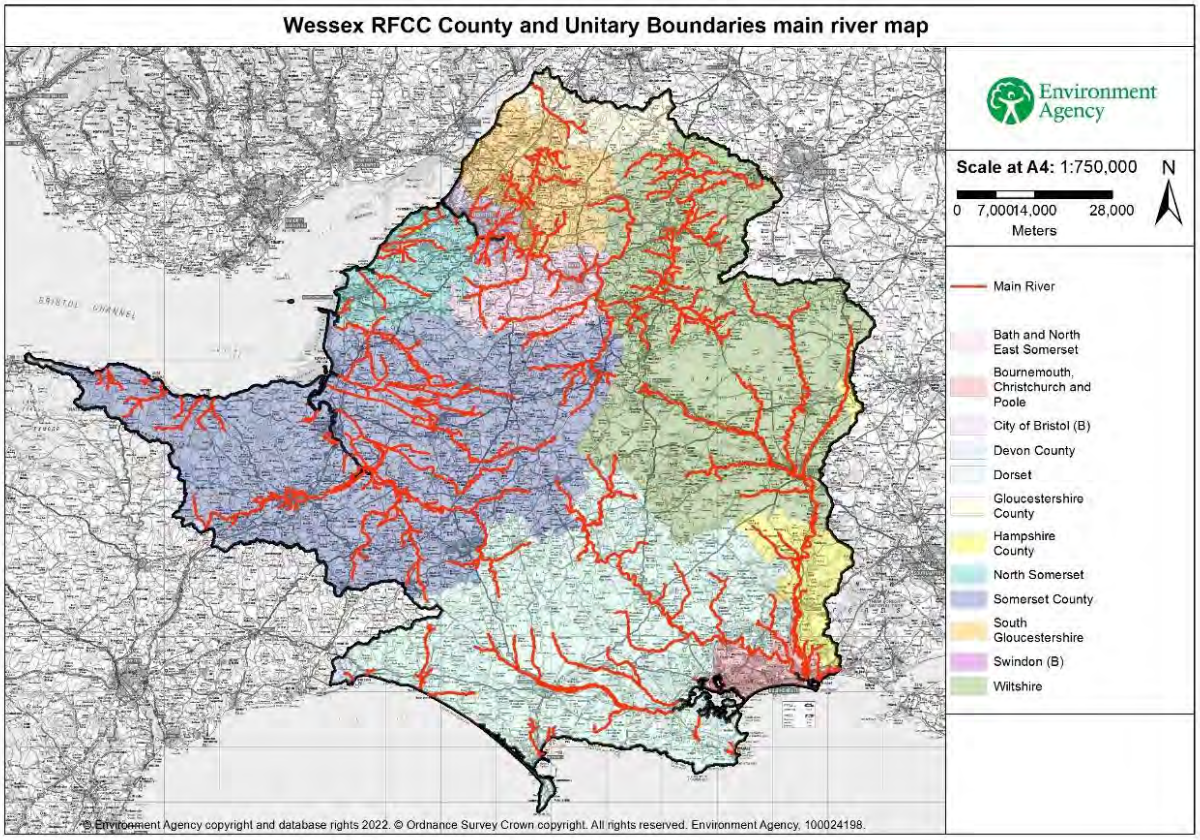
Wessex Regional Flood and Coastal Committee Strategy for 2022-2027 and beyond



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Foreword

Flooding and coastal erosion can have a devastating effect on people's lives, on communities, on businesses and on our environment.

The Wessex Regional Flood and Coastal Committee brings together representatives of each of the county and unitary councils in our area, and others with relevant experience and expertise, appointed by the Environment Agency, to work together to reduce the risk of flooding to people in Wessex and to protect our very special coastlines.

In 2017, we published our Strategy for 2017 to 2021 and beyond. This strategy set out for the first time in one place the nature of flood and coastal erosion risks in Wessex, and how the Committee, working with others, intended to address them. Over this period, as a result of investment overseen by the Committee, 15,468 homes have been better protected.

The risks of flooding and coastal change are increasing as a result of climate change. The committee's vision is to make Wessex more prepared and resilient to climate change. Achieving this will continue to involve close collaborative working between local authorities at all levels, Internal Drainage Boards, water companies and infrastructure providers, the environment and farming sector and other Government Agencies, and a whole host of others.

We will continue to seek to achieve better preparedness and protection for people, communities and businesses from the consequences of flooding and coastal change. This strategy also gives greater emphasis to the importance of developing resilience - supporting people and places to develop the capacity to live with, recover from and adapt to flooding and coastal change.

The Committee aims to help people better understand their risks of flooding and coastal change and to support them to take personal and collective responsibility as part of the shared endeavour to become ready for and resilient to increasing risk.

This strategy sets out in a series of maps the nature of flood risk across Wessex and our priority places for action. The Committee will monitor implementation of the strategy and aims to review it every two years.

We are most grateful for the commitment and contributions of all members of the committee, of officers of the Environment Agency and of local authorities and of others. Managing the risks and being ready to respond and adapt is everyone's business. We hope that this strategy makes a useful contribution.

David Jenkins
Chair Wessex Regional Flood and Coastal Committee

and

Emma Baker
Area Director

June 2022

1.0 Introduction

In April 2017 Wessex RFCC published its Strategy for 2017-21 and beyond. The Strategy set out for the first time the nature of flood and coastal erosion risks in Wessex and how the Committee working with others intended to address them.

Over this time the Committee has

- Overseen £150 million of capital investment that has better protected 15,468 properties
- Supported a programme of Natural Flood Management
- Supported the introduction of a Groundwater flood warning service
- Supported an extensive programme of engagement with more than 50 communities to ensure that people better understand their flood risk and what they can do to ensure they are better prepared for flooding when it happens.

In 2013/14 Wessex experienced a major flooding event that resulted in long-lasting flooding on the Somerset Levels and Moors, extensive damage to coastal defences along the Dorset coast and more than 1000 properties suffering groundwater flooding across Dorset and Wiltshire. Since that time Wessex has experienced numerous, more localized flooding and coastal change events.

These and other recent major incidents across the country show the devastating impact flooding and coastal erosion can have on communities.

This Strategy provides a framework for all those who have an interest in flood and coastal erosion risk management to work together to do all that we can to reduce flood and coastal risk as much as possible and to adapt for the future.

This Strategy describes:

- The national context
- The nature of flood and coastal erosion risk across Wessex;
- Who is responsible for managing flood risk;
- The role of the Wessex Regional Flood and Coastal Committee (RFCC);
- The Committee's Strategy for managing the risk;
- How the Committee plan to deliver the strategy.

It is, however, impossible to prevent all flooding and coastal change. The extreme events of recent years and predictions of more intense rain and storminess associated with climate change mean that in some locations risk will increase.

An important part of the Strategy is therefore to ensure that homeowners and businesses take responsibility for understanding their flood and coastal erosion risk and take action to make themselves more resilient to flooding and coastal change and to adapt as the risks increase. Community engagement and flood warning will therefore be important components of the Strategy.

2.0 The National Context

Since April 2017 there has been new legislation and a number of national plans and strategies have been published. These all need to be factored into the Committee's Strategy and include:

- A Green Future -the Government's 25 Year Plan to Improve the Environment (January 2018)
- The Agriculture Act 2020
- The Environment Act 2021
- Updated UKCP18 Climate Projections (November 2018)
- National flood and coastal erosion risk management strategy for England (September 2020)
- Defra Flooding and Coastal Erosion Policy Statement (September 2020)
- Nature Recovery Network and Local Nature Recovery Strategies
- Chalk Stream Strategy (CaBA)
- £5.2 Billion Capital Investment in upgrading and building new defences between 2021/22-2026/7 to better protect 336,000 properties.

All of these publications highlight the threat that climate change and the associated risk of increased flooding and coastal change poses to our economy, environment, health and way of life. The most recent climate change predictions confirm we will experience

- Wetter winters and drier summers
- Increased likelihood of more intense rainfall leading to more flooding
- Continued sea level rise well into the next century, this and more storms will result in a changing coastline

In fact, Climate Change is happening and we are already experiencing more extremes of weather resulting in more frequent flooding and coastal change.

The National Flood and Coastal Erosion Risk Management Strategy for England published in September 2020 sets out how we plan to respond to the increasing risk and makes clear that it is unrealistic to build ever higher walls in response to increasingly intense flooding and sea level rise.

The Strategy moves us from the concept of protection (where we continue to protect people from flooding and coastal change) to one of resilience where people and places develop the capacity to live with, recover from and adapt to flooding and coastal change.

The Vision and high-level ambitions of the Strategy are summarised below:

The Strategy Vision is: **for a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100.**
It has 3 long-term ambitions, underpinned by evidence about future risk and investment needs. They are: • **climate resilient places**: working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change • **today's growth and infrastructure resilient in tomorrow's climate**: making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change • **a nation ready to respond and adapt to flooding and coastal change**: ensuring local people understand their risk to flooding and coastal change, and know their responsibilities and how to take action

Alongside the Strategy the government has developed a policy statement on flooding and coastal erosion. The policy statement sets out the government's long-term ambition to create a nation more resilient to future flood and coastal erosion risk. Together the policy statement and the National FCERM Strategy for England provide a framework to guide the activities of those involved in flood and coastal erosion risk management.

Many of these publications also reference the ecological crisis and the need for action to ensure the recovery of a wide range of habitats and species including freshwater, estuarine and coastal environments. The need to work with nature and to embrace nature based solutions and catchment based approaches is therefore integral to creating climate resilient places for both people and wildlife.

All of these changes provide more opportunities to combine better water management with nature recovery.

River Frome: Woodsford River Restoration Project

3.0 Purpose of Wessex RFCC

Wessex Regional Flood and Coastal Committee (RFCC) is one of 12 committees nationally that help to deliver the Government's commitment to reduce the risk of flooding and where relevant to manage the coastline from coastal erosion across England.

The RFCCs were established by the Environment Agency under the Flood and Water Management Act 2010. They bring together members appointed by Lead Local Flood Authorities (LLFAs) and members appointed by the Environment Agency, including at least one member with environmental expertise and at least one with coastal expertise. Local democratic input is provided by the majority of members representing LLFAs.

The Wessex RFCC has 19 members comprising a Chair appointed by the Secretary of State, 10 members representing the LLFAs in Wessex and 8 members appointed by the Environment Agency. A list of current members is included at **Appendix 3.**

The role of RFCCs is fully described in the Regional Flood and Coastal Committees Members' Handbook. The main purposes of the Committee are:

- 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 decisions in flood and coastal erosion risk management that optimise value for money and benefits for local communities;
- To provide a link between the Environment Agency, LLFAs, other RMAs and other relevant bodies to engender mutual understanding of flood and coastal erosion risks in its area.

The RFCC advises on and gives consent to the Environment Agency's flood and coastal erosion risk management (FCERM) investment programmes making sure that investment is coordinated and takes account of local priorities and climate change impacts. The committee also supports the raising of Local Levies and uses them to promote flood and coastal erosion risk management activities in their Area.

The RFCC has an important role to support the delivery of the Government's flood and coastal erosion risk management policy and the National Flood and Coastal Erosion Risk Management Strategy for England whilst taking into account Defra and Environment Agency guidance.

Managing flood risk involves partnership working. All Risk Management Authorities (RMAs) have arrangements in place that bring interested parties and local communities together and RFCC members play a key role in working with and supporting these partnerships. A good example of partnership working is the Somerset Rivers Authority (SRA).

The map on the cover shows the Wessex RFCC area and **Appendix 1** provides a more detailed explanation of role and responsibilities of the various organisations involved in managing flood and coastal erosion risk.

