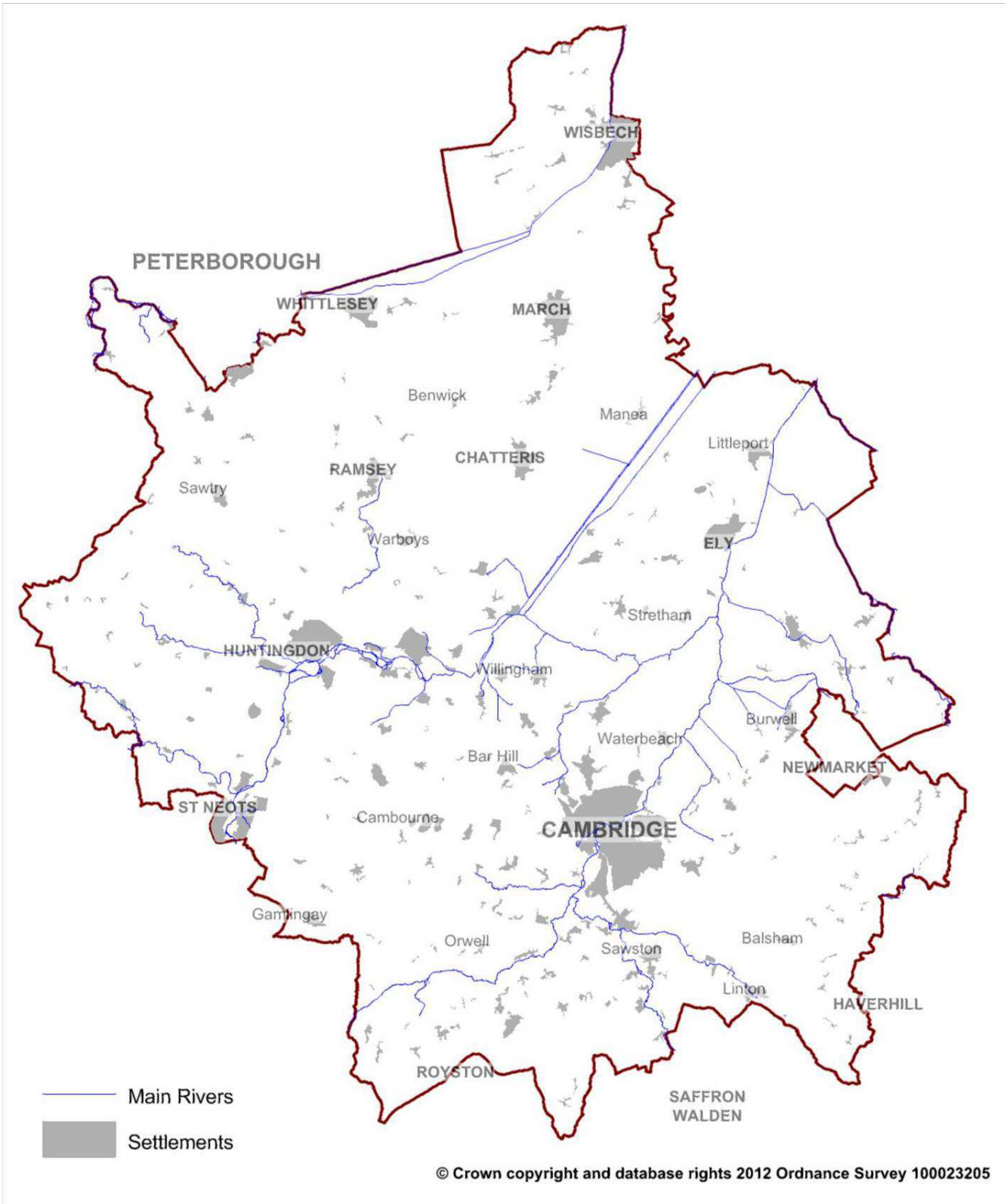


Figure 1 Main settlements and rivers in Cambridgeshire

2.1.6 Much of the northern rural area in Cambridgeshire is known as 'The Fens' which is an area that is artificially drained. The Fens include the lowest lying land in Cambridgeshire, with Holme Fen being not only the lowest point in the County, but also the lowest point in the UK, approximately 2.75m below sea level. Over 50% of the land in Cambridgeshire is below mean sea level and is therefore reliant on pumped drainage. Management of such areas is by Internal Drainage Boards who manage water levels in these areas. Internal Drainage Boards produce policy statements (available via each Internal Drainage Board) that set out the level of protection provided within internal drainage districts and each board's approach to dealing with flood risk management. Internal Drainage Boards are a locally based democratically accountable body. They make local decisions about flood risk management activities and represent a good example of 'localism at work' in Cambridgeshire.

2.1.7 Internal Drainage Boards and The Fens are discussed in a separate section later in this chapter.

2.1.8 Within Cambridgeshire there is approximately 4995km of ordinary watercourse. The main rivers through the county are the River Great Ouse and its key tributaries, for example the River Cam. The River Nene also flows through the County. Rivers are categorised into main rivers and ordinary watercourses. Main rivers are usually large watercourses but also include smaller watercourses of strategic drainage importance. The Environment Agency is responsible for flood risk management of 'main rivers' and has powers to undertake maintenance and capital work on them. All other smaller watercourses, ditches and streams are classified as ordinary watercourses. The coordination of flood risk management of ordinary watercourses is predominantly the responsibility of Cambridgeshire County Council outside of Internal Drainage Boards districts.

2.1.9 The Environment Agency is the statutory undertaker for its own reservoirs, for example the Ouse Washes and the Nene Washes, but it is also the enforcement authority for all reservoirs that come under the Reservoirs Act (1975). For more information on the Environment Agency's reservoir responsibilities see http://www.environment-agency.gov.uk/business/sectors/118421.aspx

2.1.10 City, district councils, and Internal Drainage Boards have responsibility for maintaining certain watercourses called 'awarded watercourses' across the county. These are generally maintained on an annual basis, or when required, and small blockages are cleared in the watercourses if a riparian owner is not known or not forthcoming. The lower tier authorities also have various flood risk management roles and have developed close working

relationships with residents and local interest groups. The watercourses located within local wildlife sites are also managed appropriately.

2.1.11 The City and district councils are also known as local planning authorities, and they are responsible for ensuring developments do not increase flood risk elsewhere and that where ever possible provide an overall reduction in flood risk. They must also each have a Strategic Flood Risk Assessment for their area; this is explored further in section 2.9

2.1.12 Cambridgeshire County Council as the local Highways Authority also undertakes work on a risk based approach to regularly inspect and maintain highways structures such as ditches and gullies, to help ensure that they are fit for purpose. Cambridgeshire is bordered by Lincolnshire, Norfolk, Suffolk, Essex, Hertfordshire, Central Bedfordshire, Bedford Borough, Peterborough and Northamptonshire (see Fig 2 – Neighbouring counties and unitary authorities to Cambridgeshire).

2.2 Flooding in Cambridgeshire

2.2.1 The Environment Agency has produced maps that show fluvial and tidal flooding, and it has undertaken detailed Hazard Mapping for locations in Cambridgeshire.

2.2.2 The flood maps for planning show current flood risk and use the best available flooding data from rivers and the sea. The Flood Maps for Surface Water are hosted by the EA but they are updated with data from Cambridgeshire County Council who also review them. The flood maps show:

- Flood zones:
  - Flood zone 1: Areas with low probability of flooding;
  - Flood zone 2: Areas with medium probability of flooding;
  - Flood zone 3: (a) Areas with high probability of flooding, (b) Functional floodplain (where water regularly flows when overtopping river banks);
- Flood defences and the areas they benefit; and
- The likelihood of flooding – low, moderate or significant.

2.2.3 These flood maps are not sufficiently detailed to show the risk of flooding to an individual property or specific site. However, Flood zones are used as part of the local planning authority development considerations (see Fig 3 – Flood zones in Cambridgeshire).

Figure 2 Neighbouring counties and unitary authorities in Cambridgeshire

2.2.4 British Geological Survey (BGS) mapping identifies approximately 26% of Cambridgeshire as being at a very high or high risk of groundwater flooding based on their areas Susceptible to Groundwater Flooding dataset. However, the BGS note that the susceptibility data is suitable to establish relative, but not absolute, risk of groundwater flooding at a resolution of greater than a few hundred metres. In all cases it is strongly recommended that the data is used in conjunction with other groundwater flooding data.

2.2.5 In addition, the susceptibility data should not be used on its own to make planning decisions at any scale, and cannot be used on its own to indicate risk of groundwater flooding.

2.2.6 Cambridgeshire has suffered from six recorded large scale flood events in recent years, these being:

- March 1947;
- September 1968;
- May 1978;
- Easter 1998;
- October 2001;
- Summer 2012;
- August 2014; and
- July 2015.

2.2.7 These flood events resulted from a combination of flooding from various sources, including main rivers, surface water, sewer flooding and ordinary watercourses. With respect to flooding resulting from ordinary watercourses, it is likely that a combination of factors, for example, surface water flooding and flooding from ordinary watercourses can occur when there are capacity issues with the main rivers that they flow into.

2.3 Internal Drainage Boards (IDBs)

2.3.1 IDBs have an important role in reducing flood risk through management of water levels and drainage in their districts. Much of their work involves the maintenance of rivers, drainage channels, ordinary watercourses, pumping stations and other critical infrastructure within their districts. Some IDBs date back to 1252; however, the majority of today's IDBs were established by the national government following the passing of the Land Drainage Act 1930, and today predominantly operate under the Land Drainage Act 1991 under which an IDB is required to exercise a general supervision over all matters relating to water level management of land within its district.

2.3.2 Historically, there were 63 IDBs within Cambridgeshire prior to the amalgamation of a number of IDBs within the county. They have permissive powers to undertake water level management within drainage districts. The area of an Internal Drainage Board is not determined by county boundaries, but by water catchment areas within a given region.

2.3.3 The role of Internal Drainage Board in the management of flood risk within Cambridgeshire is vital. Figure 4 shows the areas in which Drainage Boards within Cambridgeshire operate. Appendix 2 lists the Internal Drainage Boards within Cambridgeshire.

2.4 Flood Risk Management Plans (FRMPs)

2.4.1 The Environment Agency has developed Catchment Flood Management Plans for the Anglian Region with the aim of taking a broad view of flood risk at catchment level over the next 100 years. Catchment Flood Management Plans help the Environment Agency to understand the scale and extent of flooding now and in the future and set policies for managing flood risk within the catchment. Recently the Environment Agency announced that it would be producing Flood Risk Management Plans (FRMPs) for each river basin district, that highlight the hazards and risks of flooding from rivers, the sea, surface water, groundwater and reservoirs, and set out how RMAs work together with communities to manage flood risk. The draft FRMP was published for consultation in October 2014. The Environment Agency is reviewing the consultation, and will publish the final FRMP in December 2015.

2.4.2 Flood Risk Management Plans must include:

- a map showing the boundaries of the Flood Risk Area;
- the conclusions drawn from the flood hazard and risk maps;
- flood risk management objectives;
- proposed measures for achieving those objectives;
- a report of the consultation; and
- where appropriate, information about how the FRMP measures and corresponding River Basin Management Plan (RBMP) measures will be co-ordinated.

2.4.3 Much of the background information and actions from the Catchment Flood Management Plans CFMPs has been transferred into and taken forward in the new FRMPs. In the Cambridgeshire and Bedfordshire Area, the EA has taken forward all actions from the Great Ouse CFMP and the Nene CFMP which remain relevant, and removed actions which have either been completed or are no longer going forward.

2.4.4 The FRMP considers on-going, agreed and proposed measures for each of the following catchments in the Anglian RBD:

- Broadland Rivers
- Cam and Ely Ouse (including South Level)
- Combined Essex
- East Suffolk
- Nene
- North Norfolk
- North West Norfolk
- Old Bedford and Middle Level
- Upper Ouse and Bedford
- Welland
- Witham

2.4.5 The FRMP covers the River Great Ouse catchment, which starts in Northamptonshire near Brackley and passes through several towns before it crosses the Fens and flows into The Wash downstream of King's Lynn. The catchment includes other significant rivers such as the Cam that runs through Cambridge. The Nene catchment is located in the east of England. It extends from around Daventry eastwards through Northampton, Wellingborough and Peterborough to its outfall into The Wash. The catchment encompasses part of the Fens in Fenland and Huntingdonshire District Council's boundaries. Figure 6 shows the location and extent of the FRMP area.

2.4.6 The downstream limit of the Cambridgeshire and Bedfordshire, and Nene catchments in the FRMP are located on the coast. The FRMP, therefore also considers tidal flood risk. The overall plan area is about 27,890km^2 and has a population of around six million people.

2.4.7 Although there are large centres of population such as Milton Keynes, Cambridge, Bedford, Ely and King's Lynn along with market towns such as St Neots and St Ives the area is largely rural. Over half of the grade 1 and 2 agricultural land in England is present in the Anglian region.

2.4.8 The final FRMP will be published in December 2015.

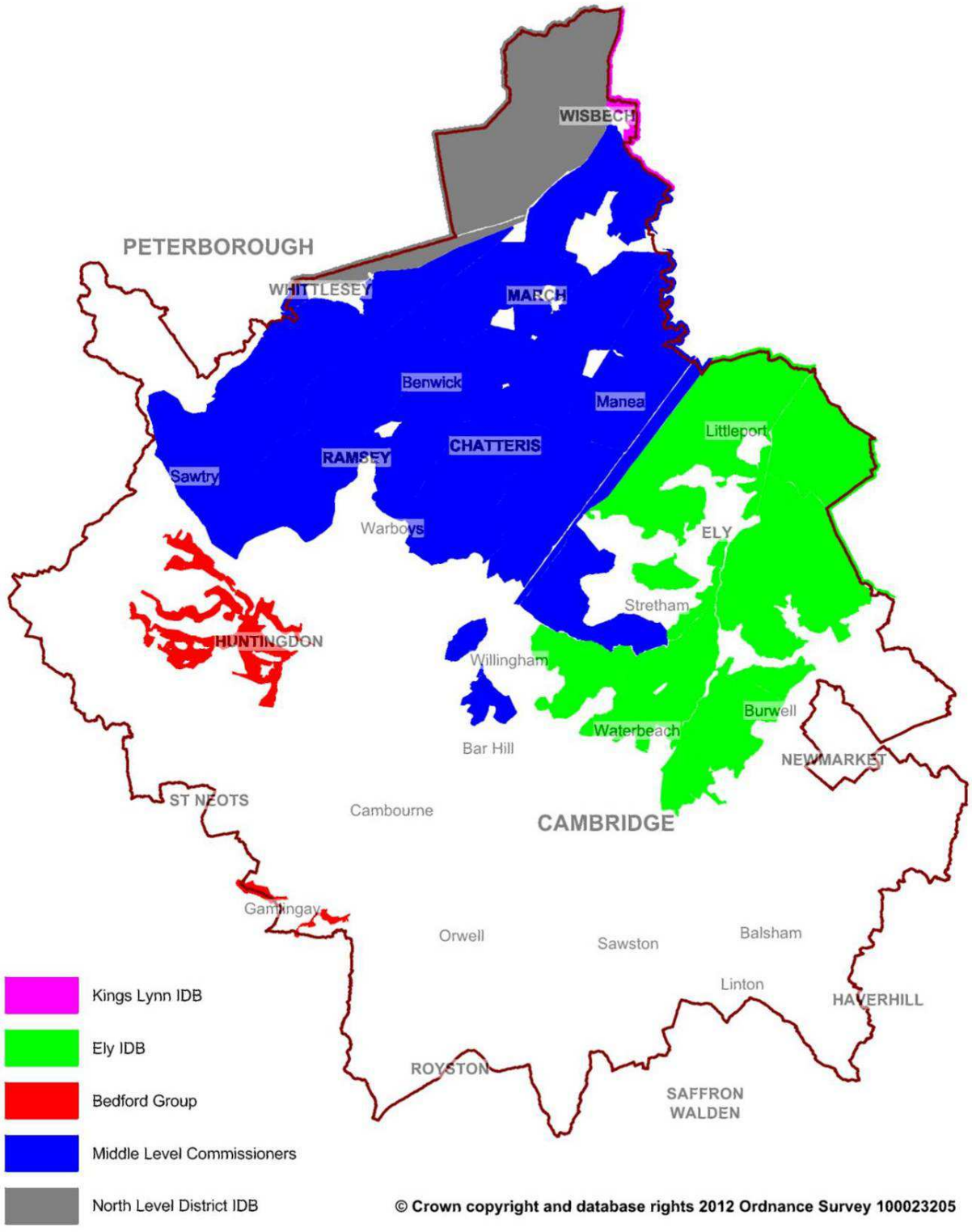


Figure 3 Internal drainage board management catchments in Cambridgeshire

2.5 The Fens

2.5.1 This section on 'The Fens' has been developed in partnership with Peterborough City Council, Lincolnshire County Council, Suffolk County Council and Norfolk County Council, and Internal Drainage Boards in the Fens.

2.5.2 The introduction of the duty for Lead Local Flood Authorities to produce Local Flood Risk Management Strategies provides an opportunity for integrating and delivering the aspirations for the Fens. Local strategies are considered an appropriate vehicle due to their key role in setting objectives and identifying priorities and funding needs for local flood risk management. Local strategies will also be driven by Lead Local Flood Authorities in partnership, will undergo public consultation and will be informed by Flood Risk Management Plans, Strategic Flood Risk Assessments and other relevant strategic and local documents. It is therefore considered a more practical approach to ensure that flood risk and drainage management of fenland areas is co-ordinated across the relevant local strategies. This needs to be delivered in partnership with all other risk management authorities operating in the Fens area, which will include Lead Local Flood Authorities, Internal Drainage Boards, the Environment Agency, Local Authorities and Anglian Water.

2.5.3 Local strategies will integrate the needs and opportunities of the local Fens and fenland communities with those of the rest of the local Lead Local Flood Authorities area, and promote a consistent approach across the Fens as a whole. This consistency is crucial, for example, to Internal Drainage Boards, who often span more than one local authority and whose practices will be similar throughout their area. The Lead Local Flood Authorities of Lincolnshire, Peterborough, Cambridgeshire, Norfolk and Suffolk have therefore agreed to work together closely to achieve this aim. Forest Heath District Council has been involved on behalf of Suffolk County Council since Suffolk's fenland is principally located in this area.

2.5.4 <u>Background to the Fens</u>

It is important to consider the history of the Fens when considering the areas future management. Systematic water management first commenced in the mediaeval period, but localised attempts had been known since Roman times. Large scale drainage of the Fens first began in the 17th century, when the 'Fens' as we now know it began to take shape. The creation of the Ouse Washes was one of the initial phases of draining the fens and is still a critical part of the flood risk management system. All these attempts met with setbacks, and it was not until the introduction of mechanised pumps in the industrial age that successful year round water management was achieved across the area.

2.5.5 Today this artificially drained landscape is home to approximately half a million people. The Fens cover an area of almost 1,500 square miles, divided between eleven district and five county councils. The Fens covers a large area of eastern England, stretching from the Wash to Lincoln, Peterborough and Cambridge (see figure 4). The Fens encompasses five different rivers – the Witham, Welland, Glen, Nene and Ouse, carry water from surrounding uplands through the Fens and into the Wash.

2.5.6 Well maintained coastal and fluvial flood defences are essential to providing the conditions in which Internal Drainage Boards can maintain extensive artificial drainage of the area.

2.5.7 Across the Fens, Internal Drainage Boards maintain 3,800 miles of watercourse, 200 miles of watercourse embankment and 286 pumping stations. Coupled with over 60 miles of coastal sea walls and 96 miles of river embankments, the Fens in the most part has a high level of protection, and is classified as a defended flood plain.

2.5.8 <u>The impacts of climate change in the Fens</u>
Climate change, poses a serious threat to the Fens and a continued programme of investment in flood defences and drainage systems will be needed for existing standards of protection, including provision for the potential impact of climate change, to be maintained in the medium and long term.

2.5.9 Beyond the short to medium term, the likely impacts of climate change on flood risk management over the next 100 years poses future challenges we need to address to enable everyone who may be affected to start planning for the future.

2.5.10 Currently, and for the next 20 years there is very good news for this area as the current standards of protection provided by the defences is very high, between 1 in 120 years (0.8% chance of flooding in any one year) to 1 in 500 years (0.2%). According to current climate change projections, in future years water levels may be higher in the Great Ouse Tidal River and New Bedford River, which will lead to an increase in flood risk. It is important to note that there is not likely to be a significant change in flood risk until towards the end of the 100 year period.

2.5.11 The Internal Drainage Boards within the Fens have been established over many years because of the special water level and drainage management needs existing within this area, and the particular need for lowland and inland local flood risk management activities. These local works are funded in the main from funds levied locally by Internal Drainage Boards.

2.5.12 Well maintained coastal and fluvial flood defences, supporting an extensive drainage infrastructure are essential in promoting sustainable growth in the Fens. Housing, jobs, essential infrastructure (such as roads and railway lines) and services (such as utilities) that meet the needs of the market towns and the rural communities can only happen if drainage and flood risk is well managed. Growth in the Fens will need to be embraced in a sustainable way; balancing development needs with the need to promote and protect open spaces, natural habitats, landscapes, the built environment and the unique qualities of the Fens. It is therefore essential that Risk Management Authorities, utilities and local communities continue to work closely with local planning authorities, so that consideration of sustainable drainage in particular and flood and water management in general are an integral part of the forward planning and development control process.

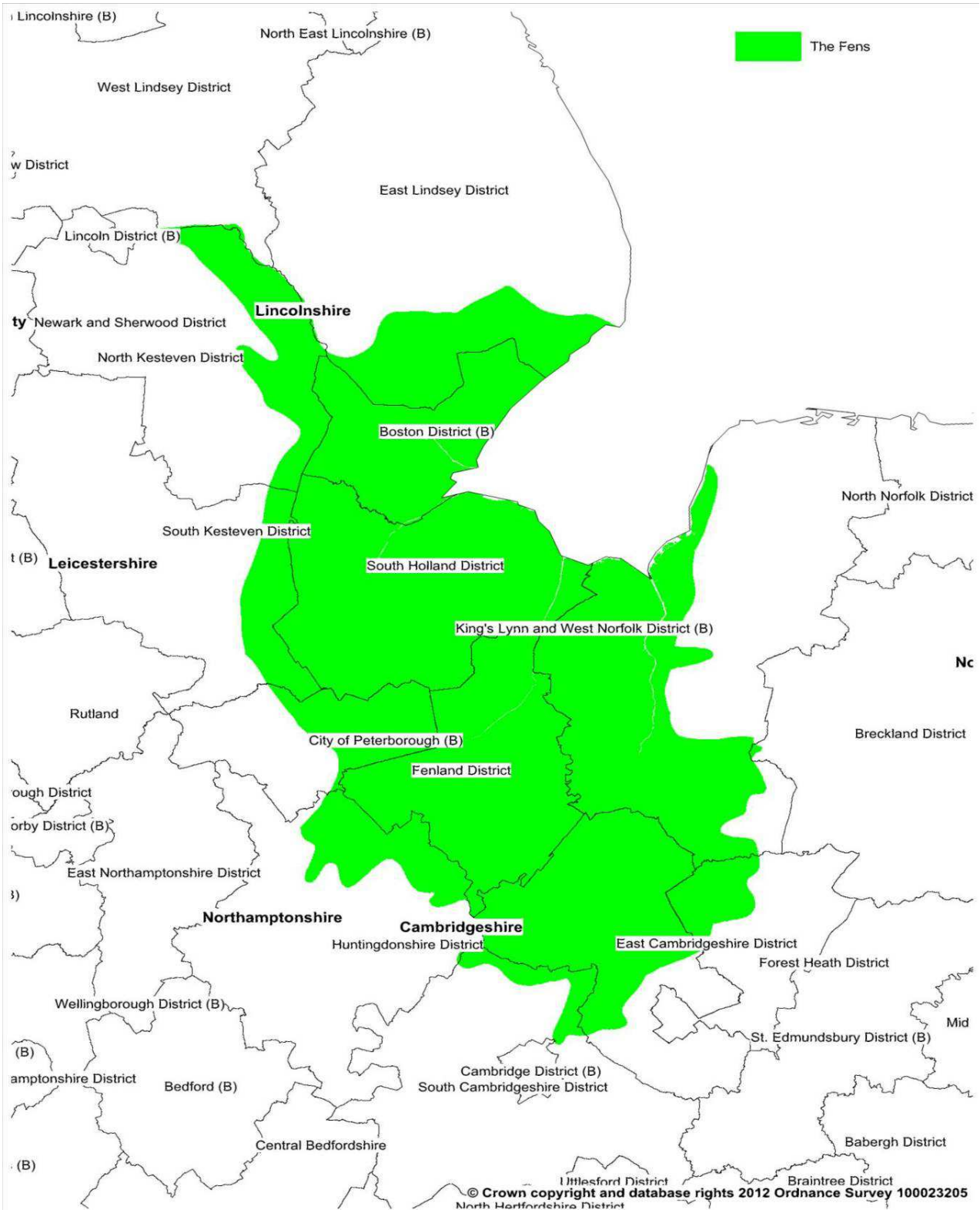


Figure 4 The location of the Fens in Eastern England

2.5.13 Farming contributes significantly to the success of the local economy, supporting a large number of businesses involved in the production of food and rural tourism.

