

## October 2017 Newsletter

Devon's Local Flood Risk Management Strategy was published in June 2014 and is supported by an annual Action Plan which prioritises improvements and investment for the relevant financial year. This newsletter update is intended to be issued twice a year to engage with and ensure that our Partners and local communities are fully aware of the work being undertaken in local flood risk management.

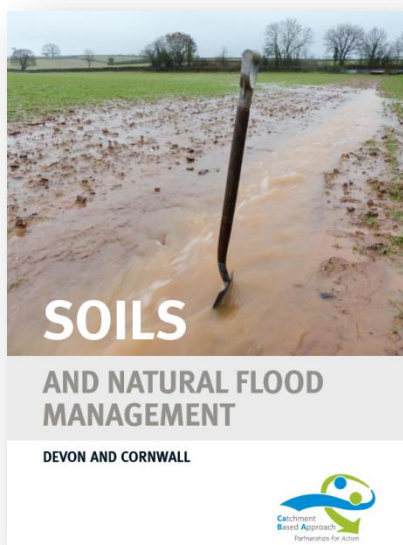
### Natural Flood Management

DCC Flood and Coastal Risk Management is committed to the delivery of flood improvement works throughout the county and will continue to endorse natural flood risk management measures as part of flood improvement schemes. As part of this, DCC is currently working in partnership with the Environment Agency (EA) to progress Natural Flood Management (NFM) pilot studies in a few selected locations across Devon.

DCC have been engaging in ongoing discussions with the EA and Dartmoor National Park (DNP) regarding proposed NFM measures just north of Ivybridge on Hanger Down. This will likely encompass a number of stone leaky dams as well as other measures. These works will enhance the standard of protection to be provided by the culvert improvements which DCC are due to implement in Ivybridge in early 2018.



Potential location for NFM measures at Hanger Down, Dartmoor National Park



A guidance manual titled 'Soils and Natural Flood Management' has been put together by the EA's East Devon Catchment Partnership. This manual aims to help improve understanding about the natural potential of soils to accept rainfall and reduce the risk of runoff. It focuses predominantly on the soils and landscape of Devon and Cornwall, in particular East Devon, but also has wider applications for the rest of the UK. The manual is now available online [here](#).

The Flood and Coastal Risk Management team would always welcome suggestions for any new areas which could potentially be good candidates for future natural flood management schemes. For more information on best practices to reduce the flood risk on your land and where to go for advice, please see our leaflet on land management, which can be found [here](#).

## Preliminary Flood Risk Assessment (PFRA)

The review of Devon's PFRA has now been completed and was submitted to the Environment Agency in June to review, prior to submission to Europe in December.

A key area to review was the number of significant flood events to occur since the original PFRA report in 2011. Since then, Devon County Council has published 15 Section 19 Flood Investigation Reports, covering 58 flooded locations. These significant flood incidents have given a widespread understanding of flood risk across Devon in addition to a more localised understanding of smaller areas at risk, which would not have been identified from any high level assessments. These incidents have also helped to verify existing studies and hydraulic modelling work in specific areas.

Another key aspect to the review and addition to the previous PFRA is the identification of a Flood Risk Area, which is defined as a 3x3km square grid area with more than four 1km squares meeting the following criteria: 200 or more people at risk; 20 or more commercial properties at risk; or 2 or more key services at risk. Under this criteria Exeter has been identified as an Indicative Flood Risk Area, the most at risk area of surface water flooding in Devon, which supports the assessment made in Devon's Strategic Surface Water Management Plan.

