

SEVERN TRENT WATER

THEME 2 – Flooding

Leicestershire Scrutiny Commission

7th June 2017

Tim Smith



SEVERN
TRENT
WATER

QUESTIONS RAISED

March 2017

There have been a number of flooding incidents in Leicestershire involving foul sewage from combined surface water and sewerage systems over the last 12 months. Are you investing in existing waste water conveyance systems, as well as planning for future increased demands?

June 2017

The Commission understands that Severn Trent Water's role in flooding is to reduce the flood risk associated with rainfall overloading of the public sewerage network. The Commission would like to know:-

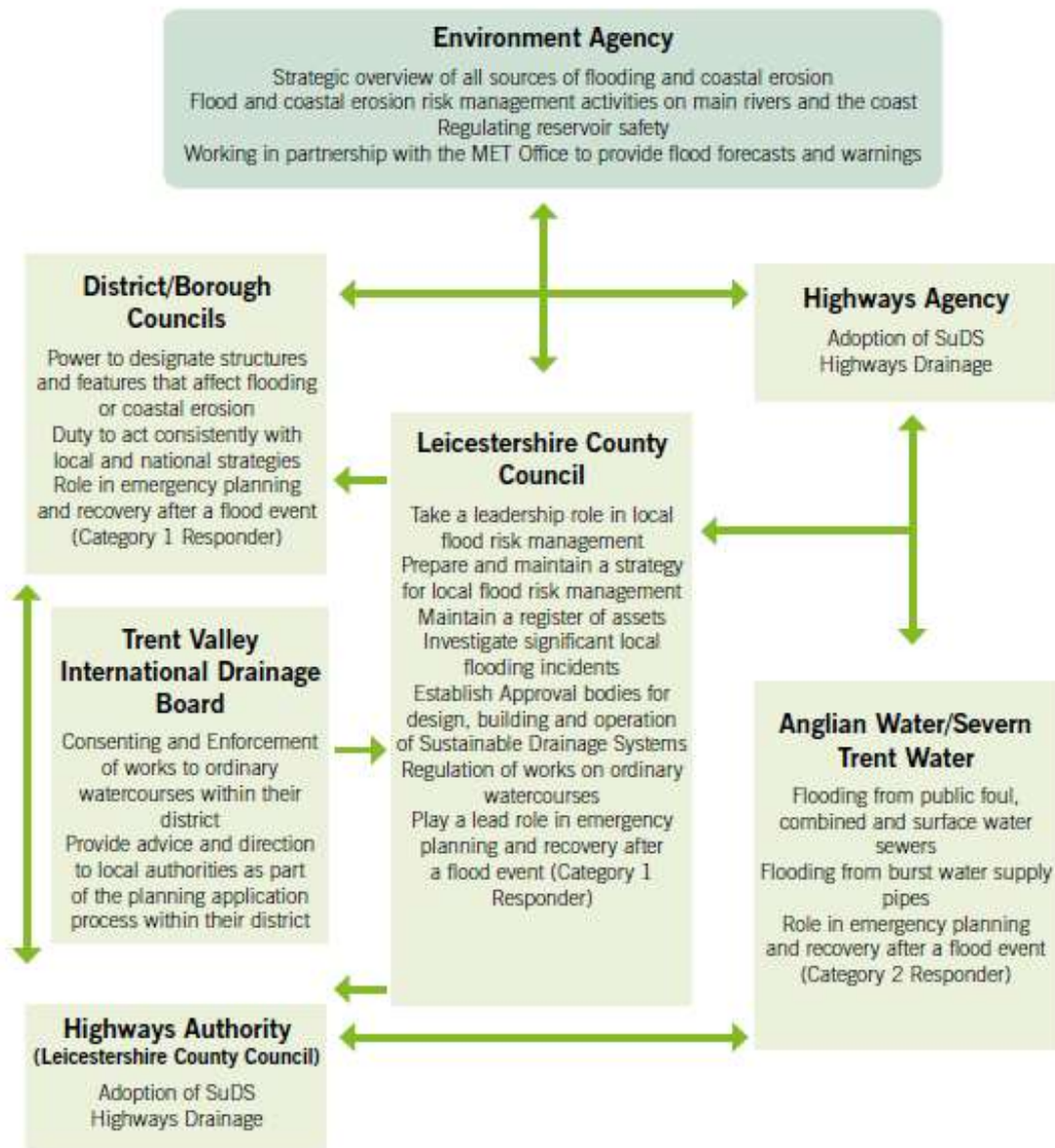
- How can the County Council and other stakeholders support and engage with Severn Trent Water in this role?*
- How does the relationship between Severn Trent Water, the County Council and other stakeholders work in terms of responding to flooding issues. Are there any ways in which this relationship could be improved?*

OVERVIEW

- Severn Trent Water role in flooding
- What is sewer flooding?
- Sewer flooding in Leicestershire
- Managing and reducing flood risk from sewers
- Multi-agency flood risk engagement

