

Update on Flood Risk Management Activities and the Local Strategy Review

Report of the Head of Planning, Transportation and Environment

1. Summary

This report provides an update on the activities being carried out by Devon County Council's Flood & Coastal Risk Management Team, in accordance with their responsibilities as the Lead Local Flood Authority (LLFA) for Devon. It also brings to the Committee's attention the updating of the Local Flood Risk Management Strategy for Devon, which is due for publication by January 2021; this will replace the current strategy, published in 2014. Additionally, it provides an update on the adoption of sustainable drainage measures, which was raised as an issue by this Committee at its meeting in March 2019.

2. LLFA Responsibilities

2.1 Local Strategy

As previously reported, the first Devon Local Flood Risk Management Strategy was published in 2014 for a 6-year period and is, therefore, due for updating. We commenced the review process at the end of 2019 to ensure a planned collaborative approach could be taken, enabling all other Risk Management Authorities (RMAs) and key stakeholders to be involved in the development of the revised strategy.

An internal Project Board was established to oversee this process consisting of the Head of Planning, Transportation and Environment, the Environment Manager and the 4 elected members representing DCC on the South West Regional Flood & Coastal Committee. An initial meeting was held between the Board and officers of the Flood & Coastal Risk Management Team to discuss the proposed format of the revised Strategy and to set out a programme for its delivery. The programme suggested that the draft Strategy should be brought to the attention of Corporate Infrastructure & Regulatory Services Scrutiny Committee, prior to public consultation, with its final adoption agreed by Cabinet in December 2020.

There has been no updated national guidance on the content of such strategies, so this can be agreed locally to suit the specific requirements of the LLFA and partner stakeholders. In our opinion, the original Strategy provided a lot of detail on the specific roles and responsibilities of each RMA and their approach to partnership delivery but, other than through the accompanying Annual Action Plan, insufficiently focussed on the main flood risk priorities to be addressed over the Strategy period. To remedy this, we have divided the revised strategy into four distinct sections. The first provides a much more concise precis of the descriptive content and principles set out in the original strategy, which is relevant to all RMAs. The second highlights where we, as LLFA, plan to investigate and invest in flood risk priorities over coming 6 year programme period; this will be developed using the prioritisation criteria set out in the Strategy and supported by the data within DCC's bespoke FloodARC analysis tool. The third section will provide the more detailed Annual Action Plan. Finally, the fourth section will identify a suite of supporting, pre-existing, documents which provide important context and related detail for the Strategy.

A small partnership group from other RMAs and key stakeholders was established earlier this year to assist in the development and content of the Strategy. An early draft of its format and typical content was shared with the group, giving them the opportunity to provide constructive feedback. The comments received have been taken on board and the draft strategy updated and reshaped accordingly. The development of the detailed content of the Strategy was assisted by a second

phase of liaison with and feedback from this partnership group, which will continue to be developed into a final draft for public consultation from mid-August to mid-October 2020.

A copy of the proposed Executive Summary, together with a listing of the Strategy contents, is included in Appendix I. It should be noted that this is not yet finalised but has been included to show the scope of the Strategy and enable interim comment by this Committee.

2.2 Flood Risk Management Database

DCC's internally developed analysis tool, known as FloodARC, continues to be updated with all flood related information as it is brought to our attention or following our own investigations. New information is also being collated for sustainable drainage proposals on new development. This will enable us to monitor the location of new installations and, potentially, their performance in future years.

The database also includes key information either required to be held by the LLFA or which supports the delivery of our role, such as a record of flood related assets, historic flooding, critical infrastructure, community resilience etc. All of this information is analysed to assist in the development of an Annual Action Plan and is now being used in earnest to prioritise the future investment programme to support the revised Local Flood Risk Management Strategy for Devon, plus the South West Flood Risk Management Plan, currently being prepared by the Environment Agency.

