

Flood and Coastal Erosion Risk Management

Annual Report
July 2017 – June 2018

11th October 2018

List of Acronyms	
CaBA	Catchment Based Approach
CC	Cornwall Council
CCFF	Cornwall Community Flood Forum
CCMA	Coastal Change Management Area
CCP	Cornwall Catchment Partnership
CCRN	Cornwall Community Resilience Network
CSO	Combined Sewer Overflow
DCLG	Department for Communities and Local Government
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
FCERM	Flood and Coastal Erosion Risk Management
FDGiA	Flood Defence Grant in Aid
FWMA	Flood and Water Management Act
LLFA	Lead Local Flood Authority
MTP	Medium Term Plan
PCO	Plymouth Coastal Observatory
PFRA	Preliminary Flood Risk Assessment
PLR	Property Level Resilience
PRF	Pollution Risk Forecast
RFCC	Regional Flood and Coastal Committee
RMA	Risk Management Authority
SMP	Shoreline Management Plan
SuDS	Sustainable Drainage Systems
SWCG	South West Coast Group
SWFRMG	South West Flood Risk Managers Group
SWRFCC	South West Regional Flood and Coastal Committee
SWW	South West Water

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1 Introduction to the Report

This report provides an annual update on the activities of Cornwall Council in relation to its role as Lead Local Flood Authority (LLFA) for Cornwall. The report covers the 12 month period from July 2017 to June 2018, inclusive.

Section 2 of this report explains the setting of the annual report within the Council's Local Flood Risk Management Strategy and the legislative context for Overview and Scrutiny Committee to have oversight of Cornwall Council's Flood and Coastal Erosion Risk Management (FCERM) activities.

Section 3 explains the responsibilities of the LLFA and other risk management authorities within the FCERM framework as set out in the Flood and Water Management Act (2010). It also describes the national funding process for flood defence investment. This section also describes the structure of groups and committees through which the Council communicates with Defra on FCERM related activities and scheme funding.

Sections 4 to 7 provide an update on FCERM activities during the reporting period.

Section 4 provides an overview of significant flood events occurring in Cornwall between July 2017 and June 2018.

Section 5 lists FCERM schemes and projects that have been progressed or developed during this period.

Whilst not specifically a FCERM issue, Section 6 summarises the bathing water quality results for designated Cornish beaches for the 2017 bathing season.

Section 7 provides an update on the devolution activities in relation to strategic resilience.

Section 8 is focussed on coastal issues.

Issues to be brought to the attention of the Overview and Scrutiny Committee are discussed in Section 9. Recommendations to the Committee are made in Section 10.

2 Context

Cornwall Council is designated as Lead Local Flood Authority (LLFA) for Cornwall under the Flood and Water Management Act 2010 (FWMA).

As such it is incumbent upon Cornwall Council to formulate and publish a Local Flood Risk Management Strategy (LFRMS). The LFRMS was produced and went out to public consultation in 2014. It was adopted by Cabinet on 5 November 2014. As part of that Strategy it was stated that an annual report on Flood and Coastal Erosion Risk Management (FCERM) in Cornwall would be issued.

Furthermore the FWMA added a new section (Section 21F) to the Local Government Act 2000 to provide powers to LLFAs to allow for the scrutiny of risk management authorities as to the exercise of their flood and coastal erosion risk management functions.

In this context, in June 2015 Cornwall Council held a Select Committee examination of FCERM in Cornwall. The report of the Select Committee was accepted and approved by Cabinet in February 2016. An outcome of that report was to suggest the return of an annual report to Overview and Scrutiny Committee.

This report addresses the requirements of both the Strategy and the Select Committee and enables the Neighbourhoods and Public Protection Overview and Scrutiny Committee to examine Cornwall Council's role as LLFA. It is the third such annual report.

3 FCERM Framework

Flood and coastal erosion risk management activities are overseen in England and Wales by Defra. The national framework and division of responsibilities are mainly set out in the Flood and Water Management Act (2010).

3.1 FCERM Responsibilities

Table 1 lists the general areas of FCERM statutory responsibilities for each of the Risk Management Authorities in Cornwall with regard to managing flood risk from different sources of flooding, as set out in the FWMA. Whilst the named authority is responsible for taking the lead in investigating flood incidents, developing solutions and implementing interventions, in practice the Lead Local Flood Authority (LLFA), Environment Agency (EA) and South West Water (SWW) work closely in partnership on all flooding issues.

Table 1 FCERM statutory responsibilities

Responsibility	Risk Management Authority
FCERM strategic overview	The Environment Agency
Management of flood risk from Main Rivers	The Environment Agency
Management of flood risk from Ordinary Watercourses	Cornwall Council as LLFA
Management of flood risk from the sea	The Environment Agency
Management of coastal erosion	Cornwall Council as Coastal Protection Authority
Management of flood risk from surface water runoff	Cornwall Council as LLFA
Management of flood risk from highway drainage (except for the A30 and A38 trunk roads)	Cornwall Council as Highway Authority
Management of flood risk from highway drainage for the A30 and A38 trunk roads	Highways England
Management of flood risk from public sewers	South West Water
Management of flood risk from statutory reservoirs	The Environment Agency
Flood incident management	All relevant authorities, emergency services and other utilities under the Civil Contingencies Act
Flood recovery	Cornwall Council
National Environment Programme	The Environment Agency
Management of pollution from public sewers	South West Water
Management of watercourses on, or adjacent to, private land	Landowners

In addition the FWMA requires Cornwall Council to:

- Investigate and record details of significant flood events within Cornwall.
- Maintain a register of structures or features which are considered to have a significant FCERM function.
- Undertake works to manage flood risk from surface water runoff and groundwater.
- Designate structures and features that affect flooding or coastal erosion in order to safeguard assets.
- Consent works on Ordinary Watercourses.
- Develop, maintain, apply and monitor a local strategy for flood risk management in Cornwall.
- Be statutory consultee on surface water drainage for planning applications of over 0.5 ha in area or containing 10 or more properties.

