Appendix A - Planning Policy and Flood Risk Management

LCR SDS SFRA Part A

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Prepared for:
Liverpool City Region Combined Authority

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Contents

A Planning Policy and Flood Risk Management

A.1 Introduction

This appendix provides a brief overview of the key planning policy and flood risk management documents that have shaped the current planning framework regarding flood risk, including the Flood Risk Regulations (FRR) 2009 and the Flood and Water Management Act (FWMA) 2010.

Figure 1 illustrates the links between legislation, national policy, statutory documents, and assessment of flood risk. The figure shows that whilst the key pieces of legislation and policy are separate, they are closely related, and their implementation should aim to provide a comprehensive and planned approach to asset record keeping and improving flood risk management within communities.

It is intended that the non-statutory Surface Water Management Plans (SWMPs) and constituent authorities' individual SFRAs can provide much of the base data required to support the delivery of the LLFA's statutory flood risk management tasks as well as supporting each authority in developing capacity, effective working arrangements and informing their Local Flood Risk Management Strategies (LFRMS) and Local Plans, which in turn help deliver flood risk management infrastructure and sustainable new development at a local level. This overarching regional SFRA should be used to support the development of the Spatial Development Strategy (SDS) and to help inform strategic planning decisions.

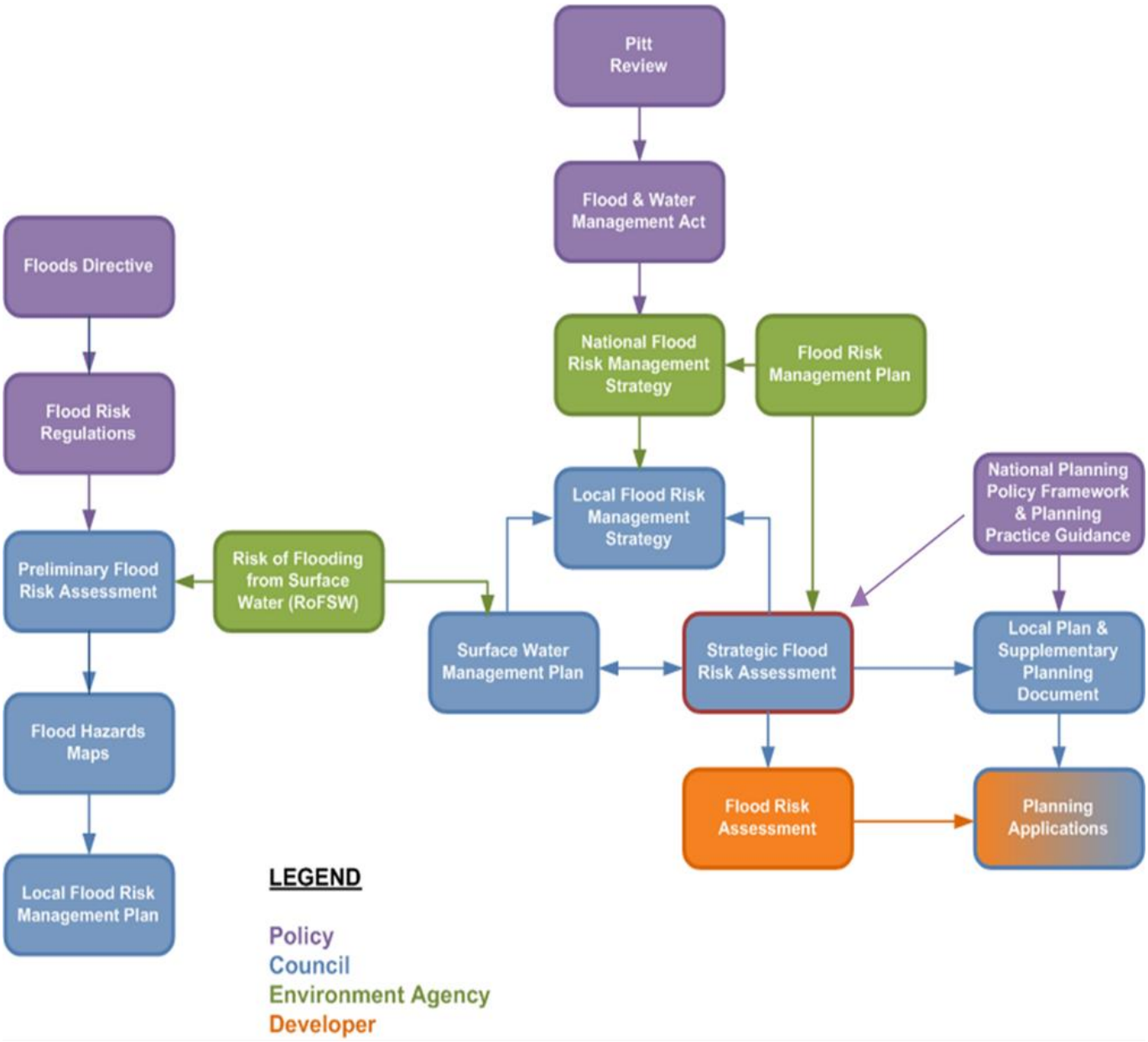


Figure 1: Key documents and strategic planning links with flood risk

A.2 Legislation

A.2.1 Flood Risk Regulations (2009)

The Flood Risk Regulations (FRR) 2009 are the interpretation of the EU Floods Directive 2007 into England's legislation. The FRR set out UK Government's approach to managing flood risk and aim to improve the management of the risks that floods pose to human health, the environment, cultural heritage and economic activity. The FRR require LLFAs and the EA to produce Preliminary Flood Risk Assessments (PFRA) over a repeating 6-year cycle with the aim of identifying significant Flood Risk Areas; preparing flood hazard and risk maps; and subsequent Flood Risk Management

Plans (FRMPs). The second six-year cycle was completed in December 2021 and the third six-year cycle is currently underway at the time of writing. More information can be found on the EA website[1].

At the time of this review (October 2023) it is understood that the UK Government intends to scrap the Flood Risk Regulations 2009 as part of a review into retained EU legislation. It is proposed to scrap this by 31 December 2023, as the Flood Risk Regulations duplicate existing domestic legislation, namely the Flood and Water Management Act 2010.

PFRAs should cover the entire LLFA area for local flood risk accounting for ordinary watercourses, surface water and groundwater flooding. Where the PFRA identifies significant Flood Risk Areas using the national approach (and locally reviewed), the LLFA is then required to undertake flood risk hazard mapping and to produce a FRMP for the significant Flood Risk Area as illustrated in **Error! Reference source not found.**.

Figure 2: Flood Risk Regulations

The EA is responsible for producing FRMPs for significant Flood Risk Areas that cover main rivers, the sea and reservoirs. However, the preferred approach is for the EA and LLFAs to work together to produce one FRMP for all sources of flood risk for a river basin district (RBD). This arrangement is agreed between the EA and the LLFAs involved before work starts. FRMPs also meet the aims of the National Flood and Coastal Erosion Strategy for England.

The EA has implemented one of the exceptions for creating PFRAs, etc. for Main Rivers and coastal flooding, as they already have mapping, i.e. Flood Map for Planning (Rivers and Sea), Risk of Flooding from Rivers and Sea Map, flood modelling, and plans i.e. CFMPs, SMPs in place to deal with this. The EA has therefore focused its efforts on assisting LLFAs through this process.

A.2.2 Constituent authority Preliminary Flood Risk Assessments (PFRAs) 2011 and 2017

The second cycle PFRAs published in 2017 reviewed the 2011 PFRAs and were published as addendums. The 2017 updates used all relevant current flood risk data and information to assess whether any flood events had changed the understanding of significant flood risk in each constituent authority since 2011.

1 Planning stages to manage flood risk, 2022

Halton PFRA 2011, 2017

The 2011 PFRA analysed the risk of surface water flooding in Halton, using the EA's now superseded first generation Areas Susceptible to Surface Water Flooding (AStSWF) dataset, and revealed that up to 12,700 properties could be at risk. However, this did not exceed the threshold of 30,000 required for it to be identified as a flood risk area. Halton Council was therefore not required to produce flood hazard maps, flood risk maps and FRMP for that area.

The 2017 review of the PFRA, using the EA's Risk of Flooding from Surface Water (RoFSW) dataset, identified no changes to flood risk within the area and no FRAs were identified.

Knowsley PFRA 2011, 2017

The 2011 PFRA analysed the risk of surface water in Knowsley using the AStSWF dataset which revealed that up to 3,000 properties could be at risk. This did not exceed the threshold of 30,000 required to define a significant flood risk area within Knowsley. The second generation Flood Map for Surface Water (FMfSW) was adopted as the indicator for local flood risk and it was recommended that a Local Flood Risk Management Strategy be developed for the area.

The 2017 review of the PFRA, using the RoFSW dataset, stated that no significant flooding events have occurred since the publication of the 2011 report and that no changes to the PFRA were necessary.

Liverpool PFRA 2011, 2017

The 2011 PFRA reviewed historic flooding records provided by Liverpool City Council, United Utilities and British Waterways (now Canal & River Trust). The national EA datasets the AStSWF and the Areas Susceptible to Groundwater Flooding (AStGF) were also considered and a indicative flood risk area was defined. The Liverpool indicative flood risk area includes 24,860 residential properties at risk, which equates to 58,172 people using the 2.34 multiplier. It is the fourth largest of the indicative flood risk areas in England. The flood risk area identified covers the majority of Liverpool and also some areas within Knowsley and Sefton.