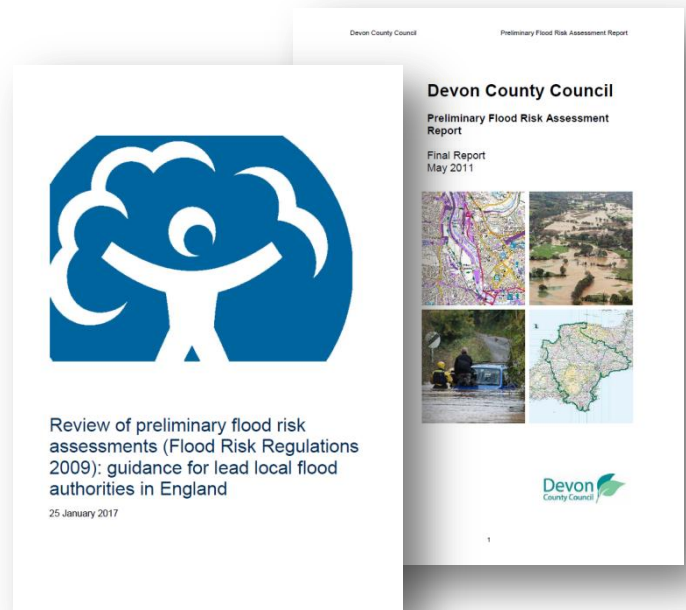
This review has highlighted that Devon's Local Flood Risk Management Strategy Action Plan, which is developed annually, reflects the significant flood incidents which have occurred since 2011 in addition to the areas identified in the 2011 PFRA and Strategic Surface Water Management Plan. The team will continue to review the flood affected areas in the last 6 years and to prioritise these for investment along with other identified flood risk locations and to continue with the development of the Exeter Surface Water Management Plan and progress recommendations.

## Flood Studies

DCC are currently undertaking a number of flood studies in order to better understand the level of flood risk. In accordance with the proposed 2017/18 Action Plan of the Local Strategy. Priority areas include Barnstaple, Beeson, Broadhempston, Buckfastleigh and Woodbury Salterton. These are to be progressed over the remainder of the financial year, as well as the ongoing investigations in Exmouth, Kingsbridge, Ottery St Mary, South Pool and Ugborough. The results of the studies will help us produce future action plans and manage our resource going forward.

## Flood Improvement Projects

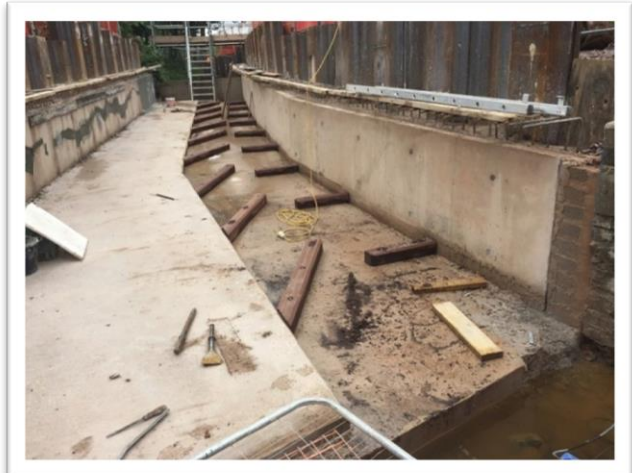
DCCs Flood & Coastal Risk Management Team has continued to develop a number of high priority flood improvement schemes, as well as the delivery of minor works and local resilience measures. These have been progressed in accordance with the Local Flood Risk



Management Strategy and in line with the indicative funding allocations of the Defra 6 year programme. Where practical, a number of minor flood improvements and resilience measures have been delivered through local funding opportunities; however, the larger capital schemes have been included in Defra's 6 year programme to take advantage of national funding.

### Axminster

The Axminster Millbrook Flood Alleviation scheme is now complete and fully operational. The £1.3m scheme reduces flood risk to over 160 properties up to the 100 year flood event and includes channel widening, a flood defence wall and major culvert alterations to convey the flow more efficiently away from those at risk of flooding.



Night working in Axminster adjacent to the railway and the new culvert including improved fish passage, prior to the lid being cast May and July 2017

This challenging project, due to its interaction and close proximity to the main Waterloo railway line and residential property was delivered by our contractor South West Highways following detailed design by DCCs in house Engineering Design Group.



The finished culvert inlet and reinstatement in Axminster, September 2017

### Ivybridge, Stibbs lane

The detailed design of the proposed flood relief culvert that will benefit 20 residential properties in north west Ivybridge is now underway. This includes ground radar scans to locate buried underground services, so that any potential clashes can be designed out before getting to site in 2018. The business case for scheme funding will be submitted before Christmas and land owner negotiations are also to be progressed shortly.

In addition to the flood relief culvert, natural flood risk management measures are proposed upstream to reduce the flow getting to the properties at risk. Subject to land owner agreements, baseline monitoring will be installed early 2018.

### Modbury

Following the successful business case submission to the Environment Agency, full funding has now been obtained for the flood alleviation scheme in Modbury that will reduce the risk of flooding to 50 residential and 32 commercial properties up to the 100 year flood event, by constructing three large earthwork bunds to contain flood water, interception ditches and local drainage improvements. Subject to final land owner permissions being signed, the scheme will look to start on site early 2018 with completion targeted by September 2018.