The Wessex RFCC Strategy enables the Committee to identify priorities for investment and take action to address local flood risk and coastal change issues across Wessex.

4.0 Wessex RFCC Area context

Wessex is a very diverse geographical area which forms the eastern part of the South West Peninsula. Its coastlines are very different and its wide range of drainage basins and rivers mean that it is subject to coastal, fluvial, surface water and groundwater flooding. Multiple causes of flooding affect many locations in both urban and rural areas.

Some of the notable features of the coast include:

- The Dorset part of the Dorset and East Devon World Heritage site (known as the "Jurassic Coast") between Lyme Regis and Studland. The site has an outstanding combination of globally significant geological and geomorphological features, including rock formations which display 185 million years of the Earth's history, globally significant fossil sites and textbook examples of more recent coastal landforms and processes, inluding Black Ven landslide, Chesil Beach, Durdle Door and Lulworth Cove. Although the coast has a low tidal range, erosion is active along most of its length. Many of its pebble and sand beaches act as important natural flood and erosion defences, as well as a range of engineered defences;
- Poole Harbour and Christchurch Harbour to the east of the Jurassic Coast;
- In complete contrast the north coast has a very large tidal range of 13 metres, which is the second highest tidal range in the world. There is also a tidal funnelling effect as the tide progresses up the Bristol Channel and Severn Estuary. There is a lowland coastal ridge protecting much of lowland Somerset along with an extensive network of engineered defences along the length of the north coast.

Some of the notable inland features include:

- Chalk Rivers in Dorset and Wiltshire which are predominantly fed by groundwater from underlying aquifers. This results in a unique hydrology whereby rivers don't respond rapidly to rainfall, but after prolonged periods of rain when the aquifers are fully charged long duration flooding can result. Chalk Rivers provide a unique habitat for many species and some rivers including the Hampshire Avon and River Frome (Dorset) are designated for their nature conservation importance;
- In contrast there are a number of small steep-sided catchments where the rivers are very 'flashy' and respond rapidly to intense rainfall. Once the rain stops, flood levels and flows subside equally quickly (see Table 1 in Appendix 4 for a list of rapid response catchments). Steep-sided urban catchments also behave in a similar way;
- Other larger river systems including the Bristol Avon and River Stour (Dorset) are surface fed rivers that respond to rainfall in a more 'textbook fashion'
- The Somerset Levels and Moors is a lowland area where much of the land is below sea level and within the flood plains of the Rivers Parrett, Brue and Axe. There are complex arrangements in place for water management including the drainage of land for agriculture and removing flood water by pumping it back into the rivers (once there is capacity to do so). The rivers are also influenced by high tides and if these coincide with high river flows then 'tide locking' can occur. This is a phenomenon where high tide levels prevent the river flows from discharging into Bridgwater Bay.

The natural environment in Wessex is very special with a diverse range of habitats supporting a varied biodiversity. There are many sites that are designated locally, nationally (including 489 Sites of Special Scientific Interest (SSSIs) covering 8% of Wessex) and

internationally (37 Special Areas of Conservation (SACs) and 10 Special Protection Areas (SPAs)).

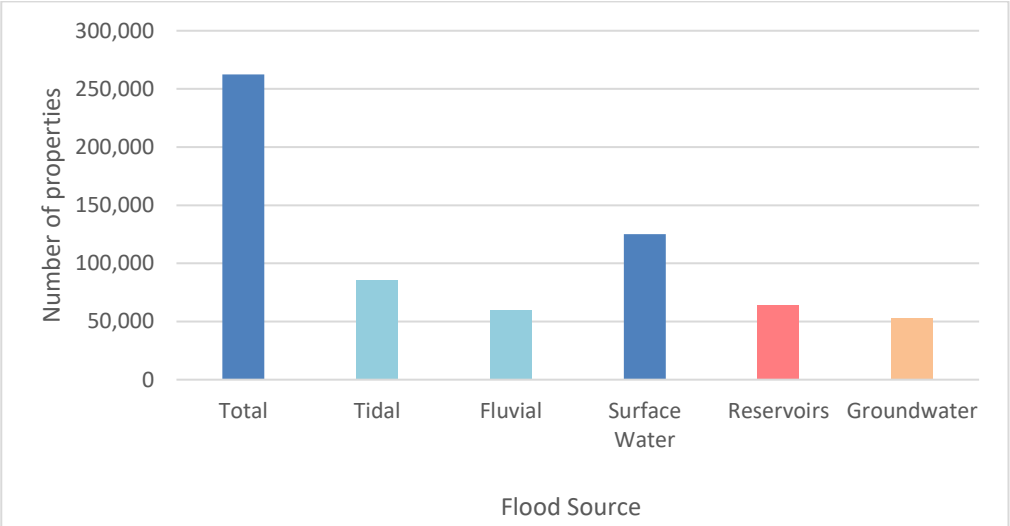
The marine environment is equally special and 28% (approximately 300 km²) of its coastal waters are in marine protected areas (Marine Conservation Zone, SAC, SPA or SSSI).

All work to reduce flood risk and coastal change provides an opportunity to protect and improve these very special environments.

5.0 Flood and Coastal Erosion Risk in Wessex

Flood Risk in Wessex

There are a number of national data sets and mapping tools which are used to map the risk of flooding from rivers, sea, surface water and groundwater sources. These show that there are approximately 250,000 properties at risk of flooding in Wessex from a variety of sources. The diagram below provides a breakdown of properties at risk by source of flooding



Property dataset = EA Address Standard, accessed March 2022. Fluvial and tidal based on Flood Zone 2, undefended 0.1% AEP. Surface Water: (due to be updated late 2022). Reservoirs: Wet Day Failure (new modelling 2021). Groundwater from Flood Warning Area polygons (due to be updated in 2023).

There is also flood risk to important infrastructure including major roads, rail lines, water and sewage pumping stations/ treatment works, gas, electricity and communication services.

There are currently 284 Flood Warning Areas in Wessex providing warnings to 80% of properties at risk. The current level of public take up of this service is 65%.

Coastal Erosion Risk in Wessex

The National Coastal Erosion Mapping (NCERM) maps have been developed for the coastline of England. Taking account of 2018 UK climate projections on climate change (including sea level rise) the erosion risk maps predict where the coastline will be in the

next 20, 50 and 100 years.

The NCERM data indicates that without further investment

- 9100 properties on the Dorset coast would be lost to erosion by 2110 (compared to 4400 properties at coastal flood risk)
- 170 properties on the North Wessex Coast would be lost to erosion by 2110 (compared to 74,000 properties at coastal flood risk).

Lyme Regis 2012 Storm

Strategic Flood and Coastal Planning

Shoreline Management Plans (SMPs) provide a framework to plan for coastal change, investment and spatial planning over a 100 year time horizon. They are developed by coastal groups consisting of Local Authorities and the Environment Agency and provide a basis for local engagement, consultation and political acceptance of future coastal change and adaptation. The plans identify sustainable management approaches for each length of coastline based on 4 policy options (hold the line, advance the line, managed realignment and no active intervention) which can change across 25 year time horizons.

The Environment Agency is currently refreshing the evidence and technical guidance which underpins SMPs. Coastal Groups will then be able to use this evidence and guidance to review their SMPs and where appropriate change their shoreline management policies.

Flood Risk Management Plans (FRMPs) (under the Flood Risk Regulations 2009) describe current and future risk of flooding from the sea, surface water, groundwater and reservoirs and set out action to address the risks identified. The second cycle of plans are in development and will set out specific actions between 2021 - 2027 (plan publication delayed as a result of Covid-19) and will encourage authorities to take an adaptive approach to Strategic Flood Risk Planning based on 2018 UK climate change projections.

River Basin Management Plans (RBMPs) provide a framework for achieving an improved and sustainable water environment. A public consultation on the draft RBMPs is currently underway (concluding on 22 April 2022). RBMPs, SMPs and FRMPs together provide an integrated approach to catchment planning for water.

Incident Management

We expect inland flood risk to increase as climate change influences rainfall patterns. At the same time we expect sea level rise and increased storminess to increase flood and coastal erosion risk. Flooding and Coastal Change will happen and to be more resilient everyone needs to be better prepared.

It will therefore be essential for all RMAs and Local Resilience Forums (LRFs) to understand the increasing risk and to have robust and exercised plans in place to ensure an effective and joined up response.

Increasing resilience will also mean local communities and business better understanding their flood risk and to have plans in place to prepare for and recover from flooding. The Flood Warden network have a key role to play in increasing resilience.

6.0 The Strategy

Wessex RFCC Vision: Making Wessex more resilient to flooding and coastal change.

Making Wessex more resilient means people and places develop the capacity to live with, recover from and adapt to flooding and coastal change.

Alongside investment to better protect communities and maintain existing defences we will need to implement a broad range of other measures including:

1. Improved place making - encompassing catchment based approaches, nature based solutions and appropriate development to both manage flood risk and coastal change and protect and improve the environment.
2. Being ready to respond to flooding – preparing for and responding to flooding and coastal change
3. Be able to recover quickly following flooding
4. Helping communities to better understand their flood and coastal change risk and enabling them to take personal responsibility as part of the collective endeavour to become more resilient to increasing risk.

So what does all this mean for Wessex?

To capture what this means for Wessex a series of “we will” statements brigaded underneath each of the national Strategy ambitions has been developed. These are a mix of measures. Some are easily measured, e.g., number of properties better protected, and others are about changing our approach to flood and coastal change risk management over the lifetime of the Strategy.

Climate Resilient Places for People and Wildlife

By 2027, working together we will

1. Better protect 11,000 properties from increased flood risk and coastal change through our capital investment programme.

2. Incorporate nature based solutions and catchment based approaches into our capital investment programme to improve resilience to floods and droughts for the benefit of people and wildlife.
3. Secure at least £20 million of partnership funding necessary to deliver the capital investment programme.
4. Maintain a Local Levy and IDB Precept Investment Strategy (see Appendix 2) that supports the delivery of the Committee's Vision.
5. Develop a strong pipeline of projects for the next 10 to 50 years and beyond that help Wessex adapt to increased flooding and coastal change.
6. Manage and maintain assets so that they operate as designed during flooding.
7. Have made significant progress towards Net Zero carbon and incorporated sustainability goals into all our plans and programmes.
8. Work with farmers and land managers to help them adapt their businesses to be more sustainable and resilient to flooding and coastal change via a range of initiatives including Environmental Land Management Scheme (ELMS) and the new Catchment Senistive Farming programme.
9. Develop adaptive approaches that enable practitioners and policy makers to better plan future flooding and coastal change investment.

Todays growth and infrastructure resilient to tomorrows climate

By 2027 together we will

1. Provide planning advice that helps avoid inappropriate development in areas at risk of flooding and coastal change
2. Engage with Committee members, Local Authority members and officers to ensure they fully understand development and flood risk issues and factor them into their decision making
3. Contribute to environmental and biodiversity net gain for new development proposals
4. Work with Local Enterprise Partnerships (LEPs) to ensure investment on flooding and coastal resilience contributes sustainable growth in local places
5. Encourage people to build back better after flooding (and before)
6. Work with infrastructure providers to ensure their assets become more resilient to flooding and coastal change.

Wessex communities are ready to respond and adapt to climate change

By 2027 together we will

1. Have helped 50 communities across Wessex better prepare for and respond to flooding and coastal change
2. Have improved flood warning services for 25 communities across Wessex
3. Have improved our preparedness for responding to flooding and coastal change when it happens
4. Develop better ways to communicate increased flood risk and coastal change

5. Develop better ways of involving flood wardens, local people and communities in managing their own flood risk.

The overall vision will only be achieved if everyone understands the flood and coastal erosion risk across Wessex and works in partnership to address shared priorities.

