SEVERN TRENT EVIDENCE TO WYRE FOREST DISTRICT COUNCIL OVERVIEW AND SCRUTINY COMMITTEE 2ND JULY 2020 AGENDA JTEM 5

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SEVERN TRENT **FLOOD RISK** MANAGEMENT RESPONSIBILITIES



WASTEWATER & DRAINAGE



Severn Trent has a duty to provide public sewers and to provide "effectually drainage" in our operating area in relation to:

1) Domestic wastewater

2) Surface water runoff from roofs and areas around properties

Severn Trent also accepts:

- 3) Industrial & commercial effluent
- 4) Highway drainage by agreement

Severn Trent are not responsible for:

- Land Drainage
- Watercourses

FLOOD RESILIENCE IN BEWDLEY -TEMPORARY **BARRIERS AND** PUMPING

SEVERN TRENT ASSETS AT BEALES CORNER

800mm diameter surface water sewer outfall

Beales Corner wastewater pumping station

375 mm diameter surface water sewer outfall

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TEMPORARY PUMPING AT BEALES CORNER



Ariel photo (during an exercise) showing the EA temporary barrier being erected and the key features of the Severn Trent sewer system a) 800mm diameter surface water outfall to the River Severn , b) 375mm diameter surface water outfall to the River Severn, c) Beales Corner wastewater pumping station. In 2007, the Environment Agency (EA) introduced trial temporary flood barriers at Beales Corner, Bewdley.

- As part of this scheme, Severn Trent installed new manhole chambers housing new penstocks and fixtures to allow for temporary pumps to be used at the same time as the temporary barriers were deployed.
- Since 2007, Severn Trent has deployed temporary pumps when the Environment Agency deploy the temporary barriers.
- Severn Trent temporary pumping prevents the River Severn backing up 2 x surface water sewers behind the temporary barrier.
- The temporary pumping also ensures the sewage pumping station (Beales Corner wastewater pumping station) on the banks of the river can continue to pump sewage operate during a flood.

ST Classification: OFFICIAL SENSITIVE SEVERN TRENT TEMPORARY PUMPING



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Beales Corner pumping station and associated temporary pumping locations (one at the pumping station and one on the surface water sewers) when the temporary barriers are deployed



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Stourport Road surface water sewer and associated temporary pumping location when temporary barriers are deployed

TEMPORARY BARRIER & PUMP DEPLOYMENT



FLOOD RESILIENCE IN BEWDLEY -PROPERTY FLOOD RESILIENCE

PROPERTY FLOOD RESILIENCE AT BEALES CORNER – ENVIRONMENT AGENCY

Plan showing the area where the Environment Agency fitted Property Flood Resilience measures



- In 2020, the Environment completed a scheme to fit Property Flood Resilience (PFR) measures to 44 properties.
- The plan (left) shows the area where the Environment Agency fitted PFR measures at Beales Corner.
- PFR measures were installed including flood door barriers, airbrick covers, non-return valves on private drainage, sump and pumps.
- The measures were installed by *WaterTight* on behalf of the Environment Agency.

PROPERTY FLOOD RESILIENCE AT BEALES CORNER – SEVERN TRENT

Plan showing locations of non-return valves (NRVs) installed by Severn Trent on public foul sewers



- Severn Trent worked with the Environment Agency on the PFR scheme.
- Severn Trent installed some nonreturn valves on public sewers. See plan (left).
- The non-return valves (NRVs) were installed to reduce the risk of properties being flooded from river water inundating and backing up the sewers and private connections

onto the sewers.

Example NRV:

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FEBRUARY 2020 FLOODING





RIVER OVERTOPPING OF TEMPORARY BARRIERS

- Environment Agency temporary barriers overtopped.
- Severn Trent staff and contractors evacuated.
- Severn Trent pumps water-logged and knocked out.
- River inundated the sewer system
- Non-return valves provided some protection to properties, but some properties still suffered sewage backing up which adding to the main river flooding issues.

QUESTIONS



