

Cornwall Winter Storm Damage 2013/14

Andy Stevenson Highways & Drainage Manager

Timeline (12 Storms)

Fluvial/Surface Water Flooding

- 18 -19 December 2013
- 23 December 2013 (927mb)

Coastal Flooding

- 30 December / 1 / 2 January 2014

Wave Damage

- 1st 9th January 2014
- damage in multiple locations

Wave Damage

- $-1^{st} 5^{th} & 7^{th} 8^{th}$ February
- 14th February 2014
- damage in multiple locations

Wave Damage

- 23rd February 2014
- damage in multiple locations

Wave Damage & Coastal Flooding

- 1st + 5th March 2014
- damage in several locations

Penzance Harbour

Date: January & February 2014

Damage: Coastal defence damage, sea wall collapsed, damaged railings, footpaths and public access areas. Scillonian III berth.

Repair cost: £134,000







Penzance Promenade & Bolitho Gardens

Date: 3rd February 2014

Damage: Collapse of walkway, Lifting of slabs, damage to beach access and

railings

Interim repair cost: £70,000

Permanent estimated cost: £850,000







Eastern Green Coastal Defence

Date: 8 January 2014

Damage: 75 linear m of a 250m length of concrete wall revetment damaged with further deterioration occurring on a daily basis, causing closure of Great Western rail line for six weeks.

Interim repair cost: £500,223

Permanent estimated cost: £2,250,000





Portreath

Date: 3rd January 2014

Damage: Significant wave damage to harbour wall, loss of fisherman's hut and railings within Cornwall World Heritage Site.

Interim repair cost: £182,587

Permanent estimated cost: £500,000







Seaton

Date: 3rd January 2014

Damage: Collapse of large section of wall, re-routing of river, beach café demolished and part of footpath

collapsed

Interim repair cost: £70,089

Permanent estimated cost: £575,000







Calstock

Date: 25th December 2013

Damage: Road collapsed, and remains closed. Residents vehicles recovered, and various access/daily living issues, i.e. emergency access.

Interim costs: £20,288

Permanent estimated cost: £460,000







Kingsand

Date: February 2014

Damage: Iconic Clock Tower and

Institute severely damaged

Interim repair cost: £8,495

Permanent estimated cost: £355,000





Cornwall Response

- Multiple interim repairs started January 2014
- Detailed designs and costings for permanent repairs undertaken
- Ministerial visits and Government Briefings
- Cornwall Local Flood Risk Strategy

Cornwall Conclusions

- Cornwall is a dynamic coastal environment shaped by the weather and the sea
- Good response and multi-agency working
- Significant cost implications for the Authority
- Permanent repairs now underway or about to start
- Settlements remain significantly exposed to flood risk (28,000 properties).
- Is this a blip or a new trend (IPCC Report) and how do we respond?

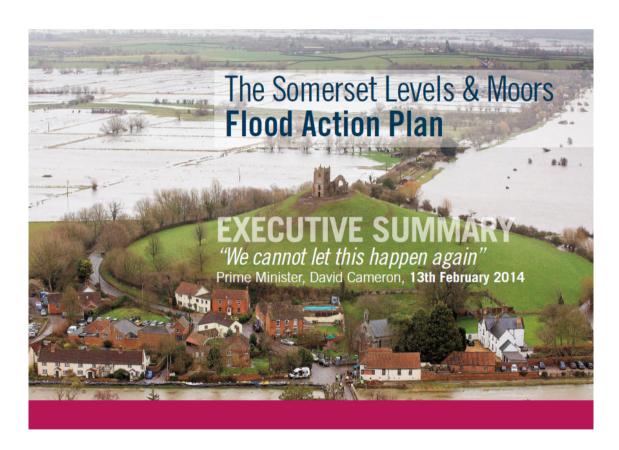
Somerset Levels and Moors Flooding

Winter 2013/14

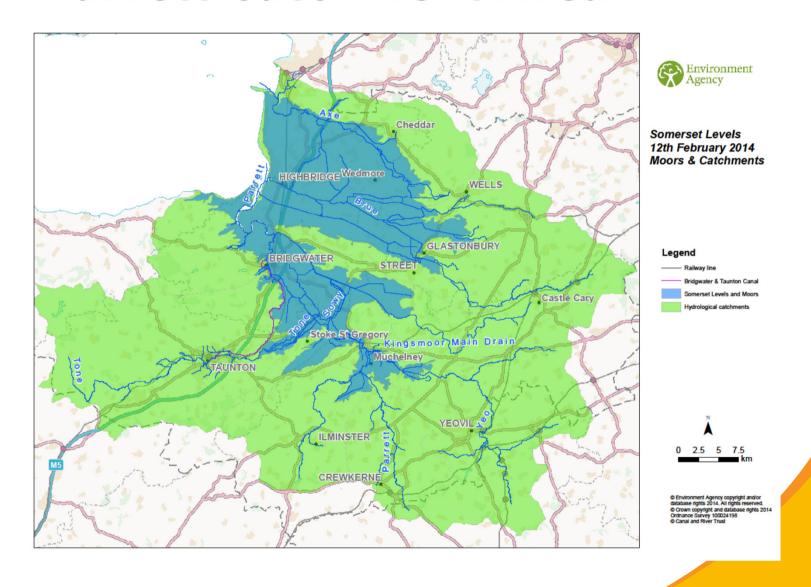


David Jones – Commissioning Manager Highway Asset & Improvement

Flood Action Plan



Parrett Catchment Area



Effects of flooding





Effects of flooding



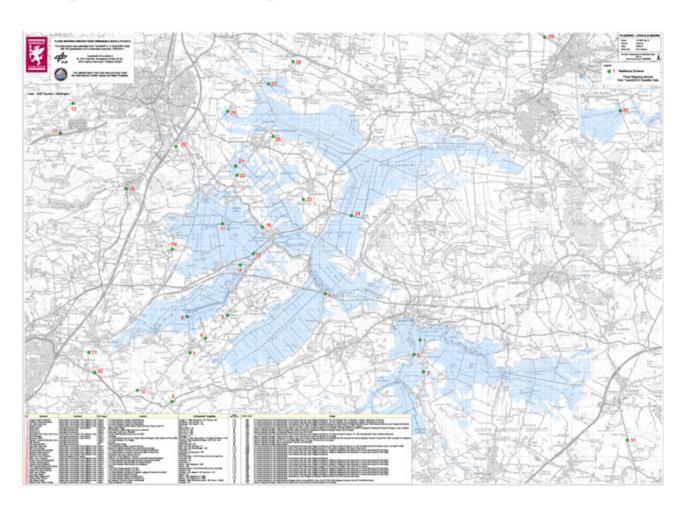


Effects of flooding





Engineering Sites



Resilient Infrastructure elements of the 20 year Flood Action Plan

- Adding extra capacity to Beer Wall Sluice and related road raising.
- Deep clean of system, including review and survey of gullies and culverts.
- Some roads will have road closure gates installed and signage for the diversion routes erected to avoid temporary ineffective barriers and signing during times of flood, sites and routes will be identified for gate & sign installation.
- Repair and resurface 44km of damaged road to make them more resilient to flooding.
- For the village of Muchelney, one road will be engineered so that the community has one access road either to the west or south.
- Implementation of minor flood alleviation management schemes e.g. to reduce road flooding of the strategic network.
- Feasibility study to assess raising the level of the A361, East Lyng to Burrowbridge. The study will look at options that will keep the road passable during floods following EA flood management measures.

A372 - Beer Wall Sluice





Royal Visit