3.2 FCERM scheme and project funding process

Cornwall Council bids for flood defence scheme funding through Defra's Capital Investment Programme, also referred to as the Medium Term Plan (MTP). The MTP is a six year (2015/16 to 2020/21) programme of consented schemes. Each scheme is led by the relevant Risk Management Authority (RMA), as set out in Table 1. Schemes that are proposed but not consented sit as pipeline projects outside of the 6 year horizon until a case for funding based on need, effectiveness, cost-benefit ratio and sources of additional partnership funding, if required, are established.

Funding provided by Central Government through the MTP process is known as Flood Defence Grant in Aid (FDGiA). Not all projects meet the necessary cost-benefit ratio and set criteria to enable full funding through FDGiA. Additional partnership funding is usually required for a scheme or project to be approved. Sources of match funding include Local Levy (see below), as administered through the Regional Flood and Coastal Committees, capital investment funding provided by the LLFA and match funding from other private or public organisations.

3.3 Flood and Coastal Erosion Risk Management structure

FCERM in England is overseen by Defra, mainly through the Environment Agency, who manage the MTP on Defra's behalf. The main channels of communication between LLFAs and Government are described below.

Figure 1 shows some of the organisations and interactions involved in delivering FCERM.

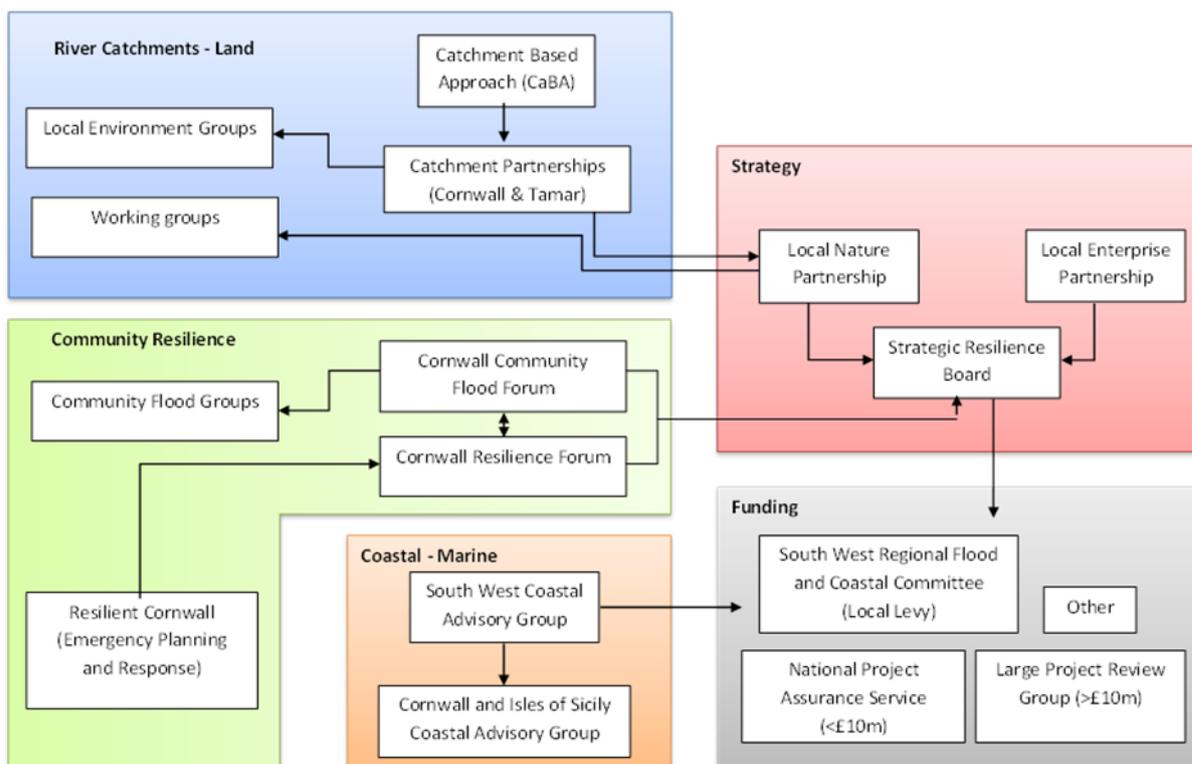


Fig. 1 Groups focussed on flood resilience in Cornwall

3.3.1 SW Regional Flood and Coastal Committee

Governance of FDGiA delivered by Central Government resources in England is provided by twelve Regional Flood and Coastal Committees (RFCC), as set out in the FWMA.

The Environment Agency must consult with RFCCs about flood and coastal risk management work and expenditure in their region and take their comments into consideration. RFCCs are also responsible for allocating Local Levy funds that can be used for commissioning specific projects or studies or as match funding for projects as required in order to release FDGiA, through an annual “local choices” meeting.

RFCCs are made up of independent members with relevant experience on specific aspects of FCERM, such as inland flooding, coastal flooding, ecology and environment, land management and utilities, Environment Agency officers and also elected members of each of the LLFAs within the region.

Cornwall Council is part of the South West Regional Flood and Coastal Committee (SWRFCC). The LLFA membership for the SWRFCC is provided in Table 2 below. The three SWRFCC members representing Cornwall Council during this reporting period are Cllr Sue James, Cllr Dominic Fairman and Cllr Carolyn Rule.

Table 2 Numbers of elected members representing LLFAs on the SWRFCC

LLFA	No of elected members
Cornwall Council	3
Devon County Council	4
Plymouth City Council	1
Torbay Council	1
Council of the Isles of Scilly	1

The Local Levy is a fund that is paid into by each of the LLFAs on a RFCC. As Local Levy is often used to match fund FDGiA, a highly beneficial rate of return is received. It can also be used to pump-prime project development in advance of FDGiA being received. The amount of Local Levy raised by each LLFA is based on a set rate per council tax band D property within each respective LLFA area.