DIFFERENT ROLES FOR DIFFERENT RISK MANAGEMENT AUTHORITIES

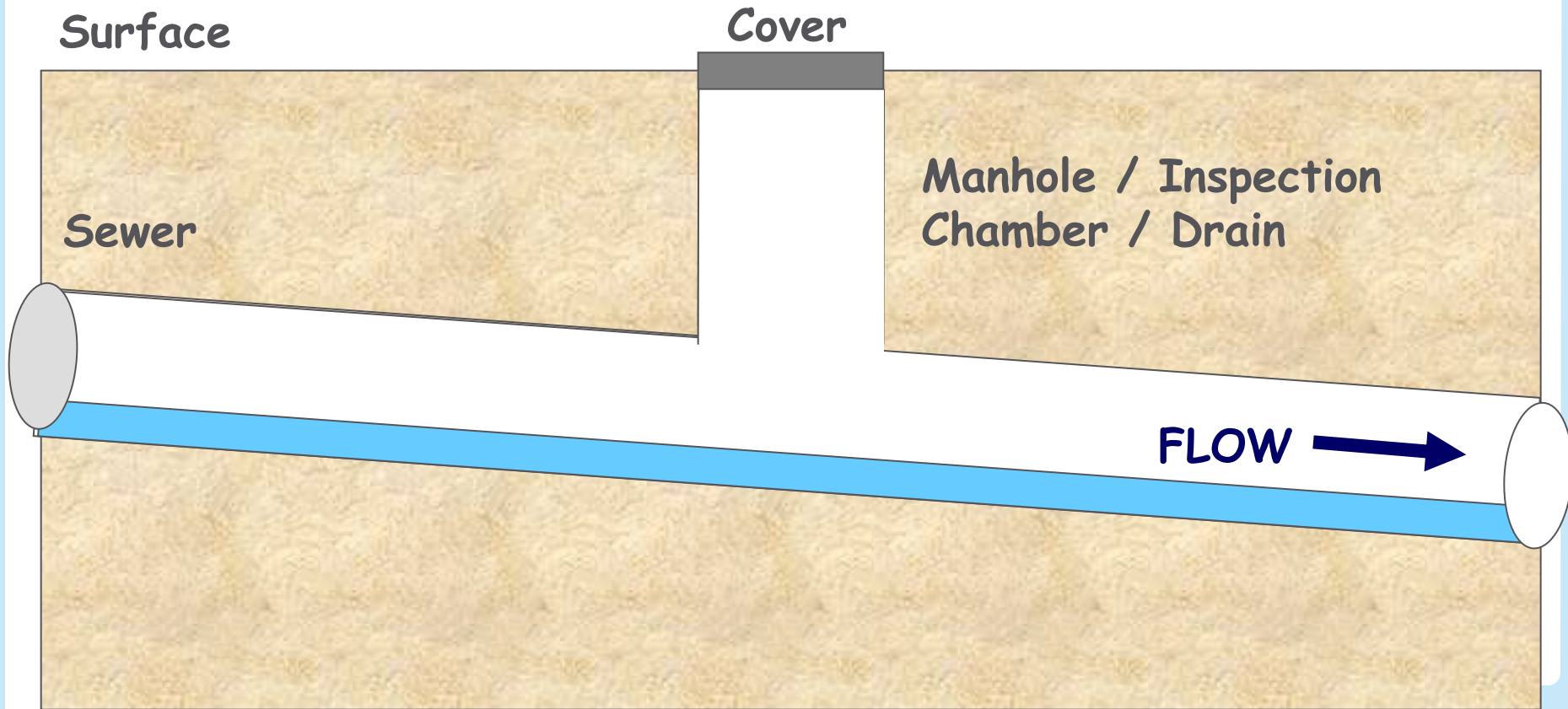




From: Leicestershire LFRMS

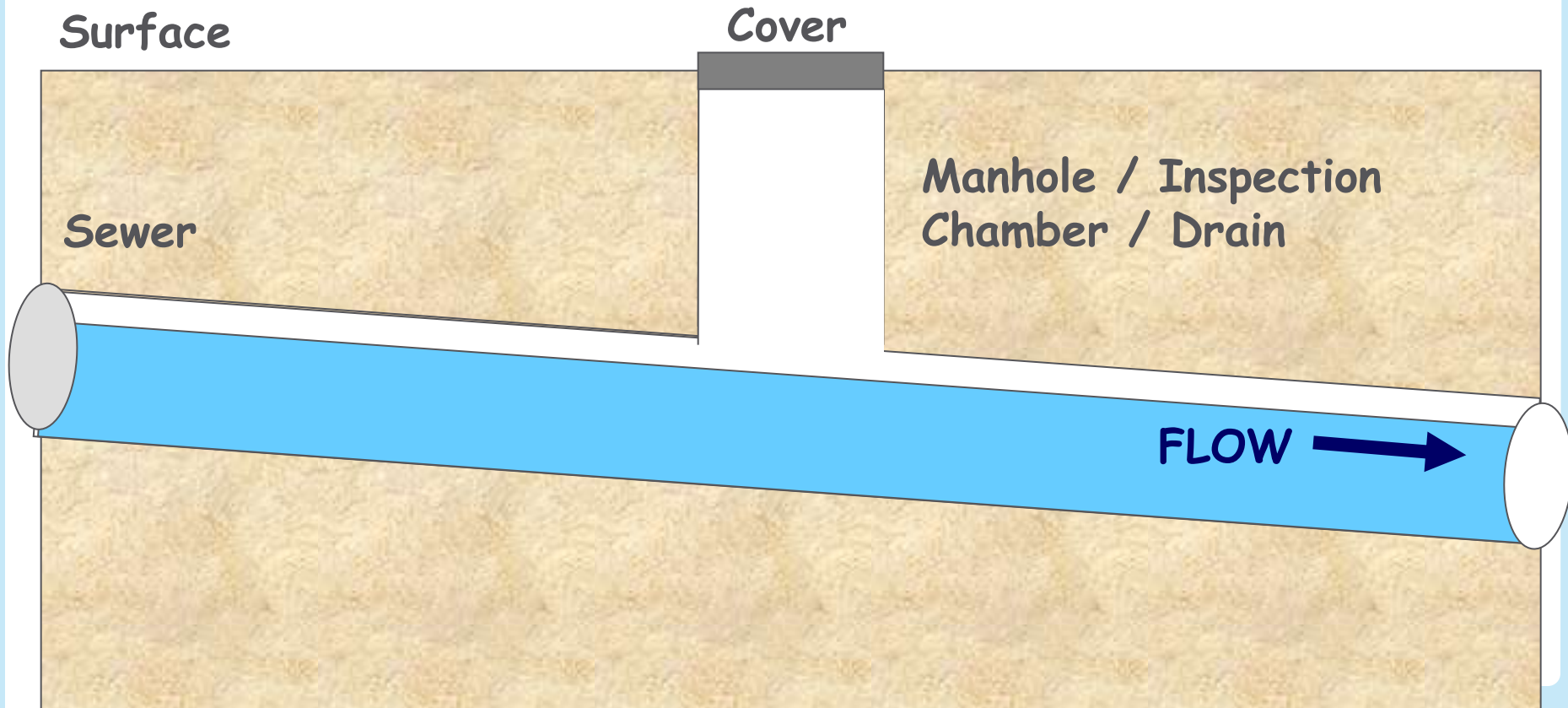
DRY WEATHER CONDITIONS

- Flow contained in sewer
- No escape from system



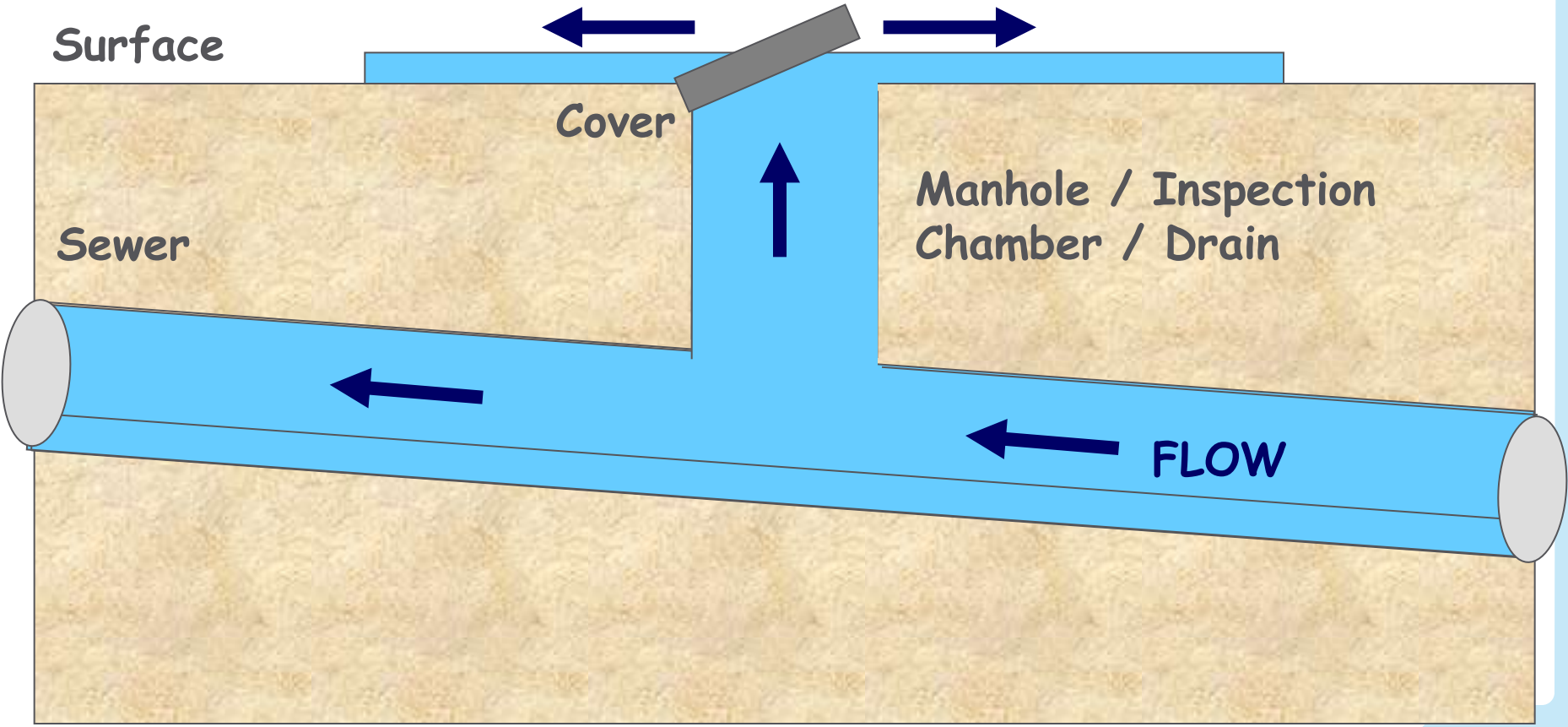
WET WEATHER CONDITIONS

- Flow contained in sewer and manhole shafts
- No escape from system



SEWER FLOODING DUE TO OVERLOADING

- Escape from system



SEWER FLOODING

Area affected

- 1) Internal sewer flooding
 - Inside properties
- 2) External sewer flooding
 - Outside properties e.g. gardens
 - Highways
 - Public open spaces