2.3 Statutory Consultee for Sustainable Drainage (SuDS)

DCC's role as a statutory consultee to the Local Planning Authorities for the surface water management on new major developments continues to be very busy, with approximately 500 new applications reviewed each year. The ongoing dialogue between developers, their consultants and relevant Planning Officers can mean numerous design iterations being reviewed before a satisfactory solution is put forward that meets the required standards, as set out in our [Sustainable Drainage Guidance](#).

Our pre-application service, introduced at the end of 2018, has had a steady uptake, with approximately 50 applications brought to our attention. This opportunity to provide advice before applications are developed for submission through the planning process will help all parties ensure a robust and sustainable drainage solution is proposed to manage the surface water flows.

Over the past 12 months we have allocated additional resource, by up to 0.5 of a full-time officer, to this SuDS function to ensure we respond to all consultations within the statutory 21-day timeframe. In most cases this will be an initial response, setting out the further information required to meet our standards. We take this role very seriously and, for some applications, it can take many months (or even years) before a suitably robust solution is proposed and we can remove our objections.

One of our regular requests is for pre-development ground water monitoring data. We are faced with much resistance to this, usually due to time and cost; however, without this information it is not possible for us to, confidently, assess whether an infiltration system will function in accordance with the design proposal. If this is the only proposed drainage solution and it proves to be unviable, there is little scope for an alternative once planning permission is granted; this could result in unacceptable flood risk.

In relation to a concern raised at the March 2019 Scrutiny Committee regarding the suggestion of South West Water adopting sustainable drainage systems, there have been further developments with the national approach, previously referred to as 'Sewers for Adoption v7'. This has now been rebranded as the Design and Construction Guidance (DCG), which came into force in April 2020. In view of the government's previous decision not to implement Schedule 3 of the Flood and Water Management Act, which originally proposed that LLFAs approve, adopt and maintain all SuDS features, this new guidance sets out the mandatory requirement for water companies to adopt sustainable drainage systems providing they meet certain criteria. Each water company will

provide further guidance regarding their stance on implementation and we are waiting for SWW to confirm their position. Further details of the DCG can be read [here](#).

2.4 Land Drainage Consents

All works within watercourses need to be regulated, with those on Ordinary watercourses being administered by DCC as the LLFA and those on Main Rivers by the Environment Agency. Under Section 23 of the Land Drainage Act, the maximum fee chargeable, at present, by the LLFA for a Land Drainage Consent is only £50 and cannot be amended without a change to legislation. This is currently being challenged with Defra through the ADEPT Flood & Water Management Group, in which DCC have an active role, but consideration of this has been delayed by Brexit and the COVID-19 pandemic. A charge is not applied to all applications, as many are received from other teams within DCC, such as Bridge Maintenance.

Over the past 12 months just under 100 Land Drainage Consent applications have been dealt with within the required two-month timescale. Recent activity has slowed a little, due to the pandemic, in what is normally a busy period for consenting due to the embargo period of 1st October to 31st May to avoid the fish spawning period and those wanting to get works done in the clear summer months.

2.5 Enforcement

The Team is regularly called upon to investigate potential blockages within watercourse, whether due to human action or a natural occurrence. It is the landowner's responsibility to maintain the watercourse that runs through or adjacent to their property and DCC, as the LLFA, has powers to enforce the clearance of any blockage or structure causing an impediment to flow. Many issues brought to our attention are as a result of neighbourly disputes and do not fall within the limited powers we have. In some situations, we may need to advise a landowner of a potential risk, such as an unstable wall or overgrown vegetation, that is not actually impeding the flow but could if unattended. This would be either through an informal discussion or letter, bringing the issue to their attention.

Over the past 12 months we have had to serve three formal notices to landowners requesting that they clear significant blockages from their watercourses as a result of their failure to act on the initial and informal request. Fortunately, each has been resolved without the need to take any further legal action.