The total Local Levy raised by the SWRFCC during 2017/18 was £1,053,274 of which £330,683 was invested by Cornwall Council. The agreed Local Levy contribution from Cornwall Council for 2018/19 is £363,751. The expected contribution from Cornwall Council for 2019/20 is £400,126.

The SWRFCC meets quarterly. In 2017/18 the following meetings were held:

- July 2017 Modbury
- October 2017 Plymouth
- January 2018 Roadford
- April 2018 St Austell

Four additional meetings of the SWRFCC Finance Sub-group were also held, with officer representation from Cornwall Council.

3.3.2 SW Coast Group

The South West Coast Group (SWCG) is aligned with, and reports to, the SWRFCC. It is made up of the Environment Agency and the Coastal Authorities, which are not necessarily LLFAs. SWCG representation is through officer membership, rather than by elected Members of the Council.

The SWCG oversees the development and implementation of Shoreline Management Plans: the Cornwall and Isles of Scilly SMP2 as well as the South Devon and Dorset SMP2 and the North Devon and Somerset SMP2.

The SWCG also administers the Regional Coastal Monitoring Programme delivered by the Plymouth Coastal Observatory (PCO), which is funded by Central Government, through FDGiA, to collect and distribute coastal survey data such as beach surveys, foreshore ecology, topographic and bathymetric surveys around the coast of SW

England and provide an annual report. The PCO has been collecting consistent data since 2006.

The PCO also conducts post-storm surveys of selected beaches in order to monitor beach erosion and sea defence vulnerability.

The PCO, with the support of the SWCG, have in this 12 month period completed an asset condition survey of all coastal defences around Devon, Cornwall and the Isles of Scilly.

3.4 Partnership working

In addition to the statutory bodies, Cornwall Council works with local partners in the field of FCERM.

3.4.1 Cornwall Community Flood Forum

Cornwall Council recognises and supports the important work of the Cornwall Community Flood Forum (CCFF).

The CCFF was set up to consolidate and continue the work of various flood groups that arose from the severe flooding that occurred in the St Austell Bay area in 2010.

The CCFF is a community-led initiative committed to supporting communities, households and businesses at risk of flooding. It began as an association of Town and Parish Councils, community groups, businesses and individuals with an active involvement in flood risk management. Its aims are to promote partnership working within flood risk management and support communities before, during and after flooding.

Membership of the CCFF is open to all Town and Parish Councils, community flood groups, individuals and businesses within Cornwall. It is also open to all organisations with an interest in flood risk management.

Recently the CCFF has moved from being an Association to a Charitable Incorporated Organisation and is keen to hear from potential trustees to contribute as much as possible to the governance of the organisation and wherever possible become actively involved in the work done by the organisation to meet its charitable objectives.

3.4.2 Cornwall Community Resilience Network

The Cornwall Community Resilience Network (CCRN) is an initiative driven by the CCFF together with Cornwall Council. The aim is to help create a network of communities working together to share experiences and knowledge and to raise the level of community preparedness throughout Cornwall.

The CCRN helps communities to be prepared to respond to an emergency, like flooding, heavy snowfall or a major fire. It encourages communities to create their own emergency plan or community flood plan and provides a toolkit to guide communities through the process and training for volunteers and flood wardens.

It is a partnership between the CCFF, the EA, SWW, Devon and Cornwall Police, Cornwall Fire and Rescue Service, and Cornwall Council's Emergency Planning, Localism and Strategic Environment Teams.

3.4.3 Cornwall Catchment Partnership

The Cornwall Catchment Partnership (CCP) champions the Catchment Based Approach (CaBA), which is a Defra policy that embeds collaborative working at a river catchment scale to deliver cross-cutting improvements to water environments through community partnerships, making use of local knowledge and expertise.

CaBA projects within the catchment management areas of West Cornwall and the Fal and of North Cornwall, Seaton, Looe and Fowey are managed by the Cornwall Wildlife Trust and the River Tamar catchment management area by the Westcountry Rivers Trust.

Participants in the CCP include the Local Nature Partnership, Environment Agency, South West Water, Natural England, The National Farmers Union, Country Land and Business Association, the Association of Inshore Fisheries and Conservation Authorities and Cornwall Council.

The CaBA promotes Natural Flood Management techniques that work with nature to control floodwaters over hard engineering techniques. The CCP created a Soils sub-group to address issues of soil erosion and agricultural runoff that has been active over the last 12 months.

3.4.4 South West Flood Risk Managers Group

The SW Flood Risk Managers Group (SWFRMG) was set up to disseminate and share information related to the new duties that local authorities inherited on the introduction of the Flood and Water Management Act in 2010. It is made up of 16 LLFAs, from the Isles of Scilly to Bristol to Gloucestershire to Bournemouth, the Environment Agency's Devon, Cornwall and Isles of Scilly region and Wessex region, South West Water and Wessex Water. It links to the Local Government Association's Flood and Water Management Group and the Local Authority SuDS Officer Organisation.

The SWFRMG provides a collective voice for the South West over FCERM issues. The Chair of the SWFRMG was taken over by Cornwall Council from Devon County Council in January 2018 and will pass to Somerset Council in January 2019.

4 Flood events during this period

Annex A lists the numbers of properties in Cornwall that flooded internally since 2011. This information is summarised in Figure 2, below.