The 2017 review of the PFRA, using the RoFSW dataset, identified some additional areas of historic flooding occurring since the 2011 study. Additional hydraulic modelling was undertaken to increase knowledge and understanding of surface water flood risk in Liverpool. This work was jointly undertaken between Liverpool City Council, United Utilities and the EA and has provided increased understanding of surface water flood risk in Liverpool.

Sefton PFRA 2011, 2017

The 2011 Sefton PFRA reviewed previous flood events, surface water flood risk, groundwater flood risk and fluvial/tidal flooding to identify flood risk areas. Areas around

Southport, Formby and to the south of the authority area were identified as being above the threshold and therefore designated as flood risk areas. Sefton Council therefore prepared Flood Hazard and Flood Risk Maps for the flood risk areas, followed by a Flood Risk Management Plan, as required.

The 2017 review of the PFRA identified that further detailed surface water modelling had been undertaken in Formby, Maghull and Seaforth / Litherland to provide a greater understanding of how the drainage systems work in these areas.

St Helens PFRA 2011, 2017

The 2011 St Helens PFRA did not identify any flood risk areas. In addition, recorded historic flood events were not considered to have had a 'significant harmful consequence' within St Helens. As a result, the next stages of the PFRA process, flood risk hazard mapping and Flood Risk Management Plan preparation were not required.

The 2017 review of the PFRA concluded that the overall understanding of flood risk within St Helens had not changed since 2011.

Wirral PFRA 2011, 2017

The 2011 PFRA provides a high-level overview of local flood risk, from sources including surface water, groundwater and ordinary watercourses. Wirral Council defined a 'locally significant flooding incident' as that which affects 20 people (or approximately 8 houses) or 1 critical service, within a 1km grid square. Reporting under the Flood Risk Regulations (2009) as part of the 2017 PFRA, a number of locally significant flooding events were identified, which required investigation under S19 of the FWMA.

These events took place on the following dates (since the 2011 PFRA):

- 13th August 2012 – various locations
- 15th August 2012 - various locations
- 29th August 2012 - various locations
- 24th September 2012 - various locations
- 5th December 2013 – widespread coastal flooding particularly affecting West Kirby and New Brighton
- August and September 2015 – south-east of Wirral from Rock Ferry to Bebington and Bromborough.

The 2017 review of the PFRA concluded that the understanding of flood risk has increased with respect to areas at risk and the multiple sources of risk. Increased knowledge has informed the LFRMS, S19 Action Plans and influenced prioritisation in the investment programme. No further flood risk areas were identified in Wirral.

A.2.3 Flood Risk Management Plans

FRMPs are designed to help deliver the ambitions of the national Flood and Coastal Erosion Risk Management Strategy for England and Government's 25 year Environment Plan focussing on the more significant areas of flooding from all sources and describing the risk of flooding now and in the future.

The FRMPs will help to:

- Identify actions to reduce flood risk
- Improve resilience of communities to flooding
- Allow communities to adapt to the impacts of climate change

The EA has developed Flood Plan Explorer which presents the objectives and measures for each FRMP for each RBD across England.

FRMPs and River Basin Management Plans (RBMP), last updated December 2022, have been developed by the EA in tandem to ensure that flood defence schemes can provide wider environmental benefits during the same six-year cycle. Both flood risk management and river basin planning form an important part of a collaborative and integrated approach to catchment planning for water. RBMPs are a requirement of The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (see Section A.2.9).

EA guidance on how to prepare FRMPs is available online via: Flood risk management plans (FRMPs): how to prepare them

The Liverpool City Region is located entirely within the North-West RBD.

North-West River Basin District Flood Risk Management Plan, 2023[2]

The Liverpool City Region is located within the North-West RBD which covers an area of approximately 13,200 km^2 and contains nearly 7 million people. 370,000 of these 7 million people are at risk of flooding from rivers and the sea, and over 600,000 are at risk of flooding from surface water. The North-West RBD extends from Cumbria in the north to Cheshire in the south, with Lancashire, Merseyside and Great Manchester in between.

The North-West RBD comprises 12 river catchments; there are 35,000 people at high risk of surface water flooding (more than a 1 in 30-year chance of being flooded in any year) and 31,000 people at high risk of flooding from rivers and sea (more than a 1 in 30-year chance of being flooded in any one year) within the North-West RBD.

This Flood Plan Explorer online interactive tool provides information about all of the measures proposed through the North-West FRMP, including:

- where the measure is

2 North-West river basin district flood risk management plan | Environment Agency | April 2023

- a description of the measure and what it is aiming to achieve
- which objectives the measure will help to achieve
- who is responsible for implementing the measure
- when the measure is planned to be implemented.

Error! Reference source not found. shows the Flood Risk Areas for surface water identified in the City Region, namely Liverpool, Formby and Southport.

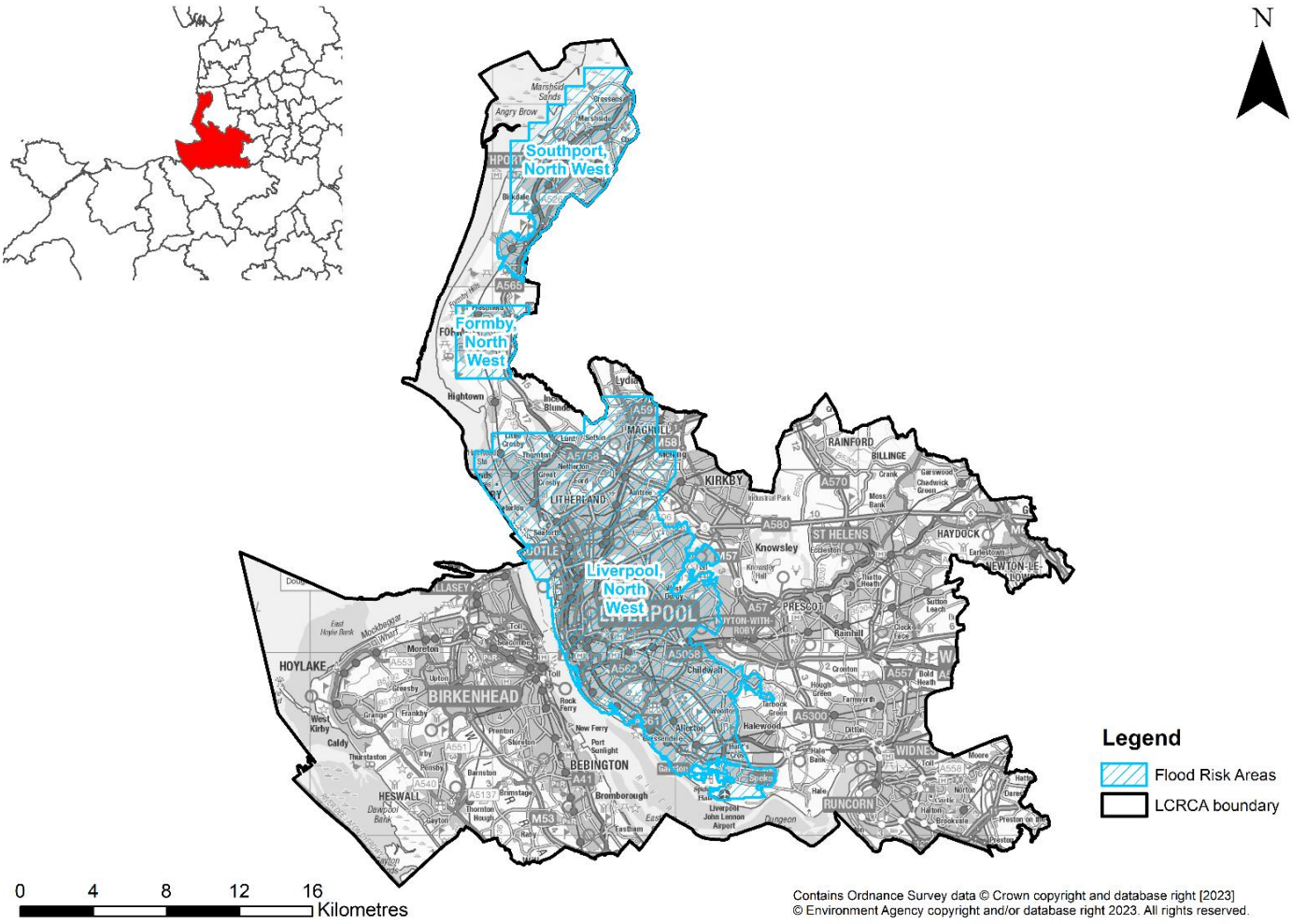


Figure 3: surface water Flood Risk Areas in the LCRCA

Liverpool Flood Risk Area:

- The EA's flood hazard and risk maps show that 90,041 people live in areas at risk of flooding from surface water
- 37,517 residential properties are at risk with 17.68% in areas of high risk
- 4,557 non-residential properties, including golf courses, schools/colleges, hospitals, retail parks, industrial parks and public utilities are at risk
- 1 Airport is at risk

- 38.83km of roads are at risk
- 41.65km of railway is at risk
- 526.69ha of agricultural land is at risk
- Areas of environmental designated sites, parks and gardens, scheduled monuments, heritage sites, listed buildings and water abstraction points are at risk
- Liverpool City Council and Sefton Metropolitan Borough Council take the lead on the development and delivery of the FRMP for this Flood Risk Area.