2.5.14 The important role that farming plays in the Fens is emphasised by the steady decline in self-sufficiency in the UK, and the Government's renewal of the food security agenda. The Fens account for 50% of all Grade 1 agricultural land in England, producing 37% of all vegetables and 24% of all potatoes grown in the country, as well as enough wheat to make 250 million loaves of bread every year.

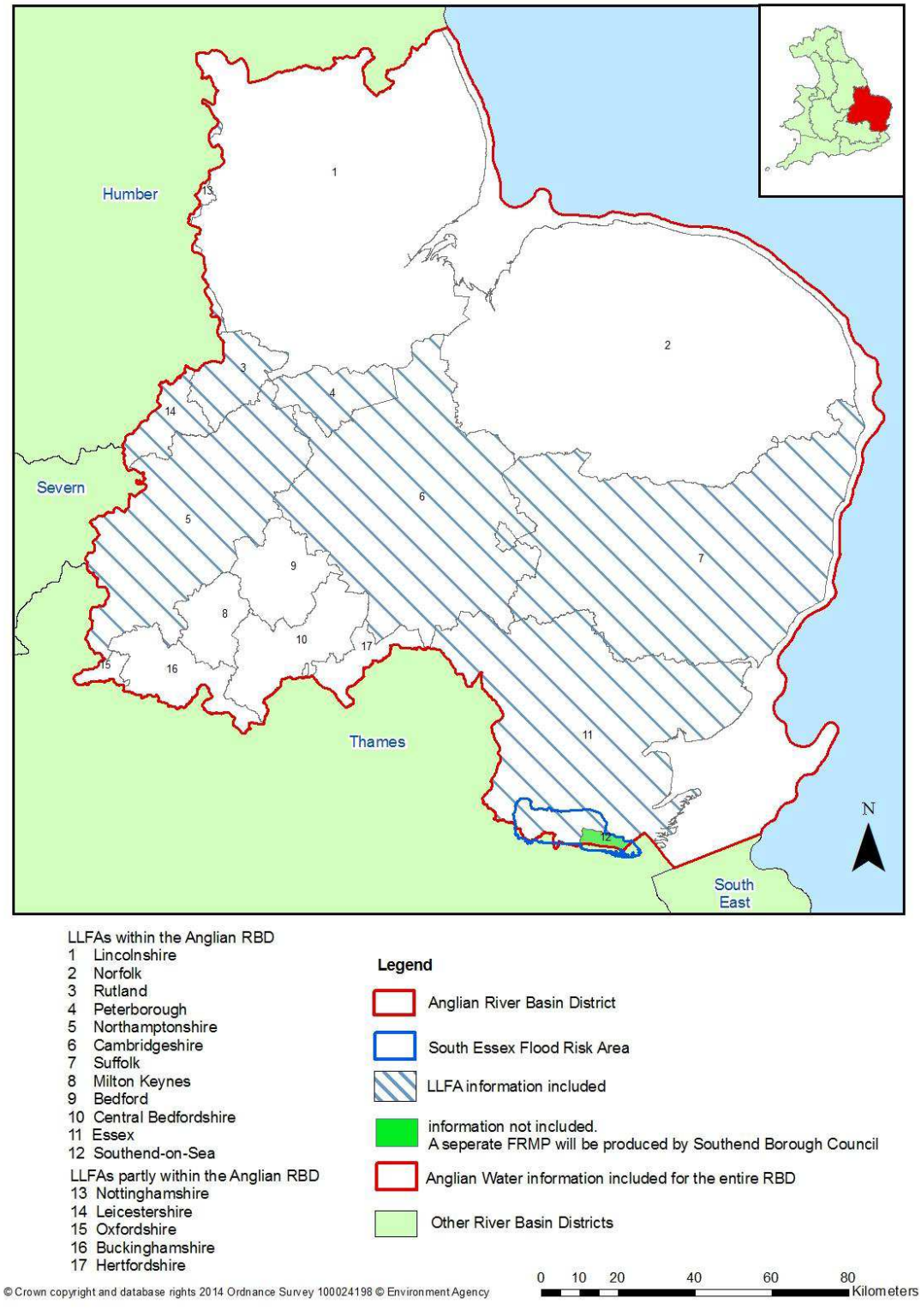
2.5.15 The area also supports significant livestock, dairying and outdoor pig production. This in turn supports a large well-established food processing industry.

2.5.16 It is critical, therefore, that appropriate flood risk and drainage management measures are taken to protect this nationally important food production area. In addition to food production, the Fens is popular for tourism, attracting numerous visitors each year. The Fens provide a unique and rich habitat for wildlife and include the Ouse and Nene Washes which while providing flood storage capacity, are also an important wetland for birds.

2.5.17 There are major transport networks, road and rail, as well as houses, critical infrastructure, water, gas and electricity that would be affected if fenland areas were to flood.

2.5.18 The Fens form two sides of the Wash which is internationally designated for animal and plant biodiversity. There are also numerous local sites, ranging from Sites of Special Scientific Interest to Local Nature Reserves which need to be protected; for example, the Nene and Ouse Washes are internationally protected wetlands. The Fens also represent a unique archaeological and historic environment, where human activity has shaped the land, with evidence of the earliest drainage schemes going back to Roman times and containing many designated and undesignated heritage assets. Like any watercourses, Fenland Rivers and roddons (former channels) can contain significant archaeological materials and deposits.

2.5.19 Specific to the Fens, the peat deposits in the fen basin overlie internationally important prehistoric remains, such as the Bronze Age sites and boats from Must Farm, Whittlesey. The band of the silt fen to the north provides a contrast of mediaeval villages and towns. More information on this or any other aspect of Cambridgeshire's historic environment can be obtained from the Historic Environment Record at the county council.



LLFAs within the Anglian RBD
1 Lincolnshire
2 Norfolk
3 Rutland
4 Peterborough
5 Northamptonshire
6 Cambridgeshire
7 Suffolk
8 Milton Keynes
9 Bedford
10 Central Bedfordshire
11 Essex
12 Southend-on-Sea

LLFAs partly within the Anglian RBD
13 Nottinghamshire
14 Leicestershire
15 Oxfordshire
16 Buckinghamshire
17 Hertfordshire

Legend

- Anglian River Basin District
- South Essex Flood Risk Area
- LLFA information included
- information not included. A seperate FRMP will be produced by Southend Borough Council
- Anglian Water information included for the entire RBD
- Other River Basin Districts

0 10 20 40 60 80 Kilometers

Figure 5 The location of the FRMP

2.5.20 Cambridgeshire's waterways have helped define its past. They have acted as routes for communication, conquest and trade, as sources of food and other requirements, provided power for industry, defined territories and acted as refuges and protection for the population. As such, they contain many remains of this past, from fish weirs to abandoned cargos, bridges to treasure hoards, all of which needs to be remembered when before suggesting changes to them.

Aspirations

To reflect the importance of the Fens as a highly productive and precious resource the following aspirations have been identified for the wider area in respect of flood risk and drainage management.

- Continue to ensure that appropriate flood risk and water management measures are taken to protect the nationally important food production areas in the Fens;
- Ensure that where appropriate, current levels of protection are maintained in the Fens taking into account climate change to protect life and property;
- Manage flood risk and drainage in accordance with principles of sustainable development;
- Ensure that development is undertaken appropriately, so that adverse consequences of flood risk are not increased;
- Contribute towards the protection and enhancement of the historic environment and environmental significance and unique landscape of the Fens and its biodiversity
- Support promotion and use of the waterways and other areas in the Fens for tourism and recreation;
- Develop effective dialogue with local communities to facilitate their involvement in flood risk management in the Fens; and
- Work with local planning authorities to help them grow the economy in the Fens, through the early consideration of flood and water management needs.

2.6 Surface Water Management Plans

2.6.1 Surface Water Management Plans are a tool to understand and manage surface water flood risk on a local basis. Surface Water Management Plans build on Strategic Flood Risk Assessments undertaken by district councils, and provide the way that local organisations are able to develop a shared understanding of local flood risk. The output of a Surface Water

Management Plan is an action plan that defines measures to reduce the risk, maintenance needs and links into development framework and emergency plans.

2.6.2 Surface Water Management Plans investigate different types of flooding including:

- Surface water flooding where rain water, a result of a heavy downpour flows over the ground or ponds on surfaces such as roads, before it enters the underground drainage network or watercourse. This also includes water that cannot enter a drain, soakaway, or watercourse because the network is full to capacity. This type of flooding is known as pluvial flooding. It could also include drain entries surcharging due to pressure from upstream in the drainage system;

The Environment Agency's 'Flood Map for Surface Water' estimates that approximately 23,100 homes in Cambridgeshire are at risk of surface water flooding in a rainfall event with a 0.5% chance of occurring in any given year (3,575 of those from depth greater than 300mm flooding during a 1 in 200 year rainfall event.)

- Groundwater flooding where water which is below the surface of the ground rises above the ground surface. This type of flooding tends to occur after long periods of heavy rainfall;

- Ordinary watercourse flooding happens when a watercourse such as a ditch or stream cannot accommodate the volume of water that is flowing into it;

- Sewer flooding is when the capacity of the underground sewer system is exceeded owing to heavy rainfall, resulting in flooding inside and outside buildings, roads or other areas (sewer flooding occurring as a result of operational issues, i.e. blockages and equipment failure was not considered as part of the Surface Water Management Plan). Water companies are responsible for flooding from their foul and surface water sewers, and from burst water mains. All water companies maintain a register of properties that have experienced flooding due to hydraulic incapacity within the network.

- It is important to note that sewers that solely take highway surface water runoff may be managed by the local highway authority.

2.6.3 Although not assessed in detail in the Surface Water Management Plans the impact of the following types of flooding were taken into account:

- River flooding from watercourses designated as a Main River that are usually large watercourses or those that are deemed to be of strategic drainage importance. Flooding happens when a main river or its adjacent flood plain cannot accommodate the volume of water that is flowing into it. The Environment Agency is responsible for flood risk management of main rivers;

- Reservoir flooding occurs when a reservoir structure suffers a complete or partial failure such as overtopping, seepage or breach. The Reservoirs Act 1975 has been amended and states that all undertakers with reservoirs that have a capacity over 25,000m³ above ground level must register their reservoirs with the Environment Agency as they are subject to regulation. Undertakers must also prepare a reservoir flood plan, and report any incidents at reservoirs to the Environment Agency;

- Tidal flooding occurs when either or both sea and river defences are overtopped or breached. Flooding from the sea and tidal rivers is often sudden and the extreme forces driving it present a significant danger to life. Although Cambridgeshire is predominantly land locked, it is affected by tidal influences in the River Nene, and in areas such as Whittlesey and Wisbech. There are also tidal influences in Cambridgeshire from the Great Ouse Tidal River along the Ouse Washes and up to St Ives.

2.6.4 Cambridgeshire Strategic Surface Water Management Plan
The first Surface Water Management Plan for Cambridgeshire was undertaken in 2010, and revised in 2014 by the Cambridgeshire Flood Risk Management Partnership to help the partnership understand the level of flood risk in Cambridgeshire. The Surface Water Management Plan was produced in accordance with Defra guidance and the latest version was approved by Cambridgeshire County Council's Economy and Environment Committee on the 13 January 2015.

2.6.5 The council is required to undertake a Strategic Surface Water Management Plan to comply with the Flood and Water Management Act 2010. It was decided that the Cambridgeshire Strategic Surface Water Management Plan does not provide a level of detail that could be used to inform decisions on the allocation of land for different types of development or individual planning applications. However, it could be used to identify broad areas where surface water should be considered in more detail in a site based Flood Risk Assessment, and to promote Sustainable Drainage Systems.

2.6.6 The Surface Water Management Plan could also be used for emergency management activities, and the content of the Cambridgeshire Surface

Water Management Plan would seek to inform the work of the Peterborough and Cambridgeshire Local Resilience Forum and associated emergency management activities in the county.

2.6.7 Data for the Surface Water Management Plan came from a variety of sources including, but not limited to, historical flooding information provided by stakeholders and members of the public as part of the Flooding Memories project, the Environment Agency's National Receptor Database and Flood Maps for Surface Water, Information from city and district councils, town and parish councils, Internal Drainage Boards, the Council's Highways Team, and Emergency Management Team.

2.6.8 In addition, a Stakeholder Engagement Plan was developed to ensure that all the key stakeholders were engaged in the development of the Surface Water Management Plan. A detailed list of the organisations involved is contained within the Surface Water Management Plan report.

2.6.9 The initial broad brush assessment identified numerous areas, called 'wet spots', at risk of varying levels of surface water flooding, as shown in figure 6.

2.6.10 The assessment then prioritised the 'wet spots' by considering how a community would be affected in the event of a flood. For example the affect on housing; critical infrastructure, wastewater treatment works; traffic infrastructure; and vulnerable sites such as a residential care home and schools.

2.6.11 Following the strategic assessment, the 'Top 10' wet spots were identified based on how badly they would be affected in the event of a flood (shown in Table 1). A further assessment will be carried out on these wet spots to evaluate whether a scheme could be implemented to reduce the flood risk.

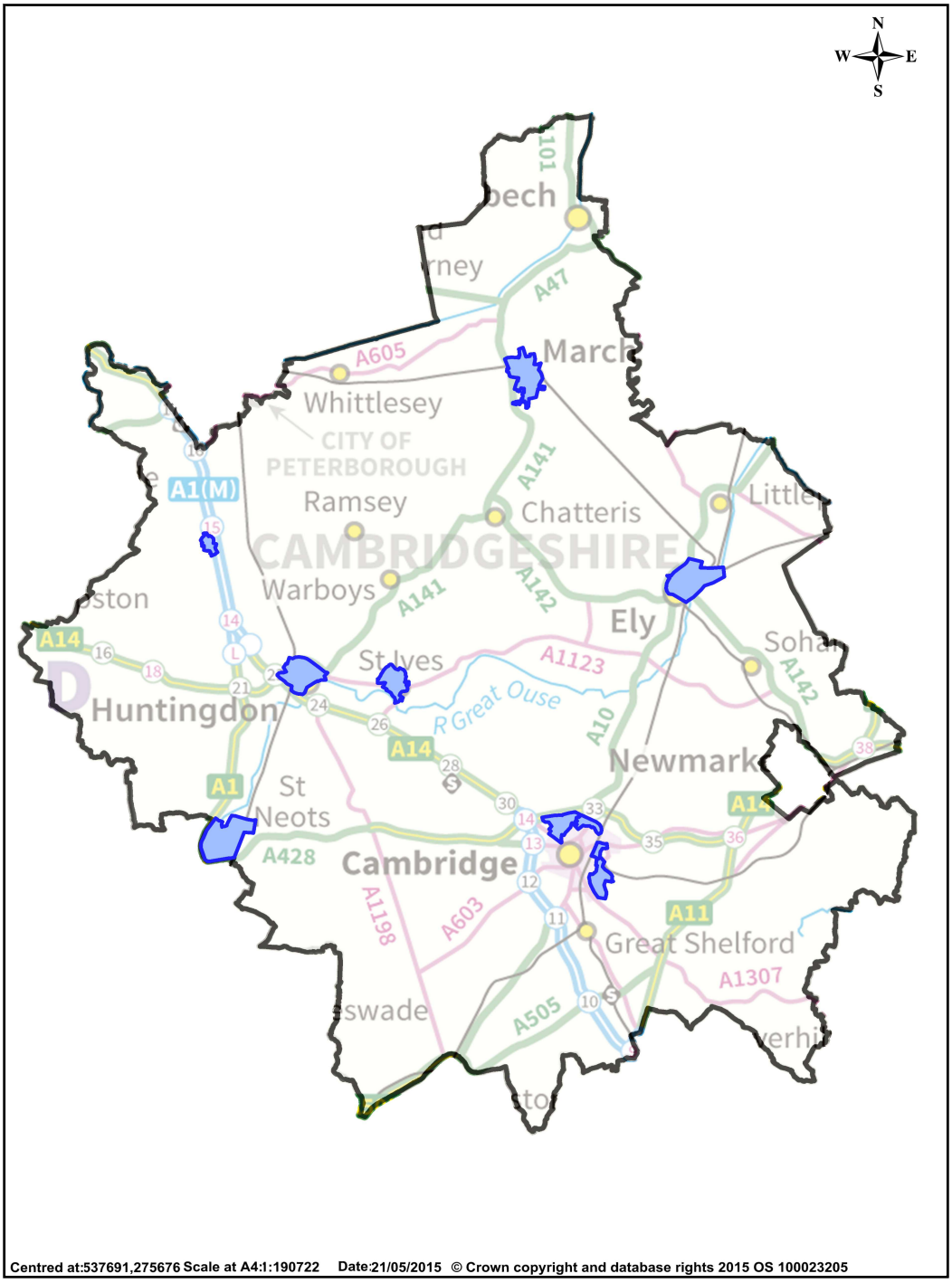


Figure 6 Top 10 wet spots in Cambridgeshire

Table 1 Top 10 wet spots in Cambridgeshire

Wet spot	Council
Cherry Hinton	Cambridge City
Kings Hedges and Arbury	Cambridge City
March	Fenland
St Ives	Huntingdonshire
North Chesterton	Cambridge City
St Neots	Huntingdonshire
Sawtry	Huntingdonshire
Coldhams Common	Cambridge City
Huntingdon	Huntingdonshire
Ely	East Cambridgeshire

2.6.13 A full list of all the 'wet spots' in Cambridgeshire can be found in Appendix 3. The full Cambridgeshire Strategic Surface Water Management Plan can be found here: INSERT LINK

2.6.14 Cambridge and Milton Detailed Surface Water Management Plan
Cambridge City Council applied for Defra funding in 2010 under the Early Action Fund which then identified the need for the Cambridge and Milton detailed Surface Water Management Plan. Defra had previously divided England into 4350 settlements, with Cambridge and Milton considered one settlement. These settlements were then ranked by their possible susceptibility to surface water flooding. Cambridge was ranked 87 out of the 4350 settlements and this indicates that Cambridge may be at a high risk area with regard to surface water. The study area is depicted in figure 7.

2.6.15 A detailed surface water management plan was produced in Cambridge to provide a better understanding of areas at greatest risk. The report highlighted two areas which are Cherry Hinton and Kings Hedges and Arbury. Both Cherry Hinton and Arbury have experienced flooding in the past (see figure 8). The report also contained recommendations on how to deal with the risk identified.

2.6.16 The full Cambridge and Milton Report can be found here: http://www.cambridgeshire.gov.uk/download/downloads/id/949/cambridge_and_milton_swmp_report_part_1

2.6.17 The remaining wet spots identified in the Cambridge and Milton study will be prioritised alongside other 'wet spots' identified in the Cambridgeshire Surface Water Management Plans.

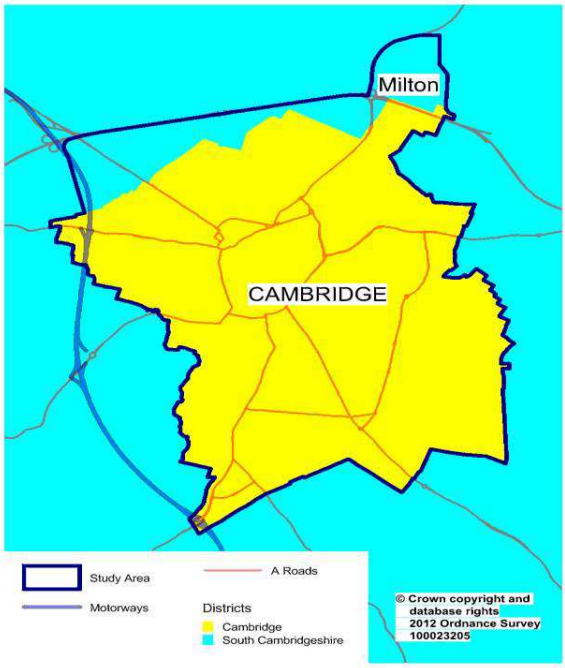


Figure 7 Cambridgeshire and Milton Study Area

2.6.18 The Cambridge and Milton study area is located within the Anglian River Basin District and the River Great Ouse catchment. It incorporates all of the Cambridge City Council area and a small portion of South Cambridgeshire District in the north, where Milton village is located.

Figure 8 Flooding in Arbury Estate (thought to be 1970)

2.7 Cambridgeshire Preliminary Flood Risk Assessment

2.7.1 The Preliminary Flood Risk Assessment (PFRA) is a high level screening exercise that brings together the readily available information from a number of sources to assess local flood risk. The Council is required to complete a PFRA in order to comply with the Flood Risk Regulations (2009).

2.7.2 The key stages of PFRA are similar to those of a Surface Water Management Plan, so the work for the PFRA was carried out alongside the Cambridgeshire Strategic Surface Water Management Plan.

2.7.3 However, the identification of flood risk areas for a Preliminary Flood Risk Assessment entails reviewing the national indicative areas produced by the Environment Agency alongside local information. The indicative flood risk areas for the Preliminary Flood Risk Assessment were defined at a national level to reflect European requirements, and were therefore different for the threshold set for the Surface Water Management Plan. At the threshold set nationally, Cambridgeshire did not have any Flood Risk Areas identified. Defra has however advised local authorities, such as

Cambridgeshire, who have undertaken Surface Water Management Plans to use this information in addition to outputs of a Preliminary Flood Risk Assessment to inform the development of their strategies.

2.7.4 Both the Surface Water Management Plan and Preliminary Flood Risk Assessment estimate the significance of flood risk based on the risk to people and property. This strategy also gives further consideration to the significance of flooding to agricultural land and considers measures to ensure that food production, which is of regional and national significance, is resilient to flooding.

2.8 Strategic Flood Risk Assessments (SFRAs)

2.8.1 Strategic Flood Risk Assessments look at flood risk at a strategic level on a local planning authority scale. In Cambridgeshire, several have been produced. South Cambridgeshire District Council and Cambridge City Council have produced a joint Strategic Flood Risk Assessment level 1. Huntingdonshire District Council has produced a Strategic Flood Risk Assessments level 1. East Cambridgeshire District Council and Fenland District Council have produced a joint Strategic Flood Risk Assessment level 1. Fenland District Council has produced a Strategic Flood Risk Assessment Level 2 for Wisbech.

2.8.2 Strategic Flood Risk Assessments are used as part of the evidence base for each Local Authority's Local Plan. They help determine where growth should be allocated and steered away from the highest flood risk areas. They are used to inform the planning process by identifying where development will be at the lowest flood risk throughout the lifetime of the proposed development. By preparing Strategic Flood Risk Assessments, local planning authorities will be able to undertake the sequential test, identify the need for Site Specific Flood Risk Assessments (FRAs) and assist in emergency planning.