2.6 Flood Investigations

Despite the significant flooding that was experienced in the north of England during the wet winter months of 2019/20, Devon fared reasonably well, with only one storm triggering the need to produce a Section 19 Flood investigation Report. This was in a known flood risk area at Ottery St Mary, where the authorities were working in partnership to deliver flood improvements and reduce the risk. A new South West Water system was being upgraded at the time of the event and is now complete and DCC has followed this with the provision of Property Flood Resilience (PFR) measures for the five affected properties. A copy of the Investigation Report for the event in September 2019, along with all previous reports that have been produced, can be found [here](#).

3. DCC Role in Supporting Flood Prevention

3.1 Flood Improvement Schemes

As reported to Cabinet in March 2020, the past 12 months has been focussed on delivering the main capital flood improvements outlined in the DCC Flood Risk Management Annual Action plan and within Defra's current six year programme, which we have just entered the final year of. Other small and more local schemes have also been progressed alongside these larger projects. Unfortunately, due to the COVID-19 pandemic, all works on site had to be suspended, so progress to many schemes has been delayed.

At the start of the 2019/20 financial year the flood improvements for Modbury were being finalised and brought into operation. This provided a reduction in flood risk to 50 residential and 32

commercial properties. Also completed was the first phase of the Northbrook surface water improvements at Exeter, but the second phase, which has been granted planning approval, has been delayed. This phase will be progressed as soon as a contractor can be appointed and it safe to commence; on completion of both phases, a total of 55 properties will benefit from a reduced flood risk. Works at Ivybridge, Stokeinteignhead, Ottery St Mary, Cullompton and Ugborough had to be pulled off site and other projects at South Pool and Sidmouth have also been delayed further by the pandemic.

More positively, it can be reported that work recommenced at Ivybridge in late May. Great effort will be continuing to ensure all other projects can make a restart over the coming weeks and months, with the aim of completing these within the current funding window ending on March 31st 2021.

A more detailed and illustrated report on the progress of individual flood improvement schemes and how they have been impacted by the COVID-19 pandemic has been produced and is available [here](#). As schemes progress, further information will be updated on the Flood Risk website [here](#)

3.2 Community Resilience

It is becoming increasingly evident that we cannot defend every property at risk of flooding and, in line with the key message of the revised National Flood & Coastal Erosion Risk Management Strategy soon to be published by the Environment Agency, we need to be making properties more resilient to the risk of flooding. The term resilient can be interpreted in many ways, such as making properties able to cope with a flood and bounce back shortly after, being able to deflect water away from the buildings, having a plan in place to know what to do in the event of a flood or to change the way we live and adapt to the risks.

All of these and many more considerations are being reviewed when investigating potential options for managing the flood risk in many of our communities. The Devon Community Resilience Forum (DCRF) continues to provide support and advice to property owners and local groups in developing Community Emergency Plans and sharing of best practice between one community and another. DCC continue to financially support the DCRF and has officer representatives on their Project Board to direct the key messages and approaches being promoted in making communities more resilient.

The Property Flood Resilient (PFR) Funding Scheme devised and promoted by DCC's Flood Risk Management Team continues to be well received by members of the public whose properties have suffered internal flooding in the past and are unlikely to see any wider scale flood improvements in the near future. Over 50 properties have benefitted from the scheme, through which up to £5,000 of flood resilience measures are funded to protect people's valuable homes. Up to £50,000 of Defra Flood Defence Grant in Aid and £20,000 of Local Levy has been secured over the past few years, as well as this year and next, so with further support from the DCC FRM budgets we can continue to provide this very beneficial scheme

A number of community PFR schemes are also being delivered where the cost benefit or practicalities of a wider hard engineering scheme does not prove to be viable, including at Cullompton, South Pool and Stokeinteignhead.

3.3 Natural Flood Risk Management

We are committed to incorporate Natural Flood Management (NFM) measures within all flood risk management improvements, whenever practical to do so and have also considered opportunities for focusing only on NFM within specific catchments. To assist with the engagement process with landowners we are in the process of developing a best practice guidance document on NFM measures for Devon. This has been reviewed by a wide stakeholder group and their comments and feedback have been incorporated. The guidance will remain a live document that can be updated regularly as new advice and case studies become available and is to be published imminently. This can be viewed [here](#), when published, together with other useful NFM information.