Formby Flood Risk Area:

- The EA's flood hazard and risk maps show that 7,257 people live in areas at risk of flooding from surface water
- Approximately 3,024 residential properties are at risk with 22% in areas of high risk
- 179 non-residential properties, including schools/colleges and a golf course are at risk
- 0.74km of roads including part of the Formby Bypass are at risk
- 2.21km of railway is at risk
- 92.48ha of agricultural land is at risk
- Areas of environmental designated sites, listed buildings and water abstraction points
- Sefton Metropolitan Borough Council takes the lead on the development and delivery of the FRMP for this Flood Risk Area.

Southport Flood Risk Area:

- The EA's flood hazard and risk maps show that 30,822 people live in areas at risk of flooding from surface water
- 1,097 non-residential properties, including hospitals, schools/colleges, golf courses, retail parks and industrial estates are at risk
- 10.1km of roads including part of the A565 and A570 are at risk
- 8.70km of railway is at risk
- 180.95ha of agricultural land is at risk
- Areas of environmental designated sites, parks and gardens, listed buildings and water abstraction points
- Sefton Metropolitan Borough Council takes the lead on the development and delivery of the FRMP for this Flood Risk Area.

A.2.4 Flood & Water Management Act (2010)

The Flood and Water Management Act (FWMA) was established in April 2010. It aims to improve both flood risk management and the way we manage our water resources.

The FWMA has created clearer roles and responsibilities and helped to define a more risk-based approach to dealing with flooding. This included the creation of a lead role for local authorities as LLFAs, designed to manage local flood risk (from surface water, groundwater and ordinary watercourses) and to provide a strategic overview role of all flood risk for the EA.

The content and implications of the FWMA provide considerable opportunities for improved and integrated land use planning and flood risk management by local authorities and other key partners. The integration and synergy of strategies and plans at national, regional and local scales, is increasingly important to protect vulnerable communities and deliver sustainable regeneration and growth.

The FWMA gives Risk Management Authorities (RMA) specific powers and duties for local flood risk management. A duty is something the RMA is legally obliged to do; a permissive power can be used at the RMA's discretion. All RMAs have a duty under Section 13 of the FWMA to cooperate with one another when exercising functions relating to flood and coastal erosion risk management.

A.2.5 National and Local Flood Risk Management Strategies

The FWMA establishes how flood risk will be managed within the framework of a National Strategy for England and Local Strategies for each LLFA area. The EA has a statutory duty to develop, maintain, apply, and monitor a strategy for England. The EA adopted the National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England on 25 September 2020 and updated it in June 2022, at the time of writing.

The National Strategy sets out principles for how flood risk should be managed and provides strategic information about different types of flood risk and which organisations are responsible for their effective management. The Strategy sets out the long-term delivery objectives the nation should take over the next 10 to 30 years as well as shorter term, practical measures RMAs should take working with partners and communities.

Halton Local Flood Risk Management Strategy[3]

Halton Borough Council's current LFRMS at the time of writing was approved in March 2015 and has yet to be updated in line with the 2022 National Strategy.

The 2015 LFRMS states the aim of the Local Strategy being '*to produce a coherent plan to demonstrate how the Council will work with individuals, the community, partners and other organisations to holistically manage flood risk in a sustainable manner*'.

The Local Strategy sets out a framework for managing flood risk in a holistic and sustainable way to help the Council in its statutory role as a LLFA to manage local risks. The Local Strategy covers five main objectives which are to:

3 Halton Borough Council Local Flood Risk Management Strategy | March 2015

- Clearly set out the different types of flooding, who is responsible for managing risk and governance arrangements
- Assess the total risk of flooding from all sources
- Manage flood risk and where appropriate reduce the risk and consequences of flooding through a range of activities and by effective management
- Develop actions and interventions to reduce flood risk where appropriate
- Undertake flood risk management activities in a sustainable manner.

Knowsley Local Flood Risk Management Strategy[4]

Knowsley Metropolitan Borough Council finalised its LFRMS October 2017. It has yet to be updated in line with the 2022 National Strategy at the time of writing.

The 2017 LFRMS states the aim of the Strategy is to ensure that the overall context of the National Strategy is met through Knowsley's management of local flood risk and this aim would be met through six key objectives:

- To develop a collective understanding of the local flood risk within Knowsley to a sufficient level whereby studies and schemes can be identified, and to put in place long-term plans to manage these risks and to make sure that other plans take account of them
- To work in partnership with other risk management authorities, key stakeholders, partners, organisations and the community, to reduce the risk of flooding to communities, the economy and the environment from all sources
- To support the delivery of flood-appropriate sustainable development and ensure that the guiding principles for sustainable development are applied and inappropriate development is avoided in existing and future areas at risk of flooding
- To increase public awareness of the effects of climate change and the implications for an increase in flood risk, engage with people specifically at risk of flooding, to empower them and encourage them to accept their flood risk, to become resilient communities by taking action to manage and/or mitigate the risks that they face
- To support and assist those bodies responsible for improving the detection, forecasting and issue of warnings of flooding. Plan for and co-ordinate a rapid response to flood emergencies and promote faster recovery from flooding
- Where viable, build, maintain and improve local flood risk management infrastructure and systems to mitigate or reduce the likelihood of harm to people and damage to the economy; environment (natural, historic, built and social) and society as a whole.

4 Knowsley Metropolitan Borough Council Local Flood Risk Management Strategy | October 2017

Liverpool Local Flood Risk Management Strategy[5]

The Liverpool LFRMS sets out how the City Council will manage risk from all types of flooding such as from surface water runoff, groundwater and ordinary watercourses for which the City Council has a responsibility as LLFA, and other types of flooding where local agents can play a supporting role to lead agencies.

The LFRMS has eight key objectives, which form the flood risk policies for the LLFA in Liverpool. These are:

- Understand all forms of the consequential effects of flood risk within Liverpool
- Manage flood risk and the impacts of flooding through a wide range of management activities
- Manage inappropriate development in areas susceptible to flooding
- Work with the EA, UU and other LLFA's within the Merseyside Strategic Flood Partnership to ensure all flood management activities are well coordinated
- Gain a detailed knowledge of all types of drainage infrastructure in the city and review the maintenance requirements of those assets in flood risk areas for both highway drainage and the open/culverted watercourse network
- Promote sustainable drainage in accordance with legislation and ensuring development takes account of climate change to avoid flood risk being increased on adjacent land
- Seek funding both locally and nationally to implement FRM schemes
- Implement flood resilience measures to minimise disruption and ensure Liverpool can recover quickly from flood events.

Sefton Local Flood Risk Management Strategy[6]

Sefton Metropolitan Council finalised its updated LFRMS in 2022.

The 2022 Sefton LFRMS provides an overview of flood and coastal erosion risk management in Sefton and integrates the concept of sustainable development through careful consideration of the three fundamental pillars: people, place and productivity.

The LFRMS gives information on who the risk management authorities are in Sefton, their relevant functions and how the approach to flood risk management is coordinated. It offers information on how wider environmental objectives will be achieved in Sefton and provides timescales of when the approach will be reviewed.

The eight themes of Sefton's 2030 vision are:

- Ready for the future
- Together a stronger community

5 Local Flood Risk Management Strategy | Highways and Transportation Regeneration | Liverpool City Council

6 Sefton Council Local Flood & Coastal Erosion Risk Management Strategy 2022-2030 | Sefton Council

- A borough for everyone
- Living, working and having fun
- A clean, green, beautiful borough
- Visit, explore and enjoy
- On the move
- Open for business.

St Helens Local Flood Risk Management Strategy[7]

St Helens finalised its LFRMS in 2019, though has yet to update this in line with the new National Strategy at the time of writing.

The 2019 Strategy focuses on the effects of flooding from surface water runoff, rivers, groundwater and wastewater. Through the LFRMS the Council looks to ensure that all sources of flooding are managed together and tackled according to level of risk, as well as considering appropriate solutions and taking practical measures to reduce both the likelihood and impact of any flood event.

Since the first Local Strategy was published in 2014, a number of the flood risk locations identified such as Beech Gardens, Bell Lane, Peasley Cross and West End Road have had appropriate and positive flood relieve schemes implemented or resilience measures installed, with areas such as College Street and the wider Sankey Valley undergoing further complex assessment.

The Council states that as more development takes place not just at regional and local planning scale but down to individual landowners altering their hardstanding footprint, it is essential that it is managed appropriately so that the effects on flood risk are minimised. The Local Strategy informs on how the Council will manage flood risk, on key responsibilities for RMAs, and on how to find out about local flood risk and what the Council can do to help the local public become safer from flooding.

Wirral Local Flood Risk Management Strategy[8]

The Wirral Borough Council LFRMS was finalised in July 2016 setting out how the Borough will manage flood risk from surface water runoff, groundwater, the sea and ordinary watercourses for which the Council has a responsibility as LLFA for the period 2016-2019. The aim of the Local Strategy is to ensure the overall context of the National Strategy is met through Wirral's management of flood risk. However, the LFRMS is yet to be updated in line with the 2022 National Strategy, at the time of writing.