2.8.3 The Strategic Flood Risk Assessment level 1 provides a summary of the catchments, relevant policies, the current flood risks, the potential impacts of climate change, flood risk management practices and policy recommendations. It identifies and analyses current and future broad scale flooding issues for proposed development allocation sites/areas. The Strategic Flood Risk Assessment level 2 focuses on residual risks, such as the rate and depth of flooding in the event that flood defences fail. It is necessary to examine these aspects so that any planned development will be safe.

2.9 Water Cycle Strategies

2.9.1 A Water Cycle Strategy is an opportunity for key stakeholders to work together to identify the water services infrastructure that is needed to support and enable sustainable development in the county. The strategy identifies what infrastructure is needed, when it is required, how much it will cost, and who should pay. The common elements that are considered in a Water Cycle Strategy include the location and capacity of Waste Water Treatment Works, sewage networks, water supply, water quality, the impact on biodiversity, and water neutrality as part of growth.

2.9.2 Partners in Cambridgeshire completed three Water Cycle Strategies: for the growth sites in and around Cambridge, for East Cambridgeshire and Fenland, and for Huntingdonshire to identify these requirements.

2.9.3 The overall objective of a Water Cycle Strategy is to provide a sustainable approach to the provision of water services infrastructure. The strategy considered the following:

- Flood risk and surface water management: Identifying areas where development is likely to increase flood risk (both on-site and downstream) and to suggest necessary improvement measures;
- Water Supply: Reviewing the existing water supply sources and identifying any required upgrades to ensure adequate water provision for new developments;
- Drainage: Reviewing the underlying geology for growth sites to understand the possible Sustainable Drainage Systems to help minimise the environmental impacts of growth;
- Waste Water: Understanding the current capacity of sewage works and the sewer network to identify whether any upgrades are required to accommodate new development, and consider the increased quantity discharges of the treated effluent on the receiving watercourse and any flood risk implications from this. This is crucial for smaller watercourses that may receive treated effluent;
- Ecology: Identifying the impact of growth relating to water quality, nature conservation areas and protected species, then suggesting possible mitigation measures; and
- Sustainable Infrastructure: Suggesting how water services infrastructure can contribute to sustainable development in terms of increased water efficiency and reduced water consumption in new developments.

2.9.4 There are three distinct stages to the development of a Water Cycle Strategy. First, a scoping report is carried out to get an initial feel for local water services infrastructure requirements. Phase 1 looks at issues across the whole study area, identifying any major constraints to growth. Phase 2

looks at detailed infrastructure requirements for specific growth sites, providing the solutions to the constraints identified in the Phase 1 report.

2.9.5 Two strategies were completed to Phase 2, and these were for:

- Major growth sites in and around Cambridge Water Cycle Strategy; and
- East Cambridgeshire and Fenland Water Cycle Strategy.

2.9.6 Huntingdonshire District Council will have its Stage 2 Water Cycle Strategy completed shortly.

2.10 Sustainable development in flood risk management

2.10.1 Defra has developed a document named the 'Guidance for risk management authorities on sustainable development in relation to their flood and coastal erosion risk management functions' that defines the contribution that all flood risk management authorities must make towards the achievement of sustainable development. The document can be found here:
http://www.defra.gov.uk/publications/files/pb13640-sdg-guidance.pdf

2.10.2 The Brundtland Commission (1987) defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". There are three generally recognised and interlinking components, known as the "three pillars" of sustainable development, and long term growth depends on the recognition and incorporation of all three into decisions: economic sustainability; environmental sustainability; and social sustainability.

2.10.3 In the context of flood risk management, sustainable development is defined as:

- Taking into account the safety and wellbeing of people and the ecosystems on which they depend;
- Using finite resources efficiently and minimizing waste;
- Avoiding exposing current and future generations to increased risk;
- Improving resilience of communities, economy and environment to current and future risk.

2.10.4 All flood risk management authorities must aim to make a contribution to sustainable development under the Flood and Water Management Act 2010.

2.10.5 Government has defined some of the ways in which the risk management authorities can contribute to sustainable development as follows:

- Actions to tackle climate change and protecting and enhancing the natural environment: Climate change is seen as one of the biggest challenges we face. Cutting greenhouse gas emissions is essential, but this must be underpinned by an approach that supports fairness and economic growth. Value must be given to nature and the historic environment; to our economy, our wellbeing, and our long term security;

- Fairness, improving wellbeing and building communities: Helping to improve the quality of life for communities. Many changes need to happen at a local level, ensuring communities work more closely together, using local insight, energy and knowledge to develop solutions tailored to local circumstances;

- Green economy & operations and procurement commitments: Being committed to sustainable growth, economically and environmentally;

- Use of sound science: The strategic solutions for flood risk management need to be developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty as well as social attitudes and values;

- Transparency and public accountability: Sharing approaches and best practice in sustainable development as well as being open and transparent are essential to its overall effectiveness.

2.11 Green infrastructure strategy

2.11.1 It is important to consider every aspect of the local environment in order to create new sustainable communities. Having a green infrastructure strategy is vital to the quality of life of the local community in Cambridgeshire, as it provides opportunities to develop plans to address present and future issues. In recognition of this, key stakeholders in Cambridgeshire came together to produce a 'Green Infrastructure Strategy' for the county in 2011.

2.11.2 Working in partnership, Cambridgeshire Horizons (now dissolved), the six local authorities, Historic England, the Environment Agency, National Trust, Forestry Commission England, Natural England, Cambridge Past Present and Future, and the Wildlife Trust, along with other organisations, produced this strategic plan for the development of green spaces throughout the county.

2.11.3 Green infrastructure includes consideration of many issues related to flood risk management including the use of green corridors, such as hedgerows, ditches, rivers and watercourses, disused railway lines and verges; green spaces; historic parks and gardens; Local Nature Reserves and county

wildlife sites; Sites of Special Scientific Interest; wetlands, including flooded quarries; and public rights of way, cycle ways and other recreational routes. The section on 'Water and Land Management' considers the impact flooding.

2.12 Strategic Environmental Assessment (SEA)

2.12.1 A Strategic Environmental Assessment was undertaken to ensure that significant environmental effects arising from this strategy were identified, assessed, mitigated, communicated to decision-makers, monitored and that opportunities for public involvement were provided.

2.12.2 Strategic Environmental Assessment is generic tool that was introduced by the European Union Directive 2001/42/EC. The objective of the Strategic Environmental Assessment Directive is to "to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development"(Article 1)". This requires national, regional and local authorities in Member States to carry out strategic environmental assessment on certain plans and strategies that they promote, such as this strategy.

2.12.3 Monitoring of the significant environmental effects of implementing the strategy will be undertaken to comply with Strategic Environmental Assessment Directive - Article 10.1, to ensure that any unforeseen adverse effects of the strategy are recognised and dealt with.

2.12.4 The Strategic Environmental Assessment for this strategy was carried out as the strategy developed. The Strategic Environmental Assessment scoping study was undertaken in line with Government Guidance.

2.12.5 After a period of consultation the comments received were incorporated into the final Strategic Environmental Assessment. The final SEA report stated that:

- There are a number of local, national and international designated sites for nature conservation within Cambridgeshire, including several Natura 2000 Sites. Natura 2000 Sites include; Wicken Fen Ramsar Site, Chippenham Fen Ramsar Site, Woodwalton Fen Ramsar Site, Fenland Special Area of Conservation (SAC), Ouse Washes Special Protection Area (SPA) and Ramsar Site, Portholme SAC, Nene Washes SPA, SAC and Ramsar Site, Devil's Dyke SAC and Eversden and Wimpole Woods SAC;

- Parts of Cambridgeshire are exposed to flood risks and these are likely to increase over time as a consequence of climate change;

- Many of the county's watercourses' current Ecological Quality (under Water Framework Directive) are considered to be of a moderate quality. However, new development may pose threats to Water Framework Directive (WFD) objectives;

- Cambridgeshire is home to a wealth of heritage assets including those of a national and local importance including; Listed Buildings, Conservation Areas, Scheduled Ancient Monuments; non-designated heritage assets; archaeology; Registered Historic Parks and Gardens;

- The Fens contain some of the UK's most productive agricultural land and this should be protected;

- The population of Cambridgeshire is expected to increase by an average of 26% by 2036, with the largest predicted growth in Cambridge City of 28% by 2031. This increase is likely to lead to higher levels of development which could in turn increase the surface water runoff from urbanised areas, contributing to further flood risk.

3. Objective 2: Managing the likelihood and impacts of flooding

3.1 Partnership Working

3.1.1 One of the key messages from the Pitt Review was the importance of partnership working to combat flood risk. This is echoed in the roles of the Lead Local Flood Authorities being "strategic leadership...through the formation of a local flood partnership."

3.1.2 In Cambridgeshire there is already an established partnership in the form of the Cambridgeshire Flood Risk Management Partnership. The partnership was established to respond to the Pitt Review Recommendations and in anticipation of the Flood and Water Management Act 2010.The partnership is made up of the Lead Local Flood Authority and Risk Management Authorities detailed in this chapter but it should be noted that the separate Internal Drainage Boards in Cambridgeshire are represented by Ely Group of Internal Drainage Boards, Bedford Group of Internal Drainage Boards, North Level Internal Drainage Boards and Middle Level Commissioners in the partnership.

3.1.3 When considering how to manage the likelihood of flooding it is important to document the roles and responsibilities for the key stakeholders involved in flood risk management.

3.2 Flood 'Risk Management Authorities'

3.2.1 Upper tier local authority - Cambridgeshire County Council – Lead Local Flood Authority

The Council has the following roles and responsibilities:

- As the designated Lead Local Flood Authority and as such has a responsibility to develop, maintain apply and monitor a strategy for local flood risk management in Cambridgeshire. The council also has a strategic leadership role for local Risk Management Authorities along with a duty to carry out flood risk management functions in a manner consistent with the national and local strategies;
- The power to request information from any person in connection with the authority's flood risk management functions;
- A duty to ensure that flood investigations are undertaken by appropriate Risk Management Authorities and reports published on flooding incidents that have a direct impact on domestic and commercial property in its area;
- A duty to maintain a register of structures or features which in the view of the Lead Local Flood Authorities have a significant effect on flood risk in their area;

- Power to undertake works to manage flood risk from surface runoff or groundwater, and to designate structures and features that affect flooding;
- A duty to aim to contribute towards the achievement of sustainable development in the exercise of flood risk management functions;
- Highway duties related to flood risk management and highway drainage;
- A strategic oversight role in emergency management;
- Responsibilities as a Statutory Consultee for surface water for planning applications;
- A duty to cooperate with all other Risk Management Authorities; and
- Decision making responsibility for granting consents for works on ordinary watercourse outside of Internal Drainage Boards.

3.2.2 The following organisations are designated Risk Management Authority under the Flood and Water Management Act 2010, and as such must act consistently with the content of both the national strategy and local strategy. Risk Management Authorities also have a duty to cooperate with other Risk Management Authorities. Other duties for Risk Management Authorities are listed under each organisation.

3.2.3 <u>Environment Agency – local area office at Brampton</u>

The Environment Agency has the following roles and responsibilities:

- Designated Risk Management Authority;
- Strategic overview for all forms of flooding;
- Duty to be subject to scrutiny from Lead Local Flood Authorities democratic processes for flood risk management activities;
- Responsible for the development of the National Strategy for Flood and Coastal Erosion Risk Management, reporting to Ministers on flood risk management including implementation of the strategies, and carrying out flood risk management functions in a manner consistent with the national and local strategies;
- Responsible for flood risk management for 'main rivers';
- Responsible for flood risk of the Environment Agency's own reservoirs, and regulates and enforces the Reservoirs Act (1975) for other reservoirs with a capacity over 25,000m³ above ground level;
- Powers to request information from any person in connection with the Environment Agency's flood risk management functions;
- Power to designate structures and features that affect flooding;
- Statutory consultee to local planning authorities on flood risk matters;
- Responsible for emergency response to a flood incident, and are a designated Category 1 responder in the Civil Contingencies Act.
- Consenting and enforcement of works in, under, or over, or within 9 metres of a Main River under the terms of the Water Resources Act 19991 and EA Bye laws;

- Consultee to the Lead Local Flood Authorities where the Lead Local Flood Authority wants to carry out works to ordinary watercourses;
- Statutory consultee on planning applications for development other that minor or householder in flood zones 2 and 3; or within 20 metres of a main river;
- A duty to cooperate with all other Risk Management Authorities; and
- A duty to aim to contribute towards the achievement of sustainable development in the exercise of flood risk management functions.

3.2.4 Internal drainage boards (See appendix 2 for a full list)

Internal Drainage Boards have the following roles and responsibilities:

- Designated Risk Management Authority;
- Powers to designate structures and features that affect flooding;
- Duty to act consistently with local and national strategies;
- Duty to be subject to scrutiny from Lead Local Flood Authority's democratic processes for flood risk management activities;
- Ability to work in consortia with other Internal Drainage Boards;
- Consenting for ordinary watercourses in Internal Drainage Board catchments;
- Water level management;
- Use available powers where appropriate to require those responsible to maintain the flow of water in an awarded drain and to modify or remove inappropriate structures within channels;
- Power to undertake flood risk management works;
- A duty to aim to contribute towards the achievement of sustainable development in the exercise of flood risk management functions;
- Carry out maintenance and improvement work on an ongoing basis as necessary to maintain existing standards of flood protection, making appropriate allowances for climate change;
- Use available statutory powers where appropriate to require those responsible to maintain the flow of water in a watercourse and to modify or remove inappropriate structures within channels;
- A duty to cooperate with all other Risk Management Authorities; and
- Take the appropriate action, under the relevant powers, against those whose actions increase flood risk or make management of that risk more difficult.

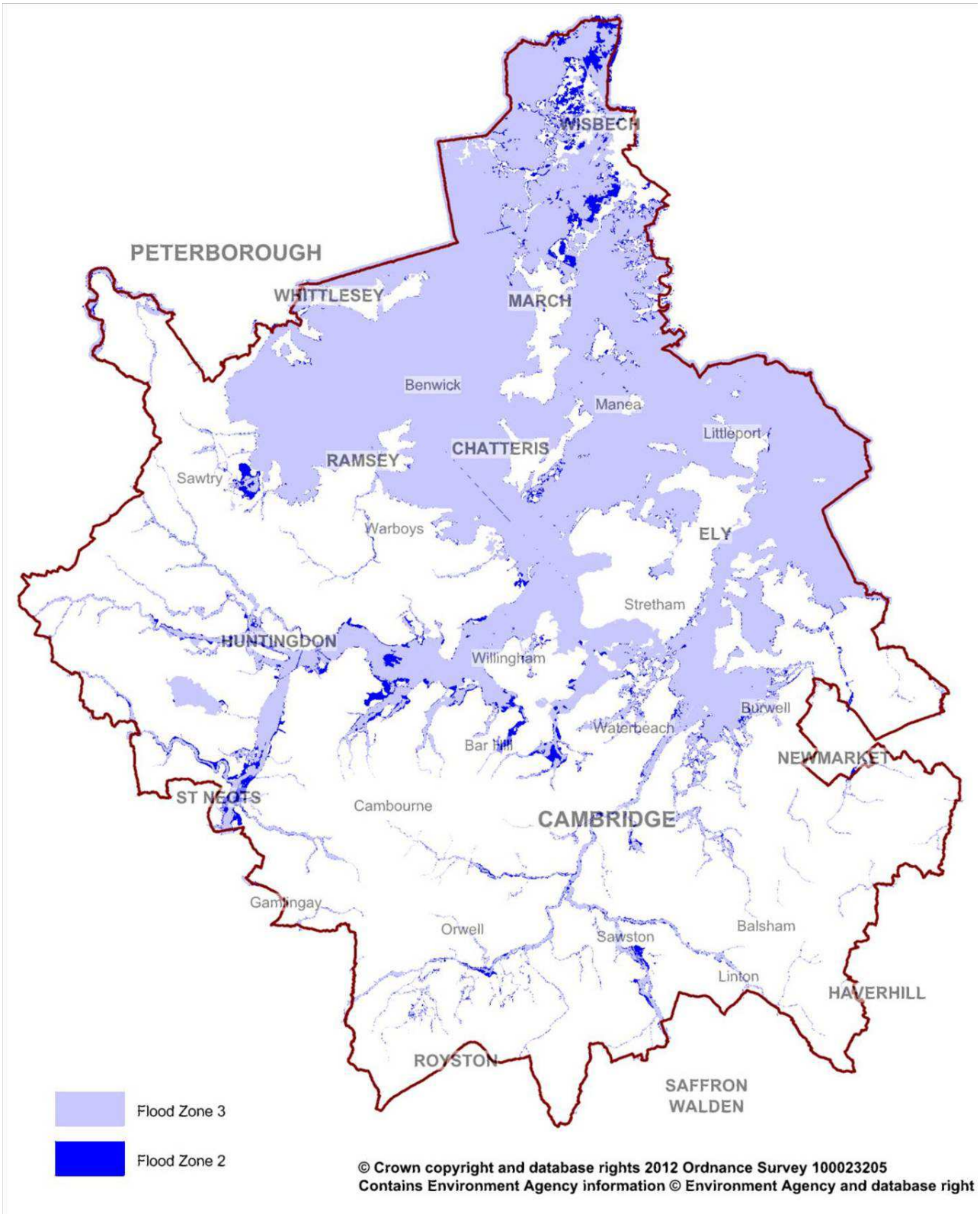


Figure 9 Flood zones in Cambridgeshire

3.2.5 Anglian Water Services Ltd

Anglian Water Services has the following roles and responsibilities:

- Designated Risk Management Authority;
- Duty to have regard to national strategies and to have regard to local strategies;
- Duty to be subject to scrutiny from Lead Local Flood Authority's democratic processes for flood risk management activities;
- Responsible for the adoption of private sewers (now complete);
- Dealing with flooding from sewers;
- A duty to cooperate with all other Risk Management Authorities; and
- Duty to adopt new built sewers.

3.2.6 Second tier local authorities:-
Cambridge City Council
East Cambridgeshire District Council
Fenland District Council
Huntingdonshire District Council
South Cambridgeshire District Council

Second tier local authorities have the following roles and responsibilities:

- Designated Risk Management Authority;
- Power to designate structures and features that affect flooding;
- Duty to act consistently with local and national strategies;
- Duty to be subject to scrutiny from Lead Local Flood Authority's democratic processes for flood risk management activities;
- Under the Enclosures Act the Council has a responsibility to maintain 'awarded' watercourses that are not the responsibility of riparian owners;
- Powers to exercise parts of the Land Drainage Act;
- Emergency response to a flood incident under the Civil Contingencies Act, and dealing with resulting homelessness;
- Local planning authority and duty to encourage appropriate development regarding flood risk and promoting sustainable drainage and be satisfied that an application will not cause increase flood risk elsewhere;
- A duty to aim to contribute towards the achievement of sustainable development in the exercise of flood risk management functions;
- Use available statutory powers where appropriate to require those responsible to maintain the flow of water in an awarded watercourse and to modify or remove inappropriate structures within channels;
- A duty to cooperate with all other Risk Management Authorities; and

- Take the appropriate action under the appropriate statutory against those whose actions increase flood risk or make management of that risk more difficult.

3.2.7 Highway Authority

The highway authority has the following roles and responsibilities:

- Designated Risk Management Authority under the Flood and Water Management Act 2010;
- Duty to act consistently with local and national strategies;
- Responsibility to maintain highways under the Highways Act 1980;
- Responsibility as an undertaker (e.g. satisfying statutory responsibilities under the New Street Works Act 1991);
- Powers to deliver works to protect the highway from flooding;
- A duty to cooperate with all other Risk Management Authorities; and
- Carry out maintenance and improvement work on an ongoing basis as necessary to maintain existing standards of flood protection for highways, making appropriate allowances for climate change.

3.2.8 Although not designated under the Flood and Water Management Act 2010 as Risk Management Authorities the following key stakeholders have their part to play in flood risk management:

3.3 Key Stakeholders responsible for flood risk management

3.3.1 Utility and infrastructure providers

Utility and infrastructure providers such as Network Rail, energy companies and telecommunication companies are not risk management authorities. However, they have a crucial role to play in flood risk management as their assets can be an important consideration in planning for flooding. Moreover they may have assets such as culverts which it is important to share with flood risk management authorities. They already maintain plans for the future development and maintenance of the services they provide and it is important that they factor in flood risk management issues into this planning process. This should ensure that their assets and systems are resilient to flood and coastal risks and that the required level of service can be maintained in the event of an incident

3.3.2 Riparian ownership

> "If you own land adjoining, above or with a watercourse running through it, you have certain rights and responsibilities. In legal terms you are a 'riparian owner'. If you rent the land, you should agree with the owner who will manage these rights and responsibilities." [1]

Householders or businesses whose property is adjacent to a river or stream or ditch are likely to be riparian owners with maintenance responsibilities. If a property backs onto a river or stream then the owner is likely to be a riparian owner and own the land up to the centre of the watercourse. Riparian owners have a responsibility to maintain the bed and banks of the watercourse and ensure there is no obstruction, diversion or pollution of the watercourse. Full details can be found in Cambridgeshire County Council's 'The rights and responsibilities of a riparian owner' http://www.cambridgeshire.gov.uk/downloads/file/336/riparian_owner_fact sheet

3.3.3 Parish and town councils

Flood events can affect whole communities within a parish or town with households which do not suffer from internal flooding still potentially being trapped as roads are blocked. Coordinated assistance is also critical in helping to support and provide shelter to neighbours who have suffered from flooding. Communities know better than anyone the level of flood risk that they face and town and parish councils can make important contributions to helping manage the levels of flood risk in their communities.

3.3.4 Property owners and residents

It is the responsibility of householders and businesses to look after their property, including protecting it from flooding. While in some circumstances other organisations or property owners may be liable due to neglect, there will be many occasions when flooding occurs despite all parties meeting their responsibilities. Consequently, it is important that house holders, whose homes are at risk of flooding, take steps to ensure that their home is protected, and this may include reporting the flooding to the emergency services. For information on how householders can protect themselves and their properties can be found in chapters three and five.

3.3.5 From 1 October 2008 the permitted development rights that allow householders to pave their front garden with hard standing without planning permission have changed in order to reduce the impact of this type of development on flooding and on pollution of watercourses. Householders will not, however, need planning permission if a new or replacement driveway of any size uses permeable (or porous) surfacing, such as gravel, permeable concrete block paving or porous asphalt, or if the rainwater is directed to a lawn or border to drain naturally.
If the surface to be covered is more than five square metres planning permission will be needed for laying traditional, impermeable driveways that do not provide for the water to run to a permeable area. Communities

and Local Government has produced a leaflet called 'Guidance on the permeable surfacing of front gardens' and more information can be found here http://communities.gov.uk/documents/planningandbuilding/pdf/pavingfrontgardens.pdf

3.3.6 For more information on 'Who is responsible for what when it comes to flooding?' please see Appendix 5.

3.4 Reporting flood incidents

3.4.1 Officers from risk management authorities are not in a position to know about every flooding incident that occurs, particularly those which do not lead to flooding within properties. However records of flood incidents which affected roads or entered the boundaries of properties are important to record. They can indicate that there has been extensive flooding from relatively regular rainfall events which would warn that the properties are at risk in more extreme rainfall events. This information is crucial in building up cases for flood defence and flood resilience schemes which will require strong evidence of the flood risk to properties. Flooding from overflowing drains and gullies can be reported to highways online http://www2.cambridgeshire.gov.uk/HighwaysReports/Highways/ReportProblem1.aspx

3.4.2 District and parish councils and community groups and residents in areas which suffer from non-urgent local flooding (i.e. from surface runoff, groundwater and ordinary watercourses) can report flood incidents online using Cambridgeshire County Council's interactive map. https://www.cambridgeshire.gov.uk/site/xfp/scripts/xforms_form.aspx?formID=48&language=en

3.4.3 Flood incidents caused by main rivers should be reported to the Environment Agency through their flood incident hotline 0800 807060.

3.4.4 Many residents may be unaware of the flood risk to their property. This can be because there has not been a flooding incident while they have lived there, or they are unaware of future risks related to climate change. Parish and town councils can inform residents of flood risk and encourage them to check with Cambridgeshire County Council, Internal Drainage Board (if appropriate) and the Environment Agency as to the extent of the risk.