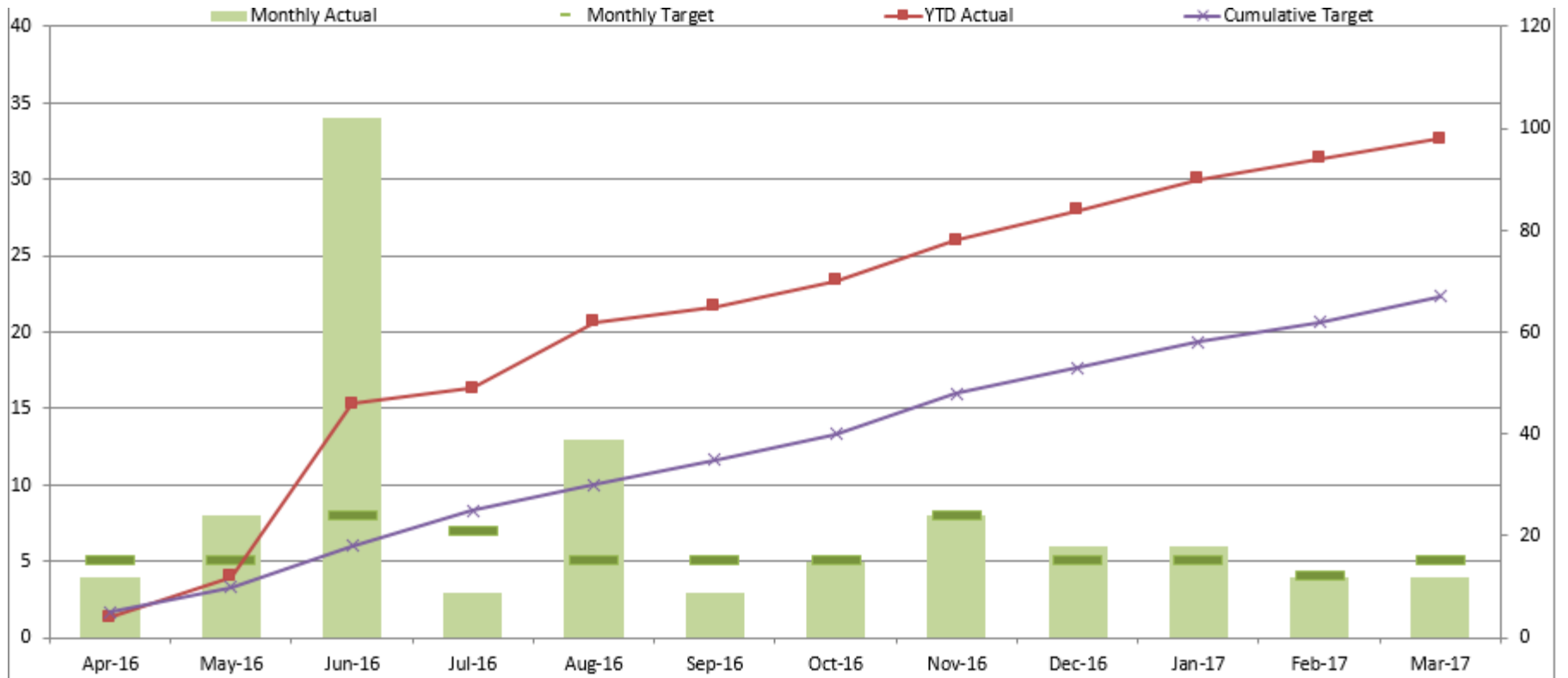


Cause

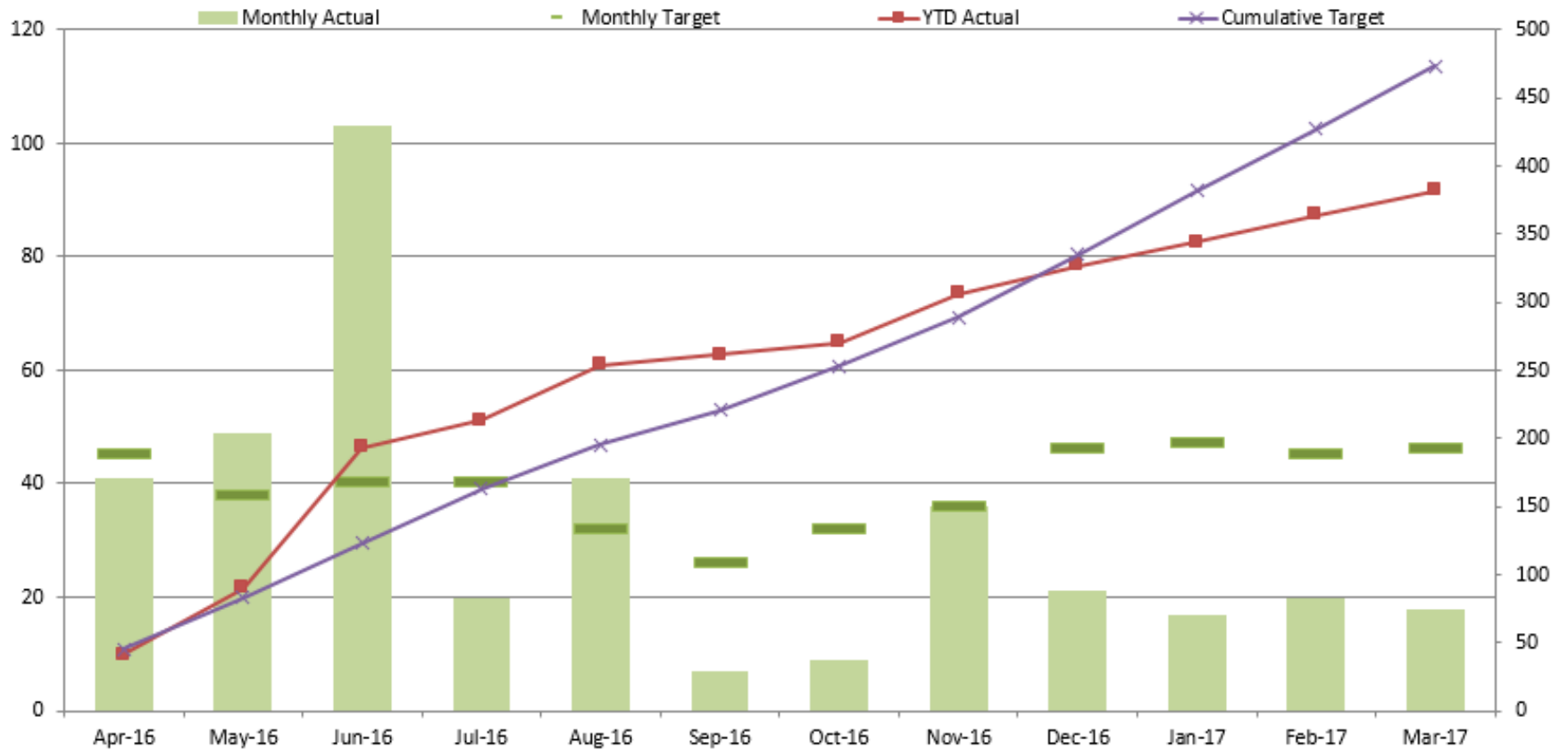
- 1) Sewer Capacity
 - Overloading of sewers due to rainfall
 - Sometimes called “Hydraulic flooding”
- 2) Flooding other causes
 - Operational issues e.g. blockages
 - Structural issues e.g. collapses



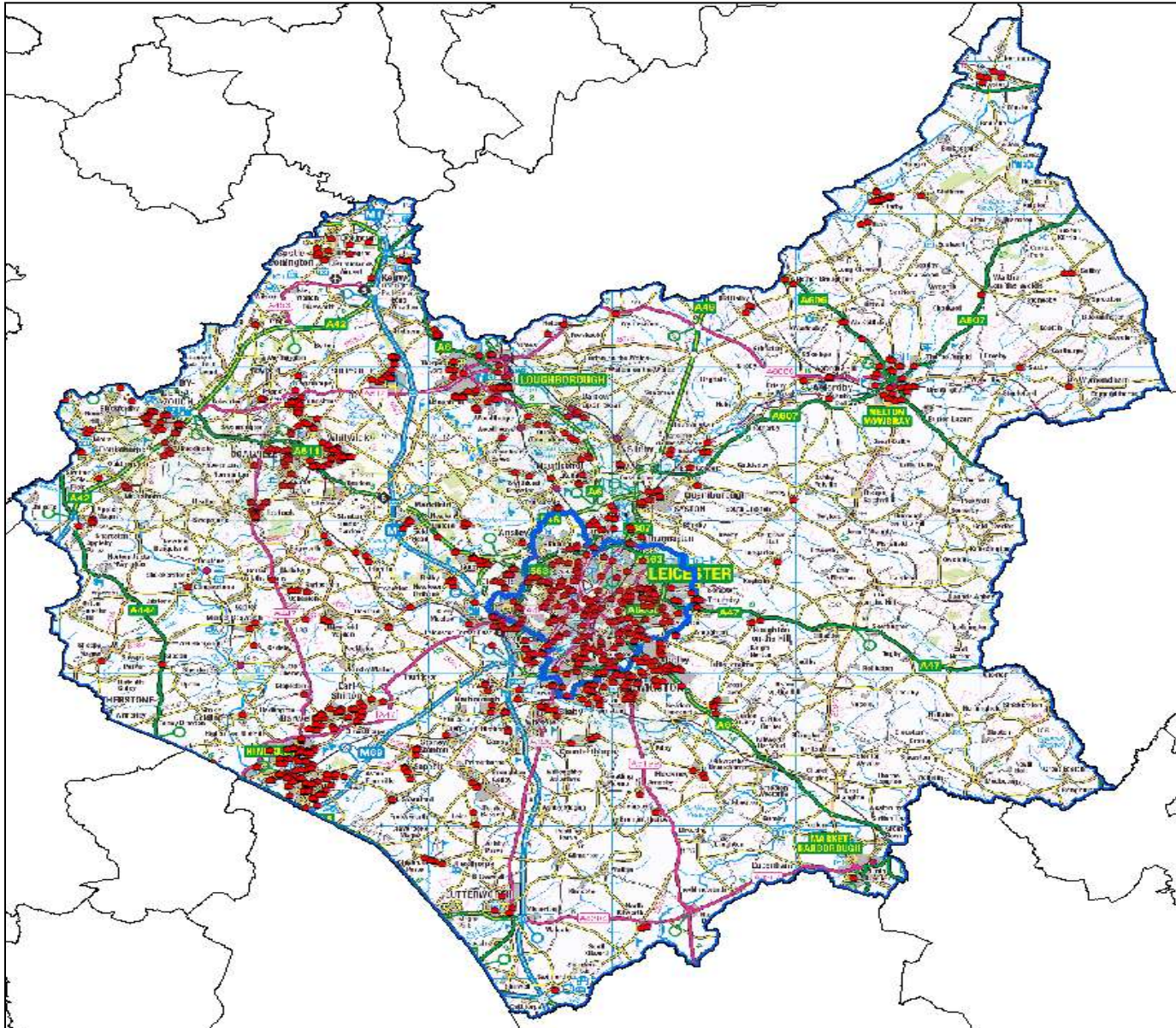
INTERNAL SEWER FLOODING - LEICESTERSHIRE