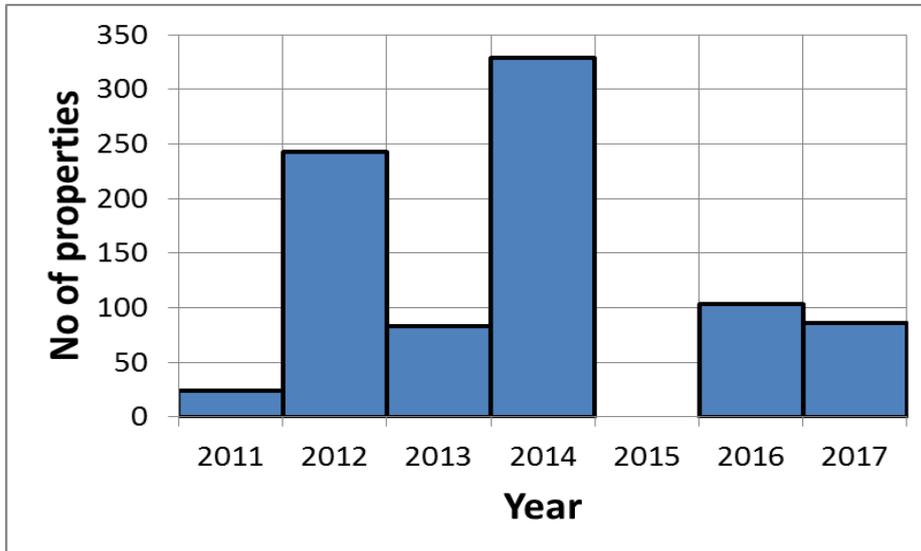


Fig. 2 Annual number of properties recorded to have flooded internally since 2011

This list includes only those that Cornwall Council is aware of. Undoubtedly there will be others of which we are not aware. The list does not include properties whose gardens only flooded, access only flooded or were flooded by incidents that are not part of FCERM such as burst water pipes or leaking roofs.

Undoubtedly, more properties flooded than those that Cornwall Council has recorded. In the 2017 calendar year some 86 properties in Cornwall were recorded as flooding internally. The majority of these were related to the Coverack event of 18 July 2017.

During the period covered by this report, 1 July 2017 – 30 June 2018 the following significant flooding and coastal events have occurred:

18 July 2017

An extremely intense rainfall of about 200 mm in three hours occurred in the area of Coverack. This was possibly the most intense storm ever recorded in the UK. In Coverack itself around fifty properties flooded, the road through the village was destroyed and a landslide caused the loss of the coast path. In neighbouring St Keverne

eleven properties flooded, one flooded at Porthallow and flood damage also occurred in Porthoustock.

A detailed Flood Investigation Report on the Coverack event is available on Cornwall Council's website.

<https://www.cornwall.gov.uk/environment-and-planning/countryside/estuaries-rivers-and-wetlands/flood-risk/flood-investigation-reports/flood-investigation-reports-2017/coverack-flood-event-of-july-2017/>

21 July 2017

Flooding occurred in Crantock around the public toilet block area and surface water flowed through the Village Stores. Cornwall Highways and South West Water investigated and action was taken to improve the drainage at this location.

3 September 2017

Very heavy rainfall led to a deluge of water flowing in the streets of Polperro. There were reports of potatoes being washed out of fields and blocking drains in the village. Fire and rescue services attended a number of incidents to rescue people trapped in cars in floodwater.

3 January 2018 – Storm Eleanor

In Newquay a row of kiosks, owned by Cornwall Council, were ripped up and washed across the Harbour as large waves and strong winds swept into the bay overnight. Four businesses operating from Newquay Harbour were badly affected.

In St Ives a wave smashed down the doors of an art gallery flooding the inside and ruining stock.

A 20 metre section of sea wall collapsed at Portreath.

At Loe Bar the outlet tunnel collapsed and the Environment Agency mobilised their heavy duty pumps to reduce water levels in Loe Pool, protecting 120 homes in Helston against flooding.

The aftermath of Storm Eleanor resulted in “cliffing” of beach sand dunes along the north coast resulting in vertical sand cliffs up to 10 metres high. This particularly affected Perranporth, Crantock and Bude, where Summerleaze Beach was closed to the public due to safety concerns. In Porth approximately 300 tonnes of sand engulfed a commercial premise.

2 March 2018 – Storm Emma

Exceptional high tides coinciding with a pressure surge from Storm Emma and melting snow resulted in damage to coastal communities along the south coast of Cornwall.

Emergency services attended Porthallow on the Lizard where five properties were flooded and floodwaters were reported to be up to 1m deep in places. Boats and cars were reported to be severely damaged.

In Maenporth the beach car park was devastated with debris, rocks and sand thrown up by the sea. Damage also occurred at Swanpool.

Mevagissey, Portmellon and Gorran Haven were badly affected with damage to the sea fronts and harbours. At Mevagissey tarmac was ripped up from the harbour, boats were thrown onto the quay and the Coastguard Station was badly damaged by the sea after its doors were smashed down by waves. A large rock fall occurred at Gorran Haven.

1 April 2018

High tides and heavy rain affected Mevagissey on Easter Sunday. Streets were submerged in flood water and many nearby roads were closed, leaving some residents unable to reach their homes.

Emergency services attended and pumped water from a number of properties. Community flood wardens were mobilised. A number of roads in the St Austell Bay area were closed due to flooding.

Reflection on the year

The main locations of flooding that affected Cornwall during this period were in coastal communities. The main source of flooding was the sea though in Coverack it was extreme rainfall. The intensity of rainfall in the Coverack event was unprecedented and around the same amount of rainfall occurred as for the Boscastle event of 2004 but in half the time.

5 Flood and Coastal Erosion Risk Management Schemes

5.1 Progress on projects

Listed below are FCERM schemes that have been concluded or progressed by Cornwall Council during the 2017/18 reporting period. This list contains only projects that are led by Cornwall Council; projects led by the Environment Agency and South West Water are excluded but in general contain some Cornwall Council involvement.