3.4.5 Should a resident experience significant flooding in an extreme rainfall event that is putting themselves or their property at immediate risk, they should report this to the emergency services.

3.5 Cambridgeshire's Flood Risk Asset Register

3.5.1 The Flood and Water Management Act 2010 gives the county council a duty to maintain a register of structures or features which, in the opinion of the authority, are likely to have a significant effect on flood risk in its area such as a small culvert in a housing estate. It also has a duty to develop a record of information about each of those structures or features, including information about ownership and the state of repair.

3.5.2 The council has worked with key partners including the Environment Agency, Internal Drainage Boards, district councils, and water companies to review their records and identify assets that could significantly affect flood risk within the county. The flood risk register contains the following types of assets:

- Awarded watercourses – responsibility of the relevant district councils or IDB;
- Ordinary watercourses – watercourses contained within IDB districts;
- Culverts, gullies, piped watercourses, inspection chambers (manholes), gravity discharge outfalls, flapped outfalls, flood defence banks;
- Water Recycling Centres – responsibility of Anglian Water Company; and
- Pumping stations, weirs, weed screens, sluice gates, locks, syphons, inlets, flood storage reservoirs, balancing ponds and bridges.

The register of flood risk assets is published on the county council's website and can be found here http://www.cambridgeshire.gov.uk/info/20099/planning_and_development/49/water_minerals_and_waste

3.6 Flood incident and investigation

3.6.1 The aims of flood investigations are to provide an understanding of the possible causes of flooding and potential cost effective long-term solutions. Each investigation will provide a clear and thorough understanding of flooding situations and circumstances, However, the duty to investigate, does not guarantee that problems will be resolved and other authorities cannot be forced into action. Decisions about the next steps must be made in partnership by the parties involved.

3.6.2 A flood investigation report will be produced for each incident investigated as required, and will identify the authorities that have an involvement in a particular flood incident and clearly outline their responsibilities or actions as necessary.. Investigations will involve consultation with the relevant risk management authorities, landowners and private organisations involved, all of whom are expected to cooperate and provide comments.

3.6.3 The decision whether to investigate a flood or not is ultimately at the discretion of the Lead Local Flood Authority; however Cambridgeshire County Council, through the Cambridgeshire Flood Risk Management Partnership has defined the following eligibility criteria for investigations:

- Where there is internal flooding* of one property on more than one occasion;
- Where there is internal flooding of five or more properties in close proximity** in a single flooding event;
- Where flooding significantly affects the external premises of one or more property;
- Where flooding on public roads significantly disrupts the flow of traffic; and/or
- Where the failure of a significant flood asset has been reported.

*Definition of internal flooding: only properties where internal flooding is above threshold level. This does not include the flooding of gardens and garages.

**Definition of close proximity: where it is reasonable to assume that the affected properties were flooded from the same source or interaction of sources

3.6.4 The LLFA has the overriding decision on whether a formal investigation is to take place.

3.6.5 After a flooding incident, the Investigating Officer will follow the eligibility criteria for flood investigations to determine whether an investigation should be carried out. Where a number of incidents meet the eligibility criteria, flood investigations will be prioritised.

3.6.6 Prioritisation will take into consideration factors such as the extent, depth and duration of the flooding, history of flooding at that location, the number of properties affected and the impact on infrastructure including roads and other major services such as emergency services.

3.6.7 The Flood and Water Team undertaking flood investigations work closely with the other risk management authorities to try to establish the causes of flooding, identify the responsible parties and notify these parties of our findings. Where possible, the Council will work with these partners to mitigate flooding issues however our duty to investigate does not guarantee that these issues will be resolved.

3.6.8 Where a flood investigation has been completed, we will publish a 'Flood Investigation Report' in due course.

3.7 Designating assets

3.7.1 Designation is a form of legal protection reserved for key structures or features that are privately owned and maintained and that contribute to the management of flood and coastal erosion risks.

3.7.2 Designation aims to ensure that owners do not in advertently alter structures and features and potentially increase flood or erosion risk to themselves, their neighbours and the wider community.

3.7.3 A designation is a legally binding notice served by the designating authority to the owner of the structure or features and the notice is also a local land charge.

3.7.4 Designating authorities are:

- Cambridgeshire County Council;
- Environment Agency;
- District and City councils; and
- Internal Drainage Boards.

3.7.5 They may 'designate' features or structures where the following four conditions are satisfied:

a) The designating authority thinks that the existence or location of the structure or feature affects flood risk;
b) The designating authority manages the risk affected;
c) The structure or feature is not already designated by another authority;
d) The owner of the structure or feature is not a designating authority.

3.7.6 If an asset becomes 'designated' its owner cannot alter, remove it or replace it, without prior consent from the designating risk management authority.

3.7.7 In order to ensure that there is consistency in designating across all the designating authorities, the list of proposed designations will be circulated to Cambridgeshire Flood Risk Management Partnership members prior to each quarterly meeting, and any contested designations would be discussed and agreed in the meeting.

3.7.8 Internal Drainage Boards also may use their bylaws to protect the integrity of flood risk assets.

4 Objective 3: Helping Cambridgeshire's citizens to manage their own risk

4.1 Stakeholder and community engagement

4.1.1 The key to enabling and empowering communities to manage their own flood risk is by working with them to understand what the risk are, and supporting them in the development of plans to reduce those risks.

4.1.2 This can be facilitated by clearly communicating to property owners what their responsibilities are to protect their own properties from flooding and the effects of flooding. Part of this is in educating landowners so that they appreciate the value, nature and role of a watercourse, and that to work effectively a watercourse needs to be maintained in good order.

4.1.3 Stakeholder engagement strategy

To facilitate close working relationships the Cambridgeshire Flood Risk Management Partnership has created a stakeholder engagement strategy. The strategy covers how the work and progress of the Cambridgeshire Flood Risk Management Partnership will be communicated to all stakeholders.

4.1.4 The key objectives identified through the development of the Cambridgeshire Flood Risk Management Partnership stakeholder engagement strategy are to:

- Raise awareness and provide an understanding about the Cambridgeshire Flood Risk Management Partnership programmed of work and its objectives for all key stakeholder groups;
- Sellf awareness;
- Ensure that the key stakeholders are aware of who they should contact for different flood risk management activities and how;
- Provide all key stakeholder groups with an update on the progress of flood risk management;
- Identify the most appropriate communication methods for communicating with each stakeholder group;
- Providing key stakeholders with a way to feedback to the partnership on flood risk management;
- Ensure communication identifies clear links with other interdependent areas of work to avoid confusing and conflicting messages to key stakeholder groups; and
- Effectively monitor communication activities and use this to influence future planning, messages and communication activities.

4.1.5 As part of the stakeholder engagement strategy, Cambridgeshire undertakes many targeted consultation and communication exercises for flood risk management. For example officers from the county council regularly attend town and parish meetings to discuss issues related to flood risk, work with the second tier councils to support them at neighbourhood panels and flood forum meetings. The county council helps county councillors to understand flood risk in Cambridgeshire by running targeted workshops and seminars, for example, following the extreme rainfall event in August 2014, the county council ran flood drop in events for those communities worst affected.

4.1.6 The county council supports the 'In Your Patch' meetings that take place in each district four times a year and provide an opportunity for local members to discuss issues on a district basis. The county council has also facilitated the flooding memories project a consultation exercise that collected information on flood events from members of the public.

4.1.7 Flooding memories project

In the autumn 2010 the Cambridgeshire Flood Risk Management Partnership ran the Cambridgeshire flood memories project. The aim of this project was to engage with the public to report on small to medium sized flood events which may have affected one or two houses, roads, gardens, fields or business premises. It also emphasised the important of reporting past flood events caused by localised problems such as blocked drains. This project not only served to identify areas of local flood risk but also proved a valuable exercise on engaging with the public on their flood risk concerns. Positive public feedback from the flooding memories project led the council to establish an interactive online flood reporting facility on our website (see figure 11). Members of the public are able to click on an interactive map to report flood incidents. The council then ensures that the reported incidents are investigated by the appropriate Risk Management Authorities and feedback on the findings from these investigations will be published on the council's web pages.

4.1.8 Flooding has been identified as one of the most likely risks to the residents of Cambridgeshire, through the community risk register.

4.1.9 Flood maps, produced by the Environment Agency, can help in understanding if communities are at risk, however, surface water flooding is difficult to predict as it is usually the result of the torrential rain that fills sewers and drainage systems to capacity in a very short period of time. Therefore, it is important that communities are made aware of the risk to their properties so they can take steps to prepare.

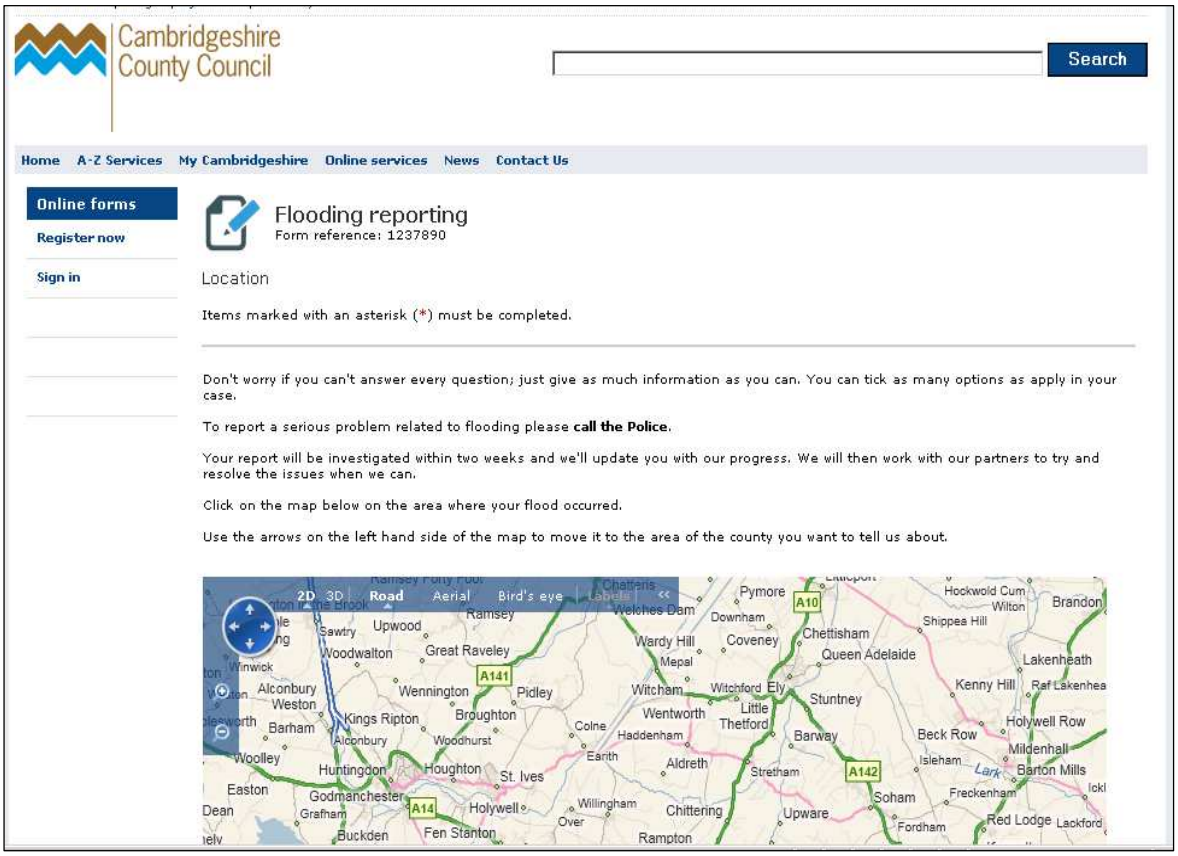


Figure 10 Screen shot of the online interactive map to report flood incidents

4.1.10 The key steps are as follows:

- sign up to the Environment Agency's free flood warning service that can give you advance notice of when flooding from rivers and the sea is likely to happen; https://fwd.environment-agency.gov.uk/app/olr/register
- communities need to know the different levels of flood warning codes (flood alert, flood warning, and severe flood warning) and the actions that they should take;
- residents need to check their insurance cover, and confirm that their buildings and contents insurance covers flooding and the level of cover provided.

4.1.11 Aside from the key steps above, specific flood guidance in this section can help communities protect themselves, their home and valuables by understanding what to do before, during, and after a flood. Cambridgeshire County Council has published some useful guidance for communities: http://www.cambridgeshire.gov.uk/info/20090/emergency_planning/482/flooding

4.1.12 The Environment Agency has developed a pamphlet which provides advice on how to make homes more resilient. http://publications.environment-agency.gov.uk/PDF/GEHO1009BRDL-E-E.pdf

4.1.13 Anglian Water Services Ltd had a campaign called Love Every Drop that seeks to engage with individuals and communities to put water at the heart of sustainable living. Anglian Water has stated that it is committed to effectively managing the impacts of growth and climate change to help address flood risk.

4.1.14 More than half of sewer blockages, that cause flooding and pollution incidents, are caused by fat, oil, grease (FOG) and unflushable items being placed down sinks and toilets. Anglian Water Services Ltd have a campaign known as Keep it Clear, which promotes good use of the public sewerage system. By working together with communities in high risk areas, residents have been able to reduce blockages by an average of more than 50%.More information on Keep it Clear can be found at http://keep-it-clear.co.uk

4.1.15 Local flood forums

The Huntingdonshire flood forum was set up by the district council in 2003 to give parish councils the opportunity to raise general queries on flooding, flood prevention and land drainage responsibilities. It also provides parish councils with the opportunity to raise more specific points related to localised flooding problems.

Aiming to encourage the resolution of local land drainage and flooding problems, the forum meets on an annual basis and is coordinated by the district council.

4.1.16 National Flood Forum

The National Flood Forum has produced a blue pages directory which provides information and advice on what products are available to help protect homes or business against flooding. It can be found here

http://www.nationalfloodforum.org.uk/

4.2 Community Impact Assessment

4.2.1 A Community Impact Assessment has been undertaken for this strategy to identify any potential impact that it may have on Cambridgeshire communities. The Community Impact Assessment can be found with the accompanying documentation.

4.2.2 The key findings of the Community Impact Assessment were that this strategy will bring together and coordinate activities in flood risk management to ensure the most effective and efficient use of resources. Arrangements will be formalised between key stakeholders to undertake new responsibilities including agreeing objectives and actions to reduce flood risk in Cambridgeshire. The revised strategy includes a refreshed Community Impact Assessment.

4.2.3 The strategy will enable linkages and potential multiple benefits for flood risk management and other funding routes and opportunities. The strategy will have a positive effect on areas of deprivation and vulnerable members of the community, as flood risk management activities are prioritied for these groups.

5 Objective 4: Ensuring appropriate development in Cambridgeshire

This chapter considers the relationship between local flood risk management and the planning system and how the two can support each other to achieve common objectives.

5.1 National context

5.1.1 The purpose of the planning system is to contribute to the achievement of sustainable development. The National Planning Policy Framework references the United Nations General Assembly definition of sustainable development: delivering development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The National Planning Policy Framework (NPPF) also refers to the UK sustainable development strategy Securing the Future which sets out five guiding principles of sustainable development: living within the planet's environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly. It is within this context that all development should be delivered. The National Planning Policy Framework can be accessed via the following link: http://planningguidance.planningportal.gov.uk/

5.1.2 A key part of this approach is to ensure that new development is planned to manage the risk of flooding. This should be taken into account in local plans, by directing new development to areas with the lowest probability of flooding, and, in development management, by determining planning applications such that decisions comply with planning policy. Development also needs to be monitored to ensure that it is built according to the agreed permissions and, if necessary, enforcement action may need to be taken to deal with unauthorised development. Planning processes also need to ensure that any flood risk management techniques adopted will conserve and enhance the historic environment, heritage assets and their settings.

5.1.3 NPPF states that "inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere". National Planning Practice Guidance (NPPG) on flood risk published alongside this framework sets out how this policy should be implemented and carries forward guidance previously contained in Planning Policy Statement 25 titled 'Development and Flood Risk' and the NPPF technical guidance which previously accompanied

this document. The NPPG can be accessed via the following link: http://planningguidance.planningportal.gov.uk/

5.1.4 Changes being introduced by the Localism Act devolve power to the most appropriate level, abolishing Regional Spatial Strategies, including the East of England Plan (May 2008), and giving the second tier councils in Cambridgeshire responsibility for setting future levels of development for their areas. The Localism Act also enables local communities to develop Neighbourhood Plans, which may set out planning policies for their local areas that authorities will have to take into account in developing their own plans. For more information on the Localism Act please go to the following link: http://www.legislation.gov.uk/ukpga/2011/20/contents/enacted

5.1.5 While the full impact of these changes remains to be seen, it is clear that local planning policies will assume much more importance in the future, and this highlights the need for close working between the Cambridgeshire authorities on planning and flood risk management.

5.2 Local context

5.2.1 Cambridgeshire County Council is now a statutory consultee on all major planning applications, with the Local Planning Authorities seeking technical advice from the county council on surface water flood risk and sustainable drainage systems. It was previously envisaged that the county council would become a Sustainable Drainage Systems Approval Body as set out within Schedule 3 of the Flood & Water Management Act (2010) however government have confirmed this will not come into force.

5.2.2 In addition to these duties, the county council has a regulatory role in respect of issuing and enforcing formal Land Drainage Act consents for activities on ordinary watercourses outside Internal Drainage Board areas and also for consenting third party activities on “designated structures”; therefore a parallel process to issuing planning permissions is also sometimes required.

5.2.3 These new duties will result in significant changes to the county council’s involvement in the planning system. It is important that the appropriate linkages are made to maximise opportunities for sustainable development and adaptation to climate change; ensuring that the planning process continues to operate efficiently in sustaining local communities, promoting economic growth and protecting and enhancing the environment.

5.2.4 Local Planning Authorities have the overall responsibility for ensuring that new developments and redevelopments do not increase flood risk elsewhere and are located in the areas of lowest risk practicable. If development is to be undertaken in areas of flood risk, the local planning authorities should ensure it is informed by an appropriate flood risk

assessment or surface water drainage strategy and that development is appropriately flood resistant and resilient. The local planning authority also has the responsibility to give priority to the use of sustainable drainage systems, along with consulting with the EA on developments proposed within Flood Zone 2 and 3 and any proposal within 20 metres of a main river.

5.2.5 This strategy seeks to highlight the benefit of partnership working, in terms of coordinating processes, plans, and policies, with regard to the planning function in Cambridgeshire.

5.3 Plan-making in Cambridgeshire

5.3.1 In Cambridgeshire, Cambridge City Council and the District Councils, as Local Planning Authorities, are responsible for preparing local plans for their areas. Additionally Cambridgeshire County Council is a Local Planning Authority in relation to minerals and waste. Local plans set out opportunities for development and clear guidance on what will or will not be permitted and where. Local plans should also set out strategic priorities for their areas, including policies to deliver climate change mitigation and adaption, and will need to be supported by adequate, up-to-date and relevant evidence, including evidence on flood risk which is held within the Strategic Flood Risk Assessments, and expanded on further in this section.

5.3.2 <u>Neighbourhood planning</u>
Neighbourhood planning is a new right for communities introduced through the Localism Act 2011. For the first time, local people will have a major statutory say in helping to shape development in the areas in which they live. Neighbourhood planning which may set out planning policies for the local area but which should be in line with the strategic policies of the adopted development plan. Neighbourhood development plans will become part of the local statutory development plan and will form the basis for determining planning applications in that area. A neighbourhood development order enables the community to grant planning permission for the development it wishes to see. The local parish or town council will lead the work. In areas without a parish council, new neighbourhood forums will take the lead. In areas which are predominately commercial, the neighbourhood forum can be led by a business neighbourhood forum.

5.3.3 The local planning authority must provide support and make the necessary decisions at key stages, for example, it will organise the neighbourhood referendum at the end of the process. The referendum ensures that the local community has the final say on whether a neighbourhood development plan, neighbourhood development order or a community right to build order comes into force in their area. Neighbourhood plans must be in general conformity with the strategic policies of corresponding

local plans, but outside these strategic elements neighbourhood plan policies will take precedence over existing local plan policies, where they are in conflict.

5.3.4 Planning and local flood risk in Cambridgeshire

Cambridgeshire County Council has undertaken a strategic Surface Water Management Plan, and produced a Preliminary Flood Risk Assessment that identifies any high level flood risk in Cambridgeshire. Although the documents cannot be used to assess flood risk for individual developments, they can be used to inform strategic planning decisions. It is anticipated that sites that are identified after detailed assessment as being at risk of flooding will require a site specific flood risk assessment. This flood risk assessment will help to assess risks and any mitigation required and to inform the detailed design of surface water systems for any development planned on a site. A guidance document for the use of Surface Water Management Plan evidence in planning decisions has been produced for use by local planning authorities and key stakeholders.

5.3.5 To facilitate a coordinated approach to planning in Cambridgeshire, the Chief Planning Officers from the second tier local authorities and officers from Cambridgeshire County Council meet regularly to share information on planning issues in the county and where appropriate include key stakeholders in water management discussions.

5.3.6 Managing Development

Development management refers to the process for determining applications for the development of land, whether for housing, business, schools or other uses. The second tier authorities are responsible for determining most planning applications including housing, health, retail, offices and leisure. The county council is responsible for determining planning applications related to minerals and waste and its own developments, such as local authority schools, and highways schemes.

5.3.7 Internal Drainage Boards advise on planning applications for development within their catchments or those on the outside of the catchments that are considered to have an impact on the drainage catchment. For example it is important that developers understand that in Internal Drainage Board catchments, in some cases direct unattenuated discharge to a watercourse may be permitted, in other circumstances only attenuated flows will be allowed by the Internal Drainage Board, whether the proposed method of connection is by private means or public sewer. In some circumstances capacity issues make it difficult for permit to be given for new discharges.

5.3.8 Internal Drainage Boards also have a role in advising on local planning strategies, for example Water Cycle Strategies and Strategic Flood Risk Assessments.

5.3.9 Flood risk in Cambridgeshire is assessed in the planning process in a number of ways. The planning process applies a principle called a sequential test that seeks to identify, allocate or develop certain types or locations of land before others. (This is now contained within the National Planning Policy Framework) For example, a site considered to be at low flood risk in Flood Zone 1 should be considered before a site in a Flood Zone 2 or 3 (3a and 3b) wherever practicable.

5.3.10 The Environment Agency is a statutory consultee for planning applications. Therefore, Local Planning Authorities have to consult the Environment Agency on certain development proposals at risk from fluvial and tidal flooding before they make a decision. There is list on the Environment Agency's website which explains what proposals they want to be consulted on. This list also gives advice and helps steer the applicant to the appropriate level of detail required for a Flood Risk Assessment.

5.3.11 At present, the Environment Agency is required to be consulted by the Local Planning Authorities on all developments other than minor development in Flood Zone 3; non-minor development in Flood Zone 2 which falls within certain vulnerability categories; non-minor development in Flood Zones 1, 2 and 3 where the development is less than 20 metres from a main river or in an area with critical drainage problems. The Environment Agency provides technical advice to Local Planning Authorities and developers on how best to avoid, manage and reduce adverse impacts of flooding.

5.3.12 The flood zones are the starting point for the sequential approach. The Environment Agency classifies land into zones. Flood Zone 3 (3a or 3b) or high levels of local flood risk; Flood Zone 2 or medium levels of local flood risk; and Flood Zone 1 or low levels of local flood risk. Flood Zones 2 and 3 (3a and 3b) are shown on the Environment Agency flood map with Flood Zone 1 being all the land falling outside zones 2 and 3 (3a and 3b). These flood zones refer to the probability of sea and river flooding only and does not take into account any existing flood defences or flooding from other sources.

5.3.13 In an area such as Cambridgeshire that relies heavily on flood defences, particularly in the Fens, and along main rivers; the residual flood risk, (i.e. the flood risk considering the presence of existing defences) is also considered in determining the viability of land for planning.