7 Local Flood Risk Management Strategy (2019-2025) | St Helens Council & Cheshire and Mid Mersey Catchment Group | 2020

8 Local Flood Risk Management Strategy | Wirral Council | July 2016

The 2016 LFRMS has five objectives which aim to form policies for Wirral Council:

- Understand the local risks of flooding and coastal erosion, working together with partners, other RMAs, organisations and the community to identify the causes and put in place long-term plans to manage these risks and make sure that other plans take account of them
- Ensure that the guiding principles for sustainable development are applied and inappropriate development is avoided in existing and future areas at risk of flood and coastal erosion while elsewhere, carefully managing other land to avoid increasing the risks
- Where financially viable, build, maintain and improve local flood and coastal erosion management infrastructure and systems to mitigate or reduce the likelihood of harm to people and damage to the economy; environment (natural, historic, built and social) and society as a whole
- Increase public awareness of the effects of climate change and the implications for an increase in flood risk, engage with people specifically at risk of flooding, to encourage them to take action to manage and/or mitigate the risks that they face and to make their property more resilient
- Support and assist those bodies responsible for improving the detection, forecasting and issue of warnings of flooding. Plan for and co-ordinate a rapid response to flood emergencies and promote faster recovery from flooding.

A.2.6 North-West Regional Flood and Coastal Committee

The constituent authority LLFAs are members of the North-West Regional Flood and Coastal Committee (RFCC). The RFCC, established by the EA, brings together relevant members appointed by the LLFAs to:

- Ensure there are coherent plans for identifying, communicating and managing flood and coastal erosion risks across catchments and shorelines,
- Encourage efficient, targeted and risk-based investment in flood and coastal erosion risk management that represents value for money and benefits local communities,
- Provide a link between the EA, LLFA, other RMAs, and other relevant bodies to build understanding of flood and coastal erosion risks in its area.

The North-West RFCC produced a business plan, which was adopted in March 2022, covering the three-year period from 2022 to 2025. The business plan sets out the long-term goals in which the North-West RFCC, with the support of its Flood & Coastal Erosion Risk Management (FCERM) Strategic Partnerships, will deliver to better protect homes and deliver more resilient communities in the North-West up to 2025. The Plan identifies priorities and objectives for the period to 2025 and will be monitored through the North-West RFCC quarterly meetings to adapt to change if necessary.

The Business Plan sets out five linked ambitions:

- Accessing investment and funding
- Building community resilience
- Managing water at catchment scale with nature
- Achieving climate resilient planning, development and infrastructure
- Increasing risk management authority capacity and collaboration.

A.2.7 Schedule 3 of the FWMA

Schedule 3 to the Flood and Water Management Act gained Royal Assent in 2020. The schedule, which incorporates recommendations from the 2008 Pitt review, provides a framework for the approval and adoption of drainage systems, an approving body (SAB), and national standards on the design, construction, operation, and maintenance of Sustainable Drainage Systems (SuDS). It also made the right to connect surface water runoff to public sewers conditional upon the drainage system being approved prior to the commencement of construction work.

In England, Schedule 3 was not commenced due to the changes in planning policy associated with the increased use of SuDS, which was implemented by Government in April 2015. Current planning policy requires SuDS to be included in all new major developments (more than 10 homes) unless in the case of exceptional circumstances. In these instances, clear evidence is required to support the application. This is in addition to the requirement for SuDS to be given priority in new developments in flood risk areas.

An independent review into the implementation of Schedule 3 was commissioned by Government and published in January 2023[9]. The review was asked to identify the benefits and impacts of making SuDS mandatory for new development to ensure that its implementation would help in addressing the pressures of climate change, increasing population and urbanisation whilst achieving multiple benefits, such as reducing surface and sewer flood risk, improving water quality, and harvesting rainwater to meet current and future needs.

The review concluded that the delivery of SuDS should not be made entirely through the planning process and recommended that Schedule 3 be implemented subject to final decisions on scope, threshold, and process. The government has accepted the recommendations. The consultation is scheduled to be completed in 2023 with the implementation of Schedule 3 expected in 2024 at the time of writing.

9 The review for implementation of Schedule 3 to The Flood and Water Management Act 2010

A.2.8 Water Framework Directive

The purpose of the Water Framework Directive (WFD), which was transposed into English Law by the Water Environment Regulations (2003), is to deliver improvements in the management of water quality and water resources through RBMPs, which were first published in 2015 and updated in 2021. The LCRCA lies within the North-West River Basin District.

A.2.9 River Basin Management Plans

The LCRCA area is covered by the North-West River Basin Management Plan, managed by the EA. The latest version of the RBMP was published in December 2022[10].

Water quality and flood risk can go hand in hand in that flood risk management activities can help to deliver habitat restoration techniques. The North-West RBMP includes such examples whereby land management techniques have been designed to reduce flood risk whilst also reducing sediment loss and improving water quality. The EA is responsible for monitoring and reporting on the objectives of the WFD on behalf of Government. They work with Government, Ofwat, local government, non-governmental organisations (NGOs) and a wide range of other stakeholders including local businesses, water companies, industry and farmers to manage water.

The RBMPs, like the FRMPs, are important documents relevant to the development of the SFRA. This regional SFRA should take into account the wider catchment flood cell aims and objectives and understand how it can potentially contribute to the deliverance of them.

The main responsibilities for the constituent authority LLFAs is to work with the EA to develop links between river basin management planning and the development of local authority plans, policies and assessments.

The general programme of actions (measures) within the North-West RBMP, which are relevant to the LCRCA include working with relevant RMAs, wider communities and stakeholders:

- To exploit opportunities to store water or manage runoff,
- Working together in places and communities exposed to significantly increased flood risk as a result of climate change,
- Taking further action to reduce the likelihood and adverse consequences of flooding in identified areas of high flood risk.

The full list of measures can be accessed via Defra's Flood Plan Explorer[11].

10 North-West River Basin District Flood Risk Management Plan 2021 to 2027, December 2022

11 Flood Plan Explorer: North-West River Basin District

A.3 Planning Policy

A.3.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published in March 2012 and received a significant revision in July 2018. The latest update took place in July 2021 at the time of writing. The NPPF sets out Government's planning policies for England and describes how these are expected to be applied. The Framework is based on core principles of sustainability and forms the national policy framework in England. It must be considered in the preparation of local plans and is a material consideration in planning decisions. The NPPF is accompanied by several Planning Practice Guidance (PPG) notes.

A.3.2 Flood Risk and Coastal Change Planning Practice Guidance[12]

The Flood Risk and Coastal Change Planning Practice Guidance (FRCC-PPG) was first published in March 2014 and last updated in August 2022 to reflect the most recent updates to the NPPF.

Whilst the NPPF concentrates on high level national policy, the FRCC-PPG is more detailed. The practice guidance advises on how planning can take account of the risks associated with flooding and coastal change in plan making and the development management process. This is in respect of local plans, SFRAs, the sequential and exception tests, permitted development, site-specific flood risk, Neighbourhood Planning, flood resilience and the vulnerability of different developments to help reduce the risk of flooding. The main SFRA report contains more information on the sequential approach to delivering sustainable development and details on the sequential and exception tests.

A.3.3 Local Plans

A Local Plan is a statutory document prepared in consultation with the local community. It is designed to promote and deliver sustainable development. Local Plans must set out a clear vision, be kept up to date and set out a framework for future development of the local area, addressing needs and opportunities in relation to housing, the economy, community facilities and infrastructure as well as safeguarding the environment and adapting to climate change and securing good design.

Local Plans set the context for guiding decisions and development proposals and along with the NPPF, set out a strategic framework for the long-term use of land and

12 Flood Risk and Coastal Change Planning Practice Guidance | Department for Levelling Up, Housing and Communities and Ministry of Housing Communities & Local Government | August 2022

buildings, thus providing a framework for local decision making and the reconciliation of competing development and conservation interests.

The NPPF requires that the evidence base for the Local Plan must clearly set out what is intended over the lifetime of the plan, where and when this will occur and how it will be delivered. The NPPF states that Local Plans should be supported by a SFRA and should take account of advice provided by the EA and other flood risk management bodies. Each constituent authority has its own Local Plan and accompanying SFRA:

- Halton Borough Council
- Knowsley Council
- Liverpool City Council
- Sefton Council
- St Helens Borough Council
- Wirral Council

The Local Plan SFRAs are used to ensure that when allocating land or determining planning applications, development is located in areas at lowest risk of flooding. Policies to manage, mitigate and design appropriately for flood risk should be written into the Local Plans, informed by both the SFRA and the Sustainability Appraisal.

Government guidance on plan making can be found online[13].

A.3.4 Spatial Development Strategy

The Liverpool City Region Spatial Development Strategy (SDS) is a statutory planning document that will set out the development and use of land across the combined authority area for the next 15 years. This will form part of the development plan for the six constituent local authorities; however, it will go alongside their own Local and Neighbourhood plans rather than replacing them.

In line with local and national legislation, the SDS will have regard to:

- The NPPF
- The health of people in the Liverpool City Region and the effect of the SDS on health inequalities
- Achieving sustainable development
- Climate change and its consequences, and
- The need to ensure consistency with national policies.

The SDS will identify key strategic locations for housing and employment development, in addition to policies addressing housing, health and wellbeing, transport, the economy, the environment, air quality and connectivity. The policies defined by the SDS will be high level, with the more detailed planning policies contained within the

13 Guidance on plan-making, Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, October 2021

Local Plans prepared by each of the six constituent authorities. These will place more of a focus on specific local circumstances and more detailed site allocations.

The SDS will be prepared in several stages in accordance with a specific regulatory framework. The stages are set out below:

- Stage 1 – preliminary public engagements seeking feedback on key strategic planning challenges, the vision and objectives of the SDS, and suggested policy approaches.
- Stage 2 – further non-regulatory consultation seeking comments on strategic spatial options and more detailed draft policy approaches.
- Stages 3 and 4 – detailed policy formulation ahead of a regulatory 'Public Participation' stage. The draft SDS will include the full suite of policies and identification of strategic locations for development.
- Stages 5 and 6 – the SDS will undergo 'Examination in Public' whereby it will be formally examined and subsequently published.