Priority Places for Investment

The successful delivery of the Strategy will require effective targeting and prioritisation of available resources and funding. Alongside the "We will" statements we will map Priority Places and opportunities for action and/or investment. These have been identified by considering a combination of existing and future flood risk, political and community interest and the potential opportunity to address the issue (often linked to regeneration) and are detailed in the table 1 below and the maps in Appendix 4 showing:

- How flood and coastal change risk is increasing over time covering coastal, fluvial, surface water, and groundwater flooding (Appendix 4: Maps 1a-d)
- Priority Places for Investment (Appendix 4: Map 2)
- Communities where Property Flood Resilience measures are to be offered (Appendix 4: Map 3)
- Catchments suitable for Natural Flood Management (Appendix 4: Map 4a)
- Opportunities for incorporating nature based solutions (Appendix 4: Map 4b)
- Priority places for community engagement (Appendix 4: Map 5)
- Where we are planning improvements to our flood warning services (Appendix 4: Map 6)

Our aim is to convey as much information as possible in inter- active map form supported where necessary with links to case studies and briefings showing how we are implementing the "We will" statements in practice.

Table 1: Wessex RFCC Priority Places for Investment 2022-2027 and beyond

Avonmouth& Severnside Enterprise Area (ASEA)
Bath
Bournemouth
Bridgwater
Bristol
Chippenham
Christchurch
Corsham
Dunball
Minehead
Poole
Salisbury
Swanage
Taunton
Wareham
Weymouth
Yate and Chipping Sodbury
Wessex Property Level Resilience Programme (PLR) – various locations
Reservoir Programme – various locations
Asset Recondition Programme – various locations
Wessex Trash Screen Replacement Programme-various locations
Somerset Pump Replacement programme
Wessex Pipeline development programme- various locations

Note Appendix 4: Map 2 will provide links to briefing notes outlining what is planned in each place.

The successful delivery of the Strategy will also be dependent on all RMAs having the right people with the right skills to address the flood risk and coastal change issues within their remit. Recruiting people with the necessary skills and experience in the current market is challenging. To counter this RMAs will increasingly need to work together, pool resources and adopt more innovative ways of working.

Monitoring the delivery of the Strategy

The Strategy will guide the Committee's work. To track progress the Wessex RFCC will receive periodic reports on progress against the "We will" statements and will review the Strategy every 2 years.

Appendix 1: Managing the risks: who does what?

The Department for Environment, Food and Rural Affairs (Defra) has overall national responsibility for policy on flood and coastal erosion risk management. It provides Grant in Aid (GiA) funding (administered by the Environment Agency) for risk management authorities including the Environment Agency, local authorities and internal drainage boards.

The term "flood risk management" is used to describe the work of flood risk management authorities (RMAs) such as the Environment Agency, Local Authorities, Internal Drainage Boards (IDBs) and Water and Sewerage Companies. They aim to reduce the likelihood of flooding by:

- Managing flood risk from all sources including river and coastal systems, surface runoff and groundwater;
- Constructing and managing defences, where appropriate
- Maintaining watercourses and flood defences where appropriate. They work together to reduce the impacts of floods through
- Influencing what is built where through land use planning;
- Regulating works carried out in rivers;
- Better flood warning
- Faster emergency response.

Under the Flood and Water Management Act 2010, all RMAs have a duty to co- operate with each other and to share information.

Public Sector Co-operation Agreements (PSCAs) are a good example of RMAs working together. They exist between public authorities for the delivery of public tasks of mutual benefit, and therefore are not subject to the regulations that require work to be tendered. PSCAs provide flexible arrangements for an IDB or other RMAs and the Environment Agency to deliver maintenance works and incident response. The Department of Levelling Up, Homes and Communities (DLUHC) and Local Planning Authorities have a key role to ensure flood risk is appropriately taken into account in the planning process. The policy on how to take flood risk into account can be found in the National Planning Policy Framework. DLUHC are also responsible for Building Regulations.

The responsibilities of RMAs and others are summarised below.

The Environment Agency

The Environment Agency is responsible for exercising general supervision over all matters relating to the management of all sources of flooding and coastal erosion in England.

As part of its strategic overview role, the Environment Agency has published a National Flood and Coastal Erosion Risk Management Strategy for England. The Strategy describes what is required to be done by all risk management authorities to reduce the risk of flooding and coastal erosion and to manage its consequences.

The Environment Agency also has operational responsibility for managing the risk of

flooding from main rivers, reservoirs, estuaries and the sea, as well as being a coastal erosion risk management authority.

Lead Local Flood Authorities (LLFAs)

Lead Local Flood Authorities (unitary authorities and county councils) are responsible for developing, maintaining and applying strategies for local flood risk management in their areas and for maintaining registers of their flood risk assets. They also have an operational role as the lead authorities with responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.

From 6 April 2015 LLFAs have taken over the role of statutory consultee for all major planning applications with surface water implications in all flood zones.

District Councils

District Councils are key partners in planning local flood risk management and can carry out flood risk management works on ordinary watercourses, working with Lead Local Flood Authorities and others in their area to ensure that risks are effectively managed.

District Councils are also local planning authorities and have a key role to ensure that flood risk is appropriately taken into account when making decisions on planning applications.

District and Unitary Councils in coastal areas are also the coastal erosion risk management authorities (Maritime Districts under the Coast Protection Act 1949).

As a result of various Local Government Reviews most areas have become unitary authorities. Somerset, Hampshire and Gloucestershire County councils are the remaining counties in Wessex with 2 tiers of local government (County Council and District Councils). From April 2023 Somerset County Council and the 4 District Councils will be replaced by a new Unitary Council for Somerset.

Internal Drainage Boards

Internal Drainage Boards (IDBs) are an integral part of water level management, for flood risk, land drainage and the environment in the UK. Each IDB is a local independent public authority established in areas of special drainage need in England and Wales. They have operational responsibilities and play an important role in the areas they cover (approximately 10% of England at present), working in partnership with other authorities to undertake works to manage water levels to meet local needs. They have permissive powers to manage water levels within their respective drainage districts.

Highway Authorities

Highway Authorities are responsible for providing and managing highway drainage and must ensure that road projects do not increase flood risk.

Water and Sewerage Companies

Water and Sewerage Companies (WaSC) are responsible for managing the risks of flooding from foul and combined public sewer systems and from public surface water sewers which drain runoff from buildings and yards.

WaSC long-term plans for providing resilient infrastructure both now and in the future are documented in Drainage and Wastewater Management Plans (DWMP). DWMPs are due to be published in June 2022 and for Wessex Water can be accessed here: www.wessexwater.co.uk/dwmp, and for other WaSCs via the Water UK website.

Somerset Rivers Authority

Somerset Rivers Authority (SRA) is a partnership between 11 of Somerset's existing organisations with a role in flood risk management. It includes Somerset County Council, 4 District Councils, the Axe Brue and Parrett IDBs, the Environment Agency, Natural England and Wessex RFCC.

The SRA's purpose is to provide a higher standard of flood risk management than is affordable from the individual budgets of RMAs. The SRA raises extra money to deliver extra work. Schemes are prioritised for SRA funding on the basis of Somerset's 20 Year Flood Action Plan, which was developed in response to the floods of winter 2013/14.

The SRA also provides information to the public and across the partnership, about all flood risk management in Somerset.

Riparian owners

Flooding to homes and business can occur even when all the RMAs have met their obligations. It is also the responsibility of the householder or business to look after their property including protecting it from flooding whilst not increasing flood risk elsewhere.

Furthermore if a householder or business has a watercourse within, under or bordering their property curtilage they are deemed a riparian owner and subject to further responsibilities. These are described in Owning a watercourse.

Riparian owners are also responsible for maintaining and protecting the bed and banks of any watercourse that runs through or abuts their property from erosion.

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Appendix 2: Wessex RFCC Local Levy and IDB Precept Investment Strategy 2021/22 – 2026/27 and beyond

1.0 Background

In July 2020 the Environment Agency published the National flood and Coastal Erosion Risk Management Strategy for England. The Strategy Vision is for 'A nation ready for, and resilient to, flooding and coastal change today, tomorrow and to 2100'. In the face of climate change and the associated increase in flood risk and coastal change the achievement of this vision requires significant long term national and local investment.

The Government has therefore committed £5.2bn to FCERM Capital Investment over a 6 year period (2021/22 - 2026/27) to reduce the risks of flooding to 336,000 properties including both homes and non-residential properties, such as shops, businesses, schools, hospitals, etc. across England. As part of this programme approximately 11,000 properties in Wessex will be better protected.

This investment will also deliver a broad range of outcomes including sustainable growth and regeneration, economic development, maintain our ability to warn and inform people at high risk of flooding from rivers or the sea and coastal erosion, maintain our ability to respond to incidents so as to save lives and property and to enhance the environment through environmental net gain and embracing nature based solutions.

Better protecting properties and infrastructure from increased flooding and coastal change is at the heart of place making and is an integral part of Local Authority plans and aspirations to grow and regenerate local communities and economies. We will therefore be working in collaborative partnerships with Risk Management Authorities and other local and national partners to secure partnership funding and jointly realise place based solutions with a wide range of benefits.

The Committee has an important role to play in achieving the ambitions set out in the National Strategy and its own Strategy through promoting a medium to long term pipeline of local investment need.

2.0 How national funding is allocated via Partnership Funding mechanism

In 2012 a new system was introduced for allocating national capital funding to flood and coastal erosion risk management projects. This is known as Partnership Funding and is designed to better protect more communities, deliver more local benefits and help avoid the deprivation caused by flooding and coastal erosion by:

- Encouraging total investment to increase the levels of investment beyond levels affordable by central Government alone;
- Enabling more local choice, and encouraging innovative, cost effective options to come forward in which civil society may play a greater role;
- Introducing more certainty over Government funding for each community that will encourage additional investment to come forward.

The national allocation scheme is underpinned by a number of guiding principles including:

- Rather than some projects being fully paid for and others not at all, at least some national funding will be on offer to all potential projects over time based on the

outcomes and benefits they deliver. Projects that deliver sufficient benefits may be 100% funded by national Government. Projects that deliver relatively less will be offered an amount of funding based on the benefits they achieve, as long as other funding can be found to bridge the gap. The local levy is one source of funding that can be used to bridge the gap for projects in Wessex;

- Greater local input and decision making should not come at the expense of a stable long-term pipeline of projects necessary to exploit economies of scale and efficiencies in delivery. The increased certainty over Government funding therefore needs to be matched by an increased certainty in local levy funding;
- The general taxpayer should not pay to protect new development in areas at risk of flooding or coastal change, now or in the future.

3.0 What is Local Levy Funding?

The local levy is an additional, locally raised, source of income for flood and coastal erosion risk management projects to supplement national funding (Flood Defence Grant in Aid - FDGiA). Wessex RFCC raise a local levy on County Councils and Unitary Authorities within its boundary. The local levy is used to secure national funding (as part of the partnership funding mechanism) to invest in projects that are designed to reduce flood and coastal erosion risk for local communities.

The local levy is also used to support locally important projects that are not funded nationally by Flood Defence Grant in Aid (FDGiA), so reducing the risk to the Wessex RFCC Area.

The local levy is set by the RFCC (who need to recommend a level of Local Levy to the Environment Agency Board) and only Local Authority members representing Lead local Flood Authorities (LLFAs) are able to vote. The local levy vote takes place in October every year at the same time as budget setting discussions are taking place within LLFAs.

Local Levy is an important source of partnership funding that helps the Committee to both secure national funding and ensure that the Priority Places identified in its' Strategy and investment programmes are ready for, and resilient to, flooding and coastal change to 2100 and beyond.