A recent project at Ottery St Mary is nearing completion, which involved the reinstatement of a historic pond feature, installation of leaky dams and natural flow control/diversion measures along woodland tracks. This will have a significant visual impact on the surface water runoff being conveyed down the streets of the town, reducing the impact on the existing drainage network and the risk of flooding to properties.

The scheme at Ivybridge, reported last year, which is being funded by the Environment Agency led Dartmoor Headwaters Project, has undergone a year of baseline monitoring before the NFM measures are implemented shortly. By gaining a good baseline of data pre-installation of the works we will be able to understand and appreciate the level of benefit being provided by the measures, which in turn will help inform the benefits of such measures for other locations.

4. Consultations/Representations/Technical Data

The Local Flood Risk Management Strategy update will be developed through regular consultation with the Project Board, other Risk Management Authorities and key stakeholders. On production of a reasonable draft document this will then undergo a full public consultation using the County Council's standard procedures. Representations will be taken into consideration and incorporated as appropriate before the final document is released for publication. This will be presented to Cabinet for final sign-off.

All flood improvement schemes will require different levels of consultation with partners, key stakeholders and organisations, local residents, parish/town councils and any flood action groups, dependent on the size and scale of activities. The appropriate method to be used will be determined as the options are developed.

Wherever possible, we share technical information with other RMAs to see whether there are any collaborative opportunities for a partnered approach. This could, potentially, open-up other funding sources, additional resources and the prospect of delivering multiple benefits. A number of platforms already exist for sharing information, such as the Devon Operational Drainage Group and the South West Regional Flood & Coastal Committee, and we are currently working with other RMAs to develop a collaborative framework for sharing programme information and action plans, known as the South West Integrated Framework Team (SWIFT).

5. Financial Considerations

All national funding for flood and coastal erosion risk management is through Defra's Flood Defence Grant-in-Aid (FDGiA), following approval of a business case justifying the cost beneficial proposal. Other local opportunities are also available to fulfil the partnership funding requirements. These include: Local Levy, paid into by the 5 LLFAs in the South West (Devon, Cornwall, Plymouth, Torbay and Isles of Scilly) and administered by the South West Regional Flood & Coastal Committee; Partnership Contributions from other RMAs, key stakeholders or businesses; and internal budgets from DCC.

In 2019/20 DCC drew down £765,000 of FDGiA and £120,000 of Local Levy and contributed over £620,000 of DCC funds to support the delivery of flood improvements, investigations, resilience measures and initiatives delivered by others. The total of over £1.5million would have been significantly higher if the pandemic had not forced the temporary suspension of works on site. The required funding to complete the works, prior to the end of Defra's 6-year programme on 31st March 2021, has been submitted to the Environment Agency and early indications are positive. Priority will be given to those schemes already commenced.

As a result of the pandemic site closures there will be additional costs that will need to be paid for by the Client (DCC), including site demobilisation and remobilisation and the standing charges for site welfare, machinery, signage, etc. Staff costs will not be included as they have been covered by the furlough scheme.

6. Sustainability and Equality Considerations

The revised Devon Local Flood Risk Management Strategy will be supported by a new Strategic Environmental Assessment (SEA), together with a full DCC Impact Assessment that will reflect on the social, equality and economic considerations. This will be a high-level document covering the implications of the Strategy as a whole; more detailed assessments will be carried out for each individual scheme as it is developed and promoted.

Through DCC's statutory consultee role for providing advice on surface water management proposals for new 'major' development we require the use of sustainable drainage features following a hierarchy of techniques to not only encourage the reduction of flood risk but also to improve water quality, enhance biodiversity and facilitate amenity.