A.3.5 Integrated Impact Assessment (IIA)

The Integrated Impact Assessment (IIA) encompasses the Sustainability Appraisal. This integrated approach enables a cross cutting approach to be taken and avoids the need to undertake and report on separate assessments and seeks to reduce any duplication of assessment work. The Sustainability Appraisal (SA) is a key component of the SDS evidence base, ensuring that sustainability issues are addressed. The SA is a technical document which must meet the requirements of the Strategic Environmental Assessment Directive 2001/42/EC, which assesses and reports on a plan's potential impact on the environment, economy, and society. The SA carries out an assessment of the draft policies at various stages throughout the preparation of the SDS, and does this by testing the potential impacts, and consideration of alternatives are tested against the SDS's objectives and policies. This ensures that the potential impacts of the SDS on the aim of achieving sustainable development are considered, in terms of the impacts, and that adequate mitigation and monitoring mechanisms are implemented.

A.3.6 Strategic Infrastructure Plan

A draft Strategic Infrastructure Plan (SIP) has been prepared to help inform the SDS and ensure the various types of infrastructure being planned for in the city region support the identified growth proposals.

A.4 Flood Risk Management Policy and Strategies

A.4.1 Catchment Flood Management Plans (2009)

The CFMPs were carried out by the EA in 2009 and were designed to establish flood risk management policies which will deliver sustainable flood risk management for the

long term. The CFMPs were used by the EA to help direct resources to where there were areas of greatest risk and helped the EA and its partners to plan and agree the most effective way to manage flood risk in the future.

The FRMPs (Section A.2.3) were designed to replace the CFMPs following the implementation of the Flood Risk Regulations in 2009. However, the CFMPs are still considered a useful reference tool in flood risk management. The CFMPs contain useful information about how the catchments work, previous flooding and the sensitivity of the river systems to increased rainfall. The EA draws on the evidence and previous measures and proposals set out in the CFMPs to help develop the FRMPs for river basin districts.

CFMPs consider all types of inland flooding, from rivers, groundwater, surface water and tidal flooding. Shoreline Management Plans (SMP) consider flooding from the sea (see Section A.4.2).

CFMPs also include:

- the likely impacts of climate change,
- the effects of how we use and manage the land, and
- how areas could be developed to meet our present day needs without compromising the ability of future generations to meet their own needs.

The CFMPs identify flood risk management policies to assist all key decision makers in the catchment. CFMPs are grouped by river basin district and are split down into further sub-areas. The Liverpool City Region is covered by the Alt Crossens, Mersey Estuary, Weaver Gowy and Dee CFMPs.

The CMFP's divide each catchment into distinct sub-areas which have similar physical characteristics, sources of flooding and level of risk. The most appropriate approach to managing flood risk for each of the sub-areas has been identified and flood risk management policies have been allocated.

Alt Crossens Catchment Flood Management Plan

Published in 2009, this Plan provides an overview of flood risk in the Alt Crossens Catchment and sets out a plan for sustainable flood risk management for the next hundred years. The catchment is mostly agricultural, and its low-lying nature causes complexity with defining flood risk to the area.

The Liverpool City Region falls under Sub-area 1: Liverpool, Sub-Area 2: Middle and Urban Alt, Sub-Area 3: Altcar and Ince, Sub-Area 4: Formby, Sub-Area 7: Southport and Sub-Area 8: Banks Marsh.

Sub-Area 1: Liverpool

Policy Option 4: Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where further action may be required to keep pace with climate change.

This sub-area has a high level of urbanisation causing the flood risk to be relatively high due to problems with out of bank flow and conveyance around Tue Brook and Deys Brook. The policy sets out to sustain the current level of protection, ensuring no increase in flood risk through continuing maintenance as well as improving defences and modifying channels where needed. To assist in implementing the preferred policy, additions have been made within the development framework to help establish work towards long term protection and re-creation of watercourse corridors through sustainable land management.

Sub-Area 2: Middle Urban Alt

Policy option 3: Areas of low to moderate flood risk where the EA is generally managing existing flood risk effectively.

This sub-area plans to continue with the flood risk management actions currently in place, improving areas that are frequently exposed to flooding by removing channel constrictions to improve conveyance. There is also scope to encourage flood resilience and resistance in individual properties to fulfil the policy aim.

Sub-Area 3: Altcar and Ince

Policy option 6: Areas of low to moderate flood risk where the EA will take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits.

Within this sub-area, there is 200 hectares of high-grade agricultural land at risk. Flood risk is currently managed through the Altmouth pumping station and routine maintenance of arterial drainage ditches, which is set to continue under this policy. The policy also aims to decrease the management of smaller watercourses to re-naturalise and enhance the ‘wetting-up’ of the land to create natural flood water storage, creating new habitats and wider sustainability.

Sub-Area 4: Formby

Policy Option 4: Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change.

Policy within this sub-area aims to maintain the current standard of flood risk protection in the future whilst encouraging local business and property owners to adopt flood resistance and resilience measures. In addition, the Altmouth pumping station will be refurbished to ensure the current level of standards is maintained, whilst continuing to work with local authorities to prevent inappropriate new development in areas of flood risk through highlighting local hotspots for surface water flooding.

Sub-Area 7: Southport

Policy Option 4: Areas of low, moderate, or high flood risk where we are already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change.

The vision of this policy option is to sustain the current levels of flood risk management into the future, ensuring an appropriate level of maintenance to the Crossens Pumping Station. The policy aims to increase the effectiveness of the pumping station and potentially implement a flood warning area at Meols Cop, which will ensure no increase in flood risk to Southport as a result of climate change.

Sub-Area 8: Banks Marsh

Policy Option 4: Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change.

In this sub-area there is limited flood risk but the impact of climate change may cause increased wetting up and ponding of agricultural land to occur. This policy recognises the need to maintain the current standard of protection however accepts that additional flooding may occur in the future.

Mersey Estuary Catchment Flood Management Plan

Published in 2009, the Mersey Estuary Flood Management Plan area covers the lower 800 km2 of the river basin. Due to 40% of the catchment being heavily urbanised and low-lying, if a 1% flood occurred over 19,000 properties would be at risk of flooding.

The Liverpool City Region falls under Sub-area 3: St Helens, Sub-area 4: Upper and Middle Sankey, Sub-area 6: Widnes and Penketh, Sub-area 7: Middle Mersey Estuary, Sub-area 8: Maritime Mersey, Sub-area 9: Bebington and Sub-area 10: Greasby.

Sub-area 3: St Helens (and Ashton-in-Makerfield)

Policy Option 3 - Areas of low to moderate flood risk where we are generally managing existing flood risk effectively.

This sub-area aims to maintain the current flood risk management which is sufficient in the areas of greatest risk however this requires close monitoring in heavily urbanised regions. To further reduce the risk of flooding and control pollution, the development of SuDS is encouraged, alongside controlling future development in flood areas with mitigation methods put in place to protect vulnerable community assets.

Sub-area 4: Upper and Middle Sankey

Policy Option 6 - Areas of low to moderate flood risk where the EA will take action with others to store water or manage run-off in such a way as to provide overall flood risk reduction or environmental benefits.

This policy aims to store water/manage runoff in locations that can provide an overall risk reduction with environmental benefits. Alongside this there will be collaboration with local and national governments to create economic and social conditions to encourage appropriate land use and management to fulfil the policy.

Sub-area 6: Widnes and Penketh

Policy option 4 - Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where further action may be required to keep pace with climate change.

The overall flood risk in this sub-area is considered low, and current risks are managed to an appropriate level, which is thought to be adequate to cope with any increase in tide levels.

Sub-area 7: Middle Mersey Estuary

Policy option 2 - Areas of low to moderate flood risk where the EA can generally reduce existing flood risk management actions.

Due to the wetland nature of the environment, the sub-area is at low levels of flood risk so the aim is to reduce flood risk management where justifiable. There will also be a continued investigation into the groundwater resource to coincide with the rest of the Mersey. It is also essential that investigations take place to explore how environmental wetland sites would be affected by climate change.

Sub-area 8: Maritime Mersey

Policy option 4 - Areas of low moderate or high flood risk where the EA is already managing the flood risk effectively but where further action may be required to keep pace with climate change.

In this sub-area changes in flood risk will be driven by climate change and urbanisation, causing significant increases in risk to property and economic damages. Therefore, it is essential to engage with stakeholders to develop a maintenance plan for existing flood defence assets within the sub-area so future changes take into account the impact of sea level rise, climate change and Liverpool's regeneration.

Sub-area 9: Bebington

Policy option 3 - Areas of low to moderate flood risk where the EA is generally managing existing flood risk effectively

In this sub-area, it is suitable to maintain current level of flood risk management acknowledging that the flood risk at these locations may rise in the long-term. It is intended that these approaches are reviewed in the future to manage changes in flood risk due to climate change.

Sub-area 10: Greasby

Policy option 6: Areas of low to moderate flood risk where the EA will take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits.

In this sub-area, the aim is to find ways to store water and manage runoff in locations to reduce the overall risk or provide environmental benefits. This will reduce the risk of flooding to people and property and transfer the risk to where it is beneficial, such as creation of water storage areas in the Wirral to reduce flood risk in sub areas downstream.