5.3.14 Many parts of Cambridgeshire fall within Flood Zones 2 and 3 of the EA flood map. Unfortunately, as the EA flood zone classification does not take into account defended areas, it is difficult to avoid further development in these areas. However, wherever possible, development will be steered to sites of lowest flood risk. A Level 2 SFRA provides more detailed information on areas benefitting from defences.

5.3.15 Development needs to also consider the aspirations of water companies, e.g., Anglian Water Services Ltd would like to maximise opportunities for surface water to be separated from the combined sewer through new and redevelopment. Anglian Water would also like to see surface water removed from the combined system, and public sewers to free up capacity for future growth, climate change and urban creep.

5.3.16 The National Planning Policy Framework also sets out the exception test. Highly vulnerable development in Flood Zone 2, essential infrastructure and more vulnerable development proposed in Flood Zone 3a and essential infrastructure proposed in Flood Zone 3b requires the exception test. For the exception test to be passed:

- It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and
- A site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

5.3.17 Both elements of the test will have to be passed for development to be allocated or permitted. The flood risk assessment should identify and assess the risks of flooding to and from the development and demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account without increasing risk to others.

5.3.18 <u>Community Infrastructure Levy</u>
The Community Infrastructure Levy (CIL) is a charge which local authorities can place on developers to help fund infrastructure needed to support new development in their areas, including flood mitigation measures. It will partially replace the existing Section 106 system. Unlike Section 106 Planning Obligations, CIL Receipts are not earmarked for particular infrastructure. Instead CIL monies are pooled into one fund which can be used for infrastructure, as set out in local planning authorities' Regulation 123 List, needed to support new development across relevant Council's administrative area. Planning obligations may not be used to find an item that is locally intended to be funded by CIL. The Planning Act 2008 includes a definition of the infrastructure that can

be covered by the levy, as follows:- transport, schools, hospitals, parks and flood defences. For further information on the progress of the Cambridgeshire authorities in relation to CIL, please refer to each authorities website.

5.3.19 Strategic Flood Risk Assessments

As discussed in chapter 4, Strategic Flood Risk Assessments are used to refine information on the probability of flooding, taking into account local and other sources of flooding, and the impacts of climate change. Strategic flood risk assessments should identify the current and future extent and nature of flooding from fluvial, tidal and other natural/artificial sources. They can help improve understanding of what may flood, how, where, how often, and to what extent. In turn it informs decisions on flood risk management, land allocation and emergency planning, which can all contribute to flood risk reduction and help deliver sustainable development.

5.3.20 Internal Drainage Boards may also require flood risk assessments if the application is being made in an Internal Drainage Board catchment where Internal Drainage Board consent is required.

5.3.21 The overall aspiration for development in Cambridgeshire is that it should steer new development to areas of low flood risk (i.e. Flood Zone 1). Where there are no reasonably available sites in Flood Zone 1, decision-makers can identify broad locations for development, whilst taking into account the flood risk vulnerability of each site. Preferably directing development to areas of medium flood risk rather than high flood risk (i.e. Flood Zone 3), and applying (where required) an exception test that ensures the development is safe, does not increase risks elsewhere and where possible reduces risks overall.

5.4 Cambridgeshire County Council as a Statutory Consultee

5.4.1 For many years, the county council had been expecting to become a Sustainable Drainage Systems (SuDS) Approving Body (SAB) and would have been responsible for approving, adopting and maintaining SuDS on new developments. The purpose of SuDS is to mimic natural drainage, significantly reduce surface water runoff and improve water quality. Implementation of this legislation will now not come forward.

5.4.2 A number of consultations were launched by government during 2014 setting out an alternative approach to implementing SABs. Following this, on the 24th March 2015, the Government laid a statutory instrument making the county council as a Lead Local Flood Authority a statutory consultee by adding the consultation requirement to Schedule 5 of the

Town & Country Planning (Development Management Procedure) Order 2015. This came into effect on the 15th April 2015.

5.4.3 In considering planning applications for major developments, Local Planning Authorities should consult with the county council in it's role as Lead Local Flood Authority on the management of surface water. The Local Planning Authority will need to satisfy themselves that the proposed minimum standards of operation for SuDS are appropriate and ensure through the use of planning conditions or planning obligations that there are clear arrangements in place for ongoing maintenance of SuDS over the lifetime of the development. The county council will be required to provide technical advice on the surface water drainage strategies and designs put forward for new developments. In the future, to enable the county council to manage resources efficiently and focus on the highest risk planning applications, standing advice for surface water will be developed and shared to Local Planning Authorities for planning applications as appropriate.

5.4.4 A Flood and Water Supplementary Planning Document (SPD) is being produced by the County Council in conjunction with Local Planning Authorities and water management authorities to support Local Planning Authorities and provide guidance to applicants when considering flood and water matters for planning applications in Cambridgeshire. Whilst the Cambridgeshire Sustainable Drainage Systems Design and Adoption Handbook will no longer be published due to the announcements from government the key design requirements of this handbook have been incorporated and updated within the relevant sections of the SPD.

5.4.5 Once the Flood and Water SPD is adopted by the relevant Local Planning Authorities, it will be a material consideration in the determination of planning applications. It should be noted that the Local Planning Authorities are likely to adopt the SPD at different times depending on the progress of their Local Plans and adoption processes.

5.4.6 The county council will work together with developers and partners, including Local Planning Authorities and the Highways Authority to encourage planned developments with adequate drainage assets. The standards of these drainage assets should meet the minimum standards for adoption ideally for adoption by an appropriate risk management authority.

5.5 Ordinary watercourse consents

5.5.1 Under the Flood and Water Management Act 2010 the county council has a duty to be responsible for consenting of ordinary water courses outside

of Internal Drainage Boards under the Land Drainage Ac1 1991. The duty transferred from the Environment Agency to County Council in April 2012.

5.5.2 The County Council is responsible for ensuring that works to an ordinary watercourse such as a mill, dam, weir, or culvert that may affect the flow of water through the ordinary water course gains the proper consents prior to any work taking place. This enables the county council to ensure that any work will not cause a flood risk. Therefore, if riparian owners wish to culvert an ordinary watercourse or insert any obstruction, consent will be required.

5.5.3 An application for consent can be made through a form that is available on either the Cambridgeshire County Council, or Internal Drainage Board website (as appropriate). There will be a charge and conditions may be applied to any consent granted. The County Council offers a changeable pre-application service for consenting.

5.5.4 An Internal Drainage Board or county council must liaise with the Environment Agency before carrying out any such work to ordinary watercourses and they must have regard to any guidance issued by the Environment Agency.

5.5.5 The Environment Agency is responsible for consenting of works to main rivers.

Figure 11 Lamb Drove Sustainable Drainage Scheme

5.6 Planning enforcement

5.6.1 The planning application process is supported by a system of enforcement, which ensures that development has planning permission and has been built in accordance with approved plans and that any conditions on an application are met by the developer according to agreed timescales.

5.6.2 The second tier authorities are responsible for the enforcement of their areas of decision making (housing, business and other types of development). Cambridgeshire County Council is responsible for the enforcement of county matters (mineral extraction and mineral processing, waste disposal and recycling and county council services e.g. schools, libraries, roads and transport infrastructure.).

5.6.3 As detailed in this chapter, the introduction of requirements for sustainable drainage approval also means that new developments need to be subject to a new system of enforcement to ensure that SuDS work is undertaken to the required standard.

5.6.4 Where enforcement action is considered necessary, both planning and flood and water management officers will need to work closely together to decide what enforcement actions may be required having had regard to the relevant flood risk enforcement policy. In some cases, it may be possible to achieve an agreed solution through the submission of a new planning application or amending the drainage designs to meet SuDS approval requirements.

5.6.5 It is also very important that SuDS systems are used for both flood risk management and controlling diffuse pollution. The Lead Local Flood Authority will liaise with the relevant planning teams to ensure that this dual benefit of SuDS systems are utilised where appropriate through the planning approval processes.

5.7 Water Framework Directive

5.7.1 The European Water Framework Directive (WFD) requires the local flood risk management strategy to take account of River Basin Management Plans (RBMPs) along with the programme of measures for implementing these plans.

5.7.2 The measures proposed by our local flood risk management strategy will be consistent with Article 4 of the directive, which outlines the environmental objectives as follow:

- All surface water bodies to achieve good ecological and chemical status by 2015;
- This covers inland waters, transitional waters (estuaries) and coastal waters;
- All groundwater bodies to achieve good groundwater quantitative and chemical status by 2015;
- Heavily-modified water bodies and artificial water bodies to achieve good ecological;
- potential and good surface water chemical status by 2015;
- No water bodies to experience deterioration in status from one class to another;
- Protected Areas to achieve the requirements made under their designation in relation to the water environment.

5.7.3 <u>Plans for achieving WFD Objectives</u>

In terms of flood risk management , as much as possible, flood risk management plans will be aligned with River Basin Management Plans in order to meet the challenges of WFD environmental objectives. This means that flood risk management schemes will be planned and delivered bearing in mind the following requirements:

- To protect and enhance the water environment;

- To ensure that there is flood risk activities do not deteriorate water bodies;
- To change the way flood assets are managed in order to improve the quality of water bodies.

5.7.4 As part of the process of aligning WFD requirements with local planning, the County Council is ensuring that applications for Land Drainage Consents are assessed for WFD compliance.

5.7.5 As a lead local flood authority, the county council will always ensure that a sustainable approach to reducing local flood risk is adopted and seek to lessen the risk of localized flooding using mechanisms that are economically viable with environmental benefits.

5.7.6 The County Council's Strategic Environmental Assessment prepared in support of the Local Flood Risk Strategy provides more information on the condition of the county's watercourses with respect to the requirements of the WFD.

5.7.7 In meeting the objectives of the River Basin Management Plan, the competent authorities for contributing to their delivery are the Internal Drainage Boards, Local Authorities, Water companies and the EA.

6 Objective 5: Improving flood prediction, warning and post flood recovery

6.1 Civil Contingency and Community Resilience

6.1.1 The Civil Contingencies Act 2004 lists local authorities, the emergency services and other organisations (including Environment Agency) as category 1 responders to all emergencies including flooding. The Act sets outs clear roles and responsibilities for the category 1 and 2 responders for managing emergency planning and response at a local level. For more information on the Civil Contingency Act 2004 please go to the following link: http://www.legislation.gov.uk/ukpga/2004/36/contents

6.1.2 Cambridgeshire and Peterborough Local Resilience Forum (CPLRF)
The Cambridgeshire and Peterborough Local Resilience Forum was established in response to the statutory requirements of the Civil Contingencies Act 2004. It brings together all the local category 1 and 2 responders to implement a planned and coordinated approach to all the potential emergencies. There are a number of sub-groups in the

Cambridgeshire and Peterborough Local Resilience Forum that cover the specific emergency subjects. The work for flooding emergency and response is covered by the severe weather sub-group.

6.1.3 The members of the Cambridgeshire and Peterborough Local Resilience Forum include:

- Environment Agency;
- Cambridgeshire County Council;
- Cambridge City Council;
- East Cambridgeshire District Council;
- Huntingdonshire District Council;
- Fenland District Council;
- Peterborough City Council;
- South Cambridgeshire District Council;
- Cambridgeshire Constabulary;
- Cambridgeshire Fire and Rescue Service;
- Department for Communities and Local Government
- Highways England;
- East of England Ambulance NHS Trust;
- NHS England East Sub Regional Team;
- NHS Cambridgeshire & Peterborough Clinical Commissioning Group;
- Public Health England;
- Military; and
- South Staffordshire Water (Cambridge Water Company).

6.2 Planning for the flood emergency

6.2.1 A number of initiatives have been undertaken to prepare for future flood emergencies.

6.2.2 Flood Risk Assessment

Under the Civil Contingencies Act 2004 all the category 1 responders in Cambridgeshire have a legal duty to assess all the risks of an emergency occurring within or affecting their areas. This work ensures that the responders have shared understanding of the risks and also informs the emergency planning and response. The members of Cambridgeshire and Peterborough Local Resilience Forum regularly review and publish a community risk register.

6.2.3 The community risk register suggests that Cambridgeshire faces a significant risk from flooding. Evidence demonstrates that the certain parts of the county are particularly vulnerable to tidal and fluvial flooding.

6.2.4 In addition to the community risk register, the Environment Agency identifies a number of areas vulnerable to flooding in the county which are

covered by their free flood warning service, Floodline Warnings Direct (FWD). In these areas flooding can be caused by main rivers such as River Great Ouse, River Nene, and River Cam.

6.2.5 Cambridgeshire & Peterborough Local Resilience Forum plans
Several plans have been created that detail what the responsible authorities need to do in a flood event. These plans include:

- **River (Fluvial) flood plan**
  This plan details the multi-agency coordinated response to an incident of River (fluvial) flooding, or the risk of such an incident occurring in Cambridgeshire.

- **East Coast flood plan**
  This plan provides an overview of the phased response to an East Coast flood event (storm surge) and the consequences on the tidal River Nene, caused by breaching or overtopping. The plan includes the associated trigger points and the preparedness and response measures that are likely to be required in such circumstances. Sections of this plan can also be followed in response to times of fluvial flooding, high tide and tide lock at Dog-in-a-Doublet sluice

- **Severe Weather plan**
  This plan is the multi-agency response plan for adverse weather events in Cambridgeshire and Peterborough, and provides outline information on the response, management and roles and responsibilities of individual agencies. An annex to this plan covers the surface water flooding incident, Multi-Agency, Joint Operations Room protocol. This arrangement has been set up following the flood incidents that occurred in Cambridgeshire in August 2014.

- **Reservoir Emergencies Generic Off-Site plan**
  This plan is to ensure that local responders are able to make a swift and effective response to any reservoir emergency. Legislation requires on-site plans for those reservoirs exceeding 25,000 cubic metres.

6.2.6 Awareness raising

6.2.7 Flood Warning
The Environment Agency provides a flood warning service throughout the country in areas at risk of flooding from rivers or sea. They monitor rainfall, river levels and sea conditions and forecast the possibility of flooding. If flooding is forecast, flood warnings are issued via a number of different channels including Floodline Warning Direct, Environment Agency website, Facebook FloodAlerts' app, and local media etc. There are a

number of the flood warning areas across Cambridgeshire where many properties and critical infrastructure (e.g. schools, care homes, and fire stations) are at risk of flooding. For example a combined number of 6,519 properties are affected by the River Great Ouse including 11 schools, 4 fire stations, 2 police stations and 1 ambulance station.

6.2.8 Warning codes

The Environment Agency uses three different warning codes – Flood Alert, Flood Warning and Severe Flood Warning. Each warning code is communicated to the public and requires a different response from residents and the emergency responders. The relevant information about the warning codes are listed below.

6.2.9 Flood Alert

Key message: Flooding is possible. Be prepared.
Timing: 2 hours to 2 days in advance of flooding.
Trigger: Forecasts that indicate that flooding from rivers may be possible, and forecast intense rainfall for rivers that respond very rapidly, and /or forecasts of high tides, surges or strong winds.

Resident's actions:

- Be prepared for flooding and prepare a flood kit of essential items;
- Avoid walking, cycling or driving through flood water;
- Farmers should consider moving livestock and equipment away from areas likely to flood
- Call Floodline on 0845 988 1188 for up-to-date flooding information;
- Monitor local water levels on the Environment Agency website www.environmentagency.gov.uk

How communicated?

- Flood warning direct, Floodline and the internet.

6.2.10 Flood Warning

Key message: Flooding is expected, and immediate action required.
Timing: Half an hour to 1 day in advance of flooding.
Trigger: High tides, surges coupled with strong winds, and / or heavy rainfall forecast to cause flash flooding of rivers, and / or forecasting flooding from rivers.

Resident's actions:

- Protect yourself, your family and help others move family, pets and valuables to a safe place.
- Turn off gas, electricity and water supplies if safe to do so and put flood protection equipment in place.
- If you are caught in a flash flood, get to higher ground.
- Call Floodline on 0845 988 1188 for up to date information.

How communicated: Flood warning direct, Floodline, the internet and media

6.2.11 Severe Flood Warning

Key message: Severe flooding and danger to life.
Timing: When flooding poses a significant threat to life and different actions are required.
Triggers: Actual flooding where the conditions pose a significant risk to life and / or widespread disruption to communities, and /or on-site observations from flooded locations, and / or a breach in defences or

failure of a barrier that is likely to cause significant risk to life, and /or discussions with partners

Resident's actions:

- Stay in a safe place with a means of escape;
- Be ready should you need to evacuate from your home;
- Co-operate with the emergency services;
- Call 999 if you are in immediate danger; and
- Call Floodline on 0845 988 1188 for up-to-date flooding information.

How communicated**:** Flood warning direct, Floodline, the internet and media

6.2.11 Warning Removed

Key message: No further flooding is currently expected for your area.

Timing: Issued when a flood warning or severe flood warning is no longer in force.
Trigger: Risk of flooding has passed, and / or river or sea levels have dropped back below severe flood warning or flood warning levels, and / or no further flooding is expected, and / or professional judgment and discussions with partners agree that a severe flood warning status is no longer needed.

Residents' actions: Be careful. Flood water may still be around for several days and could be contaminated. If you've been flooded, bring your insurance company as soon as possible.

How communicated: Flood warning direct, Floodline, and the internet

6.2.12 The Environment Agency also provides the flood warning services for the emergency responders. A web-based service will provide the responders with a targeted and efficient service which will enable them to easily monitor their assets that are at risk of flooding. The responders can manage the information in the system and will be alerted by email when their assets are at risk from flooding.

6.3 Responding to a flood emergency

6.3.1 Response to flooding can be varied subject to the level and severity of the flooding. The relevant Cambridgeshire and Peterborough Local Resilience Forum Flood Plan sets out the process and procedures for responding to flood emergencies.

6.3.2 Responding to a flood event

6.3.3 There are several activation routes for the response to the flooding. Each flood plan details these arrangements, which is normally first to convene a Flood Advisory Service Teleconference or a Severe Weather Teleconference.

6.3.4 The plan defines the roles and the responsibilities of the agencies involved in the response to flooding emergency. They are summarised as follows:

6.3.5 Environment Agency
Role: Provide information, specialist knowledge and support to local level emergency planning.
Responsibilities:

- Provide warnings;
- Maintain defences;
- Support local emergency planners;
- Provide public information about flooding; and
- Chair Flood Advisory Service Teleconference.

6.3.6 Local Authorities
Role: Support emergency services during the response and coordinate the recovery
Responsibilities:

- Prepare and maintain the Cambridgeshire and Peterborough Local Resilience Flood (Fluvial) Plan;
- Monitor warnings issued by the EA or the Met Office;
- Implement road closures;
- Resource Contact / Call Centres to take the lead in dealing with general enquiries from the public during and after major flooding;
- redirecting calls to other organisations when appropriate;
- Coordinate incident reports and response prior to formation of Tactical Coordinating Group;
- Manage the Recovery phase of the incident(s);
- Employ resources to mitigate the effects of the Emergency;
- Emergency Feeding and Housing of victims / evacuees;
- Provide welfare and counselling;
- Coordinate humanitarian assistance and the voluntary sector;
- 'Clear Up' Operations on site; and
- Restoration of normality.

6.3.7 Cambridgeshire Constabulary
Role: Lead a coordinated response to protect life and property
Responsibilities:

- Lead the multi-agency command and control, including coordination of Major Incident and Inter-Operability communications with other Agencies;

- Coordinate road closure and traffic management;
- Coordinate incident reports and response on formation of the Tactical Coordination Group; and
- Lead media liaison in line with the Cambridgeshire and Peterborough Local Resilience Flood Plan Communications Plan.

6.3.8 Cambridgeshire Fire and Rescue Service
Role: The coordination of all rescue measures and the provision of specialist equipment.
Responsibilities:
- Coordination of the rescue of trapped people/casualties;
- Managing the safety of personnel in the inner cordon; and
- Information gathering and risk assessment.

6.3.9 East of England Ambulance NHS Trust
Role: Treatment of all casualties at the scene and where necessary transporting casualties to hospital
Responsibilities:
- Provide the focal point for medical resources;
- Treatment and care of injured at the scene;
- Triage of casualties at the scene; and
- Liaison with nominated hospitals.

6.4 Recovery

6.4.1 At an early stage during a flood event the key agencies consider the recovery process and the activation of the Cambridgeshire and Peterborough Local Resilience Forum Community Recovery plan. An appropriate agency is identified to lead on recovery, which is normally the District Council in whose area the flooding has taken place. There are arrangements whereby the District Council can request the County Council to lead or in the event that flooding is Countywide. The lead recovery agency will identify and engage the other relevant agencies and establish a recovery coordinating group (chaired by the 'lead' Local Authority).

6.4.2 The membership of the recovery coordinating group will vary depending on the nature and extent of the flood, but usually include the following organisations:
- Local Authorities;
- Environment Agency;
- Cambridgeshire Constabulary;
- Cambridgeshire Fire and Rescue Service;
- Department for Communities and Local Government
- East of England Ambulance NHS Trust
- Met Office

- NHS England
- NHS Cambridgeshire and Peterborough Clinical Commissioning Group
- Public Health England
- Transport Companies
- Utilities Companies;
- Internal Drainage Boards.

6.4.3 More detail on how the recovery process will be managed is documented in the Cambridgeshire and Peterborough Local Resilience Forum Community Recovery plan.

7 Funding and Delivery

7.1 Local Context

7.1.1 It is important that the local strategy sets out how the proposed actions and measures identified in this strategy will be funded and resourced in Cambridgeshire.

7.1.2 Cambridgeshire County Council, along with other key stakeholders in the county has a limited budget to deliver flood risk measures. So it is important to identify how and from where resources will be available to fund flood risk management activities.

7.1.3 This chapter outlines the current available funding for flood risk management, the opportunities for funding through mechanisms such as Government grants, and where in the future new funding streams will be generated where feasible.

7.1.4 There are various funding streams available for risk management authorities in Cambridgeshire, and these are detailed in figure 16

7.2 Funding for new and existing flood alleviation schemes

7.2.1 In line with the Pitt Review recommendations that the Government should develop a scheme that allows and encourages local communities to invest in flood risk management measures, Defra has changed the way in which key stakeholders can access funding for flood risk management activities. Under the new scheme funding can be gained based on the benefits delivered (payment for outcomes).

7.2.2 Benefits are calculated by assessing indicators such as the number of households protected, the damages being prevented, the impact on vulnerable communities, environmental benefits, and benefits to businesses and agriculture amongst others.

7.2.3 The funding scheme aims to encourage those that will benefit from the flood alleviation scheme, such as communities businesses, and developers to contribute financially. It is anticipated that this process will enable Defra to spread its finite resources more widely to fund more projects. This aspiration is explained further in figure 12: Defra's funding model that compares the old all or nothing funding regime to the new approach.

7.2.4 Defra has devised a set of principles to support the new national funding system, and these include:

- Encourage an increase in total investment in flood risk management by operating authorities, beyond levels provided by central Government alone;
- Enable more local choice within the system and encourage innovative and cost-effective options to be promoted;
- Rather than some projects being fully funded and others not at all, now all potential projects which provide flood risk benefit, have the ability to attract some government funding;
- Funds from central government should prioritise protecting those most at risk and least able to help themselves;
- All flood and coastal erosion projects, regardless of which risk management authority is leading it, should be treated equally based on the benefits delivered and damages avoided;
- The general taxpayer should not pay to protect new development in areas at risk of flooding, now or in the future;
- All investment should be made within a nationally consistent framework to take account of policies and findings within Catchment Flood Management Plans;
- Maintain the widespread take-up of flood insurance by helping to keep insurance affordable through risks being managed properly; and
- Projects should deliver multiple benefits, for example Defra grant in aid may be possible for flood risk management schemes which also achieve key Water Framework Directive benefits.

7.2.5 Under this system some schemes will continue to receive complete funding, if the benefits significantly outweigh the costs, and for others partial funding would be available, and partnership contributions would be sought.

7.2.6 Funding can be applied for, on an annual basis, via the Government's Flood Defence Grant in Aid. Applications are assessed by the Environment Agency and applicants receive an indicative allocation of funding pending approval by the Regional Flood and Coastal Committees. See Chapter 2 for more information on the committees in Cambridgeshire. Applications are open to the Environment Agency, county councils, district councils, and Internal Drainage Boards.