7. Legal Considerations

The main duties on and powers available to LLFAs are defined in the Flood and Water Management Act 2010 and the Land Drainage Act 1991; all flood risk management activities carried out by DCC in this role accord with these Acts. Where necessary, the available enforcement powers are used to ensure watercourses maintain a free flow of water and there are no unlawful activities or structures built within an ordinary watercourse. Any works involved in delivering flood improvements, that require access onto third party land, require a legal notice to be served on the landowner, whereby compensation is payable. In most cases this is done through negotiations to agree heads of terms, although where landowners are not set to gain from the works this does become a challenge and seen as a financial opportunity.

8. Risk Management Considerations

Many communities in Devon are at risk, or have directly suffered the consequences, of flooding. It is DCC's role as LLFA to monitor and review this risk and consider how this can be minimised through partnership working with other RMAs, in accordance with the Local Flood Risk Management Strategy.

Using the risk-based criteria set out in the Strategy, a list of priority catchments will be determined for focussed attention and investment. The new 'Part 2' of the revised strategy will identify these areas, which will help inform our future Action Plans.

As we enter into the final year of Defra's 6-year programme, with a number of projects that have been delayed as a result of the COVID-19 pandemic, there is a significant risk of national funding not being available to complete all projects that were being proposed for 2020/21. Priority will be given to those projects already commenced to reduce the potential financial risks. This will be monitored throughout the year and schemes may need to be deferred if funding assurances cannot be attained.

In some locations the flood improvement works are proposed on third party land, where the landowner will not benefit from any of the works. Gaining amicable and affordable agreements with such landowners can be a challenge and a potential risk to the delivery of flood improvement projects.

9. Conclusion

DCC's Flood & Coastal Risk Management Team continues to deliver a high-level service in fulfilling the role as LLFA and goes above and beyond statutory requirements through the delivery of essential flood improvement works. The Team adopts a strong position reviewing the surface water management proposals for new development, the consideration of Land Drainage Consent applications and the enforcement of any inappropriate works or blockages within an ordinary watercourse. At times this may be challenged, but a robust and consistent approach helps to monitor, maintain and reduce the risk of flooding in Devon.

The Local Flood Risk Management Strategy is being reviewed for publication in early 2021 and will improve on the original strategy by identifying high priority areas that will be considered for further investigation and investment over the 6-year strategy period, which falls in line with Defra's national 6-year programme.

Dave Black
Head of Planning Transportation and Environment

Electoral Divisions: All

Cabinet Member for Community, Public Health, Transportation and Environmental Services:
Councillor Roger Croad

Chief Officer for Communities, Public Health, Environment and Prosperity: Virginia Pearson

Local Government Act 1972: List of Background Papers

Contact for enquiries: Martin Hutchings

Room No. AB3, Lucombe House, County Hall, Exeter. EX2 4QD

Tel No: (01392) 381909

| Background Paper | Date | File Reference |
|---|--------------|---|
| 1. Flood and Water Management Act | 2010 | http://www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf |
| 2.. Devon Local Flood Risk Management Strategy | June 2014 | https://www.devon.gov.uk/floodriskstrategy |
| 3. Sustainable Drainage Systems: Guidance for Devon | January 2017 | https://www.devon.gov.uk/floodriskmanagement/planning-and-development/suds-guidance/ |
| 4. South Hams District Council: Drainage Assessment Guidance | - | https://www.southhams.gov.uk/article/3483/Drainage-Assessment-Guidance |
| 5. DCC Flood Investigation Reports | Various | https://www.devon.gov.uk/floodriskmanagement/flood-investigations-reports-and-studies/ |
| 6. Devon Community Resilience Forum web site | - | https://www.devoncommunities.org.uk/projects/devon-community-resilience-forum |
| 7. South West River Basin District Flood Risk Management Plan | March 2016 | https://www.gov.uk/government/publications/south-west-river-basin-district-flood-risk-management-plan |
| 8. Design & Construction Guide | April 2020 | https://www.water.org.uk/wp-content/uploads/2020/01/Water-UK-SuDS-brochure.pdf |
| 9. Natural Flood Risk Management | - | https://www.devon.gov.uk/floodriskmanagement/natural-flood-management/ |