Weaver Gowy Catchment Flood Management Plan

Produced in 2009, the plan assesses the flooding of this predominantly rural, low-lying catchment. In this sub-area, management is focused on sustainable redevelopment, flood warning, resilience and making more space for water either upstream or downstream.

The LCRCA only falls within three of the sub-areas of this CFMP, Sub-area 1: Stanlow, Sub-area 2: Frodsham and Runcorn and Sub-area 7: Rural areas.

Sub-area 1: Stanlow

Policy option 4: Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where further action may be required to keep pace with climate change.

The main risk in this sub-area is the fluvial and tidal flooding of the highly vulnerable oil refinery which could have significant economic and environmental impacts. The vision of this policy is to sustain the current level of protection to the refinery into the future to support this important economic asset while in operation. Additional measures such as maximising the floodplain in rural upstream locations would also reduce flood levels in Stanlow. This will minimise both the probability and consequence of flooding.

Sub-area 2: Frodsham and Runcorn

Policy option 4: Areas of low, moderate or high flood risk where the EA is already managing the flood risk effectively but where further action may be required to keep pace with climate change.

The vision for this sub-area is to sustain the current level of protection into the future, whilst accepting that specific locations need improvement. There may be opportunities to incorporate land management changes and creating upstream flood storage to ensure there is no increase in flood risk to the sub-area.

Sub-area 7: Rural areas

Policy option 6 - Areas of low to moderate flood risk where the EA will take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits.

This sub-area includes the rural parts of the CFMP and the scattered small urban communities. The flood risk is generally low, with the management aim within the sub-area being to ensure as much of the natural floodplain is restored as possible to provide storage and reducing flood risk downstream.

River Dee Catchment Flood Management Plan

Produced in 2009, the plan assesses the flooding of this predominantly rural catchment, with some scattered urban centres including Chester, Wrexham and Deeside.

The LCRCA only falls within one of the sub-areas of this CFMP, Sub-area 6: Deeside, Wirral and North Flintshire.

Sub-area 6: Deeside, Wirral and North Flintshire

Policy Option 5: Areas of moderate to high flood risk where the EA can generally take further action to reduce flood risk.

The sub-area is heavily urbanised with a complex interaction of flood sources and environmental features. It includes the Dee Estuary and the urban areas of Deeside, Sealand, Flint, Holywell, Neston, Heswall and West Kirby and large tracts of agricultural land. The aim is for current flood defences to continue to have a dominant role but a broader range of integrated actions to manage current and future flood risk is needed.

A.4.2 Shoreline Management Plan

A Shoreline Management Plan (SMP)[14] is a non-statutory, high level policy document for coastal flood and erosion risk management planning. The LCRCA coastline is included within the North-West SMP which extends from Great Orme's Head in North Wales and the Scottish Border. The North-West North Wales Coastal Group[15] is responsible for the management and monitoring of the delivery of the SMP. The location of the North-West SMP is shown on the SFRA maps.

The SMP helps to reduce flood and coastal erosion risks to people and the environment by identifying the most sustainable policies for managing these risks in the short-term (0-20 years), medium-term (20-50 years) and long-term (50-100 years) through four different management policies:

14 Shoreline Management Plan Guidance | My Coastline
15 North-West North Wales Coastal Group

- Hold the line: maintaining the status-quo by maintaining or enhancing the current standard of protection
- Advance the line: constructing new defences to reclaim land from the sea
- Managed realignment: allowing the current shoreline to advance or retreat under careful management
- No active intervention: no investment in coastal management.

The majority of the LCRCA coastline is managed under the 'hold the line' policy. This accounts for the majority of the Mersey Estuary, the Wirral Peninsula and in the north of Sefton at Southport. 'Managed retreat' is in place in Sefton at Formby, Formby Hills, Ainsdale and Birkdale; in Wirral at Leasowe and west Wallasey; and in Halton at Widnes and Runcorn on the Mersey Estuary. 'No active intervention' is in place in Halton at Hale; in Liverpool at Speke; and in Wirral at Heswall, Thurstaston, Caldy and north of West Kirby.

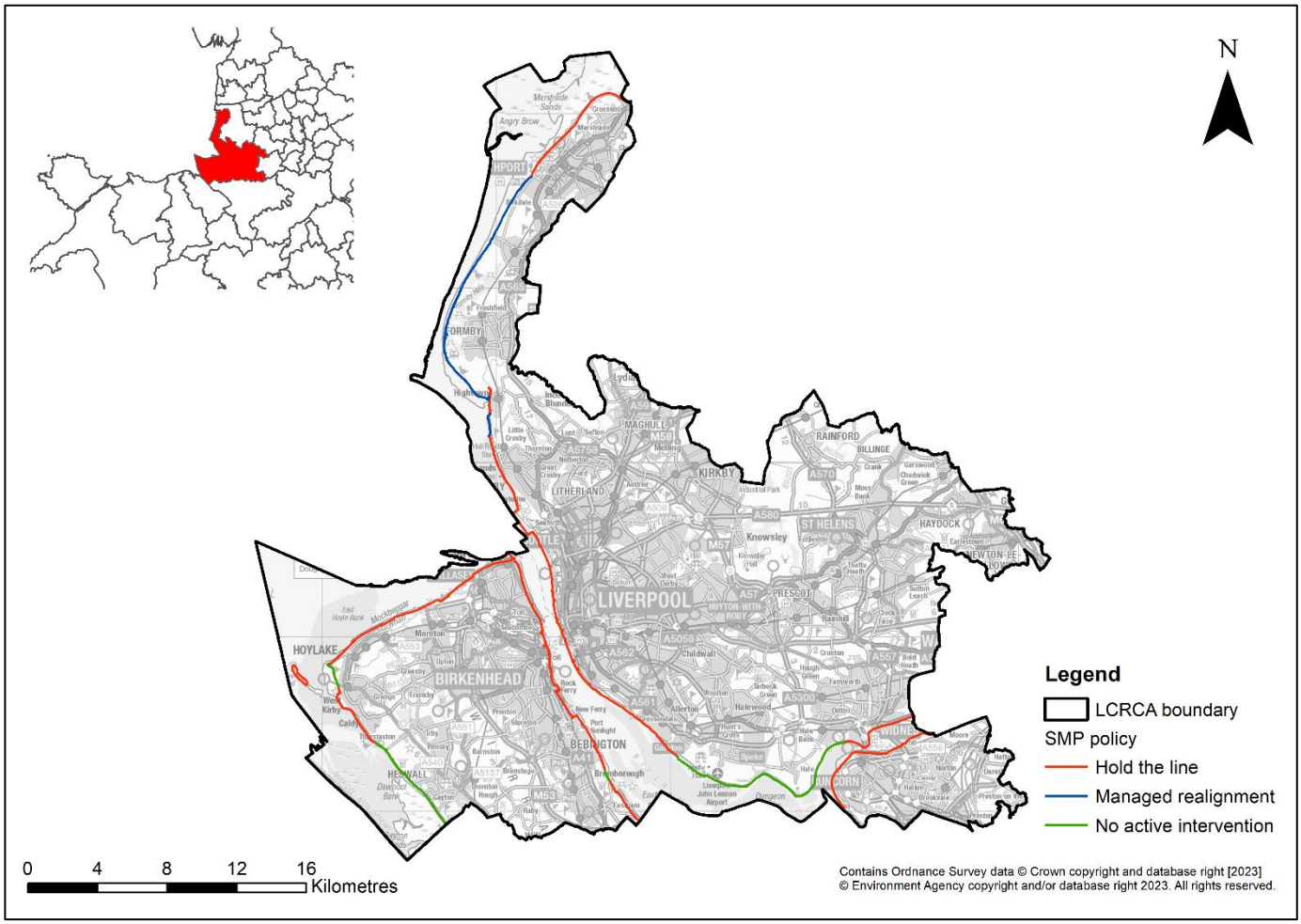


Figure 4: LCRCA Shoreline Management Plan Policies

A.4.3 Coastal Change Management Areas[16]

Coastal Change Management Areas (CCMAs) can be defined as 'an area identified in plans as likely to be affected by physical change to the shoreline through erosion, coastal landslip, permanent inundation or coastal accretion'. CCMAs will need defining where rates of coastal erosion and shoreline change are predicted to be significant over the next 100-years with consideration to climate change. Management areas should be defined through the LPA Local Plan. Updated guidance suggests CCMAs should be defined where the Shoreline Management Plan policy is anything other than Hold The Line. Wirral, Halton and Sefton Councils Local Plan's contain information regarding CCMAs within each LPA area.

A.4.4 National Coastal Erosion Risk Management Guidance[17]

The National Coastal Erosion Risk Management Guidance sets out the government's plan to become more resilient to flooding and coastal change both now and in the future. The strategy has three main ambitions concerning flood risk:

- Working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change;
- Making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as resilient infrastructure; and
- Ensuring local people understand their risk to flooding and coastal change, and know their responsibilities and how to take action.

A.4.5 National Flood Resilience Review (2016)[18]

The National Flood Resilience Review was established by the Department for Environment Food & Rural Affairs (Defra) in September 2016, following Storm Desmond in 2015, to review how flood risk is assessed, how the likelihood of flooding can be reduced and to try and make the country as resilient as possible to flooding. The review aligns closely with Defra's work on integrated catchment-level management of the water cycle in the Government's 25-year Environment Plan.