4.0 What does Local Levy fund in Wessex

In the latest Capital Investment Programme over the period 2021/22-2026/27 more than £21m of local levy is being used to reduce the risk of flooding and coastal erosion to approximately 11,000 properties.

By committing £21m of local levy to these projects, the Wessex RFCC secures approximately £300m of central government funding for these projects through the Partnership Funding mechanism.

Put simply every £1 of local levy invested secures a further £15 in national funding. Nationally it has been determined that every £1 of capital investment in flood and coastal erosion risk management provides an average long term benefit in reduced damage of approximately £5.

Therefore every £1 of local levy invested by the Wessex RFCC results in approximately £80 of long term benefit for the people who live and work in Wessex.

Local Levy Gearing

In addition the local levy funds other local priority projects which are not a priority for national funding including future project development, Property Level Resilience schemes, Community Engagement, Natural Flood Management investigations and Specialist Asset Surveys across Wessex. Local Levy funded work is currently underway in more than 50 locations across Wessex.

5.0 Local Levy funding need from 2021/22 to 2026/27 and beyond

Local levy funding will provide:

- £21m plus of funding needed as partnership funding to deliver the capital programme over the remainder of the 5 year programme;
- Funding for other local priority projects;
- Funding needed to develop a project pipeline beyond 2021/22.

Table 1 below shows the projection of local levy committed to support the delivery of the capital investment programme over the next 6 years and beyond.

	2022/23 £k	2023/24 £k	2024/25 £k	2025/26 £k	2026/27 £k	2027/28 £k	2028/29 Onward
Opening Balances	4,241	4,267	3,136	3,507	3,553	3,543	2,493
Local Levy Income	3,935	4,014	4,094	4,176	4,259	4,345	4,431
In year Levy Programme	3,914	5,149	3,278	4,135	4,274	5,400	5,367
Closing Local Levy Balances	4,267	3,136	3,507	3,553	3,543	2,493	1,562

We also need to find a further £28-50m in partnership funding to deliver the Wessex capital investment programme over the next 6 years. We are exploring a number of funding sources to close this gap. It is however open to the RFCC to commit more local levy funding to these projects, if they believe that is a good investment of local levy and LLFA members on the committee support this through the annual vote on the local levy.

It should be noted however that over the 6 year period Local Levy balances are significantly reduced meaning that there is limited scope to make significant funding contributions to other projects over the next few years.

6.0 Wessex RFCC Local Levy funding strategy 2021/22-2026/27 and beyond

We are now commencing the second 6 year national capital investment settlement. This provides more funding certainty and enables a longer term approach to planning and delivery of the capital investment programme. To make the most of this certainty, it will assist to have a similar level of certainty with respect to local levy funding.

Whilst the actual levy set will always be the subject of an annual vote by LLFA committee members it will make for more effective planning if this is set in the context of the overall need of the 6 year programme.

A medium term local levy investment plan could be based on a number of scenarios which will result in the capital programme reducing, being maintained at its current level or growing. The table below outlines possible funding scenarios. It should be noted that efficiency savings are included in all scenarios.

Proposed annual % increase	Impact on the Capital Investment Programme
0	Current investment plans could not be maintained and there would need to be cuts in the programme meaning that schemes protecting some of the Committee's Priority Places for Investment maybe delayed
2	Current investment programme can be maintained
4	These increases would enable an increased level of partnership funding contribution to schemes and the progression of more local priority projects
6	

The local levy is an extremely important source of partnership funding and enables the Committee to maximise national capital funding available to fund schemes in Wessex.

At the present time given the severe financial constraints Local Authorities are under, the RFCC are asked, for planning purposes to set a levy that maintains the current investment programme (2% annual increase).

This funding strategy is effectively a planning assumption. It will be for local authority members each year to decide on the levy actually to be set for the following year in the light of their views on their authorities' then financial circumstances and the actual need for expenditure on flood risk management.

7.0 IDB Precept

IDBs pay a precept charge to the Environment Agency in respect of water that enters the main river network from IDB managed watercourses. The precept is used to extend the maintenance funded through FDGiA and includes weedcutting, vegetation works and the operation of structures.

In 2016/17 the Government increased the investment in the maintenance of the Environment Agency's FCRM assets by £40m per year until 2019/20. The Spending Review (SR15) settlement protects maintenance funding in real terms over the lifetime of the current parliament.

As part of the funding settlement the Environment Agency has developed a 5 year maintenance programme. As with local levy funding it will be beneficial for planning purposes for the RFCC to agree a medium term plan for setting the IDB precept.

Following a one year settlement as part of Spending Review 20 (SR20) future maintenance funding will be determined by the outcome of the Spending Review (SR21). To enable longer term planning it is likely that SR21 will be a multi-year bid. We have a strong case for additional investment and are bidding to secure the optimum level of investment for asset maintenance to reduce risk and to bring our assets into required condition as soon as possible.

In recent years the Environment Agency and IDB (and more recently Somerset Rivers Authority as well) have discussed and agreed the programme of maintenance work for Somerset. In response to a request for more information on the maintenance allocation and IDB Precept is spent a paper explaining the maintenance process was presented at the January 2020 RFCC meeting.

In 2019/20 £370k of IDB Precept was used to deliver an enhanced programme of asset repairs and maintenance across Somerset. In 2020/21 as a result of the in-year reduction in maintenance funding the precept was used to undertake water level management operations and lower cost benefit maintenance activities which could no longer be funded from FDGiA maintenance allocation.

Historically the IDB precept increase has been set at the same level as the Local Levy increase. To align with the national increase in maintenance funding the RFCC have agreed that the IDB precept should for planning purposes also increase by 2% per annum. The Environment Agency will then have greater funding certainty and will be able to deliver a jointly agreed maintenance programme and appropriate operation of assets to manage water levels in Somerset.

This will also be subject to an annual vote where all RFCC members could agree to support a 2% increase, or a greater or lesser increase, depending on the circumstances at that time.

Appendix 3: Members of Wessex RFCC (current from July 2022)

Composition of Wessex Regional Flood and Coastal Committee (RFCC):

1. A chair appointed by the Minister
2. Eight members appointed by the Environment Agency
3. Ten members appointed by, or on behalf of, each Lead Local Flood Authority or Group of Lead Local Flood Authorities

Current List of Members

Role	Named member
Committee Chairman	David Jenkins
EA appointed member – General Interests	Anthony Bradford
EA appointed member – General Interests	Rosie Dilke
EA appointed member – General Interests	Peter Finney MBE
EA appointed member – General Interests	Anne Fraser MBE
EA appointed member – Utilities	David Martin
EA appointed member – Coastal Processes	Ben Murray
EA appointed member – General Interests	Paul Robertson
EA appointed member – Conservation	Janette Ward
LLFA Member – Bath and North East Somerset Council	Cllr Mark Roper
LLFA Member – Bournemouth, Christchurch & Poole Council	Cllr Mark Anderson
LLFA Member – Bristol City Council	Cllr Paul Goggin
LLFA Member – Dorset Council	Cllr Mark Roberts
LLFA Member – Gloucestershire County Council	Cllr Phillip Awford
LLFA Member – Hampshire County Council	Cllr David Drew
LLFA Member – North Somerset Council	Cllr Bridget Petty
LLFA Member – Somerset County Council	Cllr Marcus Kravis
LLFA Member – South Gloucestershire Council	Cllr Robert Griffin
LLFA Member – Wiltshire County Council	Cllr Nic Puntis

Contacts for Wessex RFCC Partners

Environment Agency:

Ron Curtis ron.curtis@environment-agency.gov.uk (Wessex South)
Rachel Burden rachel.burden@environment-agency.gov.uk (Wessex North)

Wessex RFCC:

WessexRFCC@environment-agency.gov.uk

Appendix 4 Wessex in maps: Priority Places for investment and/or action

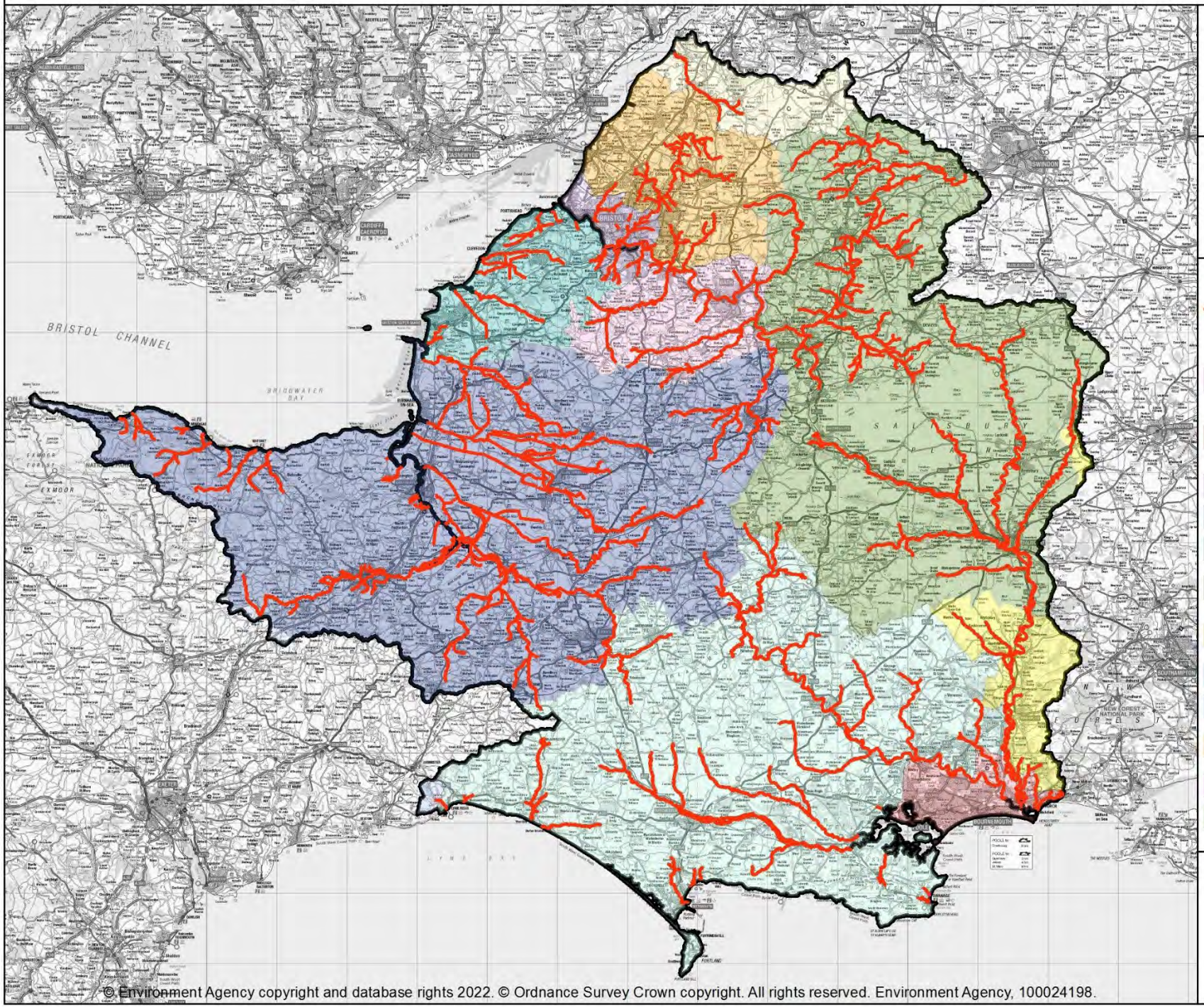
List of maps:

Map 0	Wessex RFCC County and Unitary Boundaries main river map
Map 1a	Taunton – Modelled Climate Change Impacts
Map 1b	Salisbury – Modelled Climate Change Impacts
Map 1c	Bristol – Modelled Climate Change Impacts
Map 1d	Poole – Modelled Climate Change Impacts
Map 2	Wessex RFCC Priority Places for Investment 2022 – 2027 and beyond
Map 3	Wessex Property Flood Resilience (PFR) Communities
Map 4a	Spatial Prioritisation of Wessex Catchments Suitable for Natural Flood Management (NFM)
Map 4b	Wessex opportunities for incorporating nature based solutions
Map 5	Wessex Community Engagement Priorities
Map 6	Wessex Flood Warning Service Improvements

Table 1 to be read with: Appendix 4 - Map 5 - Wessex - Community Engagement Priorities

County	Community	Rapid Response High/VH	Coastal High Risk	Levels & Moors
Dorset	Swanage	Yes	Yes	
Bristol	Brislington	Yes	Yes	
Dorset	Bridport	Yes	Yes	
Dorset	Lyme Regis	Yes	Yes	
Dorset	Weymouth	Yes	Yes	
Somerset West & Taunton	Kingsbridge to Watchet	Yes		
Mendip	Shepton Mallet	Yes		
Somerset West & Taunton	Doniford and Sampford Brett	Yes		
Dorset	Chideock	Yes		
Somerset West & Taunton	Porlock	Yes		
Dorset	Preston	Yes		
Mendip	Cheddar	Yes		
BANES	Chew Magna	Yes		
BANES	Chew Stoke	Yes		
BANES	Corsham	Yes		
Bristol	Westbury	Yes		
Dorset	Broadwey	Yes		
Dorset	Charmouth	Yes		
Dorset	Corfe Castle	Yes		
Dorset	Osmington	Yes		
Dorset	Uploders	Yes		
Dorset	Upwey	Yes		
Somerset West & Taunton	Allerford and Bossington*	Yes		
Somerset West & Taunton	Horner and upstream communities	Yes		
South Somerset	Crewkerne	Yes		
South Somerset	Wincanton	Yes		
Sedgemoor District	Bridgwater		Yes	Yes
Sedgemoor District	Burrowbridge			Yes
Sedgemoor District	Moorland, Fordgate & West Yeo			Yes
Sedgemoor District	Northmoor Green			Yes
Somerset West & Taunton	Minehead		Yes	
Bristol	Portishead		Yes	
BCP	Poole		Yes	
North Somerset	Weston Super Mare		Yes	
Sedgemoor District	Burnham on Sea		Yes	
Dorset	Fortuneswell		Yes	
Dorset	Chiswell*		Yes	
BANES	Broadmead Lane*	Yes		

Wessex RFCC County and Unitary Boundaries main river map



Environment Agency

Scale at A4: 1:750,000

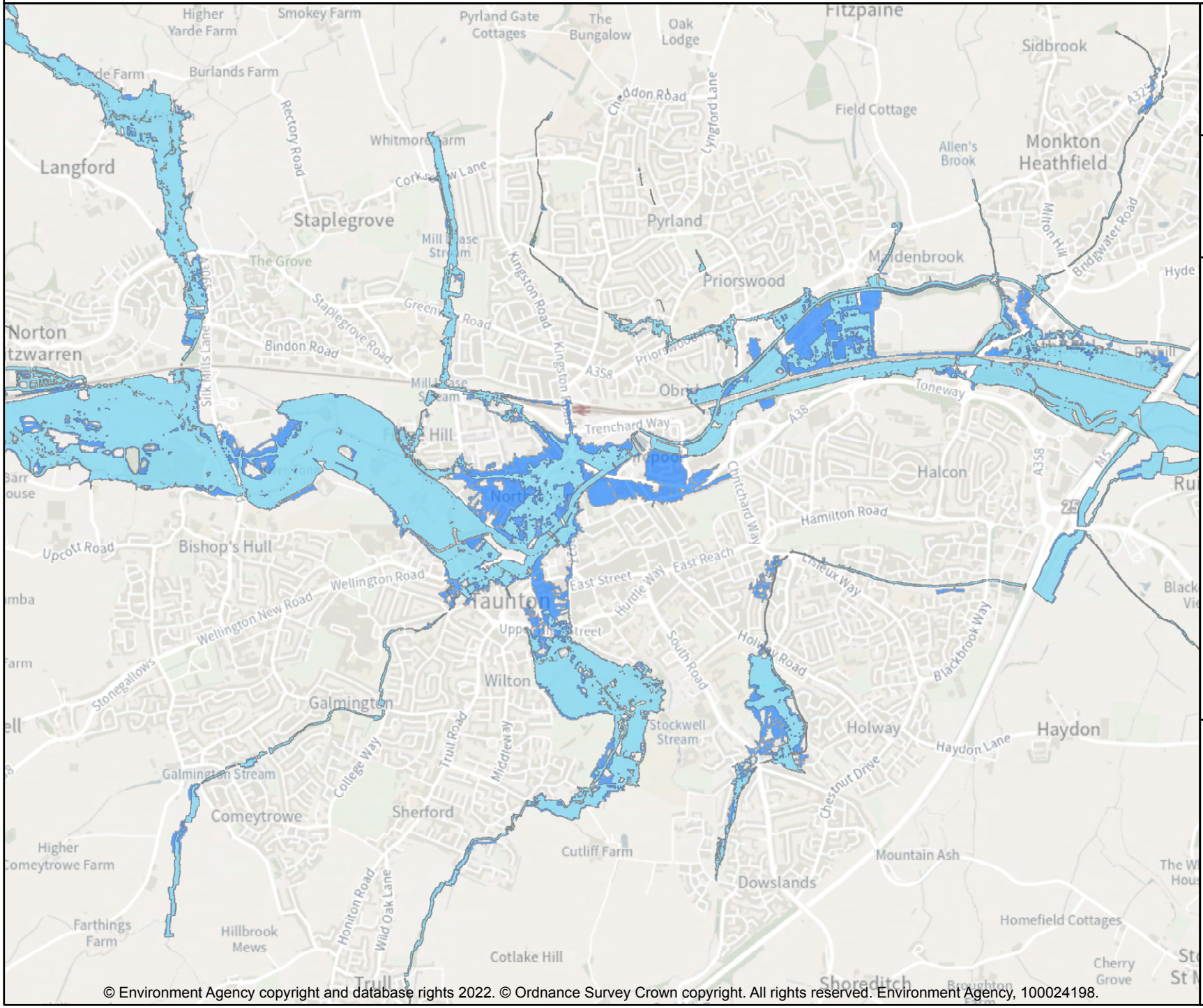
N

0 7,000 14,000 28,000

Meters

- Main River
- Bath and North East Somerset
- Bournemouth, Christchurch and Poole
- City of Bristol (B)
- Devon County
- Dorset
- Gloucestershire County
- Hampshire County
- North Somerset
- Somerset County
- South Gloucestershire
- Swindon (B)
- Wiltshire

Appendix 4 - Map 1a - Taunton - Modelled Climate Change Impacts - Central Allowance 2080s



Environment Agency

Scale at A4: 1:30,000

N

0 300 600 1,200

Meters

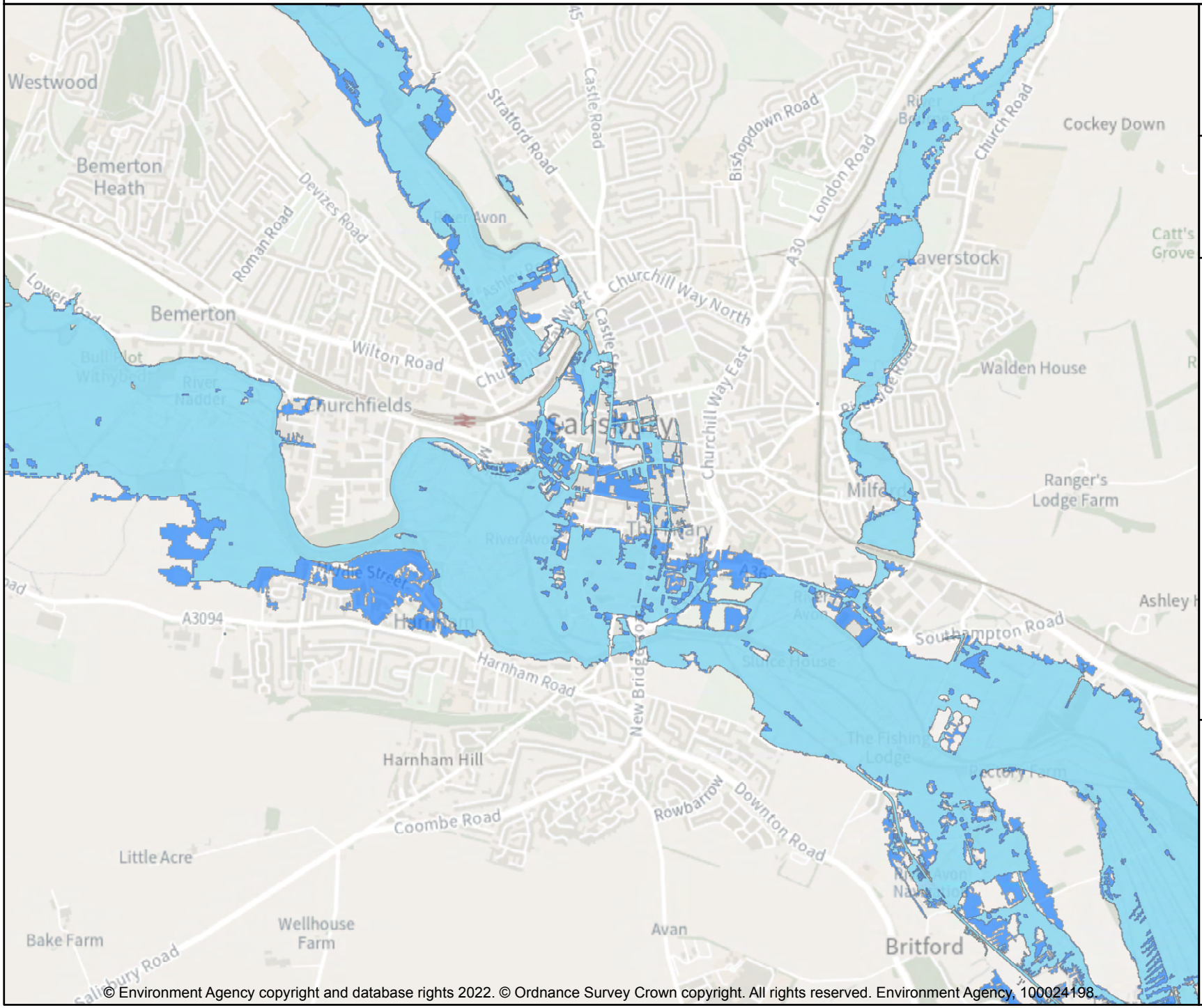
Legend

- Present Day 1% AEP
- 2080s 1% AEP

*AEP - Annual Exceedence Probability

This modelled fluvial climate change scenario uplifts the 1% AEP (1 in 100) peak inflow by 30%. This is nearest available equivalent to the recently updated peak river flow allowances for the central allowance (50th percentile) for the 2080s in the South and West Somerset Management Catchment – 37%.