7.2.7 Following the construction of new flood defences or flood risk management schemes, we will provide the following information to the beneficiaries of the scheme including home owners and stakeholders who have made local contributions to fund the works:

- An assessment of how the flood risks have changed, using the evidence provided during the design and construction of the schemes; and

- An assessment of residual flood risk for the areas covered by the schemes.

7.2.8 Where relevant, the county council will also work closely with the Environment Agency to update their data on flood maps for the areas benefitting from flood defences or flood risk management schemes. Additionally, the county council will also work with the Environment Agency to integrate any existing mechanisms for keeping the insurance companies updated on flood risk management activities within Cambridgeshire.

7.3 Funding for key flood risk management activities

7.3.1 It should be noted that while each organisation receives varying levels of funding for flood risk management activities, they do not act in isolation. Cambridgeshire takes a partnership approach to funding work to reduce flood risk and always looks to reduce costs and resources through working in partnership. Funding from the Regional Flood and Coastal Committee's local levy is also available for flood alleviation schemes, to tackle tidal, costal, fluvial and surface water flood risk.

7.3.2 The Government has committed funds to lead local flood authorities via the revenue support grant, to support them in carrying out responsibilities under the Flood and Water Management Act 2010. Defra is providing up to £36 million a year, starting with £21 million in 2011/12. Cambridgeshire county council received £162,600 in 2012/13, £347,100 in 2013/14, and then reduced to £286,000 thereafter.

7.3.3 Cambridgeshire County Council also contributes via a local levy to the Central Regional Flood and Coastal Committee (approximately £326,000 per year) and to the Northern Regional Flood and Coastal Committee (approximately £40,000 per year) to support the flood risk management in those areas.

7.3.4 The Highways Authority allocates an annual budget of £330,876 to undertake gully and offlet cleaning (see picture 14 and 15 to reduce risk of flooding to the roads in Cambridgeshire.

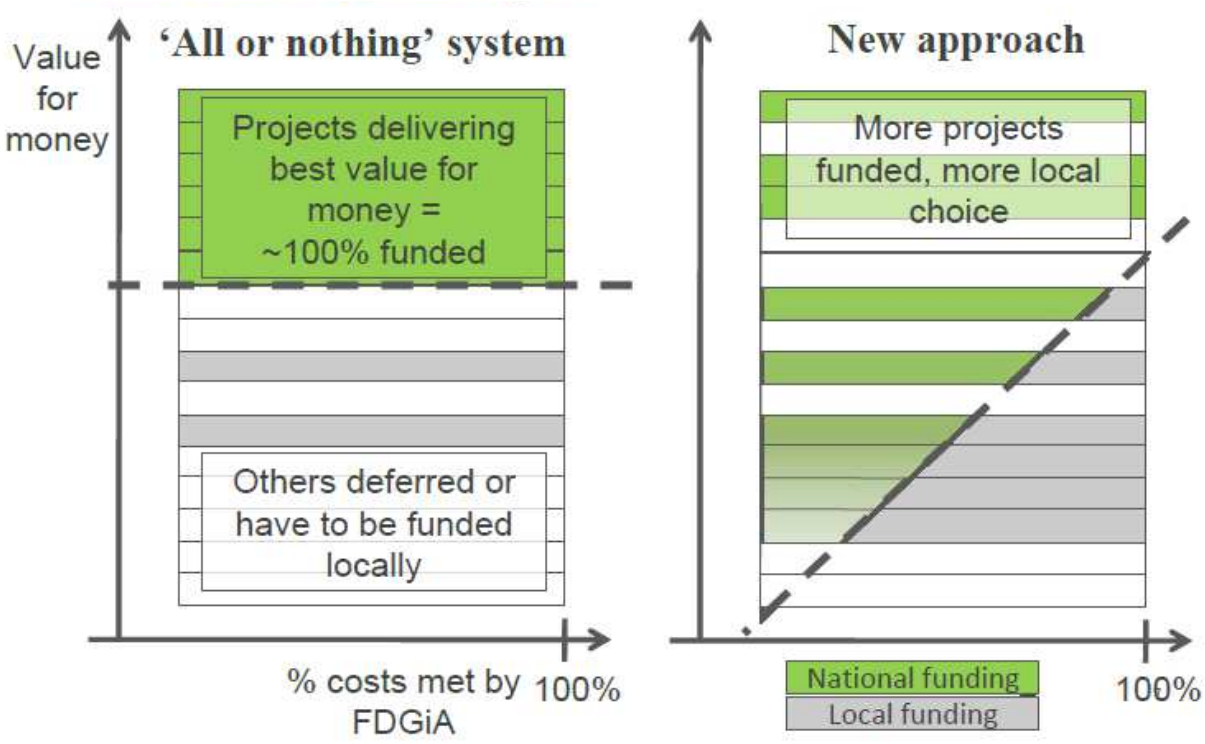


Figure 12 Defra's funding model

7.3.5 Cleaning of gullies and offlets are undertaken on an area basis (North, South, East and West) and cleaning is carried out yearly, two yearly or three yearly basis based on the risk of flooding to a particular area. The Highways Authority also holds a contingency budget of £25,000 to deal with unscheduled flood risk issues.

7.3.6 <u>District and City councils in Cambridgeshire</u>

The city and district councils are responsible for managing several hundred kilometers of watercourses in the county. Some such as South Cambridgeshire District Council, Fenland District Council, Cambridge City Council and East Cambridgeshire District Council hold a modest budget to enable them to undertake essential capital works under a scheduled maintenance routine. The District Council's aim to secure funding to undertake essential works on watercourses when issues are identified if this is outside of budgeted annual work plan.

7.3.7 Community Infrastructure Levy (CIL)

There is now an increased emphasis on CIL as a funding mechanism for flood risk management schemes. It is absolutely necessary that the flood risk impacts of all new developments are assessed, and planned for within the communities. There needs to be an integrated approach between various organisations within the local communities to ensure that new developments take existing risks into consideration. Local planning authorities will have to undertake infrastructure assessments, which should include a review of the flood risk assessments. The setting and approval of pricing schedules for Community Infrastructure Levy should also be decided by the appropriate local planning authorities.

7.3.8 The ultimate use of Community Infrastructure Levy will be determined by the appropriate approval body within each local authority.

7.3.9 Town and Parish Councils

Under a new Government order town and parish councils have been given the General Power of Competence (under the Localism Act), and can now spend money on flood alleviation schemes in excess of limits that were set at £7.36/head in 2015/16 under the Section 137 limits. This means that parish councils have a part to play in partnership funding contributions for flood alleviation schemes in the future. Parish Councils are also able to apply for Public Works loans, at preferential rates, to enable them to contribute to more comprehensive flood risk management schemes.

7.3.10 Internal drainage boards

In Cambridgeshire the main income streams for Internal Drainage Boards are agricultural drainage rates, charged to the occupiers of agricultural properties; special levies charged to district councils, representing the rates payable for non-agricultural properties; payments received from the Environment Agency for highland water contributions; payments received from grant in aid for specific capital schemes, and development contributions.

Figure 13 Gully

Figure 14 Off let unit

The main expenditure for the Internal Drainage Boards include capital asset renewal and refurbishment, maintenance works on its watercourse

network, pumping station running costs, and precepts payable to the Environment Agency. The general drainage charge is on land outside IDB drainage districts. The amounts raised and the sources from which they are raised will depend on the works scheduled within each Internal Drainage Boards area, and will vary from year to year.

7.3.11 Anglian Water Services

Anglian Water Service's income is regulated by the Water Services Regulation Authority, commonly known as Ofwat. Ofwat set Asset Management Plan price limits for what Anglian Water Services can charge their customers. In the period (2015-2020) Ofwat's price setting allowed for over £5 billion, which is to be spent on customer priorities. This includes:

- Delivering on 10 separate outcomes, including Satisfied Customers, Safe Clean Water, Resilient Services and Fair Charges;
- Maintaining delivery of core services, including reducing the risk of flooding, while keeping bills affordable; and
- Long term planning and working in partnership to deal with the pressures associated with growth and climate change.

7.3.12 Funding is not specifically allocated on a county basis. It is allocated on a risk and cost benefit basis throughout the Anglian Water Services region. A certain amount is allocated on an Anglian Water Services area basis to tackle reported sewer flooding of properties in their area.

7.3.13 Anglian Water Services recognise the opportunities that come with working in partnership to manage flood risk. With this in mind, it has created a pot of funding available to all LLFAs, including Cambridgeshire, for working on joint schemes that help to deliver benefits to their customers and local communities.

7.3.14 Regional Flood and Coastal Committees

Regional Flood and Coastal Committees raise local levies under existing arrangements to fund local flood risk management priorities. The members of Regional Flood and Coastal Committees have a role to approve the spending for managing flood and coastal erosion risk within their committee boundaries. This spending is set out in the revenue programme (promoted by the Environment Agency), and the capital programme (promoted by all Risk Management Authorities). The committees have a role to consent both programmes. The funding sources for these programmes include: Central Government funding which is called Flood and Coastal Risk Management Grant in Aid; local levies which are raised from Lead Local Flood Authorities; precepts which are collected from Internal Drainage Boards; and general drainage charges which are raised

from landowners. These are the key streams of funding for which the committees take an oversight.

7.3.15 Cambridgeshire falls within two Regional Flood and Coastal Committee catchments - 'Anglian Central', which is in the Environment Agency's Cambridgeshire and Bedfordshire area, and 'Anglian Northern' which is in the Lincolnshire and Northamptonshire area. The committees take a direct interest in how local levy funding is allocated, as this funding is raised through the Lead Local Flood Authorities represented on the committees by elected members. Decisions on how and where local levy funds are spent are made by the members of each committee for the area rather than on a county or unitary boundary basis. Therefore, funds may be allocated to schemes inside or outside of Cambridgeshire's County boundary. Examples of schemes within Cambridgeshire which have received Local Levy funding include: Cherry Hinton surface water management scheme; Kings Hedges surface water management scheme; and the Godmanchester flood alleviation scheme.

7.3.16 Section 106 funding - developer contributions

Under Section 106 of the Town and Country Planning Act 1990 local planning authorities can enter into an agreement with a developer or land owner as part of the planning application process to gain funds to support the provision of services or infrastructure. This would include funding to reduce flood risk which is caused by, or increased by a new development. With the introduction of the CIL Regulations on the 6 April 2010, Section 106 Planning Obligations are predominantly directed towards on-site mitigation, including site-specific flood mitigation measures

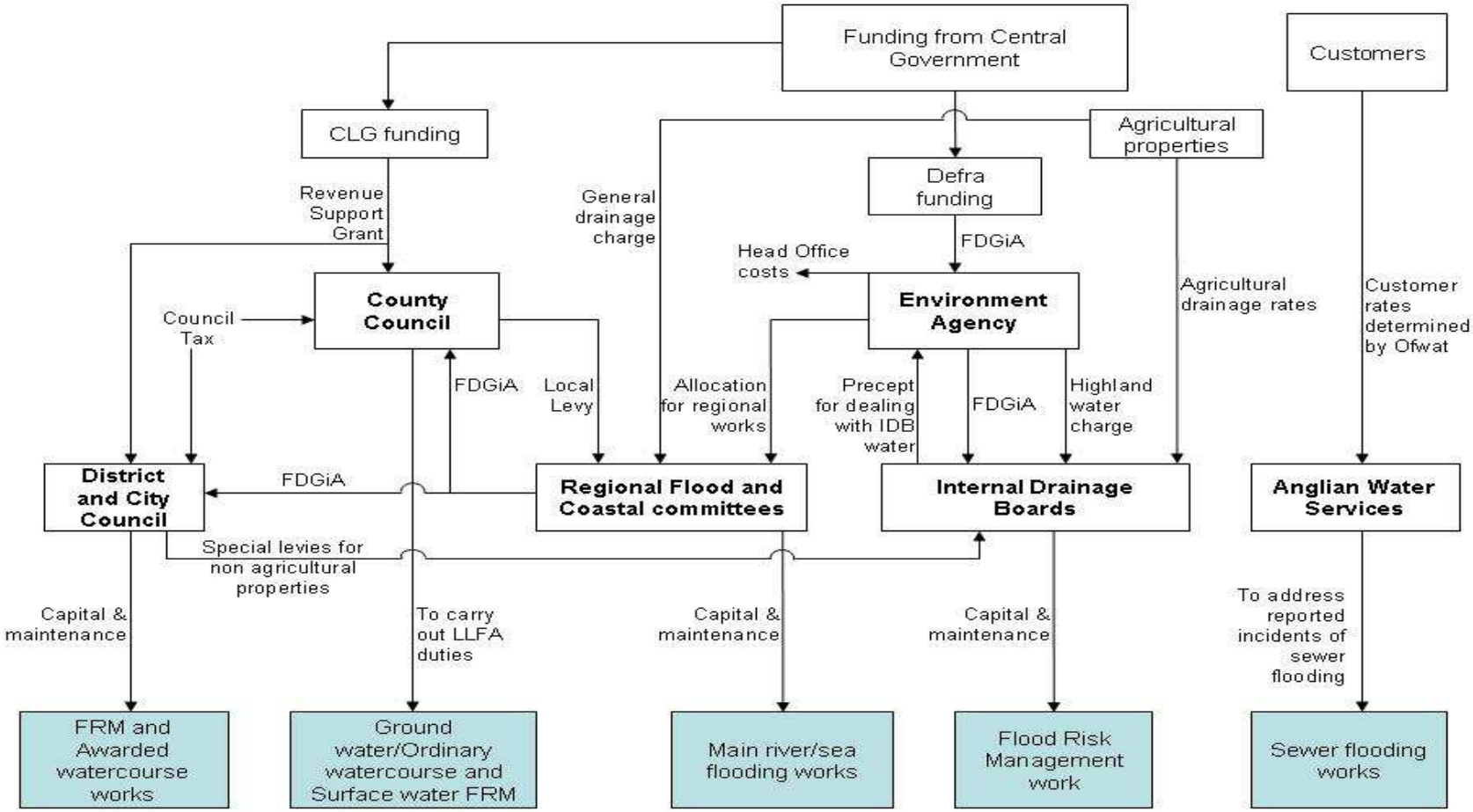


Figure 15 The various streams of funding and expenditure for flood risk management activities

8 Cambridgeshire's Objectives and Actions

This section of the strategy details the activities undertaken by each flood management authority to help reduce flood risk in Cambridgeshire. This is a 'living' section that will be updated on a regular basis to reflect progress that has been made.

Table 2 OBJECTIVE 1: UNDERSTANDING FLOOD RISK IN CAMBRIDGESHIRE

REF	Title	Description	Key accountability	Action and Status
1.1	Great Ouse Flood Risk Management Plan	Development and implementation of the Anglian Flood Risk Management Plan for the River Great Ouse catchment	Environment Agency	Draft published for consultation in October 2014. Final FRMP will be published in December 2015.
1.2	Internal Drainage Board Action Plan	Implementation of individual internal drainage board Action Plans to manage water levels and reduce flood risk in internal drainage board catchments. The action plan helps to ensure that flood risk management assets are properly managed and where appropriate improved to provide/sustain the appropriate level of protection	Internal Drainage Boards	Ongoing

1.3	Strategic Flood Risk Assessments	Complete Strategic Flood Risk Assessments, look at flood risk from a strategic level on a local planning authority scale	Cambridge City Council	Joint Strategic Flood Risk Assessment Level 1 with South Cambridgeshire District Council has been completed
			Fenland District Council	Joint Strategic Flood Risk Assessment with East Cambridgeshire District Council has been completed. Strategic Flood Risk Assessment Level 2 for Wisbech has been completed.
			East Cambridgeshire District Council	Joint Strategic Flood Risk Assessment with Fenland District Council has been completed.
			Huntingdonshire District Council	Strategic Flood Risk Assessment Level 1 has been completed.
			South Cambridgeshire District Council	Joint Strategic Flood Risk Assessment Level 1 with Cambridge City Council has been completed.

1.4	Strategic Surface Water Management Plan	Undertake a strategic Surface Water Management Plan to identify sites of significant flood risk in Cambridgeshire	Cambridgeshire County Council	Strategic assessment completed Jul 2011.
1.5	Detailed Surface Water Management Plan	Undertake detailed Surface Water Management Plans to identify causes and risks of surface water flooding in a given area. Identify if there are opportunities for joint partnership working.	Cambridgeshire County Council	Cambridge (Cherry Hinton): Completed Cambridge (Kings Hedges and Arbury): Completed St Neots: Completed Ely: Completed A14 Girton: Completed March: Completed Wisbech: Not being progressed – local measures implemented Soham: Completed Cambridge (North Chesterton): Completed Impington and Histon: Completed Godmanchester: Completed
1.6	Flood maps for surface water	Update our national scale surface water flood mapping by including local information on flood risk to produce a more detailed surface water flood map for use by Lead Local Flood Authorities	Environment Agency and Cambridgeshire County Council	Ongoing

1.7	Reservoir Flood Risk	The Environment Agency is responsible for managing flood risk from its own reservoirs, and enforcing the Reservoirs Act (1975) for other reservoirs with a capacity over 25,000m³ above ground level. Maintain reservoir inundation maps to support local authorities and reservoir operators and assist in the production of emergency plans for reservoir flooding emergencies. Support the Local Resilience Forum in the production of emergency plans to cover registered reservoirs.	Environment Agency, Cambridgeshire County Council, Anglian Water Services and Internal Drainage Boards.	By the end of 2014
1.8	Preliminary Flood Risk Assessment	Produce a Preliminary Flood Risk Assessment to highlight high level strategic sites at significant risk of flooding to comply with the Flood Risk Regulations (2009).	Cambridgeshire County Council	Completed Dec 2011
1.9	Water cycle studies	Produce district level water cycle studies to identify the water services infrastructure that is needed to support and enable sustainable development in the county.	Cambridge City Council East Cambridgeshire District Council Fenland District Council Huntingdonshire District Council South Cambridgeshire District Council	Water Cycle study for growth sites in and around Cambridge: Completed East Cambridgeshire District Council: Completed Fenland District Council: Completed Huntingdonshire District Council: in progress. South Cambridgeshire District Council: Ongoing

1.10	Understanding legislation	Ensure that each partner understands the legislative context of flood risk management work.	Cambridgeshire County Council	Information sharing and attendance by Risk Management Authorities to the Cambridgeshire Flood Risk Management Partnership meetings: quarterly
1.11	Understanding sources of flood risk	Ensure that each partner has a good understanding of the different sources of flooding – river, sewer, surface water, reservoir and groundwater etc.	Cambridgeshire County Council	Information sharing and attendance by Risk Management Authorities to the Cambridgeshire Flood Risk Management Partnership meetings: quarterly
1.12	Local flood information	Engage with key members of the community to gain information on flood risk issues for individual Surface water Management Plans.	Cambridgeshire County Council	Ongoing - Attendance to key stakeholder events such as the Huntingdon Flood Forum; Completed - Support the community in using an online interactive map to report flood risk issues via the county council's web pages
1.13	Flood incident reporting and incident investigation	Set up processes and procedures for flood investigation including: Online reporting facility, online status reports, investigation criteria and timescales.	Cambridgeshire County Council	Completed.

1.14	Flood Risk Asset Register	A register of structures are features that could impact on flood risk. The register will help ensure that flood risk management assets are properly managed and where appropriate improved to provide/sustain the appropriate level of protection.	Cambridgeshire County Council	Asset register set up: Completed Population of asset register: Ongoing
1.15	Environment Agency System Asset Management Plans	Maintain Asset Management Plans that outline the Environment Agency's approach to the management of Environment Agency assets that reduce the risk of flooding from the sea and main rivers	Environment Agency	2011-2015
1.16	River Basin Management Plans – Anglian River Basin District	The River Basin Management Plans describe the main issues for each river basin district and highlights some key actions for dealing with them. To meet the requirements of the Water Framework Directive.	Environment Agency	Draft RBMP was published in October 2014. Final RBMP will be published in December 2015.
1.17	Partnership working with other Lead Local Flood Authorities	Cambridgeshire County Council hosts quarterly meetings with Lead Local Flood Authorities in the Anglian region to share progress, best practice, and consider joint working opportunities.	Cambridgeshire County Council	Quarterly - ongoing
1.18	Ensure that all flood risk management authorities carry out duties as detailed in the strategy	The action plan detailed in this Strategy will be monitored on a regular basis by the Business Manager - Flood and Water. Oversight is also given by members of the Cambridgeshire Flood Risk Management Partnership	Cambridgeshire County Council	Quarterly

Table 3 OBJECTIVE 2: MANAGING THE LIKELIHOOD AND IMPACTS OF FLOODING

REF	Title	Description	Key accountability	Action and Status
2.1	Partnership working CFRMP	Cambridgeshire County Council established the Cambridgeshire Flood Risk Management Partnership (CFRMP) in 2007. Members include: Cambridgeshire County Council Environment Agency East Cambridgeshire District Council, South Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, Cambridge City Council, Anglian Water Services, Middle Level Commissioners, Ely Group of Internal Drainage Boards, North Level Internal Drainage Board, Bedford Group of Internal Drainage Boards, Cambridgeshire Constabulary.	Cambridgeshire County Council	Members meet quarterly. Members oversee flood risk management activities in Cambridgeshire.
2.2	Designation of Assets	Designation is legally binding and aims to ensure that owners do not in advertently alter structures and features and potentially increase flood risk.	Designation authorities: Cambridgeshire County Council, Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District	In order to ensure that there is consistency in designating across all the designating authorities, guidelines for designations will be agreed, and the list of proposed designations will be circulated to CFRMP members prior to each quarterly CFRMP

			Council, Huntingdonshire District Council, South Cambridgeshire District Council and Internal Drainage Boards in Cambridgeshire.	meeting.
2.3	Flood incident investigation	A duty to investigate and publish reports on flooding incidents, and to identify which partners have relevant flood risk management functions, and what they have done or intend to do to resolve the problem.	Cambridgeshire County Council (lead) (including Highways Authority), Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council, Anglian Water Services, and Internal Drainage Boards in Cambridgeshire.	Cambridgeshire County Council has two Senior Officers – Flood Risk to carry out investigations: Completed The Council has set up an online resource for members of the public to report flood risk issues. The Council works closely with its partners to investigate and resolve flood risk issues, and progress on investigations is recorded on the county council's web pages: Ongoing

2.4	Asset register	Duty to maintain a register of structures or features which in the view of the Lead Local Flood Authorities have a significant effect on flood risk in their area.	Cambridgeshire County Council	Cambridgeshire County Council has developed an asset register that holds information on risk asset owned by the Council and other parties: Completed The asset register has been made available to the public via the county council website: Completed
2.5	Information sharing	Request information from any person in connection with flood risk management functions.	Cambridgeshire County Council (including Highways Authority), Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council, Anglian Water Services and Internal Drainage Boards in Cambridgeshire.	Cambridgeshire Flood Risk Management Partnership regularly request and share information between partners to help improve and address flood risk management issues. Cambridgeshire County Council and Anglian Water Services have developed and agreed a data sharing agreement.

2.6	Manage and reduce sewer flooding	Investigate and remediate sewer flooding reported to Anglian Water Services	Anglian Water Services	Ongoing
2.7	Consenting for works to Ordinary Watercourses	Undertake consenting activities for Ordinary watercourses.	Cambridgeshire County Council Internal Drainage Boards	Processing applications made in Cambridgeshire outside of Internal Drainage Boards catchments Processing applications made for works in Internal Drainage Board catchments.
2.8	Surface water flood alleviation schemes	Produce detailed 'Project Appraisal Reports' to make applications for grant funding.	Cambridgeshire County Council with support from the relevant District or City Council	Cambridge (Cherry Hinton): Progressing Cambridge (Kings Hedges and Arbury): Progressing St Neots: To be commenced Ely: To be commenced March: To be commenced Histon and Impington: To be commenced
2.9	Main River flooding	Development and implementation of the Flood Risk Management Plan (incorporating the river Great Ouse and River Nene).	Environment Agency	Implementing the actions arising and improving flood resilience of watercourses through engineering works.
2.10	Consenting for main rivers	Decision making responsibility for granting consents for works on main rivers.	Environment Agency	Environment Agency is processing consent applications.