Beach Dune Management Plans (BDMP)

A tenth Beach Dune Management Plan has been completed at Marazion. This followed the same format as the nine beach dune plans completed the previous year at Constantine Bay, Porthtowan, Summerleaze, Par, Widemouth Bay, Praa Sands and Portcothan, Harvey Towans and Fistral Beach. The reports are all publicly available at the following link: <http://www.cornwall.gov.uk/environment-and-planning/countryside/estuaries-rivers-and-wetlands/flood-risk/coastal-erosion-and-shoreline-management/beach-dune-management-plans/>

Newquay Harbour

Urgent repairs are required at Newquay Harbour. Gap funding for Newquay is now secured from Cornwall Council. The contract has now been awarded to our in house contractor (with specialist sheet piling work to be sub-contracted) and all permissions etc. are now in place. Works are provisionally programmed for commencement in July 2018 with duration of 8 weeks for detailed design and 16 weeks for construction.

Bude canal sea wall

Partial works have been undertaken to repair damage to the upper canal revetment as part of storm Eleanor recovery. Further work has been undertaken on site investigation. The main works are planned for 2018.

Millbrook

Works have been undertaken and completed at Millpool Head, Millbrook, to improve flows through a culvert on an Ordinary Watercourse. This is Phase 2 of a project whereby Phase 1 was on a Main River section and so carried out by the Environment Agency.

Mount's Bay long term options

A feasibility study of long term options (including a potential "sandscaping" approach) has been approved with £50k FDGiA and £50k match funding from The Crown Estates. The project is currently concluding Phase 1 and the results are encouraging enough to move on to Phase 2, with further modelling and development of options. The final solution is likely to involve an element of sand recharge to the Bay and this may include a "mega-nourishment" or "sandscaping" approach.

Long Rock Coastal Improvements Project

This project involves a rock armour defence to the railway line and coastal path at Long Rock, in Mount's Bay, and environmental/flood risk improvements to Marazion Marsh SPA. £2.7M FDGiA has been approved and a Grant Agreement for £1M ERDF funding has also now been agreed. The official start date for the project was 1 July 2017 and it is due to run until December 2020.

At the time of publication of this report, the planning application for the rock armour coastal defence element has been submitted in September 2018, with further applications due for the Marazion Marsh element in October or November 2018.

Further information on this project is available on our website at:

<http://www.cornwall.gov.uk/longrock>

5.2 Developing schemes

FCERM schemes that have been developed or initiated during the 2017/18 reporting period but are yet to come forward to full funding approval are listed below.

StARR (St Austell Bay Resilient Regeneration) Project

This multi-million pound project aims to reduce flood risk to communities living and working in the St Austell Bay area, particularly in Par and St Blazey. The proposed scheme will bring additional benefits to the area by encouraging investment into the area, which currently floods on a regular basis.

The project takes an ambitious, multi-scheme integrated approach to managing flood risk from multiple sources with close partnership working between Cornwall Council, the Environment Agency, South West Water, Cornwall Development Company, Westcountry Rivers Trust and the University of Exeter.

As of the end of June (for the reporting period of this report) we were reasonably confident of obtaining funding from FDGiA, Defra's Deprivation Fund and ERDF European funding, at approximately £10M for each component.

At the time of publication in October 2018 – this project has made further progress on securing funding, with Defra funds confirmed, consideration by the Environment Agency's large project review board for FDGiA has been positive and a further application for the ERDF EU Funding has been made.

Further information on this project is available on our website at:

<https://www.cornwall.gov.uk/starrproject>

Property Level Resilience (PLR)

CC internal approval will be required for the match funding contribution and we are looking to deliver the project with a 2018/19 start. The main risk to this project is in finding internal resources to manage it. We are currently awaiting information on the

Environment Agency's PLR Framework to deliver the project, which is expected to become available in the autumn of 2018.

BDMP Actions

Leading on from the ten completed beach dune management plans we are now seeking funding to deliver the identified actions. These do not easily fit with the priorities required for FDGiA funding.

Mount's Bay Shoreline Management Strategy

Funding for a wider Strategy for Mount's Bay is currently being sought. The ongoing Mount's Bay long term options feasibility work, preferred options for the Promenade, Wherrytown and Newlyn and the issue of a potential Outer Harbour Breakwater would benefit from a wider strategy within the context of the Shoreline Management Plan and agreed by numerous stakeholders.

Portreath Harbour

Urgent repairs were needed for Portreath Harbour at the end of this reporting period.

At the time of publication of this report following an appraisal of the Project Plan to review data and options assessment for remedial works, the Environment Agency has commenced repair works.

Coverack

We are awaiting guidance on grant support from the Environment Agency for work to the sea wall at Coverack and the EA has allocated a resource to help Cornwall Council with the business case. The need for the work is partly due to erosion of the existing defences in the July 2017 event but also to address ongoing coastal erosion issues.

Cornwall Council is presently committed to progress this project due to the urgency of the work and increasing vulnerability of the road.

In addition, Cornwall Council is working closely with the Environment Agency on the development and appraisal of potential future FCERM schemes across Cornwall.

6. Bathing water quality issues

Whilst not strictly a FCERM issue, the Select Committee that met in June 2015 was keen to be kept abreast of developments relating to bathing water quality and combined sewer overflows (CSO).

Cornwall has presently 89 beaches designated as bathing waters under the Bathing Waters Regulations. Last year there were 81 but 8 new ones were added in 2017:

- Booby's Bay, near St Merryn
- Godrevy, The Towans, near Hayle
- Gwynver, Whitesand Bay
- Mexico Towan, The Towans, near Hayle
- Northcott Mouth, near Bude
- South Fistral, Newquay
- Tregonhawke, Whitsand Bay
- Upton Towan, The Towans, near Hayle

Bathing water quality is assessed through a fairly complex process involving regular monitoring and signage to report alerts.