Appendix 4 - Map 1b - Salisbury - Modelled Climate Change Impacts - Central Allowance 2080s



Environment Agency

Scale at A4: 1:25,000

N

0 250 500 1,000

Meters

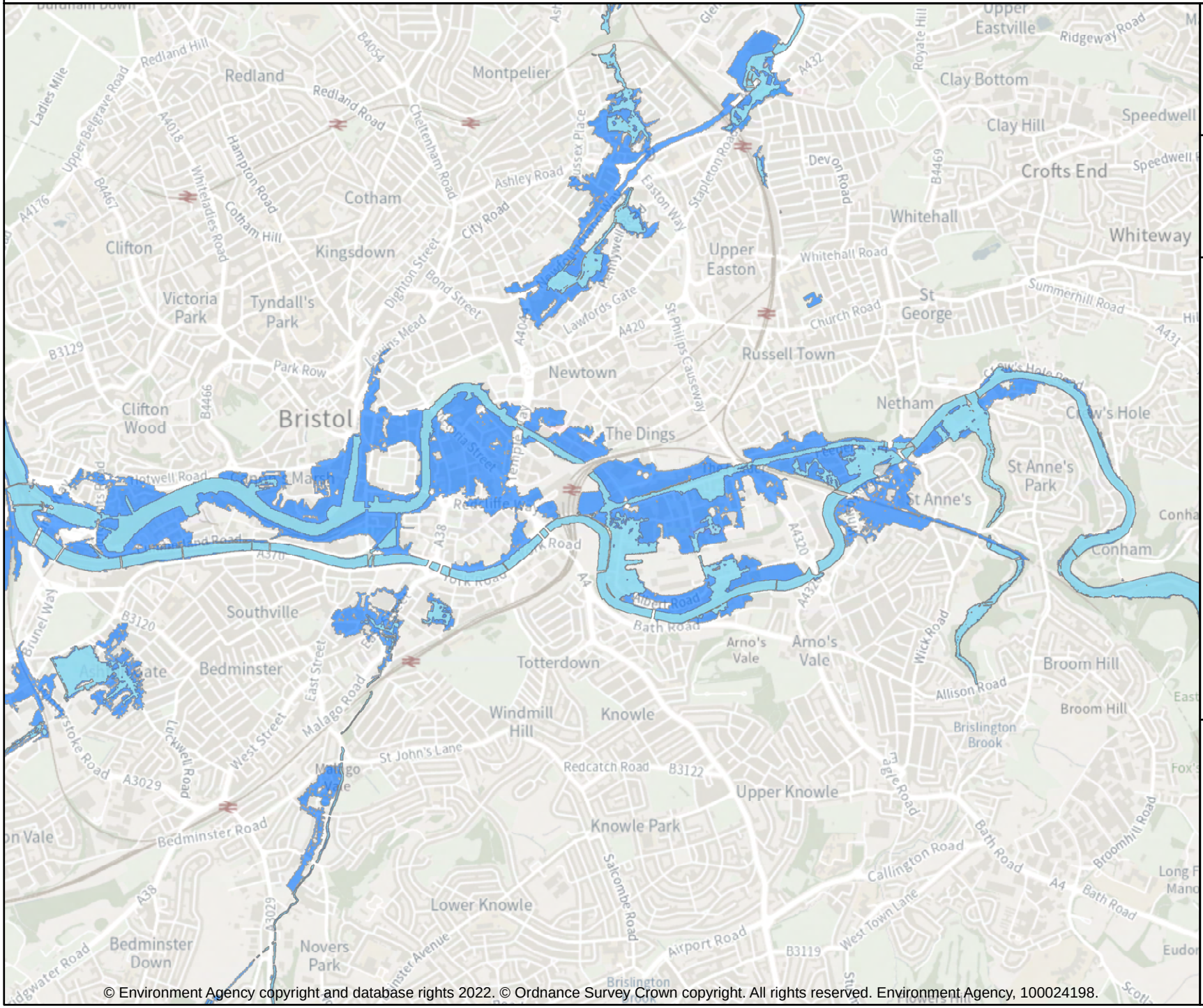
Legend

- Present Day 1% AEP Fluvial
- 2080s 1% AEP Fluvial

* AEP - Annual Exceedance Probability

This modelled fluvial climate change scenario uplifts the 1% AEP (1 in 100) peak inflow by 40%. This is nearest available equivalent to the recently updated peak river flow allowances for the central allowance (50th percentile) for the 2080s in the Avon Hampshire Management Catchment – 38%.

Appendix 4 - Map 1c - Bristol - Modelled Climate Change Impacts - Central Allowance 2120



Environment Agency

Scale at A4: 1:30,000

N

0 300 600 1,200

Meters

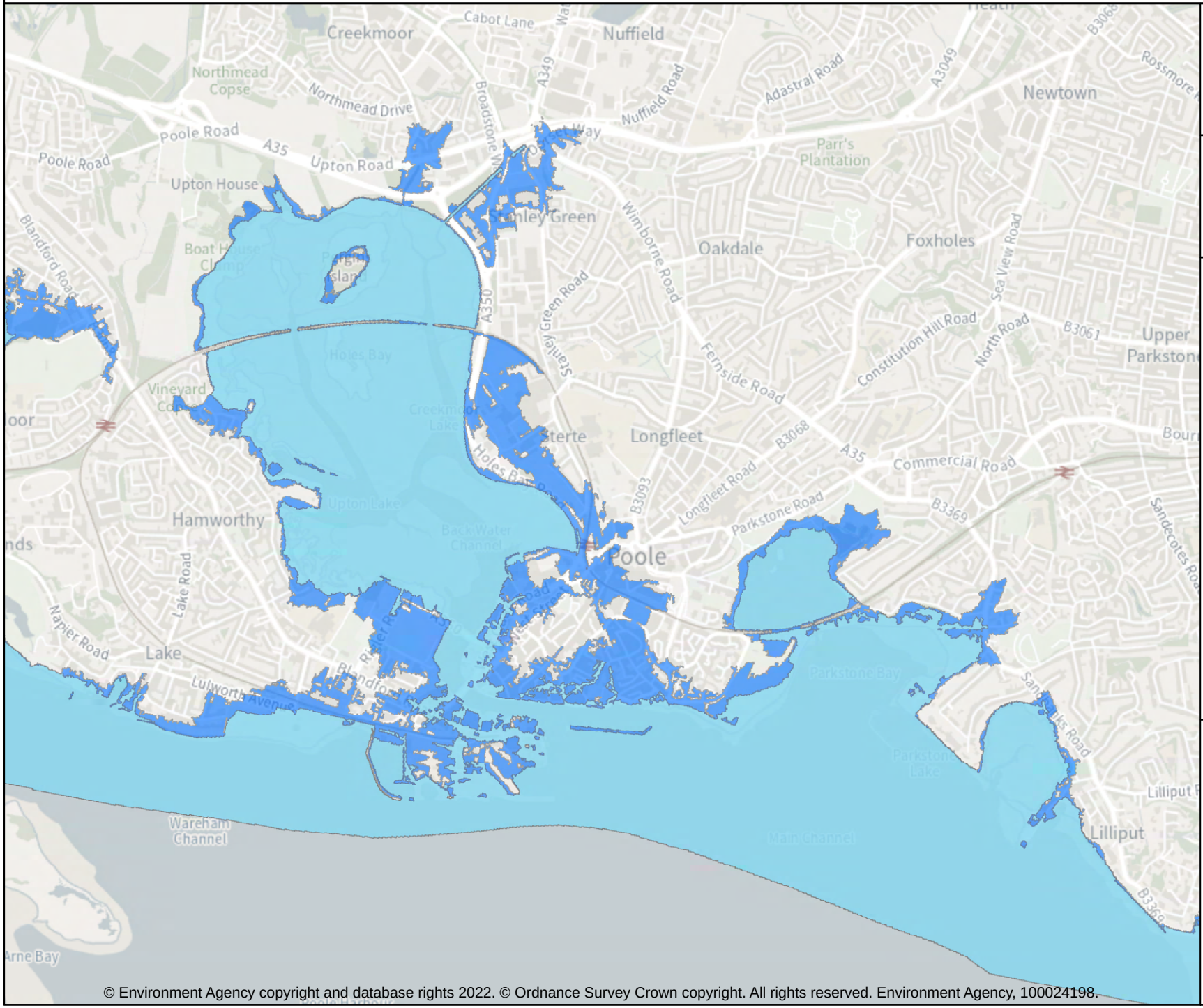
Legend

- Present Day 1% AEP Fluvial
- 2120 1% AEP Fluvial

* AEP - Annual Exceedance Probability

This modelled fluvial climate change scenario uplifts the 1% AEP (1 in 100) peak inflow by 35%, the tidal boundary condition also reflects predicted sea level rise. This is nearest available equivalent to the recently updated peak river flow allowances for the central allowance (50th percentile) for climate change to 2120. Please note that the current peak river flow allowances only

Appendix 4 - Map 1d - Poole - Modelled Climate Change Impacts - UKCP09 2118



Environment Agency

Scale at A4: 1:27,712

N

0 275 550 1,100

Meters

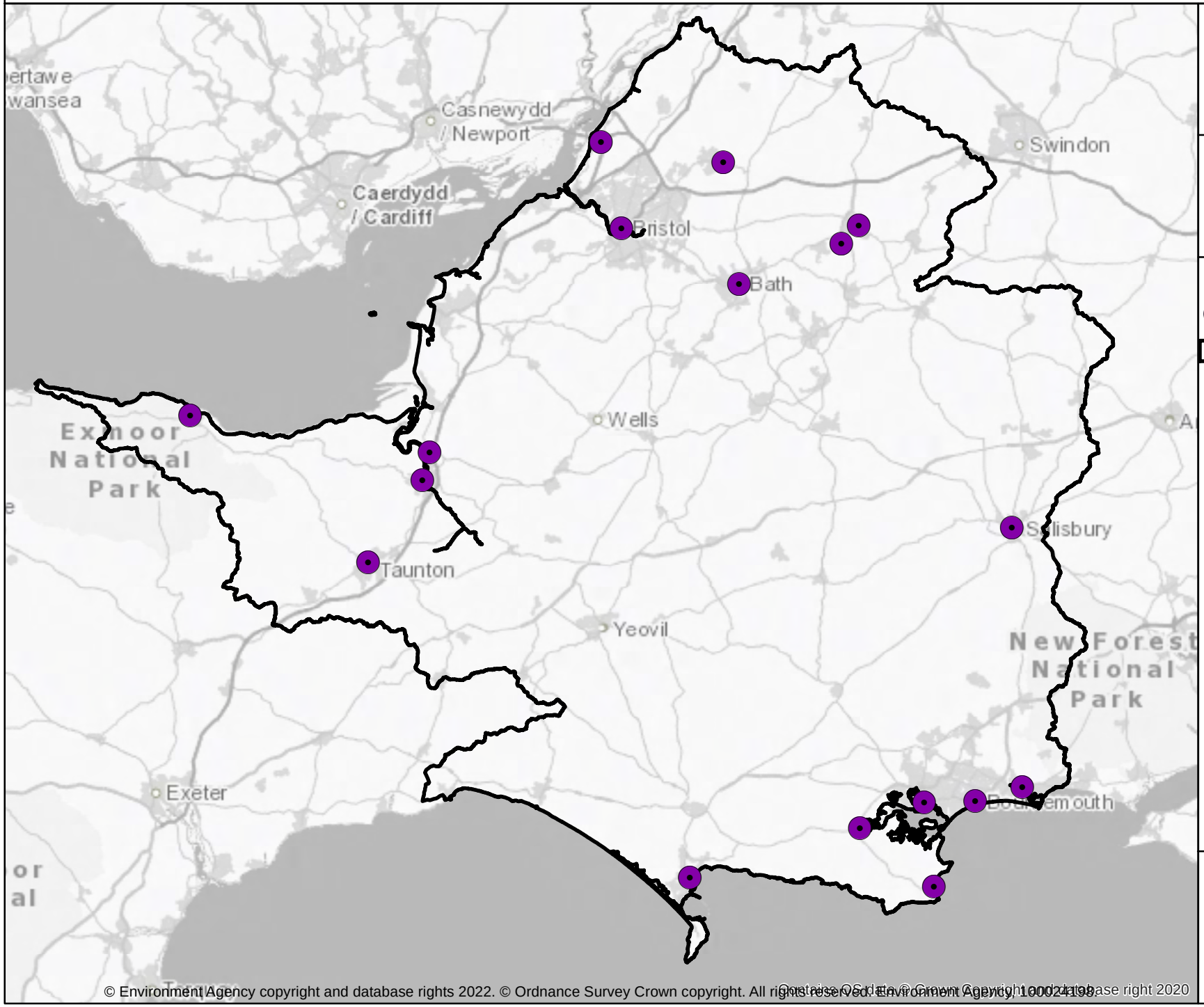
Legend

- Present Day 1% AEP Tidal
- 2118 1% AEP Tidal

* AEP - Annual Exceedance Probability

This modelled tidal climate change scenario uplift peak tidal levels according to the projections of UKCP09. UKCP09 provides future climate projections for land and marine regions as well as observed (past) climate data for the UK. UKCP09 was produced in 2009, funded by a number of agencies led by Defra and was updated by UKCP18 in 2018.