EXTERNAL SEWER FLOODING – LEICESTERSHIRE



SEWER FLOOD RISK REGISTER




REPORTING AN INCIDENT

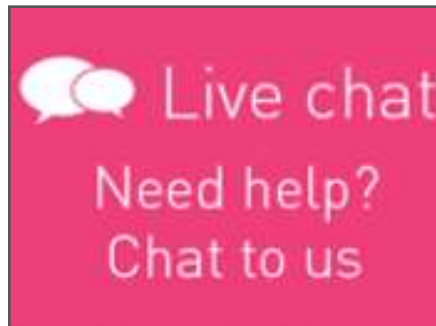
If you're having a problem with your supply, we'd like to know about it so we can get it fixed as quickly as possible.

We'd find a photo helpful if you're able to get one for us, simply click the camera button to find the photo.








We really appreciate you taking the time to tell us about any problems - we may not know about them if you didn't.

What type of problem is it?

-  Drain issue
-  Water Leak
-  General water supply issue
-  Cover or lid
-  Other

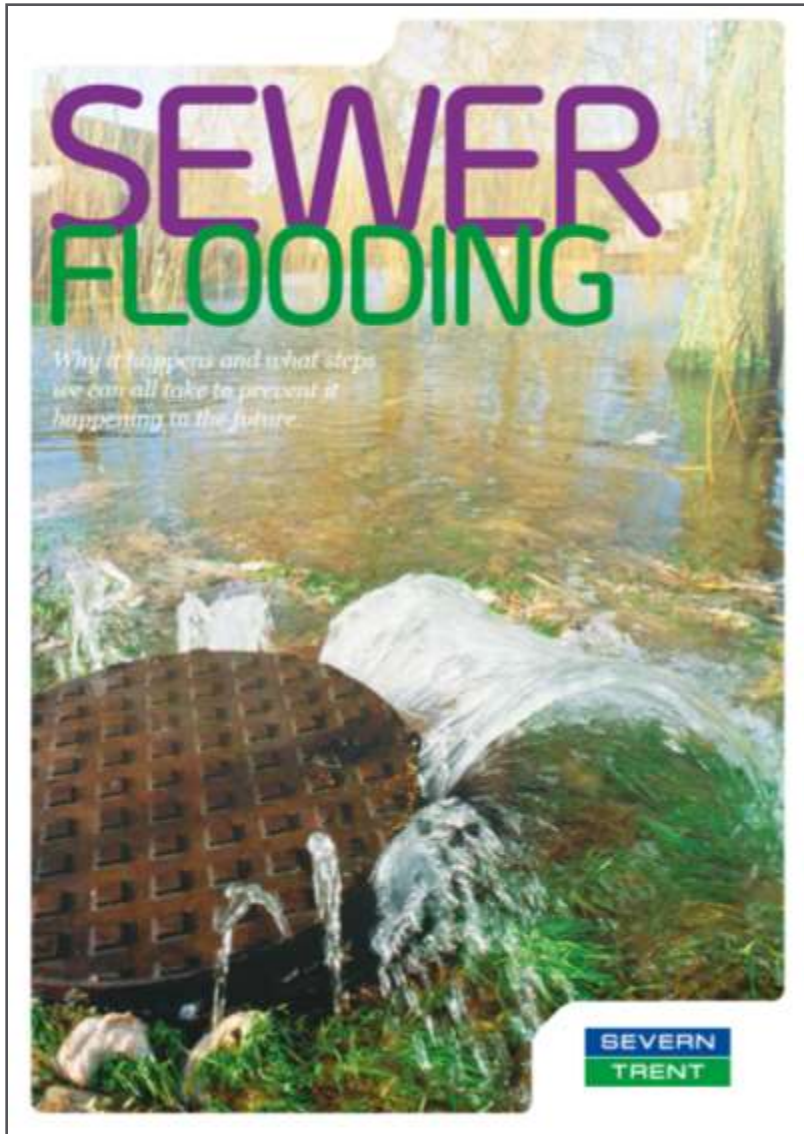


What type of drain issue do you have?

-  Flooding my house
-  Flooding my garden
-  Flooding public area
-  Seeping manhole
-  Blockage
-  Smell
-  Other

www.stwater.co.uk/in-my-area/report-a-problem/

RESPONDING TO AN INCIDENT



What can we do to help?



Step 1 – Respond to your call



Step 2 – Clean up



Step 3 – Investigate and identify the cause



Step 4 – Resolution

EG - MULTI-AGENCY RESPONSE TO FLOODING – WHITWICK, THRINGSTONE & COALVILLE

County Hall is drawing up plans to protect communities



PETER MORGAN
SOUTHAMPTON
WINDY WATER: A
flooded street in
Whitwick, Warwick,
is kept from
the rain.

How can we stop these flash floods happening again?

Several houses are in risk of being lost if the floodwaters return. The county is drawing up plans to protect communities.

BY DAN MARTIN
Local Correspondent

“It was a disaster,” he said. “In the early days, floods, it is to be expected with people and their property in the water.”

Following the floods the county will be preparing the drainage system, what happened and what could be done in the future to mitigate it.

The county council funded over 1,000 road signs during the flood. Martin said that the county council had been an “absolute” success.