CSO alerts are provided by SWW. A Pollution Risk Forecast (PRF) is also provided by the Environment Agency for certain beaches. These are available where the Environment Agency has sufficient data to imply a link between rainfall across a catchment and reduced river water quality. PRF is a tool that could be utilised on any beach with a river flowing onto it but the system is typically only used on sites struggling to meet the 'sufficient' classification. This means the picture is not as comprehensive as it could be. Reduced water quality can be due to agricultural runoff, for instance, not just CSOs. If a PRF is issued it does not necessarily mean that water quality is poor, just that it is statistically likely to be. Of Cornwall's 89 designated beaches, 24 benefit from a PRF.

Live pollution alerts can be accessed from SWW's Beach-live site (<http://www.beachlive.co.uk/>), on the Environment Agency website or through Surfers Against Sewage's Safer Seas app.

Overall bathing water quality results are based on the data from four consecutive years. In 2017 in Cornwall no beaches recorded a "poor" rating, 2 beaches a "sufficient" rating, 15 beaches a "good" rating and 63 beaches gained an "excellent" rating. The excellent rating represents 79% of bathing water beaches in Cornwall against a national average of 66%). As bathing water quality is rated against four years of results, the eight new bathing water beaches will not have a rating until 2021.

7. Devolution

The Strategic Resilience Board has met six times since the last Scrutiny Committee Report.

The aims of the board are:

1. To govern the delivery of the Resilience Work Programme and the Cornwall Devolution Deal (CDD)
2. To provide strategic leadership for a long term approach to resilience in Cornwall Council
3. To optimised partnership working across Cornwall to manage flood risk and coastal change.

Progress

- The first phase of the resilience component of the Devolution Deal is entering closedown, with the 25 year Investment Plan being drafted
- The Strategic Resilience Board is meeting regularly (quarterly) which is improving working practices between the risk management authorities (RMAs); the Environment Agency, South West Water and Cornwall Council.
- A consultant (WSP) completed the creation of a triple bottom line risk assessment tool. This tool allows us to dynamically map flood risk across Cornwall by weighting impact on different criteria, the tool then summarises the potential for Flood Defence Grant in Aid, assisting with programme/project prioritisation.
- Through the Strategic Resilience Board and the work completed on the first round of Devolution, a new set of proposals have been created for the next round; New Frontiers (Annex A).
- The programme of activities for the current round of Flood Defence Grant in Aid through the Environment Agencies Medium Term Plan has now been refreshed and agreed at the National level.
- Work is continuing on the outlined pipeline programme for 2021 to 2027 (next round of Flood Defence Grant in Aid); discussions are ongoing to clearly define the programme and understand the funding need.
- A number of draft Community Flood Profiles were completed but have proven to be resource intensive in their creation, a review of the composition and resource required for delivery of this activity is underway, to enable more focussed delivery.

8. Coastal Change Issues

The Shoreline Management Plan (SMP) was adopted by Cabinet in 2011.

The SMP sets out management policies and preferred approaches for coastal defences. It is a material planning consideration but is not well understood by planners or developers. In order to clarify the application of the SMP in Planning, we are in the process of drafting Planning Guidance on coastal erosion to provide consistency and clarity on what we expect of developments in areas vulnerable to coastal erosion. We are working closely with Cornwall Council Planning and the Environment Agency to do this.

The SMP identifies areas around the coast that are particularly susceptible to coastal erosion and classifies these as Coastal Change Management Areas (CCMA). We are endeavouring to build CCMA considerations into Neighbourhood Plans.

In order to raise the profile of the SMP, dedicated webpages and all of the associated documents are now hosted on our website at:

<https://www.cornwall.gov.uk/smp>

9 Discussion

- *Climate Change*

A changing climate is becoming a reality, the unusually long period of good weather in Cornwall this summer was part of a wider global weather pattern in all likelihood resulting from an ever warming climate due to green-house gas emissions. The heat waves across the globe have preceded some of the strongest and most devastatingly impactful storms in the Atlantic and Pacific ever seen.

The assessment of the flood event in Coverack has shown that rainfall patterns in Cornwall are changing too and to the degree that they are breaking UK records. Our geography is distinct with short catchments with small communities living next to the coast, the risks we face are real but difficult to predict, and consequently it is extremely difficult to fund defences in anticipation of such events via the existing national system.

In November Defra are due to publish the next edition of the UK Climate Predictions 2018 (UKCP18), replacing those last issued in 2009. The UK Climate Change Risk Assessment published in 2017, has illustrated the complexity of the risks we face and our New Frontiers asks, are a starting point for a local and national discussion about how we respond to our increased understanding of our risks.

In 2019, we will prepare a more comprehensive response to our Climate Change risks once the UKCP18 is published, which will be another step in preparing for the future and initiating conversations with our communities about the likely social impacts of the environmental changes.

- *Brexit impacts*

There continuing uncertainty around the conditions for Brexit are not immediately impacting our approach to managing flooding and coastal defence, however, it the case that our major investments which aim to deliver defences in a way that also delivers environmental growth which is necessary for the wider adaptations to a changing climate as well as defending our selves from these risks, are being partly funded by European Funds.

It is essential that the Government reflect the reality of a changing climate through the structure of the Shared Prosperity Fund and the approach to developing Local Industrial Strategies.

The new Agriculture Act and forthcoming Environment Act do acknowledge the need for change in how we manage our environment, there are positive changes proposed in these documents, which will proceed through Parliament in 2018/19.

- *Investment/funding availability*

The reality of our current assessment is that while in the short term through the Environment Agency programme, EU Funds and some Defra deprivation funding we can progress a number of important flooding and coastal defence schemes. The long term situation for investment is challenging, where we have high cost capital investments needed for small communities that in a national calculator do not provide the number of households needed to generate the level of funding required.

It is unlikely that Government through any national scheme will be able to fully account for this, although we are lobbying for genuine inequalities in funding to be addressed through our New Frontiers asks and responses to consultations.