Appendix 4 - Map 2 - Wessex RFCC Priority Places for Investment 2022 - 2027 and beyond



Environment Agency

Scale at A4: 1:750,000

N

0 7,000 14,000 28,000

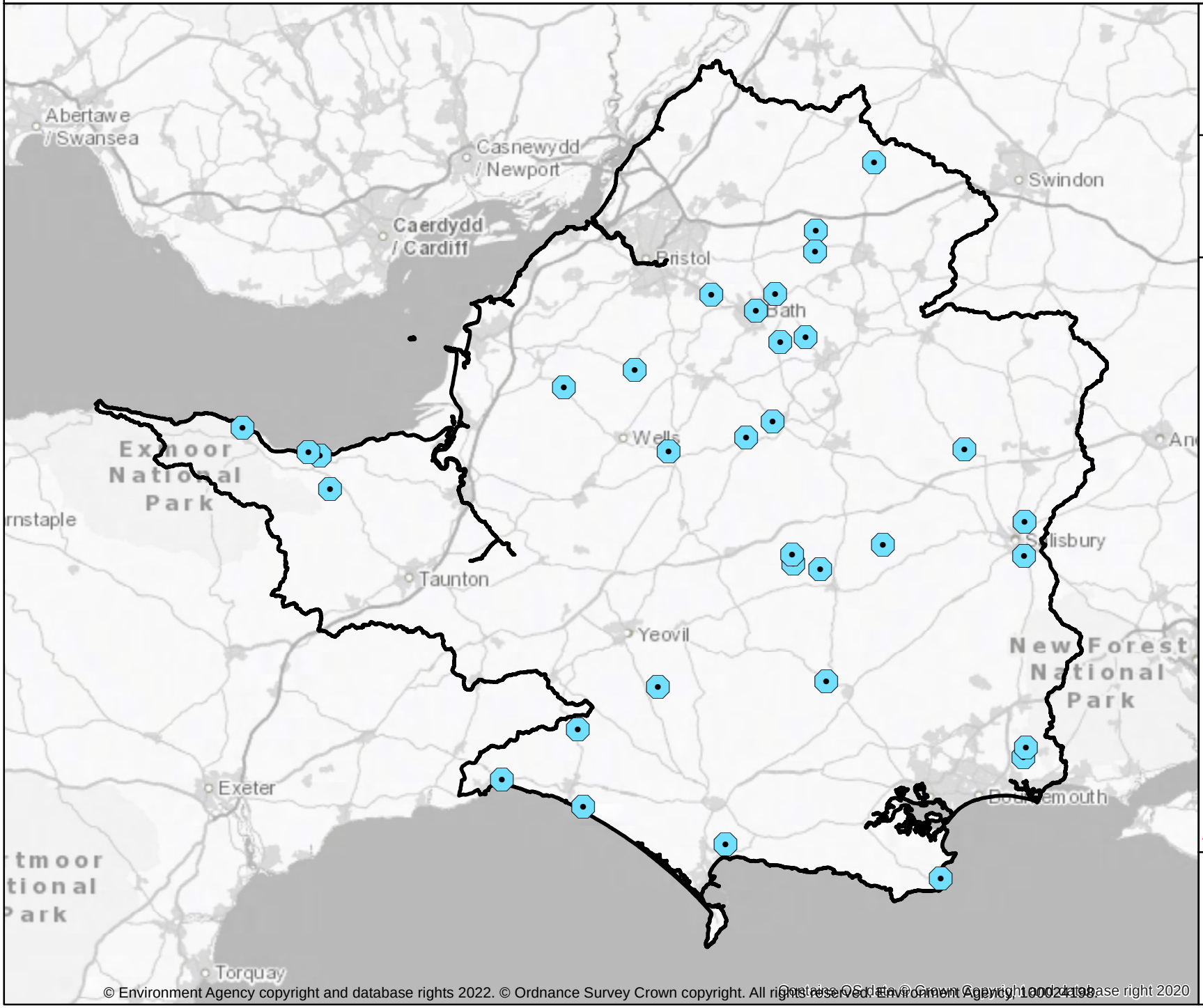
Meters

Wessex_RFCC_Priority_Places

WRFCC_Boundary

Avonmouth
Bath
Bournemouth
Bridgwater
Bristol
Chippenham
Christchurch
Corsham
Dunball
Minehead
Poole
Salisbury
Swanage
Taunton
Wareham
Weymouth
Yate

Appendix 4 - Map 3 - Wessex - Property Flood Resilience (PFR) Communities



Environment Agency

Scale at A4: 1:800,000

N

0 7,500 15,000 30,000

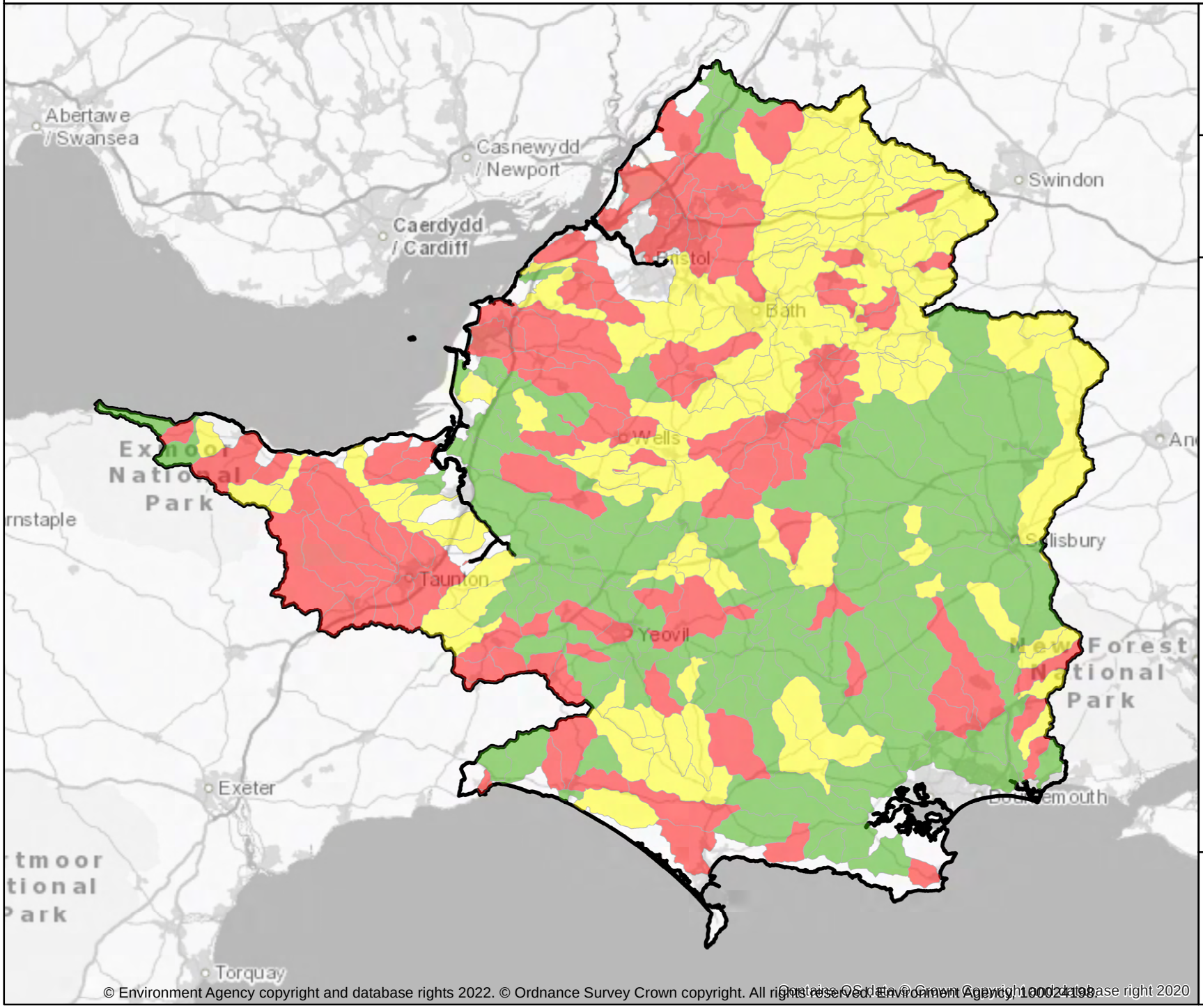
Meters

Legend

- PFR Communities
- WRFCC_Boundary

Bath	Gillingham
Batheaston	Kingswood
Beaminster	Malmesbury
Bradford On Avon	Minehead Harbour
Britford	Motcombe
Burton Bradstock	Nunney
Castle Combe	Ripley
Charmouth	Salisbury
Cheddar	Saltford
Chetnole	Shepton Mallet
Colesbrook	Shrewton
Doniford	Slaughterford
Durweston	Sopley
East Harptree	Sutton Poyntz
Ford	Swanage
Freshford	Tisbury
Frome	Watchet

Appendix 4 - Map 4a - Spatial Prioritisation of Wessex Catchments Suitable for Natural Flood Management