### Braunton

Phase 2 of the Braunton Caen Street flood improvement scheme is now on site, due for completion at the end of November. Phase 2 includes the provision of a pumping station that will supplement the vastly improved highway drainage works that took place earlier in 2017. When operational, flood risk in the area will be reduced up to the 50 year flood event.

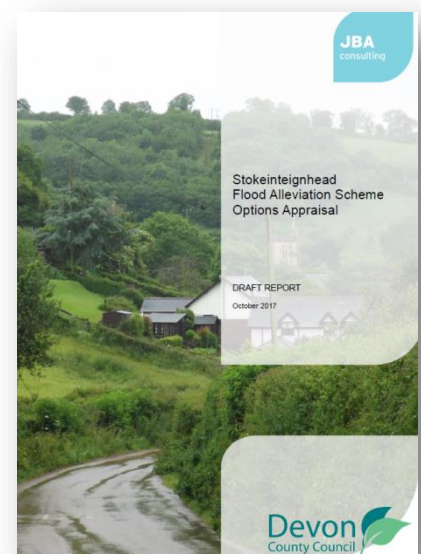


Works underway to install the pumping station in Caen Street, Braunton, September 2017

### Stokeinteignhead

The final modelling exercise and options assessment for the proposed Stokeinteignhead Flood Alleviation works has now been completed. The report has identified that storing water in the upper catchment is the most beneficial option in terms of reducing the risk of flooding.

Our in-house Engineering Design Group is now busy developing the proposal of two water storage areas (one on the eastern catchment and one on the southern catchment), to take it to outline design and to a point where a planning submission can be made, supported by the specialist investigations we have commissioned to date including geotechnical investigations, landscape assessment, ecological baseline studies and historic environment desktop study.



## The Devon Community Resilience Forum

The Forum are continuing to provide advice and support for communities in improving their resilience, through the development of Emergency Plans and facilitating community grants and public events.



The next event will be held on 22nd November at the Kenn Centre, Kennford, EX6 7UE. Key agencies from across Devon: the Police, Fire & Rescue Service, Environment Agency, Devon County Council and District Councils, will be providing advice and workshops for community representatives.

This will be the fifth event and promises to build on the success of the previous four events. Presentations will include:

- Setting up a community rest centre.
- Role of Police and Fire & Rescue Service.
- Community plan case studies.
- Community risk assessments.
- Running a community exercise.
- Writing a community emergency plan.



Devon Community Resilience Forum – June 2017

For more information visit: <https://www.devoncommunities.org.uk/resilience-event22112017>

Twitter: @DevComsTogether #devonresilience

## Property Level Resilience (PLR) Grant Scheme

Devon County Council is committed to increasing community resilience in Devon and is supported by Defra to deliver property level resilience measures. Working closely with a number of partners, DCC aims to help individual property owners be better equipped with the tools and basic defence measures they need to be able to deal with flooding. As such, a new PLR Grant Scheme has been established to enable home owners to apply for up to £5,000 to carry out a survey of the property, identifying the required resilience measures, and to purchase the recommended measures. Any additional budget requirements will be at the expense of the property owner.

There is limited funding, with an allocation to be made available each year by Defra, Local Levy and DCC. Applications will therefore be prioritised based on the criteria set out in DCC's PLR Policy in order to maximize the number of properties benefitting from this opportunity and to ensure those properties with the greatest need will receive the funding. There can be no guarantee of funding for all applications.

The PLR Policy and Application Form can be found on our website [here](#).

Throughout the first 6 months of this new initiative DCC has received and reviewed various applications for the PLR Grant Scheme. Applications have been received from areas across the county, from Axminster, to Yelverton, and Kingsbridge to Braunton. The majority of applications have met the PLR policy criteria and have successfully been accepted. 21 applications are now progressing through the scheme. Following a consultation, an independent surveyor has been appointed to assess the level of flood risk to these properties in order to recommend PLR measures to make them more resilient.

DCC aims to invest up to £105K in these 21 properties with the purpose to install the recommended PLR measures, and to ensure an outstanding and resilient environment. These measures will not only help the property owners to fulfil their responsibility to protect their homes from flooding, but will also benefit them in economic terms as the cost of resilience repairs from flood damage could potentially be up to £630k. On average, the cost to recover a property from internal flooding at low level would be £30K.