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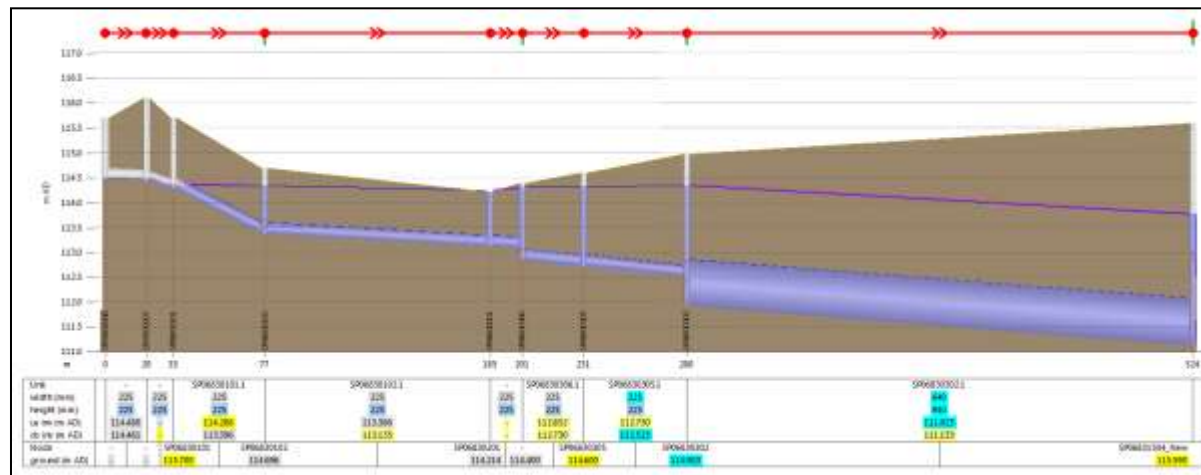
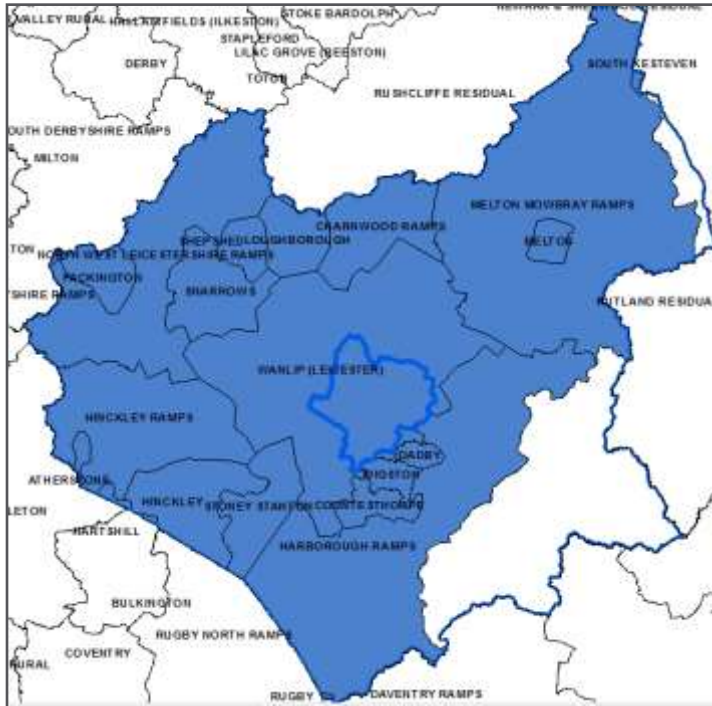
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CCTV AND ASSET SURVEYS



MODELLING AND RISK MAPPING



EXAMPLE:- THURNBY



EXAMPLE:- BURBAGE



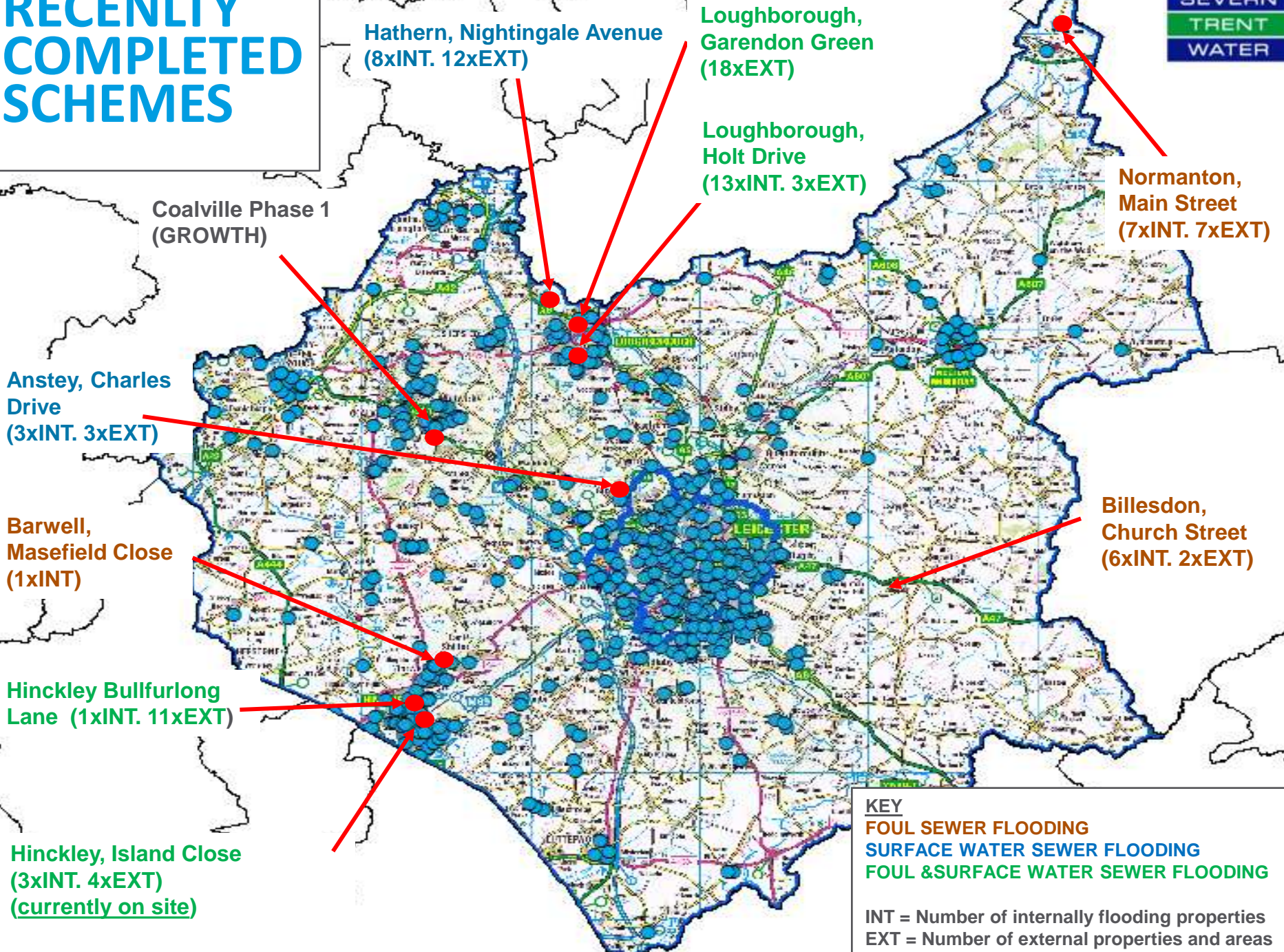
INCREASE CAPACITY



Example flood alleviation schemes in which involved significantly increasing the capacity of the sewerage system including the construction of large underground storage tanks.



