

ITEM 6

Somerset Rivers Authority Board Paper

Title: Workstream Update W4 – Funding and Delivery of resilient infrastructure.

RECOMMENDATION

The SRA Board is asked to:

1. Note the progress made in delivering all original actions.
2. Approve the proposals to update W4 and support Grant Proposals aligned to the revised workstream

Purpose of the item:

To review progress in delivering workstream W4, identify outstanding issues and actions, and propose revisions for the future.

Background and context

The flood action plan stated that the flooding of the Somerset Levels and Moors in 2012 and 2014 saw major disruption to transport. Some communities were cut off for weeks at a time. There was major disruption to the road network with several A roads blocked, causing disruption and delay to peoples' travel and consequent costs to business, estimates of impacts are in the region of £100m

The flood action plan identified the need for some key infrastructure engineering works to repair the damage caused by the 2013/14 flood and to prevent some of the consequences occurring in the future if a similar event happened again.

Effective infrastructure and transport links are vital both for individual communities and for economic prosperity and growth and the delivery of Nationally Significant Infrastructure Projects.

The flood action plan aimed to ensure:

A recognised community should have at least one access road, or if that is not possible, easy access to alternative means of transport

Maintain strategic connectivity into and through the county

Infrastructure at risk should be able to recover more quickly from flooding

Where routes are likely to be subject to flooding the resilience of agreed alternative routes should be strengthened

There are short term actions that can both reduce flood risk and increase access, putting the road network back to a good state following the impact of the floods.

There are a range of longer term actions that can increase the overall resilience of the transport infrastructure, which in some cases need to be considered alongside flood risk management measures to ensure maximum effectiveness and value for money as part of the wider consideration of a sustainable long term future for the Levels and Moors.

Much of the technical engineering work needed was undertaken in W4.

Workstream 4 was amended early in the 2016/17 financial year by the SRA to differentiate between projects the County Council was undertaking as a Highway Authority and those being progressed in its role as Lead Local Flood Authority. Consequently W4a refers to Resilient Infrastructure and W4b refers to County Flood Projects

Latest status

A review of the delivery of Workstream 4 demonstrates that significant progress has been made since its formulation, with all of the original actions complete.

The key deliverables from the workstream are set out below along with their current status:

RESILIENT INFRASTRUCTURE		
W4.1	Deep clean of system, including review and survey of gullies and culverts	Completed 2014
W4.2	Pre-placed road closure gates and signage (for diversionary routes) for roads that are at risk of flooding	<p>Gates installed 2015 to close 4 sections of road in times of flood.</p> <p>A361 East ling to Burrow Bridge</p> <p>Langport to Muchelney</p> <p>Cutts Road</p> <p>Moor Road</p> <p>This initiative has proved difficult to implement and currently no further sites are proposed</p>
W4.3	Repair and resurface identified damaged roads using materials and road marking	<p>Works completed. A new Framework Contract was set up to deliver this work. Schemes included;</p> <ul style="list-style-type: none"> The laying of new kerblines to protect against historic

	more resilient to flooding, allowing faster recovery in the future as appropriate.	<p>edge erosion and resurfacing of Huntworth Lane which is the primary access road to Moorland</p> <ul style="list-style-type: none"> • Collaborative work with the IDB to improve flood resilience to Kitches Lane, Chadmead • Surface dressing of the A372 and A361 serving the levels utilising innovative skim planing of high centre ridge in advance of dressing.
W4.4.	Raise the road to Muchelney. Short term solution (one of either west or south roads) to be delivered by next winter.	500m of the Drayton to Muchelney road was raised by upto 1.3m. resulting in a surface level above the maximum flood height in 2014.
W4.5	Implement minor flood alleviation management schemes e.g. to reduce road flooding of the strategic network	9 schemes completed 2014
W4.6 (Was W1.6.2)	Raise level of the A372 – Othery to Aller (7 bends) and to allow larger culvert for Sowey channel	Beer wall scheme completed. Phase 1 complete December 2014. Phase 2 complete July 2015.

Post 20 Year Plan publication W4 on-going activities

Enhanced maintenance

- Gully emptying
- Road sweeping
- Drain Jetting
- Desilting of structures
- Investigation into highway flood alert system
- Working with FWAG on Land Management Highway Referrals
- LLFA Flood mitigation schemes targeted at surface water, ground water and ordinary watercourse flooding problems.
- CCTV surveys of privately owned culverted watercourses
- Replacement of trash screens prone to blockage and associated maintenance work

Proposals for the future of W4

It is proposed that W4a will carry enhanced levels of maintenance at highway sites with known issues. This will provide a proactive approach over and above the minimum

statutory duty carried out by the highway authority (usually reactive unblocking of drainage systems) once they become obstructed. Additional funding will also allow consideration to the use of new or innovative treatments to achieve the desired outcomes.

W4a will also seek to carry out improvement schemes that are either not a highways priority or are not affordable with its current budgets. It will seek to prevent any community being cut off from flooding and to enhance the Highway Resilient Network. The resilient network is defined in the map below and the following criteria has been used to enable a consistent approach across the County.

- Strategic and County Routes
- Emergency Location Links
- Adjoining Counties Links
- Major Settlement Links
- Settlements above 500 feet Links
- Urban/Rural School Links (Major)
- Freight Routes



Achieving these aims will not necessarily entail construction works upon the highway. SCC has a good track record of working with partners to deliver the most appropriate intervention and bring about the desired benefits. For example; working with FWAG SW to address highway flooding caused by land management practices.

It is proposed that SRA funding allocated to W4b County Flood Projects will allow SCC as Lead Local Flood Authority to undertake a greater number of local improvement schemes to better protect properties from flooding from ordinary watercourses, surface water and groundwater sources. It is also envisaged that SRA funding will enhance services and activities provided above what can be delivered with current funding and resources.

Recommendation:

The SRA Board is asked to:

1. Note the progress made in delivering all original actions.
2. Approve the proposals to update W4 and support Grant Proposals aligned to the revised workstream

Date: 29th November 2016

Author: David Jones

Appendix A Revised Workstream 4 Table of Actions

No.	ACTION	WHEN	WHO LEADS IT?
RESILIENT INFRASTRUCTURE			
W4.1a	Enhanced gully emptying programme targeting areas of high flood risk	Annual	SCC as Highway Authority
W4.2a	Implement minor flood alleviation management schemes e.g. to reduce road flooding of the strategic and resilient network	Annual	SCC as Highway Authority
W4.3a	Road sweeping programme	Annual	SCC as Highway Authority
W4.4a	Drain jetting An enhanced maintenance regime focussed on the problem areas, in addition to that currently delivered by SCC to alleviate localised highway flooding.	Annual	SCC as Highway Authority
W4.5a	Desilting of structures. Focused on problem areas, de-silt waterways beneath engineering structures i.e road bridges/culverts. It is proposed that each year a list of priority schemes is identified	Annual	SCC as Highway Authority
W4.6a	Flood alert system A fully automated detection system designed to detect when carriageway flooding reaches a predetermined level, triggering	2017/18	SCC as Highway Authority

No.	ACTION	WHEN	WHO LEADS IT?
	advanced warning road signs advising travelling motorists that a flood is ahead, significantly reducing the risk of personal unjust or vehicle damage, particularly during hours of darkness.		
W4.7b	Implement additional LLFA projects addressing surface water, ground water and ordinary watercourse flooding	Annual	SCC as LLFA
W4.8b	CCTV surveys To provide the ability to survey privately owned culverts to identify problems and/or to gather information	Annual	SCC as LLFA
W4.9b	Replacement and maintenance of trash screens	Annual	SCC as LLFA