Environment Agency

Scale at A4: 1:800,000

N

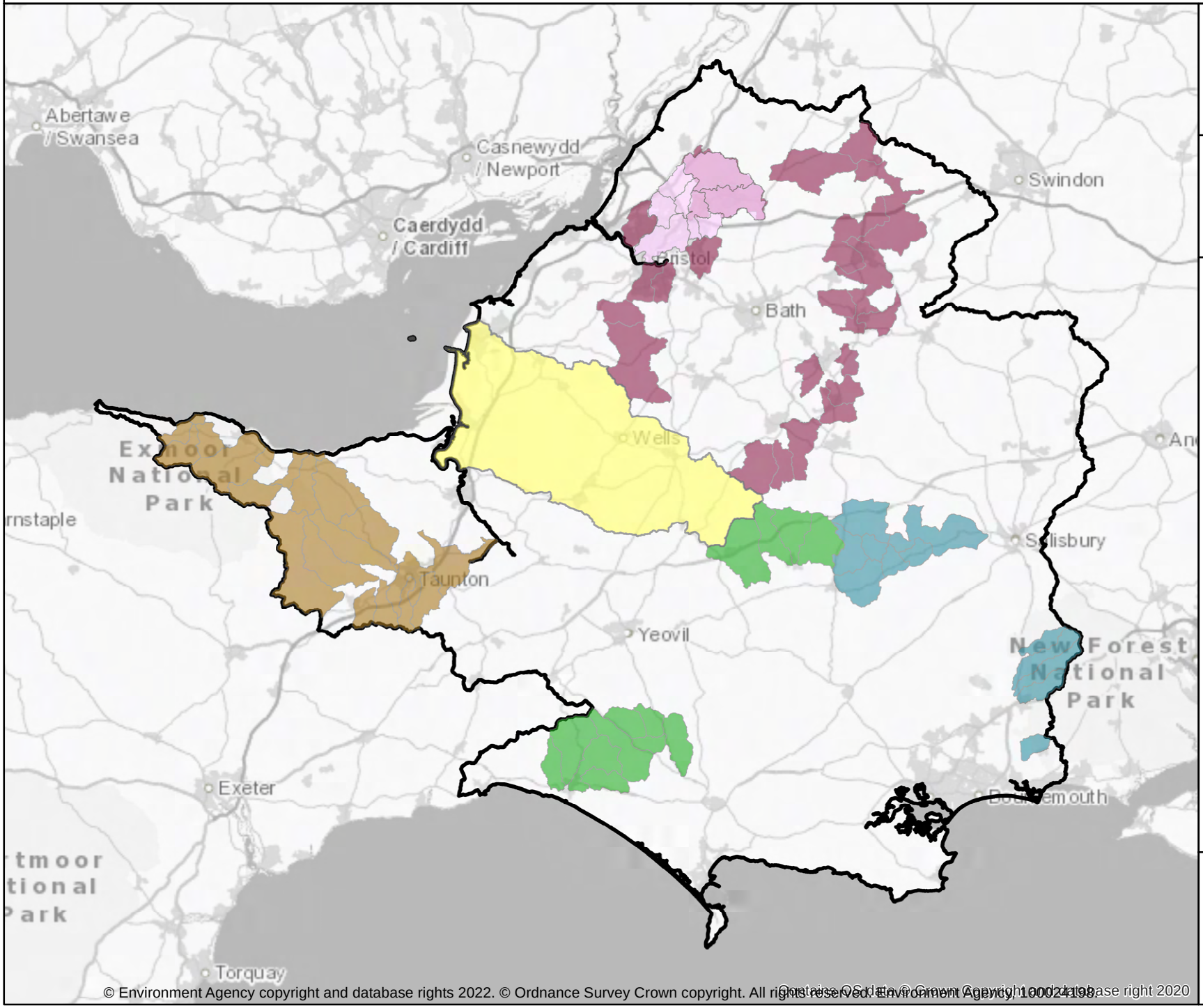
0 7,500 15,000 30,000

Meters

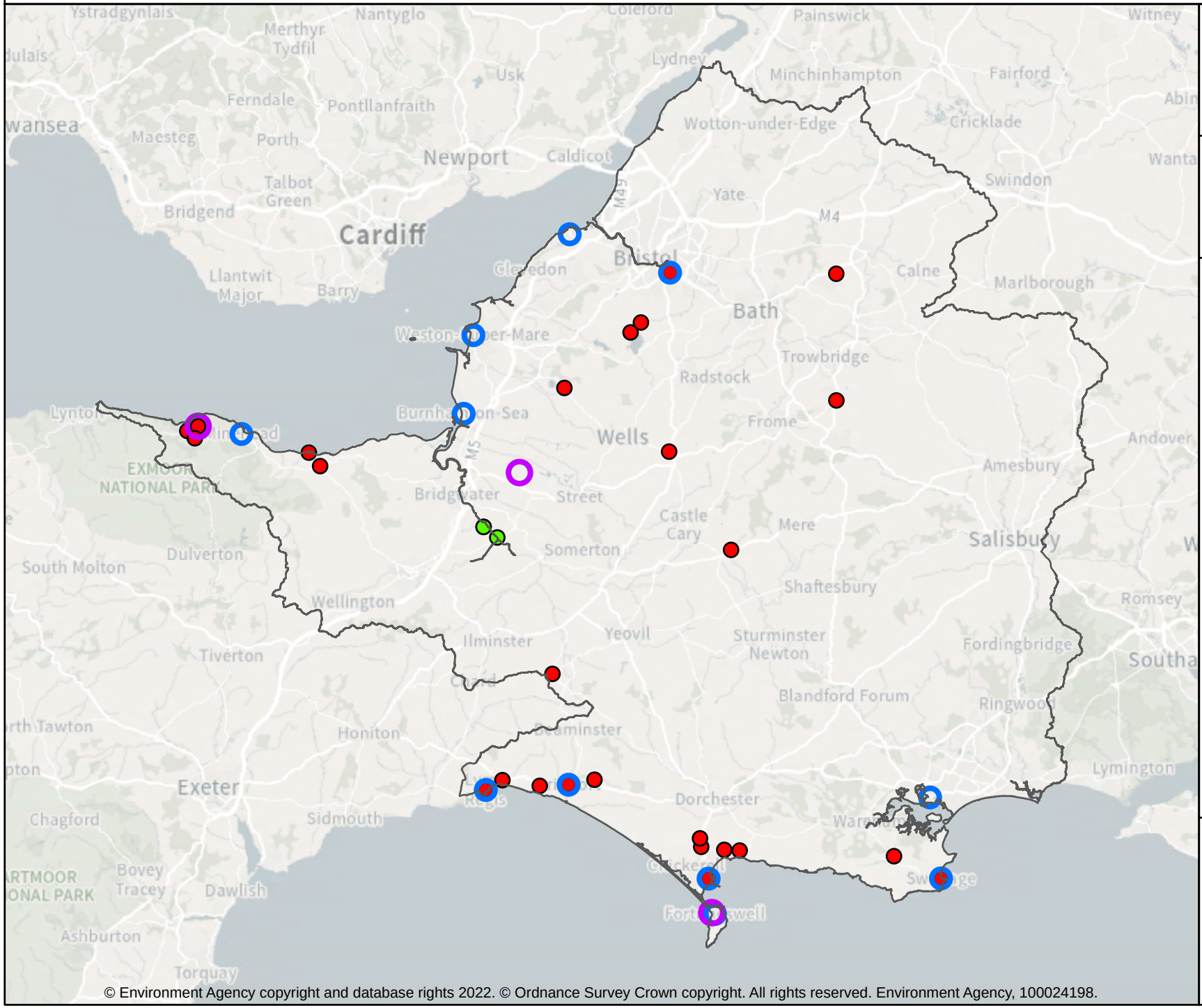
Legend

- High
- Medium
- Low
- WRFCC_Boundary

Appendix 4 - Map 4b - Wessex opportunities for incorporating nature based solutions



Appendix 4 - Map 5 - Wessex - Community Engagement Priorities



Environment Agency

Scale at A4: 1:800,000

N

0 5 10 20

Kilometers

Legend

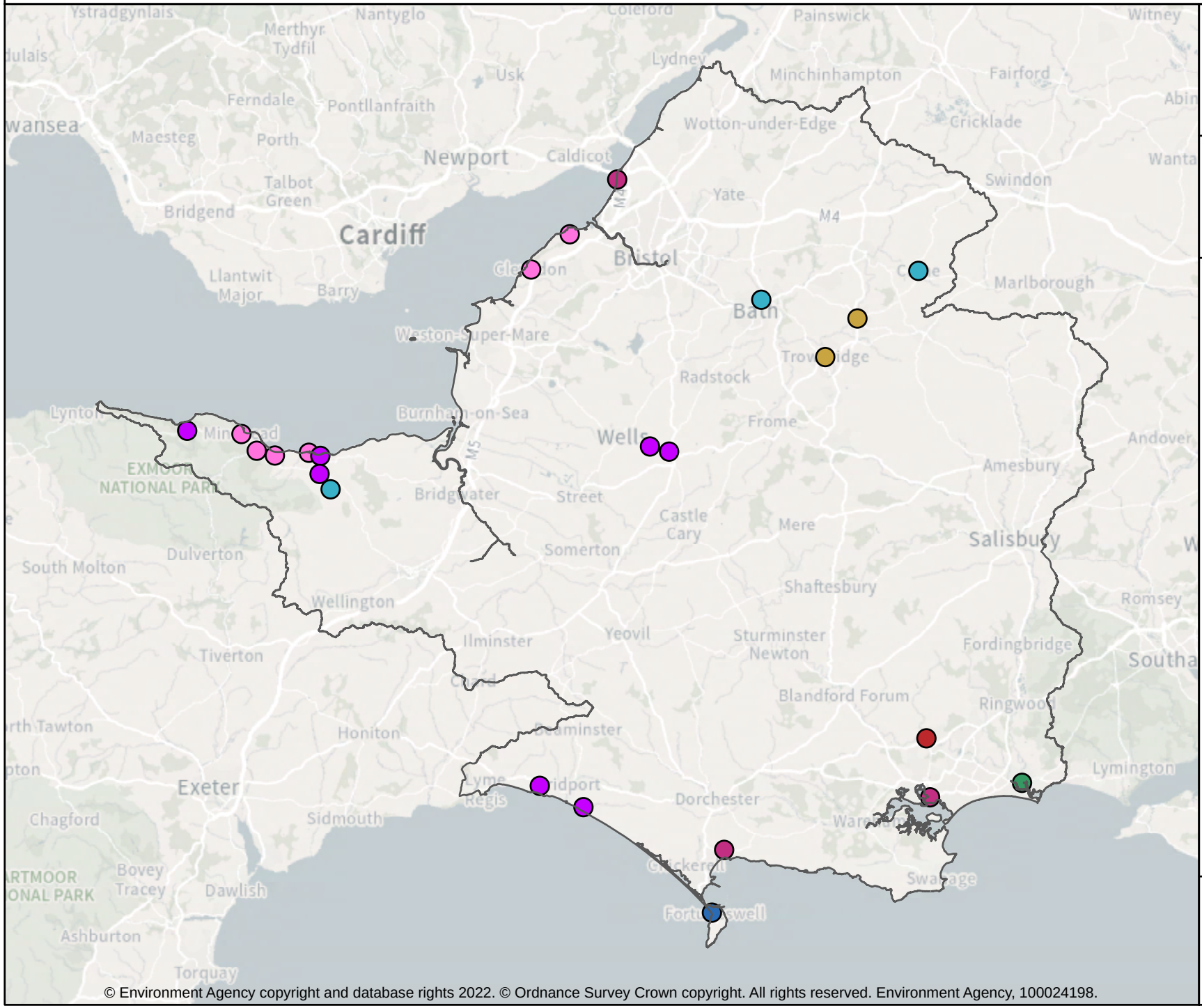
WRFCC Boundary

Category

- High Risk Coastal
- Rapid Response
- Siren Site
- Somerset Levels and Moors

In addition to these locations, community engagement will also be carried out to align with the Capital Investment Programme and where Flood Warning Service improvements are carried out.

Appendix 4 - Map 6 - Wessex - Flood Warning Service improvements



Environment Agency

Scale at A4: 1:800,000

N

0 5 10 20
Kilometers

Legend

WRFCC Boundary

Improvement

- Flood Forecasting and threshold
- Flood Warning Area
- Flood Warning Area, Flood Forecasting and threshold
- Flood Warning Expansion Project site
- New Flood Forecasting model
- New Flood Forecasting model (Rapid Response Catchment)
- New Flood Warning Area and threshold
- New Flood Warning Area, Flood Forecasting and threshold

Locations identified for Flood Warning Service improvements will also be prioritised for community engagement.