Thus we are going to need to think about our risks and responses differently in future, where we need the involvement of communities, land owners and managers, hydrological and coastal engineers to work together to design new schemes that can reduce the impact of the risks faced, are affordable and can be implemented.

- *Development management*

Management of coastal erosion, is an important and complex matter with an interaction particularly with the Planning system. Our current approach does not give certainty to land managers, developers, planners or communities. This needs to be addressed but will take considerable investment of time and financial resources; technically to take the sources of evidence we have on risk in to realistic analyses for different communities; and to work with the communities to establish an appropriate response locally.

Further the publication of the UKCP18, is likely to impact the flood risk assessments made by the Environment Agency that the Council relies upon for spatial planning purposes. The Council needs to prepare its self to gain understanding and make appropriate responses to the impacts this new assessment may make. This could impact the existing Local Plan and will require fully incorporating into the evidence base for the next Local Plan.

- *Maritime Strategy refresh*

The Maritime Strategy is relevant to everyone in Cornwall, not just coastal areas, and it is undergoing its 5 year review. Cornwall has 1086km of coast line, the longest coastline in England and nowhere in Cornwall is more than 20 miles from the sea. 92% of our businesses are located in clusters around 6 key ports. Viewing ourselves differently and valuing this highly designated environmental habitat and natural capital resource for our communities and economy is vital for Cornwall to succeed in future. Weaving

awareness of maritime issues as a ‘golden thread’, acknowledging the opportunities and challenges gives Cornwall one of its distinct characteristics in an evolving UK context where regional areas are being asked to focus on their unique features and strengths.

- *Glover Review of Designated Landscapes*

The Glover Review on the designated landscapes has been established by the Secretary of State for the Environment to look at the efficacy of the existing designations, primarily those of National Parks and Areas of Outstanding Natural Beauty, but others are not excluded from the scope of the review.

While in Cornwall a polarised debate can quickly form about whether or not Cornwall should be a national park in part or in its entirety and whether our existing designations are being well managed; there are in reality a series of escalating pressures in Cornwall particularly around our coastal zone. The coastal zone in Cornwall holds the majority of our major towns the notable exemptions being Camborne, Pool & Redruth, Bodmin, Liskeard and Launceston. The majority of the other major settlements are all located in coastal and tidal locations. Thus in these towns the majority of our economic activity is focused and they are major centres of population with increases in scale set out in the local plan. Further our AONB with the exception of Bodmin Moor is all located around the coast and we have a significant number of internationally and nationally designated sites indicating the value of the habitat and wildlife; all around this coast runs the South West coastal path a major economic and social asset for residents and visitors.

With the designation review in mind, this could be the moment to consider if a new type of designation is needed to help manage the pressures and opportunities Cornwall faces into the future; that can focus public sector resource efficiently, develop suitable governance structures and policies that involve communities, to choose how the character of our coastline evolves while it changes shape in the coming years. It is also notable that Plymouth City Council have been pursuing the idea of naming Plymouth Sound a Marine Park, not as a ‘designation’ through legislative means but as a tool to raise awareness, encourage partnership and investment in the area.

- *Community engagement*

Local communities and specific places need to be more resilient; to achieve this they may need to change their function in future occasionally, seasonally or permanently, local residents early involvement in understanding how their community is going to change and how it could adapt through the design and practicalities of their evolving place is critical.

In terms of emergency response, the Community Flood Forum and Emergency Management procedures in Cornwall are national exemplars. Resourcing for the long term engagement needed to manage adaptation rather than response is not currently clearly or easily available, locally or nationally.

Localism and devolution approaches offer an opportunity for increased local ownership and influence on places and services, however, that tends to focus on the immediate needs and desires of the community, rather than being supported to address the long term complex issues that issues such as climate change and coastal erosion generate.

10. Recommendations

Following the report for 2017/18 and the discussion above, the following recommendations are made to the Cabinet Member for Environment and Public Protection, that the Council:

1. Continues to oversee Flood and Coastal Erosion Risk Management in Cornwall via the review undertaken by the Neighbourhoods Overview and Scrutiny Committee.
2. Maintains the leadership of the Strategic Resilience Board that to further improve joint working between the Council, Environment Agency and South West Water as Risk Management authorities; and with other public and private organisations and partnerships to deliver effective leadership of flood risk management.
3. Actively works to promote and practice the principles of Environmental Growth, through innovative catchment management, natural flood management and coastal engineering approaches) within all our activities.
4. Participates where appropriate at national and international levels in strategic initiatives and academic research on Flood and Coastal Erosion Risk Management, especially in respect of the challenges presented by climate change and sea level rise.
5. Endeavours the best available evidence on flood and coastal risk is used to make decisions and to formulate future strategic plans.
6. Continues to review the implications of funding availability for future schemes to manage risks in Cornwall; actively lobbies for fairer funding where appropriate; and proposes policy conditions to Government that empower the collected Risk Management Authorities in Cornwall to positively address their local challenges, optimising national and local resources that are available.
7. Requests the Environment Agency and South West Water to proactively design their services and infrastructure that result in improved bathing water quality in Cornwall.
8. Continues to evolve the approach to working with communities, accounting for the existing Localism and Devolution policies and how to develop increased understanding of long terms risks and community engagement in adaptation required to implement the Shoreline Management Plan.