A.4.6 25 Year Environment Plan (2018)

This Plan sets out Government action to help the natural world regain and retain good health. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first. The Plan also sets out how Government will tackle the effects of climate change, considered to

16 Coastal Change Management Areas Guidance
17 National Coastal Erosion Risk Management Guidance | GOV.UK | July 2020
18 National Flood Resilience Review, September 2016

perhaps be the most serious long-term risk to the environment given higher land and sea temperatures, rising sea levels, extreme weather patterns and ocean acidification. The Plan aims to show that Government will work with nature to protect communities from flooding, slowing rivers and creating and sustaining more wetlands to reduce flood risk and offer valuable habitats.

Focusing on flood risk, Government has updated the national flood and coastal erosion risk management strategy for England (see Section A.2.5) which looks to strengthen joint delivery across organisations. The Plan states that the EA will use its role in statutory planning consultations to seek to make sure that new developments are flood resilient and do not increase flood risk.

For flood mitigation, Government will focus on using more natural flood management solutions; increasing the uptake of SuDS, especially in new development; and improving the resilience of properties at risk of flooding and the time it takes them to recover should flooding occur.

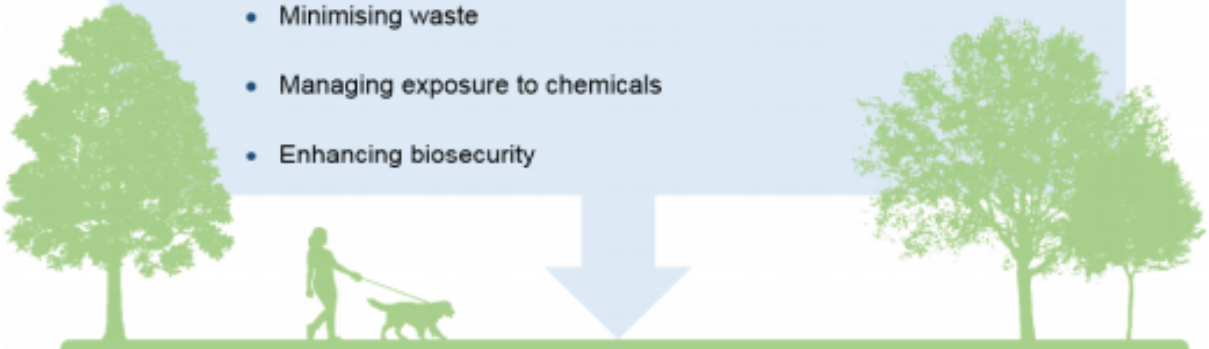
Our 25-year goals

We will achieve:

- Clean air
- Clean and plentiful water
- Thriving plants and wildlife
- Reduced risk of harm from environmental hazards such as flooding and drought
- Using resources from nature more sustainably and efficiently
- Enhanced beauty, heritage and engagement with the natural environment

We will manage pressures on the environment by:

- Mitigating and adapting to climate change
- Minimising waste
- Managing exposure to chemicals
- Enhancing biosecurity



Our policies will focus on:

- Using and managing land sustainably
- Recovering nature and enhancing the beauty of landscapes
- Connecting people with the environment to improve health and wellbeing
- Increasing resource efficiency, and reducing pollution and waste
- Securing clean, productive and biologically diverse seas and oceans
- Protecting and improving the global environment

A.4.7 Surface Water Management Plans

In June 2007, widespread flooding was experienced in the UK. The Government review of the 2007 flooding, chaired by Sir Michael Pitt, recommended that:

"…Local Surface Water Management Plans (SWMPs) …coordinated by local authorities, should provide the basis for managing all local flood risk."

The Government's SWMP Technical Guidance document[19], 2011, defines a SWMP as:

- *A framework through which key local partners with responsibility for surface water and drainage in their area, work together to understand the causes of surface water flooding and agree the most cost-effective way of managing surface water flood risk.*
- *A tool to facilitate sustainable surface water management decisions that are evidence based, risk based, future proofed and inclusive of stakeholder views and preferences.*
- *A plan for the management of urban water quality through the removal of surface water from combined systems and the promotion of SuDS.*

As a demonstration of its commitment to SWMPs as a structured way forward in managing local flood risk, Defra announced an initiative to provide funding for the highest flood risk authorities to produce SWMPs.

Defra's framework for carrying out a SWMP is illustrated by the SWMP wheel diagram, as shown in **Error! Reference source not found.**. The first three phases involve undertaking the SWMP study, whilst the fourth phase involves producing and implementing an action plan which is devised based on the evidence gained from the first three phases.

19 Surface Water Management Plan Technical Guidance

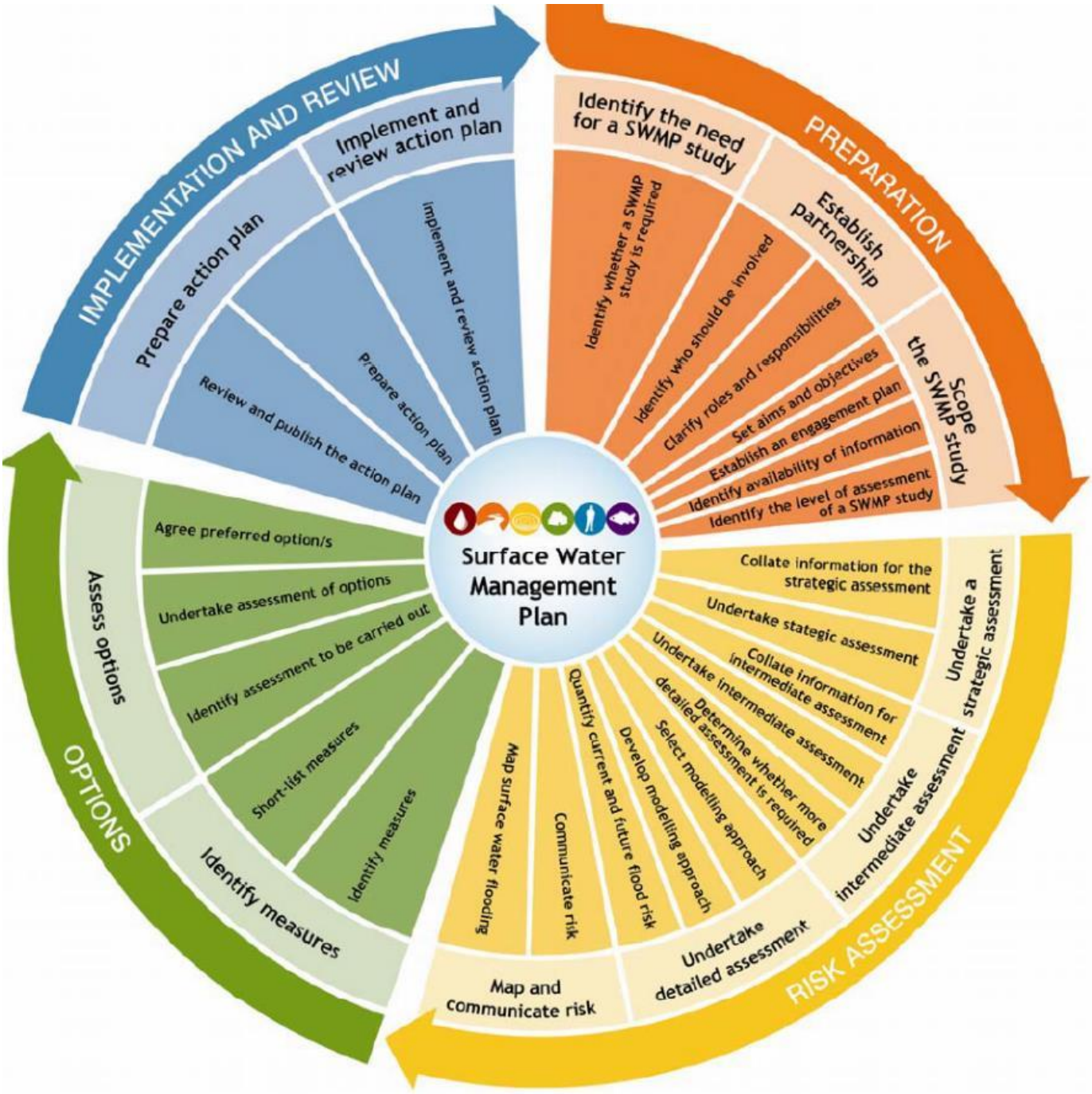


Figure 5: DEFRA wheel (taken from SWMP Technical Guidance)

Halton SWMP

Halton produced a Surface Water Management Plan which was published in June 2011. The report utilised hydraulic modelling tools and a GIS based approach to identify and map surface water flooding and flood risk across Halton. It was concluded that surface water flooding in Halton is characterised by a large number of small areas of flooding spread around the borough with some of the flood areas being coincident

with or adjacent to property and/or infrastructure which will have an impact on the local population. These areas of flooding are prevalent around Widnes and Runcorn.

Sefton SWMP

Sefton have produced their Surface Water Management Plan which was published in August 2011. The known areas at risk of surface water flooding, as identified within the SWMP are:

- Southern Southport
- Crosby
- Litherland
- Maghull
- Aintree
- Netherton
- Ainsdale
- Birkdale

An action plan has been developed as part of this SWMP which outlines recommendations, actions and measures that should be implemented to ensure that Sefton meets the requirements placed upon them and which could be implemented in order to reduce the chance and consequences of flooding.

It is understood that the other constituent authorities have not produced SWMPs.