Property front door with slots either side, ready for flood boards to be slotted into place in the event of a flood warning – Umberleigh, North Devon

## Flood Risk Mapping available on Devon's Environmental Viewer

Flood risk mapping and information is available to the public on DCC's Environmental Viewer. This interactive map of Devon allows users to view flood risk data alongside other environmental information, such as ecology, geology and landscape, the historic environment, planning applications and public access areas.

The available flood risk data consists of flood maps showing the risk from surface water and from rivers and the sea, in addition to Main Rivers, Critical Drainage Areas and Devon County Council's Asset Register of flood risk features.

Any questions on the data sets should be directed to the team at [floodrisk@devon.gov.uk](mailto:floodrisk@devon.gov.uk)



View flood risk data online using the [Environment Viewer](#)

## Addendums to the Strategy

The main Strategy document will be updated every 6 years with the next review in 2020. Any updates before this new publication will be shown as addendums on the [Flood Risk Management website](#). When these addendums are updated, key partners will be consulted, including members of the Flood Risk Management Partnership and Project Board.

## Case Study: Dawlish Warren Beach Management Scheme

The Environment Agency and Teignbridge District Council (TDC) have been working together on the Dawlish Warren beach management scheme.

All elements of the scheme are now complete except for the Geotube defence buried in the dunes at the 'neck' (the narrowest point of the Warren) and the fencing and planting of dunes. The Geotube is formed of bags pumped full of sand and water, which drain to create compacted sand bags up to 2.85m high and 6m wide. In an extreme future storm event the Geotube defence would prevent storm waves entering the Exe Estuary and reaching communities such as Starcross and Cockwood, as well as important infrastructure including the main rail link to the south west.



Work in progress on the 'Geotube' at Dawlish Warren, July 2017

The dredging and recharging of the beach has been completed. The raised beach is up to 3m higher than the original and large numbers of visitors are enjoying the improvements.

Particular attention is being paid to public safety issues during construction and to the establishment of good communication channels to the many interested people and organisations who visit and use the Warren. Large numbers of people use the project's Facebook page and receive regular newsletter updates. The Press have publicised the scheme extensively and the MP visited the site in July.

***We have included a case study detailing a local project in this issue and intend to do so in future editions. If you would like us to include your local community in any future case studies, please contact us with further information.***

# What to do in the event of a flood

## Your guide on who to call

In the event of a flood, there are many authorities available to help. Below outlines who should be contacted for the various types of flooding incidents and emergencies that occur. The local authorities rely on information reported to them to inform any investigations and prioritisation of investment.

If it is an **emergency** and there is danger to life as a result of flooding you should not hesitate to call **999**

**To report flooding of the highway and blocked drains** contact Devon County Council's Highway Customer Service Centre on **0345 155 1004** or visit [www.devon.gov.uk/drainage](http://www.devon.gov.uk/drainage). Office hours are Monday to Friday 8am – 8pm and Saturdays 9am – 1pm. For emergencies outside of these hours call **01392 383329**

**For any flooding on major trunk roads** (the M5 A30, A38, A35 and A303) contact the Highways Agency on **0300 123 5000** (24 hour service)

**To report flooding from sewers and water pipes** contact South West Water on **0344 346 2020** (24 hour service)

**For enquiries about flood warnings** contact the Environment Agency's Floodline on **0345 988 1188** (24 hour service)

**For general enquiries about Main River or flooding from the sea** contact the Environment Agency on **03708 506 506**

**For all other flooding enquiries** contact the Devon County Council Flood Risk Management Team on **0345 155 1015** or email [floodrisk@devon.gov.uk](mailto:floodrisk@devon.gov.uk)

## Preparing for a flood

Please refer to Devon County Council and Environment Agency web pages for advice on what to do before, during and after a flood. In the first instance of flooding and sandbag requests contact your local District or Parish Council to be directed to any local sandbag supplies that may be available.



**Flood Alert:** Flooding is possible. Be prepared.



**Flood Warning:** Flooding is expected. Immediate action required.



**Severe Flood Warning:** Severe flooding. Danger to life

**Warnings no longer in force:** No further flooding is currently expected in your area.

**Sign up to flood warnings:** <https://www.gov.uk/sign-up-for-flood-warnings>