Glossary

| | |
|---|--|
| DEFRA - Department of Environment, Food and Rural Affairs | PLR - Property Level Resilience |
| EA - Environment Agency | RMA - Risk Management Authority |
| FDGiA - Flood Defence Grant in Aid | SEA - Strategic Environmental Assessment |
| FRMP - Flood Risk Management Plan | SuDS - Sustainable Drainage System |
| LLFA - Lead Local Flood Authority | SWMP - Surface Water Management Plan |
| NFM - Natural Flood Management | |

Extracted from Draft Devon Local Flood Risk Management Strategy

Executive Summary

Why Devon needs a Local Flood Risk Management Strategy

Devon County Council (DCC) developed its first Strategy in 2014. Under our duties as a Lead Local Flood Authority (LLFA) and the Flood and Water Management Act 2010, we have a responsibility to maintain a strategy for how we will manage local flood across our area. This document sets out our updated strategy for the period 2021-2027.

Our Vision

We will manage and reduce flood risk to property and significant infrastructure in Devon efficiently, through collaboration with partners and ensure that flood risk is not increased, making Devon more resilient to flooding and adapting for future climate change.

Key themes

We will achieve our vision by following key themes throughout the strategy. Increasing resilience of communities and places to climate change, through partnership working, community engagement and investment in flood alleviation schemes. We will prioritise high risk communities and natural, sustainable solutions.

Who does what?

Risk Management Authorities and Planning Authorities have various responsibilities when it comes to flood risk management. This strategy summarises the roles and responsibilities of RMAs and LPAs under relevant legislation and in particular, the role of Devon County Council as Lead Local Flood Authority.

What we will do

To achieve the vision and objectives in this strategy, we have set out a series of Principles that Devon County Council will follow:

Principle 1: Integrated Flood Risk Management and Partnership Working

Through collaborative working, Devon Risk Management Authorities will consider opportunities for multiple benefits and the alignment of programmes to maximise funding availability, delivering effective, consistent and integrated flood risk management.

Principle 2: Addressing the Skills Gap

Where skills gaps are identified in Devon County Council's flood risk management, we will seek opportunities through internships, apprenticeships and graduate programmes, in addition to specialist consultants when required.

Principle 3: Improving Data Quality and Management

Devon County Council will keep up to date and accurate records of flood risk data and will ensure government guidance is followed on the use of geographical information and maintaining metadata, enabling efficient data use and storage, sharing with partners when appropriate.

Principle 4: Maintaining an Asset Register and Record

Devon County Council will continue to populate its asset register with flood risk features thought to have a significant impact on flood risk, ensuring that this is up to date with national developments and guidance and that the assets recorded are used as a vital part of assessing local flood risk.

Principle 5: Designating Flood Risk Features

Devon Risk Management Authorities have the powers to designate any structures and features that are considered to affect flood risk, including those which were not necessarily designed or constructed for that purpose.

Principle 6: Investing in Local Flood Risk Management

All Risk Management Authorities in Devon will work in partnership to deliver local flood management schemes and initiatives. An investment plan will be developed through collaborative working and will be outlined in our list of Priority Communities, the South West Flood Risk Management Plan and flood risk management measures outlined in Part 2 of this Strategy. Funding will be sought through the relevant opportunities such as FDGiA, Local Levy, local authority capital budgets and private contributions.

Principle 7: Sharing of Investment Programmes

The South West Flood Risk Management Plan will pull together the investment programs of Risk Management Authorities (RMAs) and signpost to more details on individual RMA action plans. The sharing of investment programmes and project plans will be encouraged between all of the RMAs, using the already established Devon Flood and Water Management Group as a forum to discuss and prioritise investment in local flood risk management.

Principle 8: Seeking additional funding

Devon Risk Management Authorities will seek additional funding from the national, regional and local sources and take the opportunity to obtain funding through other government initiatives, as they arise, to implement location-specific actions identified in the Action Plan.