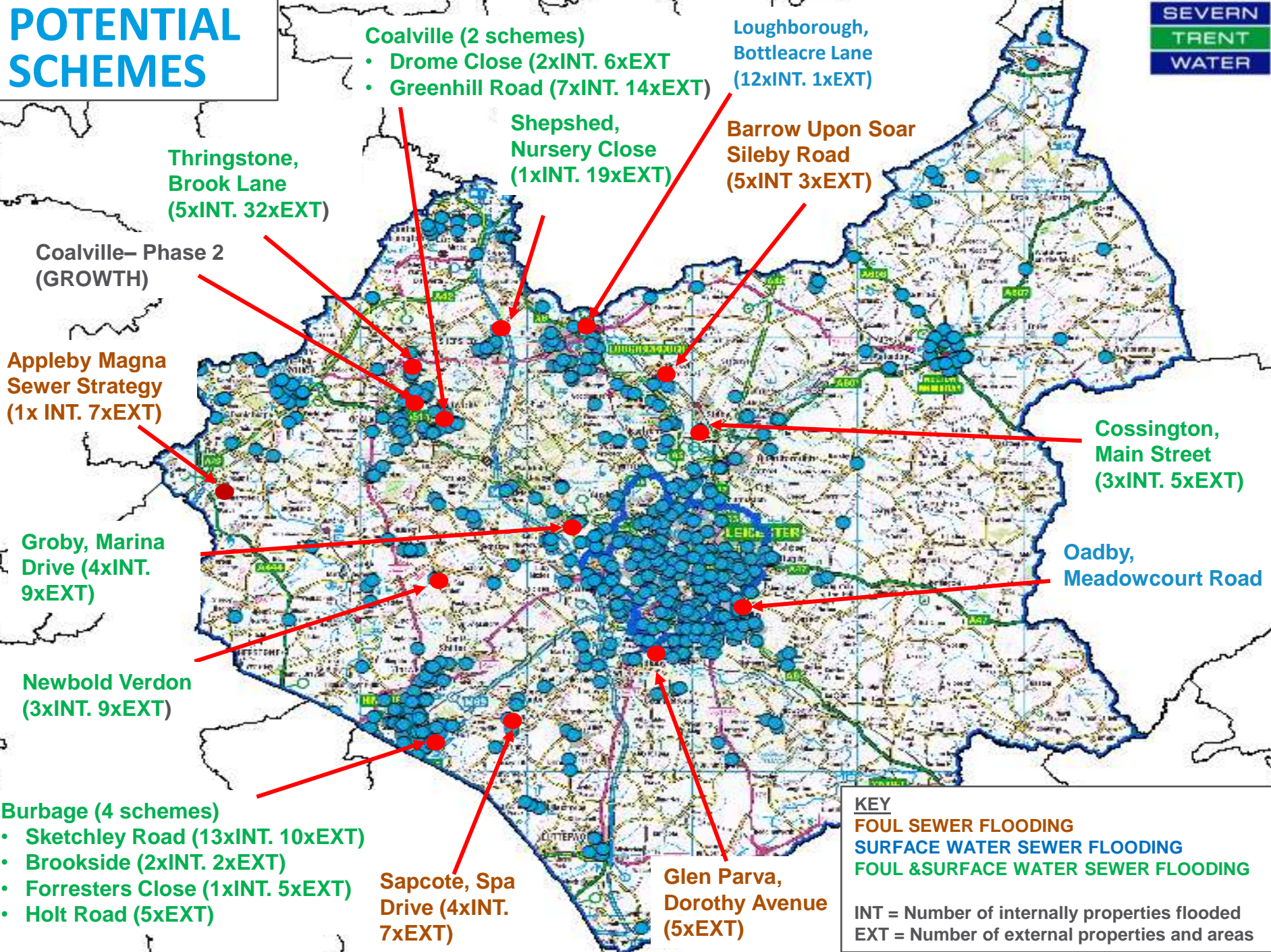
RECENTLY COMPLETED SCHEMES



KEY
FOUL SEWER FLOODING
SURFACE WATER SEWER FLOODING
FOUL & SURFACE WATER SEWER FLOODING

INT = Number of internally flooding properties
EXT = Number of external properties and areas