2.11	Private Sewers	Responsible for the adoption of private sewers	Anglian Water Services Ltd.	Completed
2.12	Awarded watercourses	Under the Enclosures Act District Council have a responsibility to maintain 'awarded' watercourses' that are not the responsibility of riparian owners.	District Councils and IDB	Ongoing
2.13	Highways flooding	Duty to regularly inspect and maintain highways structures and powers to deliver works to protect the highway from flooding.	Cambridgeshire County Council Highways Authority.	Highways assets inspected on a two yearly cycle or as required. Additional inspections carried out if a fault has been reported or if the asset is located in an area of flood risk.
2.14	Internal drainage board watercourses.	Improving flood resilience of watercourses through engineering works.	Internal Drainage Boards	Ongoing
2.15	Carrying out flood risk management work	Carrying out day to day appropriate management of watercourses and undertaking or coordinating capital works as required to protect people, property or utilities within the return period of a defence, or an Internal Drainage Board plan or policy.	Internal Drainage Boards	Ongoing
2.16	Enforcement	Using available statutory powers, or bylaws (where available or appropriate), to require those responsible to maintain the flow of water in watercourses and to	Cambridgeshire County Council (including Highways Authority), Environment Agency,	Ongoing

		modify/remove inappropriate structures within or around the watercourses (including main rivers, ordinary watercourses and awarded watercourses)	Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council and Internal Drainage Boards in Cambridgeshire.	
2.17	Mitigating environmental impacts of flood risk management activities	Responsibility to ensure that the environmental impacts of all flood risk management activities are properly considered at all stages and appropriate plans put in place to mitigate the impacts.	Environment Agency Cambridgeshire County Council including Highways Authority, South Cambridgeshire District Council, Huntingdonshire District Council, East Cambridgeshire District Council, Fenland District Council, Cambridge City Council and Internal Drainage Boards in Cambridgeshire.	Ongoing

Table 4 OBJECTIVE 3: HELPING CAMBRIDGESHIRE'S CITIZENS TO MANAGE THEIR OWN RISK

REF	Title	Description	Key accountability	Action and Status
3.1	Stakeholder and community engagement	Ensure that Cambridgeshire's citizens are engaged in flood risk management activities in the county.	Cambridgeshire County Council	Update District Councillors on flood risk management activities: Ongoing Regularly update Councillors through 'Member briefings' and progress reporting at council meetings: Ongoing Ensure that the community had an opportunity to feed into the development of the 'Cambridgeshire Strategic Surface Water Management Plan': Completed The Chair of the Economy and Environment Committee is the chair for the CFRMP: Ongoing. Working with local community groups to raise awareness of risk of flooding and helping them to contribute to managing those risks: Ongoing Attend Parish Council to update parishioners on flood risk management work: Ongoing

3.2	Flood incident reporting	Enable citizens to report flood events.	Cambridgeshire County Council.	Installed an online facility on the County Council web pages to enable citizens to upload information on flood events online: Completed
3.3	Local flood forums	Support local flood forums	Cambridgeshire County Council and Huntingdonshire District Council.	Ongoing
3.4	Riparian owner responsibilities	Provide information to those living near watercourses that have a responsibility for ongoing maintenance.	Cambridgeshire County Council	Produced a 'Riparian owner' factsheet that details the responsibilities for riparian owners: Completed
3.5	Town and Parish Councils	Provide information to Town and Parish Councils on how they can contribute to local flood risk management schemes.	Cambridgeshire County Council	Information sent to all Town and Parish Councils in Cambridgeshire: Ongoing
3.6	Citizen protection in flood risk events	Provide information about how citizens can minimise flood risk and protect themselves during flooding	Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council	Information provided via the internet, the publications and other communication channels: Ongoing

3.7	Flood warnings	Raising public awareness and encouraging sign up to Floodline Warnings Direct.	Environment Agency	Ongoing
3.8	Property level flood prevention	Advising and Implementing property level flood prevention schemes	Environment Agency	Scheme implemented in Gough Way and Barton Road in Cambridge, Girton and Oakington.
3.9	Shared flood risk management solutions	Giving local communities a greater stake in project design and delivery at an early stage of flood risk management schemes.	Cambridgeshire County Council, Environment Agency	Ensuring the local communities are fully engaged in the design of proposed solutions to reduce flood risk e.g. Godmanchester Flood Alleviation scheme, Cherry Hinton Surface Water Management Plan, and Kings Hedges Surface Water Management Plan: Ongoing

3.10	Support and advice	Offering advice to the public on responsibility for flooding and possible solutions	Cambridgeshire County Council, Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council and Internal Drainage Boards in Cambridgeshire.	Ongoing advice is offered on Council web pages and by email and telephone as and when required: Ongoing

TABLE 5 OBJECTIVE 4: ENSURING APPROPRIATE DEVELOPMENT IN CAMBRIDGESHIRE

REF	Title	Description	Key accountability	Action and Status
4.1	Evidence base for flood risk management.	Use data from detailed Surface Water Management Plans to inform planning decisions.	Cambridgeshire County Council, Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council and Internal Drainage Boards in Cambridgeshire.	Cambridgeshire County Council in partnership with the Environment Agency and District Council Local Planning teams has developed a planning guidance document that details how surface water information can be used in planning decisions: Ongoing
4.2	Appropriate development	To contribute towards the achievement of sustainable development in the exercise of flood risk management functions, and reduce flood risk in ways which promote green infrastructure, improve biodiversity and conserve important wildlife sites and cultural heritage.	Cambridgeshire County Council (including Highways Authority), Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District	Local Planning Authorities encourage appropriate development that does not increase flood risk, promotes sustainable drainage, and ensure that an application will not cause increase flood risk elsewhere; Ongoing Cambridgeshire County Council is producing a Flood

			Council, Huntingdonshire District Council, South Cambridgeshire District Council, Anglian Water Services and Internal Drainage Boards in Cambridgeshire.	and Water Supplementary Planning Document in conjunction with Local Planning Authorities and risk management authorities to provide greater policy guidance when considering flood and water matters as part of proposed new development.: Completed by Summer 2016 Internal Drainage Boards in Cambridgeshire have produce 'Biodiversity Action Plans' for their catchments: Completed
4.3	Development and flood risk management	Planning development site allocations in lower flood risk areas. Using flood risk assessments and policies to steer growth to suitable areas. Ensuring that the development does not increase the risk of flooding elsewhere when determining planning applications. Support the revisions of Strategic Flood Risk Assessments to ensure that the evidence in their local plans is up to date.	Environment Agency, Cambridgeshire County Council, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, , Huntingdonshire District Council, South Cambridgeshire District Council.	Planning decisions in Cambridgeshire are made to adhere to the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance to NPPF which replaced Planning Policy Statement (PPS) 25: Ongoing

4.4	Development in the Fens	Contribute towards the protection and enhancement of the environmental heritage and the unique landscape character of the Fens. Work in partnership with key stakeholders to help grow the economy in the Fens, through the early consideration of flood and water management needs.	East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, and Internal Drainage Boards in Cambridgeshire.	Partnership working to ensure appropriate development in the Fens: Ongoing
4.5	Local Plans	Need to demonstrate that Local Plans take account of the relevant information from the Local Flood Risk Management Strategy. Working together to share all relevant information and data in the development of new Local Plans.	East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council, Cambridge City Council	Ensure that District Councils are aware of the objectives of the Local Flood Risk Management Strategy that relate to planning and act consistently with those objections and actions: Completed Cambridge City Council and South Cambridgeshire District Council are working on a joint Local Plan for 2018/19.
4.6	Funding for flood risk management	Ensure that developments take account of flood risk and developers make necessary contributions to the cost of flood defence through Section 106 and Community Infrastructure Levy. Contributions payable to Internal	Cambridgeshire County Council. East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South	Flood risk management authorities continue to work closely with planning authorities to effectively link flood risk management to planning: Ongoing

		Drainage Boards by developers, in respect of increased rates of flows or volumes coming from a development.	Cambridgeshire District Council, Cambridge City Council	
4.7	Joint Local Plan for Cambridge and South Cambridgeshire	Ensure that partners have up to date evidence on flood risk and the water environment to develop appropriate planning policy.	South Cambridgeshire District Council, and Cambridge City Council.	2018/19

Table 6 OBJECTIVE 5: IMPROVING FLOOD PREDICTION, WARNING AND POST FLOOD RECOVERY

REF	Title	Description	Key accountability	Action and Status
5.1	Flood warning	Promote the flood warning service including sign up to the Floodline Warnings Direct, understanding the different flood warning codes, the actions residents should take to protect themselves from flooding and encourage residents and communities to produce personal and community flood plans.	Environment Agency	Communicate flood warning codes and scheme: Ongoing.
5.2	Helping citizens to protect their homes and valuables.	Issue guidance to help local communities to protect their home and valuables and understand what to do before a flood, during flooding and afterwards	Cambridgeshire County Council, Environment Agency, Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, South Cambridgeshire District Council and Internal Drainage Boards in Cambridgeshire.	Make information available to the public via web pages, and other media: Ongoing The Environment Agency has issued a pamphlet which provides advice on how to make homes more resilient: Completed Promote National Flood Forum which provides information and advice on what products are available to help protect homes or business against flooding: Ongoing.

5.3	Emergency preparedness	Developing a multi-agency preparedness plan to respond to flood events under the Cambridgeshire and Peterborough Local Resilience Forum (CPLRF)	Cambridgeshire and Peterborough Local Resilience Forum	Detailed within the Multi agency flood plan. Complies with the Civil Contingency Act: Completed
5.4	Planning for a flood emergency	Identifying areas at flood risks through the development of Surface Water Management Plans.	Cambridgeshire County Council	Communicate the finds of each detailed surface water management plans to the CPLRF: Ongoing
5.5	Recovering from a flood event	Developing recovery contingency plans in case the local area is impacted by flooding (including business and economic recovery).	Cambridgeshire and Peterborough Local Resilience Forum	Detailed within the Multi agency flood plan. Complies with the Civil Contingency Act: Ongoing

9 APPENDICES

Appendix 1 - Detailed list of legislation relevant to the development of the strategy

Legislation and document relevant to the development of local flood risk management strategy include:

- **Flood Risk Regulations 2009**
- **The Flood & Water Management Act (2010)**
- The Town and Country Planning (Development Management Procedure) (England) Order 2015
- **Catchment Flood Management Plans**
- **National Planning Policy Framework**
- **Shoreline Management Plans**
- **Strategic Flood Risk Assessments**
- **The Climate Change Act (2008)**
- **Conservation of Habitats and Species Regulations (2010**
- **Civil Contingencies Act (2004)**
- **Strategic Environmental Assessment Directive (2001)**
- **Land Drainage Act (1991)**
- **Water Framework Directive (WFD)**
- **Making Space for Water(MSfW) (published on 29th July 2004)**
- **The Natural Environment and Rural Communities Act 2006**
- **The Reservoirs Act 1975**
- **The Water Industry Act 1991**
- **The Water Resources Act 1991**
- **The Building Act 1984**
- **The Health Act 2009 (so far as relevant to water)**
- **The Highways Act 1980 (so far as relevant to water)**
- **The Environment Act 1995 (so far as relevant to water).**

Appendix 2 - A complete list of all internal drainage boards partly or wholly in Cambridgeshire

Internal Drainage Boards	Applicable to the Relevant District Council Area
North Level Drainage Board	• Fenland District Council
Ramsey IDB	• Huntingdonshire District Council
Whittlesey Consortium of IDBs • Drysides • Feldale IDB • Holmewood and District IDB • Woodwalton Drainage Commissioners • Whittlesey IDB	• Huntingdonshire District Council • Fenland District Council
Bedford Group of IDBs (In Cambridgeshire) • Alconbury and Ellington IDB • Bedfordshire and River Ivel IDB	• Huntingdonshire District Council
IDB that have been agreed to be represented by Ely Group • Burnt Fen IDB • Cawdle Fen • Littleport and Downham • Middle Fen and Mere • Old West • Padnal and Waterden • Swaffham • Waterbeach Level	• East Cambridgeshire District Council • South Cambridgeshire District Council
IDBs presently managed by Middle Level Commissioners • Benwick IDB • Bluntisham IDB • Conington and Holme IDB • Curf and Wimblington Combined IDB • Euximoor IDB • Haddenham Level IDB • Hundred Foot Washes IDB • Hundred of Wisbech IDB • Manea and Welney District Drainage Commissioners • March and Whittlesey IDB • March East IDB • March and Whittlesey IDB • March Fifth District Drainage Commissioners • March Sixth District Drainage	• Fenland District Council • East Cambridgeshire District Council • South Cambridgeshire District Council • Huntingdonshire District Council

Commissioners • March Third District Drainage Commissioners • Middle Level Commissioners • Needham and Laddus IDB • Nightlayers IDB • Over and Willingham • Ramsey First (Hollow) IDB • Ramsey Fourth (Middlemoor) IDB • Ramsey Upwood& Great Raveley IDB • Ransonmoor District Drainage Commissioners • Sawtry IDB • Sutton and Mepal IDB • Swavesey IDB • Upwell IDB • Waldersey IDB • Warboys Somersham Warboys Somersham and Pidley IDB • White Fen District Drainage Commissioners	

Appendix 3 – Surface Water wet spots in Cambridgeshire - Multi Criteria Analysis (MCA)

MCA results for Cambridgeshire based on flood risk to properties only with no historic weighting.

Wetspot	District	Total Score	County Rank
Cherry Hinton	Cambridge City	29944.55	1
King's Hedges Arbury	Cambridge City	11237.45	2
March	Fenland	1954.93	3
St Ives	Huntingdonshire	1646.48	4
North Chesterton	Cambridge City	1622.94	5
St Neots	Huntingdonshire	1415.96	6
Sawtry	Huntingdonshire	1213.03	7
Coldham's Common	Cambridge City	1128.51	8
Huntingdon	Huntingdonshire	920.47	9
Cherry Hinton Village	Cambridge City	752.44	10
Ely	East Cambridgeshire	751.21	11
City Centre	Cambridge City	750.06	12
Offord Cluny	Huntingdonshire	721.98	13
Buckden	Huntingdonshire	507.59	14
Papworth Everard	South Cambridgeshire	472.80	15
Linton	South Cambridgeshire	456.22	16
Bar Hill	South Cambridgeshire	406.59	17
Ramsey	Huntingdonshire	405.64	18
Stilton	Huntingdonshire	391.44	19
Castle School	Cambridge City	374.8	20
Histon/Impington	South Cambridgeshire	294.73	21
Bin Brook	Cambridge City	288.81	22
Dullingham	East Cambridgeshire	274.82	23
Sawston	South Cambridgeshire	249.63	24
Alconbury Weston	Huntingdonshire	238.57	25
Kimbolton	Huntingdonshire	231.34	26
Elsworth	South Cambridgeshire	226.26	27
Oakington	South Cambridgeshire	206.58	28
Fen Drayton	South Cambridgeshire	200.22	29
Glatton	Huntingdonshire	172.02	30
Littleport	East Cambridgeshire	156.90	31
Chatteris	Fenland	154.13	32
Great Paxton	Huntingdonshire	153.32	33
Alconbury	Huntingdonshire	141.48	34
Isleham	East Cambridgeshire	125.06	35
Haslingfield	South Cambridgeshire	122.40	36
Bourn	South Cambridgeshire	122.10	37
Broughton	Huntingdonshire	120.69	38

Wisbech	Fenland	118.32	39
Sutton	East Cambridgeshire	117.96	40
Gamlingay	South Cambridgeshire	115.50	41
Southoe	Huntingdonshire	105.20	42
Vicar's Brook Hobson	Cambridge City	100.76	43
Comberton	South Cambridgeshire	99.67	44
Coton	South Cambridgeshire	98.34	45
Soham	East Cambridgeshire	97.88	46
Fulbourn	South Cambridgeshire	95.75	47
Cambourne	South Cambridgeshire	95.50	48
Melbourn	South Cambridgeshire	89.41	49
Old Hurst	Huntingdonshire	85.60	50
Girton	South Cambridgeshire	84.90	51
Papworth St Agnes	South Cambridgeshire	80.48	52
Willingham	South Cambridgeshire	79.71	53
Doddington	Fenland	78.13	54
Somersham	Huntingdonshire	75.42	55
Witchford	East Cambridgeshire	75.17	56
Bassingbourn	South Cambridgeshire	74.72	57
Great Shelford	South Cambridgeshire	73.07	58
Little Downham	East Cambridgeshire	58.93	59
Wyton Airfield	Huntingdonshire	57.08	60
Whittlesey	Fenland	55.30	61
Pampisford	South Cambridgeshire	54.23	62
Little Paxton	Huntingdonshire	52.95	63
Offord D'Arcy	Huntingdonshire	49.52	64
Brampton	Huntingdonshire	48.87	65
Burwell	East Cambridgeshire	48.82	66
Bury	Huntingdonshire	48.55	67
Duxford	South Cambridgeshire	48.07	68
Swavesey	South Cambridgeshire	47.95	69
Harston	South Cambridgeshire	47.49	70
Haddenham	East Cambridgeshire	46.97	71
Longstanton	South Cambridgeshire	46.54	72
Orwell	South Cambridgeshire	44.74	73
Cottenham	South Cambridgeshire	43.35	74
Coates	Fenland	42.08	75
Wimblington	Fenland	40.81	76
Yaxley	Huntingdonshire	39.78	77
Warboys	Huntingdonshire	38.77	78
Stapleford	South Cambridgeshire	37.76	79
Caxton	South Cambridgeshire	37.43	80
Aldreth	East Cambridgeshire	35.92	81
Mepal	East Cambridgeshire	35.27	82
Earith	Huntingdonshire	34.21	83
Bluntisham	Huntingdonshire	33.80	84

Ashley	East Cambridgeshire	32.31	85
Easton	Huntingdonshire	32.13	86
Yelling	Huntingdonshire	32.02	87
Woodwalton	Huntingdonshire	29.36	88
Stretham	East Cambridgeshire	29.20	89
South Chesterton	Cambridge City	29.09	90
Little Gransden	South Cambridgeshire	29	91
Cheveley	East Cambridgeshire	26.22	92
Elton	Huntingdonshire	25.18	93
Needingworth	Huntingdonshire	24.47	94
Longstowe	South Cambridgeshire	24.04	95
Godmanchester	Huntingdonshire	23.83	96
Fowlmere	South Cambridgeshire	23.14	97
Shudy Camps	South Cambridgeshire	22.15	98
Guilden Morden	South Cambridgeshire	21.52	99
Barton	South Cambridgeshire	19.87	100
Upwood	Huntingdonshire	19.63	101
Murrow	Fenland	17.52	102
Horseheath	South Cambridgeshire	17.40	103
Bottisham	East Cambridgeshire	17.15	104
Ickleton	South Cambridgeshire	16.69	105
Weston Green	South Cambridgeshire	16.58	106
Witcham	East Cambridgeshire	16.31	107
Over	South Cambridgeshire	15.90	108
Waterbeach	South Cambridgeshire	15.64	109
Great Abington	South Cambridgeshire	14.26	110
Milton	South Cambridgeshire	14.15	111
Colne	Huntingdonshire	13.96	112
Little Stukeley	Huntingdonshire	13.80	113
Hilton	Huntingdonshire	12.83	114
Hemingford Grey	Huntingdonshire	12.64	115
Bassingbourn Barrack	South Cambridgeshire	12.30	116
Hale Fields	Huntingdonshire	12	117
Caldecote	South Cambridgeshire	10.82	118
Little Ditton	East Cambridgeshire	10.71	119
Teversham	South Cambridgeshire	10.41	120
Houghton & Wyton	Huntingdonshire	9.77	121
Babraham	South Cambridgeshire	9.68	122
Stone Hill	South Cambridgeshire	9.66	123
Nosterfield End	South Cambridgeshire	9.06	124
Elm	Fenland	9.04	125
Fenstanton	Huntingdonshire	9.03	126
Litlington	South Cambridgeshire	8.67	127
Kirtling	East Cambridgeshire	8.32	128
Old Weston	Huntingdonshire	8.14	129
Molesworth	Huntingdonshire	8.13	130

Great Gidding	Huntingdonshire	7.85	131
Toft	South Cambridgeshire	7.35	132
Meldreth	South Cambridgeshire	6.61	133
Great Gransden	Huntingdonshire	6.48	134
Foxton	South Cambridgeshire	6	135
Manea	Fenland	5.78	136
Shepreth	South Cambridgeshire	5.66	137
Ramsey St Mary's	Huntingdonshire	5.59	138
Hardwick	South Cambridgeshire	5.59	139
Brinkley	East Cambridgeshire	5.57	140
Abbotsley	Huntingdonshire	5.50	141
Stuntney	East Cambridgeshire	5.45	142
Little Shelford	South Cambridgeshire	5.39	143
Barrington	South Cambridgeshire	5.36	144
Whittlesford	South Cambridgeshire	5.30	145
Tilbrook	Huntingdonshire	5.27	146
Hamerton	Huntingdonshire	5.23	147
Steeple Morden	South Cambridgeshire	5.14	148
Bartlow	South Cambridgeshire	5	149
Great Wilbraham	South Cambridgeshire	5	150
Stonely	Huntingdonshire	4.98	151
Abbots Ripton	Huntingdonshire	4.94	152
Folksworth	Huntingdonshire	4.94	153
Grantchester	South Cambridgeshire	4.72	154
Madingley	South Cambridgeshire	4.66	155
British Racing Schoo	East Cambridgeshire	4.54	156
Fordham	East Cambridgeshire	3.85	157
Saxon Street	East Cambridgeshire	3.68	158
Lode	East Cambridgeshire	3.64	159
Swaffham Bulbeck	East Cambridgeshire	3.55	160
Keyston	Huntingdonshire	3.52	161
Great Stukeley	Huntingdonshire	3.45	162
Farcet	Huntingdonshire	3.03	163
Parson Drove	Fenland	2.96	164
Christchurch	Fenland	2.89	165
Gorefield	Fenland	2.88	166
Stetchworth	East Cambridgeshire	2.86	167
Wilburton	East Cambridgeshire	2.84	168
Graveley	South Cambridgeshire	2.81	169
Eastrea	Fenland	2.81	170
Pidley	Huntingdonshire	2.76	171
Caldecote & Denton	Huntingdonshire	2.75	172
Landbeach	South Cambridgeshire	2.74	173
Eversden	South Cambridgeshire	2.71	174
Eaton Ford	Huntingdonshire	2.70	175
Balsham	South Cambridgeshire	2.69	176

Worsted Lodge	South Cambridgeshire	2.69	177
Tadlow	South Cambridgeshire	2.68	178
Great Chishill	South Cambridgeshire	2.67	179
Weston Colville	South Cambridgeshire	2.64	180
Duxford Airfield	South Cambridgeshire	2.61	181
Thriplow	South Cambridgeshire	2.61	182
Newton	South Cambridgeshire	2.54	183
Rampton	South Cambridgeshire	2.48	184
Trumpington	Cambridge City	2.47	185
Boxworth	South Cambridgeshire	2.46	186
Wansford	Huntingdonshire	2.37	187
Chettisham	East Cambridgeshire	1	188
Conington	South Cambridgeshire	1	189
Harlton	South Cambridgeshire	1	190
Horningsea	South Cambridgeshire	1	191
Six Mile Bottom	East Cambridgeshire	1	192
Abington Pigotts	South Cambridgeshire	0	193
Alconbury Research	Huntingdonshire	0	194
Benwick	Fenland	0	195
Bicton	Huntingdonshire	0	196
Black Horse Drove	East Cambridgeshire	0	197
Burrough Green	East Cambridgeshire	0	198
Bythorn	Huntingdonshire	0	199
Camps End	South Cambridgeshire	0	200
Carlton	South Cambridgeshire	0	201
Castle Camps	South Cambridgeshire	0	202
Catworth	Huntingdonshire	0	203
Chippenham	East Cambridgeshire	0	204
Chippenham Junction	East Cambridgeshire	0	205
Coveney	East Cambridgeshire	0	206
Covington	Huntingdonshire	0	207
Croxton	South Cambridgeshire	0	208
Croydon	South Cambridgeshire	0	209
Diddington	Huntingdonshire	0	210
Dry Drayton	South Cambridgeshire	0	211
East Fen	East Cambridgeshire	0	212
Ellington	Huntingdonshire	0	213
Eltisley	South Cambridgeshire	0	214
Fen Ditton	South Cambridgeshire	0	215
Fenton	Huntingdonshire	0	216
Friday Bridge	Fenland	0	217
Grafham	Huntingdonshire	0	218
Great Raveley	Huntingdonshire	0	219
Great Staughton	Huntingdonshire	0	220
Guyhirn	Fenland	0	221
Haddon	Huntingdonshire	0	222