Principle 9: Flood Risk Management Studies

Devon Risk Management Authorities will continue to work in partnership and develop studies in order to better understand and reduce flood risk and improve community resilience.

Principle 10: Encourage Sustainable Drainage Systems (SuDS)

Devon County Council encourages the use of SuDS and promotes the benefits such as improving water quality, biodiversity and amenity, channeled throughout various groups, development management and through advice on Local Authority Core Strategies, development plans and policies. Devon County Council will give guidance to Planning Authorities and the development industry as a Statutory Consultee, fulfilling a duty to check and approve sustainable drainage system designs for major developments.

Principle 11: Consenting to works on Ordinary Watercourses

Devon County Council will regulate works on ordinary watercourses, ensuring that any activity will not increase flood risk and will encourage sustainable measures and methods in doing so. This will be in line with the regulation of Main Rivers by the Environment Agency maintaining a consistent approach across Devon.

Principle 12: Natural Flood Management

We will prioritise natural flood management measures (where appropriate) in all flood investigations and improvement projects, either as sole measures or in combination with hard engineering solutions, including supporting NFM initiatives throughout Devon. We will promote sustainable land management which seeks reduced rates and volumes of surface runoff, erosion and sediment transport by promoting education and awareness campaigns as part of community engagement projects.

Principle 13: Sustainable Management of Local Flood Risk

DCC Flood Risk Management will seek to reduce the risk of flooding to property and significant infrastructure in a way that will conserve, and where appropriate enhance the interconnected needs of the economy, society and environment, whilst making these more resilient.

Principle 14: Adapting to Climate Change

Devon Risk Management Authorities must use the latest UK Climate Projections to make resilient flood risk management decisions for the effects of climate change. This may lead to difficult choices about the future protection of property and infrastructure.

Principle 15: Raising Awareness and Improving Communication and Involvement

Through the collaboration with other Risk Management Authorities and the Devon Community Resilience Forum, all Partners will work together towards raising public awareness (including those that are most vulnerable such as the elderly, young children, those living with a disability or living in areas of deprivation) about flood risk and the roles of the Risk Management Authorities, providing clear and up to date information.

Principle 16: Property Flood Resilience

When wider flood alleviation schemes for a community or individual property are not viable or unable to be delivered in the foreseeable future, we will remain committed to making properties more resilient to flooding through the installation of Property Flood Resilience measures where possible.

Principle 17: Working with Emergency Responders

The Lead Local Flood Authority and District Councils of Devon, through their Emergency Planning services, will continue to work with Partners' emergency responders to develop plans and provide information to inform operational decisions in support of a Devon that is resilient to flooding.

Principle 18: Recording and Investigating Flood Events

Devon County Council in partnership with the Environment Agency will record local flood incidents reported through Risk Management Authorities and the public in order to build up a picture of risk for current and future work. Those that reach Devon's significance thresholds will be investigated under Section 19 of the Flood and Water Management Act and the reports will be published online.

What we will do over next 6 years:

Part 2 of Devon's local strategy looks ahead over the next investment period of 6 years, in line with the national funding program. Here we show how this work is prioritised, including the current priority communities. The annual action plan of investment is covered in Part 3 of this strategy.

Possible flood risk management measures will generally fall into one of the categories below, where the general hierarchy listed shows how these measures should be approached. The hierarchy follows the principles of starting with increasing a community's preparedness for flooding and increasing resilience, through to implementing physical flood defence measures.

Resilience is fundamental for all communities, to manage local flood risk and be prepared for future climate change impacts. The physical measures should prioritise more sustainable natural processes in the first instance, either as sole measures or in combination with hard engineered solutions. Hard engineering measures should be considered when natural solutions alone will not adequately protect a community to the required level.