POTENTIAL SCHEMES

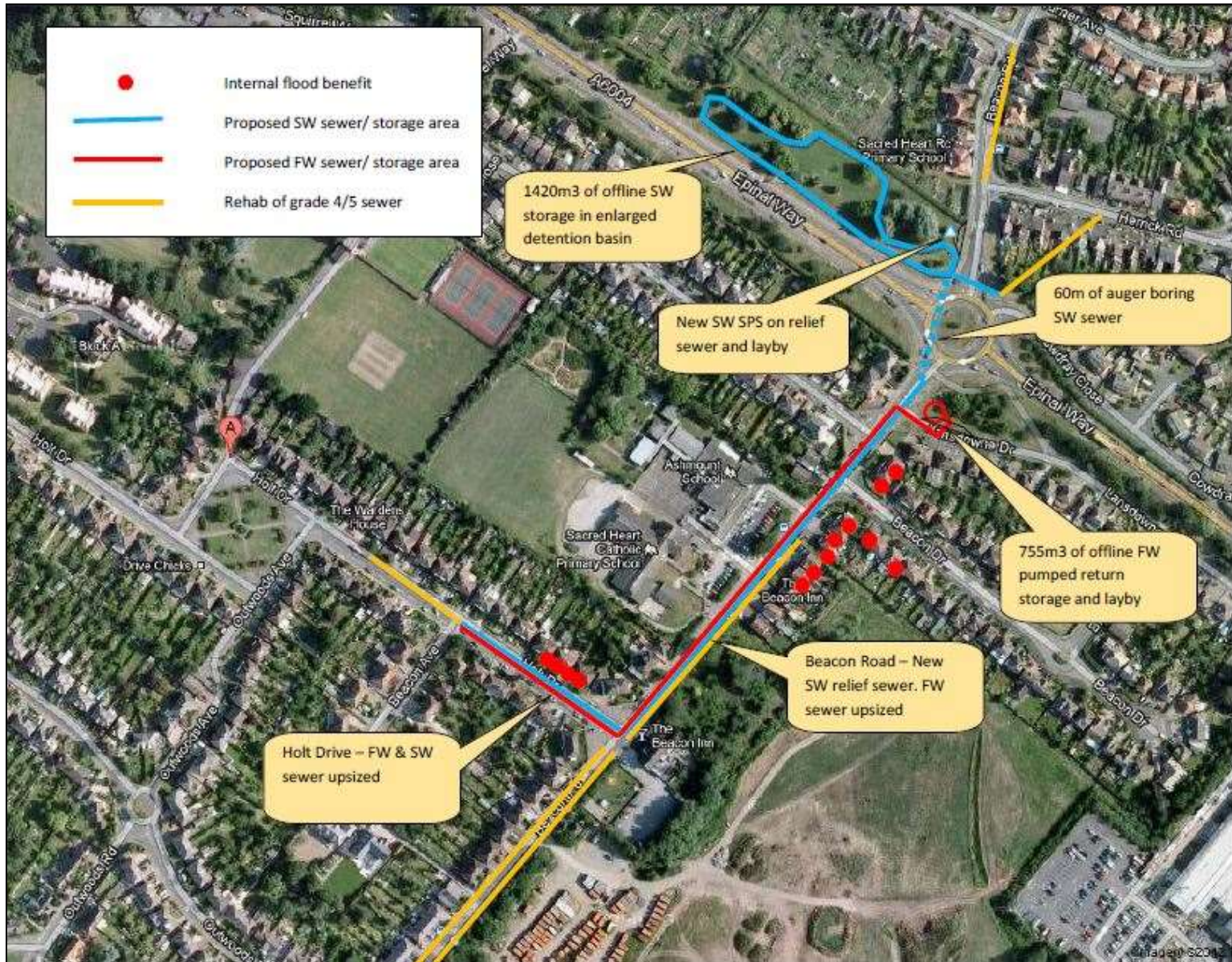


KEY

- FOUL SEWER FLOODING
- SURFACE WATER SEWER FLOODING
- FOUL & SURFACE WATER SEWER FLOODING

INT = Number of internally properties flooded
EXT = Number of external properties and areas

EG:- SUSTAINABLE DRAINAGE SYSTEMS



PARTNERSHIP SCHEMES E.G. LUBBESTHORPE ROAD, BRUANSTONE



PROPERTY LEVEL RESILIENCE (PLR)

Range of Property Level Resilience (PLR) Measures



Example of a flood gate fitted to an individual property



Optima 160 - Aquobex



SMARTairbricks (BSI)



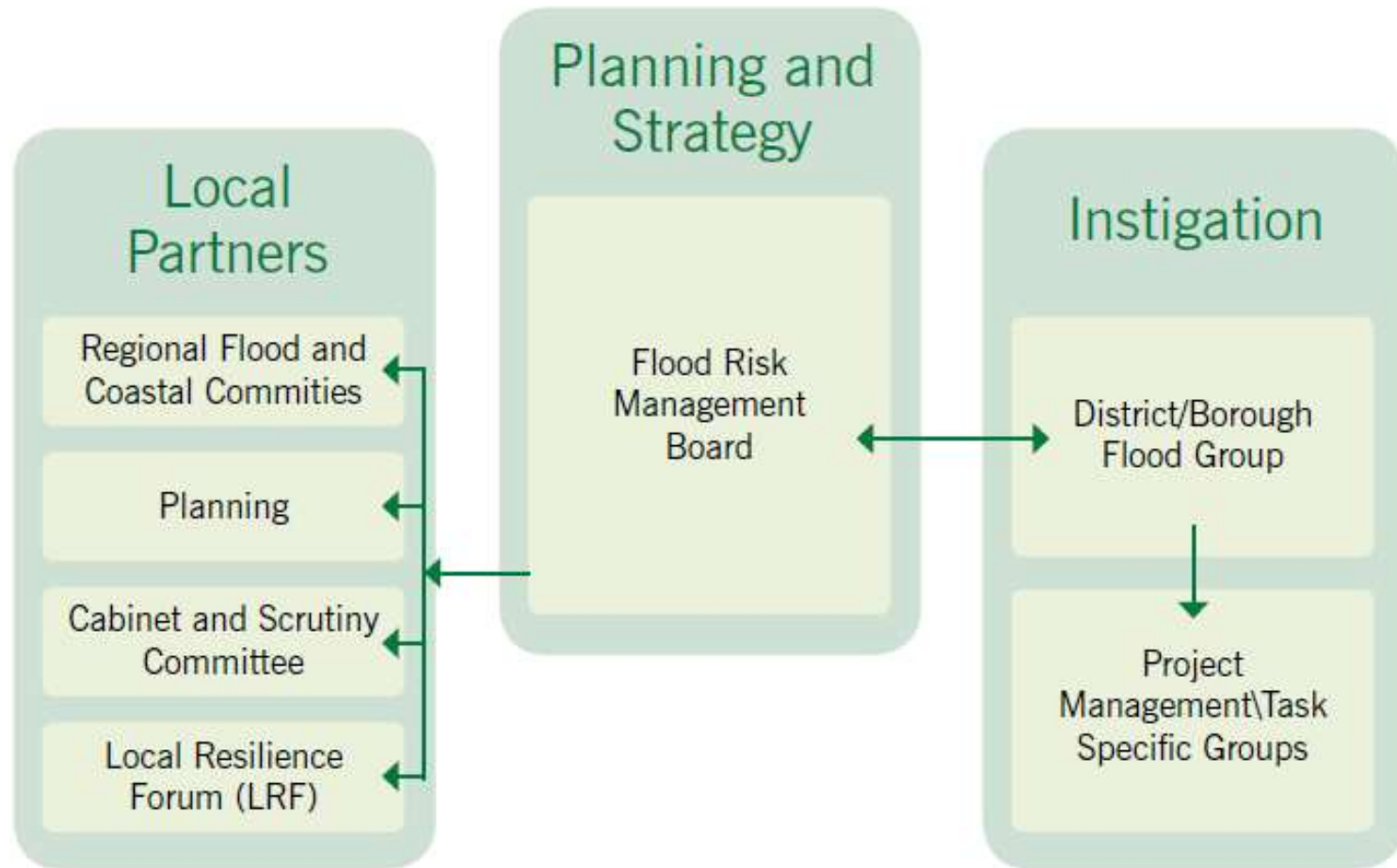
Waste pipe NRV - Aquobex



Snorkelvent

http://www.knowyourfloodrisk.co.uk/sites/default/files/FloodGuide_ForHomeowners.pdf

MULTI-AGENCY GROUPS & MEETINGS



STRATEGIC PLANNING FOR AMP7



QUESTIONS

Severn Trent Water
Severn Trent Centre
2 St John's Street
Coventry
CV1 2LZ