A.4.8 Water Cycle Studies

The purpose of a Water Cycle Study (WCS) is to investigate whether the local water environment has the capacity to support planned levels of growth and provide a comprehensive and robust evidence to support Local Plan production.

To achieve this, the WCS investigates the capability of the water and sewerage suppliers to provide the services to enable housing and economic growth and identify key risks to the timing of housing delivery and impacts on customers and the local environment. A WCS is certainly useful in the Local Plan Examination, where there is large growth and urban expansion planned within a local authority area.

Wirral, Liverpool and Mersey Heartlands Growth Point WCS (2013)

The objective of the Wirral, Liverpool and Mersey Heartlands Growth Point WCS was to identify any constraints on housing and employment growth planned for the Growth Point Area and Wirral and Liverpool in general, up to 2027 that may be imposed by the water cycle and how these can be resolved. It also provided a strategic approach to the management and use of water, which ensures that the sustainability of the water environment in the region is not compromised.

Wirral Council WCS (2013)

The objective of Wirral's WCS was to identify any constraints on housing and employment growth planned for the area up to the year 2027, that may be imposed upon by the water cycle and how these can be resolved i.e. by ensuring that appropriate water infrastructure is provided to support indicative development. Furthermore, it aimed to provide a strategic approach to the management and use of water which ensures that the sustainability of the water environment in the region is not compromised.

The outline WCS was carried out as a high-level review of potential future development against the water cycle, such as water supply, wastewater treatment, sewer network capacity, flood risk and other environmental considerations.

Mid Mersey WCS (2011)

The Mid Mersey WCS was produced to provide an overview of the water cycle and its constraints to development across the three local authority areas which form the Mid Mersey Growth Point (Warrington Borough Council, Halton Borough Council, and St. Helens Council). It provides strategic level advice on water infrastructure and environmental capacity to inform the development of the Local Development Frameworks and associated growth strategies.

A.4.9 Green Infrastructure and Open Space assessments

Open space, or Green Infrastructure (GI), should be designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits for local communities and should be provided as an integral part of all new development, alongside other infrastructure such as utilities and transport networks. Open greenspace can be used to mitigate flood risk.

Local Plans should account for increased flood risk, resulting from climate change, through the planning of GI. GI can have an important role to play in reducing the likelihood of flooding by providing space for flood storage, reducing runoff and increasing infiltration, whilst also providing social and economic benefits.

Alongside GI should be the implementation of SuDS (see Section 5.7 of the main report). The suitability of GI and SuDS can be informed by this SFRA through utilisation of open space for water in the areas of greatest flood risk, which would be key to helping deliver sustainable development.

Examples include:

- Restoration of natural character of floodplains;
- Reduction of downstream flood risk;
- Preserving of areas of existing natural floodplain; and

- Introduction of new areas and enhancing existing areas of greenspace whilst incorporating sustainable drainage within new development.

The Town and Country Planning Association together with the Wildlife Trusts produced a guidance document for Green Infrastructure[20]. The guidance states that local plans should identify funding sources for GI and provision should be made for GI to be adequately funded as part of a development's core infrastructure. For new developments, GI assets can be secured from a landowner's 'land value uplift' and as part of development agreements. LPAs may include capital for the purchase, design, planning and maintenance of GI within the Community Infrastructure Levy (CIL) programme.

Wirral Green and Blue Infrastructure Strategy

Wirral Council has prepared a Green and Blue Infrastructure (GBI) Strategy as part of the Evidence Base for the Local Plan 2020 to 2037. The Strategy has three aims:

- To review the extent to which GBI assets are functioning well;
- To identify where there are existing and anticipated future gaps in GBI provision; and
- To set out what actions and interventions could enhance the current provision.

The aim being to protect and enhance the Borough's rural and urban environment to help the local economy grow and allow people to enjoy a good quality of life. The draft Strategy was subject to public consultation ending in April 2021 and is available to view on the Council's Local Plan evidence base page21

It is understood that the other constituent authorities have not carried out GI assessments.

A.4.10 Flood risk and catchment partnerships

The Catchment Based Approach (CaBA) embeds collaborative working at a river catchment scale to deliver cross cutting improvements to our water environments. The CaBA partnerships drive cost-effective practical delivery on the ground, resulting in multiple benefits including reduced flood risk and resilience to climate change.

Catchment partnerships are groups of organisations with an interest in improving the environment in the local area and to developing an integrated approach to managing risk within whole catchments. Catchment partnerships are led by catchment host organisations. The partnerships work on a wide range of issues, including the water

20 Planning for a Healthy Environment - Good Practice Guidance for Green Infrastructure and Biodiversity, Published by the Town and Country Planning Association and The Wildlife Trusts, July 2012

21 Wirral Council Local Plan evidence base

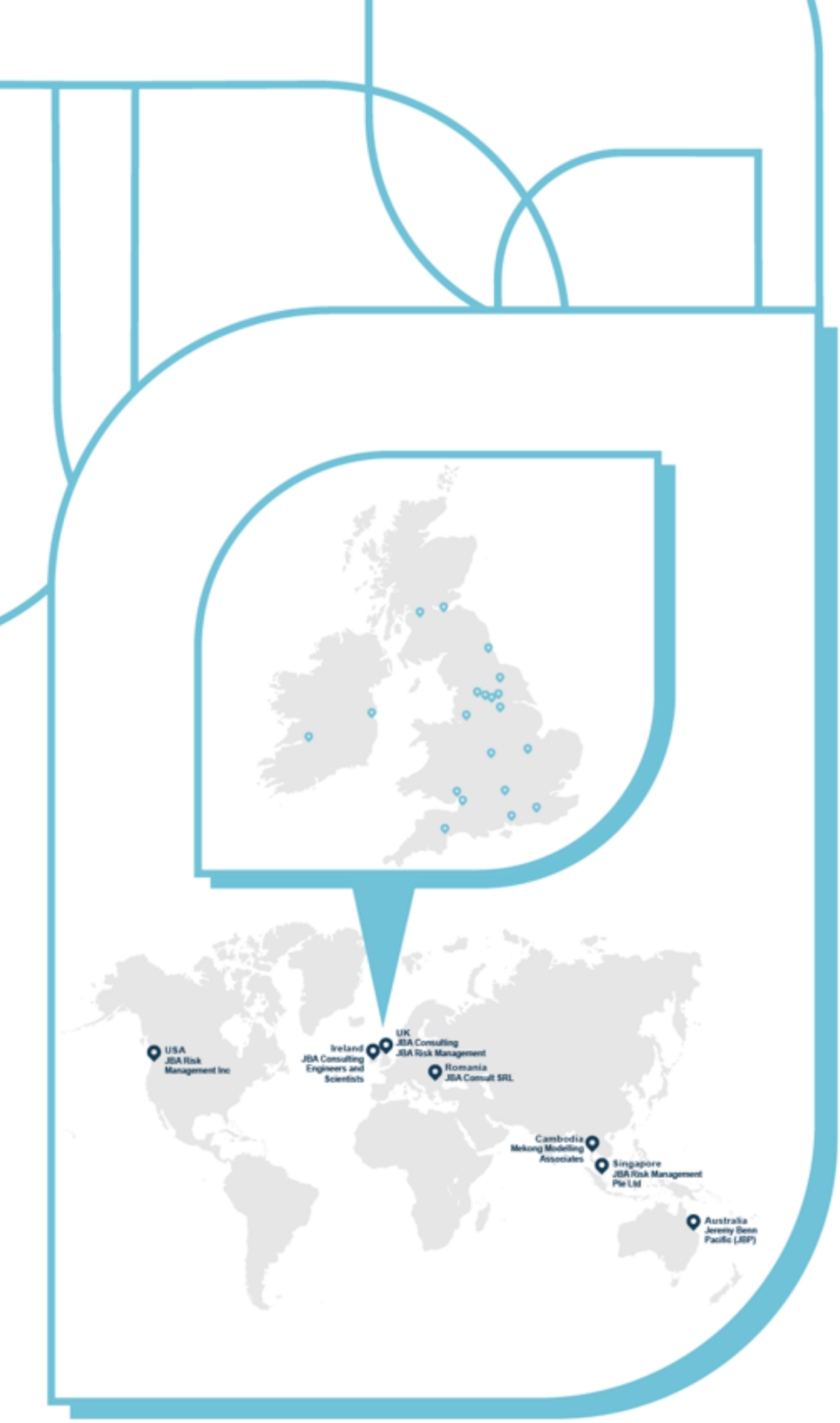
environment but also address other concerns that are not directly related to river basin management planning.

Catchment partnerships relevant to the Liverpool City Region include:

- Cheshire and Mid Mersey Flood Partnership - one of five FCERM partnerships reporting to the North-West RFCC. The Cheshire and Mid Mersey Partnership includes all RMAs and river catchment management groups, community and flood action groups.
- Mersey Rivers Trust was established to improve the water environments of the catchment and sub-catchments, by restoring and protecting rivers.

The LCRCA has been involved in the development of several partnerships designed to provide collaboration between public agencies, businesses and the community. Partnerships and plans that affect the LCRCA include:

- Cheshire Mid Mersey Flood Management group,
- Merseyside Resilience Forum (MRF),
- Cheshire Resilience Forum (CRF),
- LLFA Community Risk Registers,
- North-West Regional Flood and Coastal Committee (NRFCC),
- Merseyside FCERM Strategic Partnership,
- The Flood Hub,
- Flood warning and awareness in partnership with the EA, and
- Local flood plans.



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