Hail Weston	Huntingdonshire	0	223
Hauxton	South Cambridgeshire	0	224
Hemingford Abbots	Huntingdonshire	0	225
Heydon	South Cambridgeshire	0	226
Hildersham	South Cambridgeshire	0	227
Hinchingbrooke	Huntingdonshire	0	228
Hinxton	South Cambridgeshire	0	229
Holme	Huntingdonshire	0	230
Holywell	Huntingdonshire	0	231
Houghton Hill	Huntingdonshire	0	232
Isleham Field	East Cambridgeshire	0	233
Kennett	East Cambridgeshire	0	234
Kings Ripton	Huntingdonshire	0	235
Kingston	South Cambridgeshire	0	236
Leighton Bromswold	Huntingdonshire	0	237
Leverington	Fenland	0	238
Little & Great Green	South Cambridgeshire	0	239
Little Abington	South Cambridgeshire	0	240
Little Raveley	Huntingdonshire	0	241
Little Thetford	East Cambridgeshire	0	242
Little Wilbraham	South Cambridgeshire	0	243
Long Meadow	East Cambridgeshire	0	244
Monks Wood	Huntingdonshire	0	245
Outnewlands	Fenland	0	246
Perry	Huntingdonshire	0	247
Prickwillow	East Cambridgeshire	0	248
Pymoor	East Cambridgeshire	0	249
Queen Holme	South Cambridgeshire	0	250
Ramsey Forty Foot	Huntingdonshire	0	251
Ramsey Heights	Huntingdonshire	0	252
Ramsey Mereside	Huntingdonshire	0	253
Somersham Fore Fen	Huntingdonshire	0	254
Spaldwick	Huntingdonshire	0	255
Stibbington	Huntingdonshire	0	256
Stow Cum Quy	South Cambridgeshire	0	257
Swaffham Prior	East Cambridgeshire	0	258
The Links	East Cambridgeshire	0	259
Toseland	Huntingdonshire	0	260
Turves	Fenland	0	261
Tydd St Giles	Fenland	0	262
Wardy Hill	East Cambridgeshire	0	263
Waresley	Huntingdonshire	0	264
Water Newton	Huntingdonshire	0	265
Welches Dam	Fenland	0	266
Wendy	South Cambridgeshire	0	267
Wentworth	East Cambridgeshire	0	268

West Fen	Fenland	0	269
West Wickham	South Cambridgeshire	0	270
West Wratting	South Cambridgeshire	0	271
Westwick	South Cambridgeshire	0	272
Whaddon	South Cambridgeshire	0	273
Wicken	East Cambridgeshire	0	274
Wimpole	South Cambridgeshire	0	275
Winwick	Huntingdonshire	0	276
Wisbech St Mary	Fenland	0	277
Wistow	Huntingdonshire	0	278
Woodhurst	Huntingdonshire	0	279

Appendix 4 – Glossary and Abbreviations

Awarded Watercourse	This term is used to describe the range of ordinary watercourses managed some of the lower tier authorities and IDBs under the Enclosures Act.
Breach	Flooding caused by the constructional failure of a flood defence or other structure that is acting as a flood defence.
Catchment Flood Management Plans (CFMPs)	Catchment Flood Management Plans have been produced by the Environment Agency and are high-level planning tools that set out objectives for flood risk management for each river catchment and estuary. They also identify flood risk management policies that are economically practical, have a potential life of 50 to 100 years, and will aid partnership working to put them in place. CFMPs consider inland risk from rivers, surface water, groundwater and tidal flooding but do not consider sewer flooding. The CFMPs that cover Cambridgeshire are: Great Ouse CFMP and River Nene CFMP
Civil Contingencies Act (2004)	This is legislation that aims to deliver a single framework for civil protection in the UK and sets out the actions that need to be taken in the event of a flood. The CCA is separated into two substantive parts: local arrangements for civil protection (Part 1) and emergency powers (Part 2).
Climate Change	A long-term change in the statistical distribution of weather patterns over periods of time that range from decades to millions of years. It may also be a change in the average weather conditions or a change in the distribution of weather events. Climate change may be limited to a specific region, or may occur across the whole planet.
Conservation of Habitats and Species Regulations (2010	An Act which transposed the Habitats Directive into UK law. The regulations aim to help maintain and enhance biodiversity throughout the EU, by conserving natural habitats, flora and fauna. The

	main way it does this is by establishing a coherent network of protected areas and strict protection measures for particularly rare and threatened species.
Critical Infrastructure	A term used to describe the assets that are essential for the functioning of a society and economy. Most commonly associated with the term are facilities for: electricity generation, transmission and distribution; gas production, transport and distribution; oil and oil products production, transport and distribution; telecommunication; water supply (drinking water, waste water/sewage, stemming of surface water (e.g. dikes and sluices)); agriculture, food production and distribution; heating (e.g. natural gas, fuel oil, district heating); public health (hospitals, ambulances); transportation systems (fuel supply, railway network, airports, harbours, inland shipping); financial services (banking, clearing); and security services (police, military).
Culvert	A closed conduit used for the conveyance of water under a roadway, railroad, canal, or other impediment.
Flood Defence	A structure that alters the natural flow of water or flood water for the purposes of flood defence, thereby reducing the risk of flooding. A defence may be 'formal' (a structure built and maintained specifically for flood defence purposes) or 'informal' (a structure that provides a flood defence function but has not been built and/or maintained for this purpose).
Environment Agency	An Executive non-departmental public body responsible to the Secretary of State for Environment, Food and Rural Affairs and an Assembly Sponsored Public Body responsible to the National Assembly for Wales. The Environment Agency's principal aims are to protect and improve the environment, and to promote sustainable development.
Flood Map	A multi-layered map which provides information on flooding from rivers and the sea for England and Wales. The Flood Map also has information on flood

	defences and the areas benefiting from those flood defences.
Flood Map for Surface Water	The most recently produced data set developed by the Environment Agency. The Flood Map for Surface Water better represents the mechanisms that cause surface water flooding.
Flood And Water Management Act (FWMA) 2010	The FWMA 2010 combines the recommendations of the Pitt report and previous policies, to improve the management of water resources and create a more comprehensive and risk based regime for managing the risk of flooding from all sources. The Act reinforces the need for an integrated approach to managing flood risk and places a number of roles and responsibilities on local authorities, such as the County Council as Lead Local Flood Authority.
Flood Hazard Map	A map that defines flood risk areas and shows: the likely extent (including water level or depth) of possible floods; the likely direction and speed of flow of possible floods; and whether the probability of each possible flood occurring is low, medium or high (in the opinion of the person preparing the map).
Flood Resilience	Actions taken to reduce the impacts of internal flooding of a property
Flood Resistance	Actions taken to prevent to ingress of flood water to a property. Flood Resistance measures may include flood barriers or flood gates.
Flood Risk	Flood risk is a combination of two components: the chance (or probability) of a particular flood event occurring and the impact (or consequence) that the event would cause if it occured
Flood Risk Map	A map showing: the number of people living in the area who are likely to be affected in the event of flooding; the type of economic activity likely to be affected in the event of flooding; any industrial activities in the area that may increase the risk of pollution in the event of flooding; any relevant

protected areas that may be affected in the event of flooding; any areas of water subject to specified measures or protection for the purpose of maintaining the water quality that may be affected in the event of flooding; and any other effect on human health, economic activity or the environment (including cultural heritage).

Flood Risk Management

A process to reduce the probability of occurrence through the management of land, river systems and flood defences and reduce the impact through influencing development on flood risk areas, flood warning and emergency response.

Flood Risk Regulations 2009

The Flood Risk Regulations 2009 came in to force on the 10 December 2009. They transpose the EU Floods Directive into UK law. The key provisions of the regulations for local authorities are:

- to give responsibility to lead local flood authorities (unitary and county councils) to do the same for all other forms of flooding (excluding sewer flooding which is not caused by precipitation);to require preliminary flood risk assessments (Preliminary Flood Risk Assessments) by the Environment Agency and lead local flood authorities to be prepared by 22 December 2011. These should, on the basis of Environment Agency and lead local flood authority Preliminary Flood Risk Assessments, identify areas of significant flood risk;
- the requirement of flood hazard and risk maps to be prepared by 22 December 2013 for identified
- areas of significant flood risk; and
- the requirement of flood risk management plans to be prepared by 22 December 2015 for the same areas.

Flood Zones

Nationally consistent delineation of ‘high’ and ‘medium’ flood risk, published on a quarterly basis by the Environment Agency

Flood Zone 1 (Low Probability)	Defined as an area only at risk of flooding from flood events with an Annual Exceedance Probability (AEP) of less than 0.1% (1 in 1000). The probability of flooding occurring in this area in any one year is less than 0.1%.
Flood Zone 2 (Medium Probability)	Defined as an area at risk of flooding from flood events with an Annual Exceedance Probability (AEP) of between 1% (1 in 100) and 0.1% (1 in 1000). The probability of flooding occurring in this area in any one year is between 1% and 0.1%.
Flood Zone 3a (High probability)	Defined as an area at risk of flooding from flood events with an Annual Exceedance Probability (AEP) of greater than 1% (1 in 100r). The probability of flooding occurring in this area in any one year is greater than 1%.
Flood Zone 3b (Functional Flood plain)	Defined as land where water has to flow or be stored in times of flood. Usually defined as areas at risk of flooding from flood events with an Annual Exceedance Probability (AEP) of greater than 5% (1 in 20) design event. The probability of flooding occurring in this area in any one year is greater than 5%.
Fluvial	The processes associated with rivers and streams and the deposits and landforms created by them.
Groundwater	Water located beneath the ground surface, either in soil pore spaces or fractures in rock
Gully	An artificial channel serving as a gutter or drain.
Land Drainage Act 1991	The Land Drainage Act was enacted in December 1991. It consolidates existing water legislation and outlined the duties and powers to manage land drainage for a number of bodies including internal drainage boards and local authorities. Some sections of the Land Drainage Act 1991 have been amended subsequently. It outlines the duties and powers to manage land drainage for a number of bodies including the Environment Agency, internal drainage boards, local authorities, navigation authorities and riparian owners.

Main River	All watercourses shown on the statutory main river maps held by the Environment Agency and the Department for Environment, Food and Rural Affairs. The Environment Agency has permissive power to carry out maintenance and improvement works on these rivers.
Making Space for Water (MSfW) published on 29 July 2004	was the cross-Government programme taking forward the developing strategy for flood and coastal erosion risk management in England. It is no longer current but the work has informed the Government policy direction and the Flood and Water Management Act 2010 with regards to managing all risks and providing innovative ways of doing this. The strategy proposed that the Government will, over the 20-year lifetime of the strategy, implement a more holistic approach to managing flood and coastal erosion risks in England.
Medium Term Plan	The Medium Term Plan shows flood and coastal management schemes which the Environment Agency Board has allocated Defra grant in aid fund which have been approved by the Regional Flood and Coastal Committees.
National Flood and Coastal Erosion Risk Management Strategy	The Environment Agency's National Strategy was published in May 2011 and provides an overview of how flood risk and the risk of coastal erosion will be managed across England. The aims and objectives of the National Strategy have been translated onto a local scale through this Local Strategy for the County Council.
National Planning Policy Framework (NPPF)	This is a new document developed by the Department for Communities and Local Government (CLG). It is designed to streamline planning policy by substantially reducing the amount of planning guidance and bringing it all together in one coherent document.
Ordinary Watercourse	Any section of watercourse not designated as a main river.
Permissive Powers	The Land Drainage Act gives the City and District Council powers to undertake flood alleviation works on ordinary watercourses. These are permissive powers and the City and District Council is able to decide whether or not to use them in relation to a particular problem. Normally the use of these

	powers would only be considered where the benefits of a scheme outweigh its capital costs.
Pitt Review	Sir Michael Pitt carried out an independent review of the 2007 floods and made a number of recommendations for future flood risk management. In particular, he recommended that local authorities should play a more significant role in tackling local problems of flooding and coordinating all relevant agencies. Many of the recommendations of The Pitt Review have been enacted through the Flood and Water Management Act.
Planning Policy Statement (PPS) 25	Sets out the Government's spatial planning policy relating to development and flood risk. Its aims are to ensure that flood risk is taken into account at all stages in the planning process, to avoid inappropriate development in areas at risk of flooding and to direct development away from areas of highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall. This practice guide provides guidelines on how to implement development and flood risk policies by the land use planning system. The guide also includes working examples through case studies. This Practice Guide (at Appendix B) contains a checklist to help developers and applicants to prepare an appropriate, site-specific flood risk assessment in accordance with the policy in PPS25, and the advice in the Practice Guide.
Pluvial	Direct runoff as a result of rainfall and the processes associated with it
Precipitation	Describes the processes involved in rain, sleet, hail, snow and other forms of water falling from the sky
Preliminary Flood Risk Assessment (PFRA)	The Preliminary Flood Risk Assessment is a process involving an assessment of past floods and the possible consequences of future floods, leading to the identification of Areas of significant risk. All LLFAs must prepare a PFRA report in relation to

	flooding in the LLFA's area. The LLFA is not required to include information about flooding from the sea, main rivers and reservoirs unless the authority thinks that it may affect flooding from another source. The floods to be included are those which had significant harmful consequences for human health, economic activity or the environment.
Regional Flood and Coastal Committees (RFCCs)	RFCCs were set up under the Floods and Water Management Act 2010. The committees have a chair appointed by the Minister, members from Lead Local Flood Authorities (allowing for local democratic input) and independent members recruited by the Environment Agency who have specialist skills or backgrounds. RFCCs play an important local role in guiding flood and coastal risk management activities within catchments and along the coast, advising on and approving programmes of work for their areas as well as raising local levies to fund local priority projects and works in partnership with others.
Reservoir	Artificial lake used to store water. Reservoirs may be created in river valleys by the construction of a dam or may be built by excavation in the ground or by conventional construction techniques such a brickwork or cast concrete. Reservoirs greater than 10,000m3 are governed by the Reservoirs Act 1975
Residual Risk	The risk which remains after all risk avoidance, reduction and mitigation measures have been implemented.

Return Period	The probability of a flood of a given magnitude occurring within any one year
Riparian Owner	All landowners whose property is adjoining to a body of water have the right to make reasonable use of it and the responsibility to suitably maintain it.
Risk Management Authority	Risk management authority means— (a) the Environment Agency, (b) a lead local flood authority, (c) a district council for an area for which there is no unitary authority, (d) an internal drainage board, (e) a water company, and (f) a highway authority. Risk Management authority must act in a manner which is consistent with the national strategy and guidance, and except in the of a water company, act in a manner which is consistent with the local strategies and guidance.
River Basin Management Plan (RBMPs)	River Basin Management Plans have been produced by the Environment Agency for the eleven river basin districts in England and Wales. They help to set out the actions required to achieve the objectives of the Water Framework Directive. RBMPs describe the main issues for each river basin district and state the environmental objectives for the basin, explain the objectives selected to achieve good ecological status and summarise the actions needed to deliver those objectives.
Sequential Test	Informed by a SFRA, a planning authority applies the Sequential Test to demonstrate that there are no reasonably available sites in areas with less risk of flooding that would be appropriate to the type of development or land use proposed
Sewer	A sewer is a pipe which carries and removes either rainwater (surface) or foul water (or a combination of both) from more than one property. A sewer can also be categorised as being a private of public

	sewer and can carry surface or foul water. A Private Sewer is solely the responsibility of the occupiers/owners of the properties that it serves. A Public Sewer is a sewer that has been adopted and maintained by a Sewerage Undertaker
Sewer Flooding	The consequence of sewer systems exceeding their capacity during a rainfall event
Strategic Environmental Assessment Directive 2001	(EC Directive 2001/42/EC Is legislation which aims to increase the consideration of environmental issues during decision making related to strategic documents such as plans, programmes or strategies. The Strategic Environmental Assessment identifies the significant environmental effects that are likely to result due to the implementation of a plan, programme or strategy.
Strategic Flood Risk Assessment (SFRA)	A SFRA is used as a tool by a planning authority to assess flood risk for spatial planning, producing development briefs, setting constraints, informing sustainability appraisals and identifying locations of emergency planning measures and requirements for flood risk assessments. The purpose of a SFRA is to assess and map all forms of flood risk from groundwater, surface water, impounded water bodies, sewer and river sources, taking into account future climate-change predictions. This provides planning authorities an evidence base for making decisions on future development primarily in flood risk areas.
SuDS	Sustainable Drainage Systems. SuDS are drainage systems which are designed to reduce the impact of urbanisation on the hydrology of a river system.
Surface Water Runoff	Rainwater (including snow and other precipitation) which: is on the surface of the ground (whether or not it is moving); and has not

	entered a watercourse, draining system or public sewer. Areas that suffer a depth of greater than 0.1m are considered to be at risk of surface water flooding. Flooding that is greater than 0.3m deep is classed as being at risk of deep surface water flooding
Surface Water Management Plans	Surface Water Management Plans are produced by local authorities The following benefits are achieved through undertaking a SWMP study: Increased understanding of the causes, probability and consequences of surface water flooding; Increased understanding of where surface water flooding will occur which can be used to inform spatial and emergency planning functions; A co-ordinated action plan, agreed by all partners and supported by an understanding of the costs and benefits, which partners will use to work together to identify measures to mitigate surface water flooding; Identifying opportunities where SuDS can play a more significant role in managing surface water flood risk; Increased awareness of the duties and responsibilities for managing flood risk of different partners and stakeholders; Improved public engagement and understanding of surface water flooding; Significant contribution made towards meeting the requirements of the Flood Risk Regulations (2009) and Flood and Water Management Act (2010).
Water Framework Directive (WFD)	WFD is the most substantial piece of EC water legislation to date and is designed to improve and integrate the way water bodies are managed throughout Europe. It came into force on 22 December 2000 and was transposed into UK law in 2003. Member States must aim to reach good chemical and ecological status in inland and coastal waters by 2015.

Appendix 5 – Who is responsible for what when it comes to flooding?

There is no single organisation responsible for all flooding across Cambridgeshire. Instead it's a group approach with different organisations managing different types of flooding.

The table below shows exactly who each organisation is across Cambridgeshire and what their responsibilities are, as well as useful contact details and when you may need to contact them. There are always exceptions to the general rule, so it's best to check with Cambridgeshire County Council if you are unsure.

The responsibility for flood risk management across the county rests with everyone. If you are a landowner of any kind; be it a homeowner, business owner, community, farmer, developer, authority, tenant or whoever you have a responsibility to prevent flooding from your land. This is called Riparian Responsibility. You are a riparian owner of any watercourse within or adjacent to the boundaries of your land. This could be an open watercourse (river or stream), a ditch or a culvert for example.

Riparian owners are responsible for maintaining and clearing debris (even if this is not from their land) from the watercourse or ditch as well as vegetation on the banks, in order to keep these clear and prevent flooding. As a riparian owner you could face legal action if lack of maintenance of your watercourse causes flooding. To learn more about your responsibilities as a riparian owner, read our Riparian Ownership factsheet - www.cambridgeshire.gov.uk/downloads/file/336/riparian_owner_factsheet

Roles and Responsibilities

Town and Parish Councils/Communities

Town and Parish Councils as well as Communities both play an important role in managing flood risk at the community level. They can help gather information on areas at risk of flooding by reporting any flood incidents. Communities and individuals at risk of flooding should prepare Community and Household Flood Plans. Residents can also get involved with the community and local councils by becoming a Flood Warden. In addition Communities and Parish or Town Councils can be crucial in raising additional funding for local flood defence measures and for undertaking regular maintenance.

The National Flood Forum offers useful advice on how to write a flood plan or become a Flood Warden http://www.nationalfloodforum.org.uk/

Environment Agency

The Environment Agency is responsible for flood risk management activities on main rivers across Cambridgeshire, for regulating reservoir safety, and providing river flood warnings. They have the power to undertake work on main rivers to fix a flooding issue, but would charge this cost to the Riparian Owner.
Contact the Environment Agency if you are having a flooding issue from a main river or reservoir in Cambridgeshire, or you wish to carry out work on a main river.

Email: enquiries@environment-agency.gov.uk or telephone 03708 506 506

Cambridgeshire County Council

Cambridgeshire County Council is responsible for coordinating the management of flood risk from surface water, groundwater and ordinary watercourses. However this does not mean that they can or will undertake works to fix a flooding issue, but they can investigate to find out who the Riparian Owner is and therefore who is responsible; and advise on potential solutions. The cost of any works to fix these flooding issues will be charged back to the responsible person or organisation.

Contact Cambridgeshire County Council to report surface water, groundwater or ordinary watercourse flooding floodandwater@cambridgeshire.gov.uk

Or report an incident online:
http://www.cambridgeshire.gov.uk/info/20090/emergency_planning/482/report_flooding

Cambridgeshire County Council also carries out consenting works on all ordinary watercourses outside of Internal Drainage Board areas. Contact the Council if you would like to undertake work to an ordinary watercourse:
http://www.cambridgeshire.gov.uk/info/20099/planning_and_development/49/water_minerals_and_waste/4

Cambridgeshire Highways

Cambridgeshire Highways are responsible for fixing drainage and flooding issues on highways and roads across Cambridgeshire. This includes blocked drains and gullies on the roads; however they are not normally responsible for ditches alongside roads. In most cases the responsibility is with the adjacent landowner.

Contact Cambridgeshire Highways to report flooding on a highway, including blocked drains and gullies on roads.

To report flooding on Highways, please use the highways fault online reporting tool
http://www2.cambridgeshire.gov.uk/HighwaysReports/Highways/ReportProblem1.aspx

Or call 0345 045 5200 (8:00am to 6:00pm)

Highways Agency

The Highways Agency is responsible for drainage of the motorways and some of the A roads (trunk roads) in Cambridgeshire, for example the A14 and M11. Contact the Highways Agency for flooding issues on the roads listed above.

Tel: 0300 123 5000 (say "Report")

District and City Councils

Cambridgeshire's district and city councils are responsible for reviewing flood risk in planning applications. They have the power to carry out works on ordinary watercourses to fix local flooding issues. The cost of these works would be charged back to the responsible person or organisation. The also, in some cases, are responsible for 'awarded watercourses'.

Contact your District or City Council for flood risk issues in planning Application, or if you are concerned about flooding from an awarded watercourse.

Anglian Water

Anglian Water, as a water and sewerage company responsible for managing the flooding and flood risk from public sewers and water mains across the county. This includes making sure they can maintain essential water supply and sewerage services during a flood. They are also sometimes responsible for removing surface water from your property via the public sewer system for treatment.
Contact Anglian Water for flooding from one of their burst water mains or sewers.

Tel: 03457 145 145 (Select option 1)

Cambridge Water

Cambridge Water, as a water company responsible for managing the flooding and flood risk from water mains across the county. This includes making sure they can maintain essential water supply services during a flood.
Contact Cambridge Water for flooding from one of their burst water mains

Tel: 01223 70 60 50

Internal Drainage Boards

In Cambridgeshire there is a large area covered by Internal Drainage Boards. These Internal Drainage Boards are responsible for managing water levels in the watercourses within this area. They also carry out consenting works on all ordinary watercourses in their areas.
Contact the relevant Internal Drainage Board if you are planning to carry out any work on an ordinary watercourse in their area.

Go to appendix 2 for a complete list of all internal drainage boards partly or wholly in Cambridgeshire.