Investment Hierarchy

- 1. Community resilience measures:** Engaging with communities directly and through the Devon Community Resilience Forum to raise awareness of flood risk and encourage the setting up of local flood action groups and development of emergency plans to increase resilience. These measures should always be a part of any community at risk, even when other interventions are in place.
- 2. Emergency planning measures:** Flood warnings and flood action plans can be used to improve community preparedness and resilience to flooding. Support from the Devon Community Resilience Forum is available for communities.
- 3. Riparian landowner maintenance:** Members of the public who own land adjacent to watercourses have riparian responsibilities and therefore a duty to maintain their section of watercourse to ensure there is no impediment of flow. See DCC's guide '[Living with Water](#)'
- 4. Making Policy:** Policies can be made to direct spatial planning or to set standards for development that will help reduce further flood risk.
- 5. Natural Flood Management measures:** Implementation of natural measures which help to alleviate the risk of flooding to property and significant infrastructure, either as sole measures or in combination with hard engineering solutions. *Managing water in the upper catchments will help to reduce and slow the flows downstream minimising the risk to property and the level of any hard engineering defences that may be required.*
- 6. Retrofitting Sustainable Drainage Systems:** Installation of sustainable drainage systems in urban areas to manage surface water and remove it from traditional piped drainage systems.
- 7. Delivery of early intervention schemes:** A solution that can be implemented relatively quickly by the Risk Management Authorities or Local Authority at relatively low cost.
- 8. Community action:** Some cases can be successful when community groups join forces and deliver and maintain their own local schemes. In some cases this may generate further contributions from local levy or the Lead Local Flood Authority.
- 9. Further investigation/research:** Further investigations such as catchment studies and hydrological/hydraulic assessments to understand the flow rates and directional paths and evaluate the extent of flooding. These would provide evidence for future capital investment.
- 10. Development of future schemes:** Where immediate action is not financially viable or a solution not readily available then a larger scale flood alleviation scheme may be required. In such cases national funding would need to be secured together with additional contributions from others, such as local levy, local authorities and other third parties. This is likely to require hard engineered improvements, however Natural Flood Management measures must also be considered and delivered where possible.
- 11. Property Flood Resilience:** Resilience measures at a property level such as flood doors, gates and air bricks can be installed to increase the resilience of individual homes and businesses. This option is often chosen as the last line of defence where any potential for a larger flood alleviation scheme will not be viable or delivered in the foreseeable future.

[Foreword](#)

.....
i

[Executive Summary](#)

.....
ii

[Glossary](#)

.....
vi

[Part 1: Strategic vision and objectives: Why we are producing this strategy](#)

.....
1

[Introduction](#)

.....
1

[Why Devon needs a Local Flood Risk Management Strategy](#)

.....
1

[Devon County Council’s Vision for flood risk management](#)

.....
3

[Devon County Council’s objectives for flood risk management](#)

.....
3

[Strategic plans and assessments](#)

.....
4

[Roles and Responsibilities - Who Does What?](#)

.....
6

[Risk Management Authorities \(RMAs\) in Devon](#)

.....
6

[Partnership and joint working](#)

.....
7

[Flood risk management in Devon - What do we do?](#)

.....
9

[What DCC will do as the LLFA](#)

.....
10

[Flood risk data](#)

.....
10

[Investment in flood risk management](#)

11

[Flood risk management funding](#)

12

[Flood risk assessments and studies](#)

13

[Planning, development & infrastructure](#)

14

[Regulation of works on watercourses](#)

18

[Natural Flood Management and sustainability](#)

18

[Climate change](#)

19

[Community resilience](#)

20

[Flood forecasting and warnings](#)

21

[Self help measures](#)

22

[Responding to flood events](#)

23

[Post flood event community engagement](#)

24

[Investigating flood events](#)

24

[Reviewing the strategy](#)

25

[Performance evaluation](#)

25

Part 2: Priority Communities and Investment - What will we do and how?

.....
27

How communities are prioritised

.....
27

Devon's priority communities

.....
27

Opportunities and measures for delivering local flood risk management

.....
28

Part 3: Annual action plan: What, when and where?

.....
31

Part 4 –Supporting documents

.....
32

Who to contact about flooding

.....
33