ANNEX A Property flooding

Table A1 List of properties affected by internal flooding since 2011

Year	Event (Location)	Properties flooded
2011	17 January (Praze)	1
	17 January (St Buryan)	2
	17 January (various other)	5
	26 August (Truro)	5
	24 October (Mevagissey)	10
	24 October (Par)	1
Total		24
2012	17&18 October (Fowey)	5
	17&18 October (Looe)	20
	17&18 October (Mevagissy)	5
	24 November (Cawsand)	5
	24 November (Hessenford)	5
	24 November (Kingsand)	10
	24 November (Ladock)	13
	24 November (Millbrook)	23
	24 November (Newlyn)	15
	24 November (Perranporth)	5
	24 November (Polperro)	6
	24 November (Portmellon)	Not known
	24 November (St Just in Roseland)	Not known
	24 November (Trenear)	5
	14-16 December (Fowey)	4
	14-16 December (Looe)	50
	14-16 December (Mevagissey)	12
	22 December (Helston)	5
	22 December (Ladock)	10
	22 December (Lostwithiel)	13
22 December (Mevagissey)	13	
22 December (Mousehole)	7	
22 December (Porthallow)	9	
22 December (Porthleven)	3	
Total		243
2013	18 January (Heamoer)	25
	18 January (Port Issac)	5
	21 March (Heamoer)	Not known
	21 March (Pendeen)	5

Year	Event (Location)	Properties flooded
	21 March (Relubbus)	6
	5 August (Crantock)	5
	5 August (Helston and Breage)	8
	5 August (Perranporth)	5
	5 August (Scorrier)	1
	6 September (Falmouth)	3
	23 December (Bugle)	3
	23 December (Ponsanooth)	1
	23 December (Calenick)	5
	24 December (Luxulyan)	2
	24 December (Trenear)	2
	24 December (Perranwell)	7
	Total	83
2014	1 January (Perranporth)	1
	3 January (Fowey)	8
	3 January (Looe)	60
	3 January (Porthleven)	5
	9 January (Polperro)	60
	1-5 February (Mevagissey)	20
	3 February (Penryn)	5
	3 February (Penzance)	11
	3 February (St Ives)	15
	3-5 February (Fowey)	26
	3-5 February (Looe)	60
	3-5 February (Portmellon)	6
	4-5 February (Kingsand)	8
	5 February (Millendreath)	28
	14 February (Frogpool)	1
	14 February (Newlyn)	7
	8 October (Fowey)	5
	8 October (Looe)	3
	Total	329
2015	Total	0
2016	3 January (Menheniot)	1
	6 February (Blackwater)	2
	6 February (Portreath)	9
	6 February (Hayle)	12
	6 February (Chacewater)	2

Year	Event (Location)	Properties flooded
	6 February (St Agnes)	2
	8 February (Mawgan Porth)	1
	8 February (Port Gaverne)	1
	8 February (Port Issac)	2
	12 February (Penryn)	1
	10 April (St Mawes)	2
	10 April (Flushing)	1
	10 April (Gorran Haven)	2
	10 April (Penzance)	3
	13 September (Falmouth)	14
	13 September (Portreath)	4
	13 September (Bridge)	5
	13 September (Gilberts Coombe)	2
	13 September (Camborne)	16
	13 September (Redruth)	21
	Total	103
2017	2 February (St Mawes)	1
	5 February (Polperro)	1
	13 May (Camborne & Redruth)	5
	18 May (Falmouth)	2
	27 May (Looe)	~10
	18 July (Coverack)	50
	18 July (St Keverne)	11
	18 July (Porthallow)	1
	3 September (Polperro)	~5
	Total	86
2018 to date	3 January (Newquay)	4
	3 January (St Ives)	1
	2 March (Porthallow)	5
	2 March (Maenporth)	1
	2 March (Mevagissey)	1
	1 April (Mevagissey)	5
	Total	17

ANNEX B New Frontiers Devolution Proposals

- Overall a request for Government to consider how rural and coastal areas are considered in national policy, where each place has unique circumstances, but Cornwall's are particularly distinctive, being unprotected Atlantic peninsula with rapid response catchments around our coast line, creating a unique combined risk from intense rainfall events and sea flooding to small and/or vulnerable communities
- For national approaches to modelling flood risk to include wave action and heights and that these are modelled to reflect future risk from sea level rises and more rapid climate change (this is now being done).
- For the Partnership Funding Calculator (the Flood Defence Grant in Aid gateway), has a mechanism included within it to account for low population – high risk – high cost flood risk management measures. This would require measures of value such as the risk of loss of life to be given greater weight within the calculator model.
- For a fund to conduct a feasibility study and consultation on the implementation of Schedule 3 (deferred) of the Flood and Water Management Act 2010 (Sustainable Drainage Systems (SuDS)) and support to fund a nationally important guidance document into design, implementation and maintenance of Sustainable Drainage Systems.
- For infrastructure, commercial premises and livelihoods to be accounted for more equally with residential properties within the Calculator mechanism (this is supported by our dynamic risk mapping tool).
- For positive consideration to be given to increasing funding for green infrastructure and natural flood management interventions. To enable investigations of how these risks can be managed effectively into the future, taking account of the capital and revenue implications associated with protecting communities with complex risks. We would welcome collaborations with the Environment Agency's research programmes to evaluate investment proposals and projects to enable increased intelligence on such an approach to become more widely available. To define, nationally, the concept of Natural Flood Management and Working with Natural Processes and a way of quantifying the benefits of such schemes when compared to engineered, traditional structures.
- For Government to consider the impact local ownership of coastal assets has upon their maintenance, and the risk of deterioration as storm pressures

increase. We would ask that increased funding was made available for maintenance of these assets in the South West.

- It has become clear that in the future in Cornwall, roads will need to convey water and traffic; however, they are not specifically designed for this purpose. We ask Government to convene a cross departmental task group to consider policy changes needed to support adaptation to climate change for rapid implementation across all Government investment streams associated with transport infrastructure.
- Consider the application of a small climate change adaptation levy on local taxes, such as Council Tax and Business Rates. This would provide a revenue stream for the Council to support communities who want to proactively consider their future to inform growth and development plans and to access the available national funding more effectively.
- Consider a parallel scheme to FloodRE for small/medium sized enterprises (SMEs) in areas of deprivation where economic and social resilience is reduced. This will encourage new investment in economically and socially disadvantaged areas and support existing businesses' to increase their resilience. Businesses' share the burden of flood risk and collective responsibility to flooding.