

The Environment Agency is delivering a Flood Risk Management Scheme (FRMS) to better protect homes and businesses from flooding in the Kent Catchment, enhance the local environment and improve community amenities.

Building on the surveys and investigations carried out last year we are starting a programme of rehabilitation works, aimed at improving conveyance throughout Kendal, as well as managing excess flows to reduce the risk of flooding. This update is to provide you with a summary of the works.

Stock Beck overview

Stock Beck comprises of several sections of watercourse that originate in farmland before entering the eastern side of Kendal. The watercourses converge and are joined by connections from surface water drains. The combined flows pass through largely culverted sections within the urban area and outfall into the River Kent in the town centre, near Gooseholme Park.

As part of the Kendal and Upper Kent Catchment Flood Risk Management Scheme we will address the flood risks associated with Stock Beck, and design improvements which will manage water within the catchment more effectively. A combination of measures will be used to improve the conveyance of Stock Beck through the town, as well as managing excess flows to reduce the risk of flooding.

Rehabilitation works are being carried out to maintain the flow through existing culverts located along Stock Beck, together with construction of a new pumping station at Gooseholme, and a proposed catchment drain to the Northeast of Kendal.

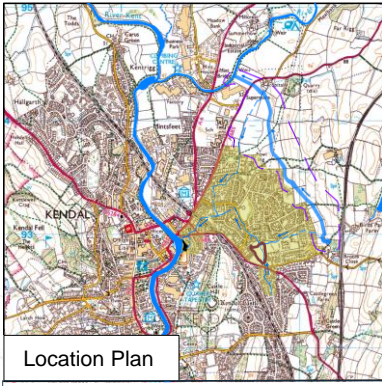
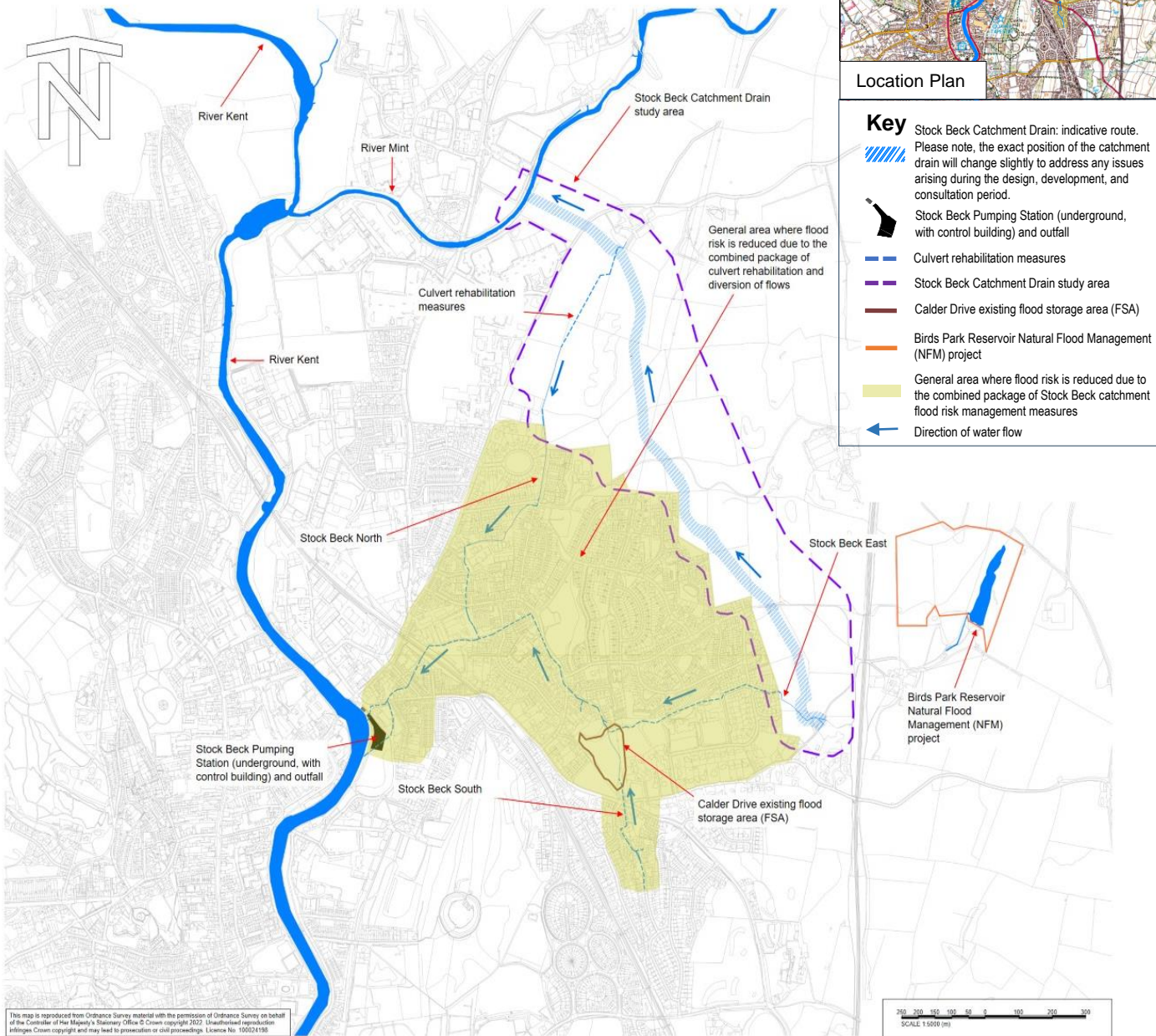
Culvert rehabilitation works

Works are required to replace and rehabilitate a number of sections of the Stock Beck culvert system in the areas of Calder Drive, Sandylands Road, Rusland Park, Auction Close, Silverdale Drive and Gavel Court. Our specialist contractor 'OnSite' will carry out the work.

This work is due to commence from 5th August for approximately 16 weeks. Whilst the majority of work will be undertaken in the highway, we will require temporary access to some residents' gardens and/or driveways. Those affected will be notified prior to the work, and traffic management put in place where required. Any inconvenience caused will be kept to a minimum.

Stock Beck Flood Risk Management measures - overview plan

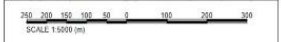
The plan below highlights the combination of flood risk management measures being used to reduce flood risk across the Stock Beck catchment and general area of better protection.



Key

- Stock Beck Catchment Drain: indicative route. Please note, the exact position of the catchment drain will change slightly to address any issues arising during the design, development, and consultation period.
- Stock Beck Pumping Station (underground, with control building) and outfall
- Culvert rehabilitation measures
- Stock Beck Catchment Drain study area
- Calder Drive existing flood storage area (FSA)
- Birds Park Reservoir Natural Flood Management (NFM) project
- General area where flood risk is reduced due to the combined package of Stock Beck catchment flood risk management measures
- Direction of water flow

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The flood defenses downstream of the new outfall are designed to take the additional flows. By reducing the flows through the Sandylands estate and onward to the River Kent, we significantly reduce the amount of pumping required by Stock Beck pumping station, lowering our carbon footprint.

What to expect from the rehabilitation work

Prior to the rehabilitation work, culverts due to be lined will be cleaned. Specialist high pressure water jets (mounted on tankers) are used to push water through each chamber of the culvert removing any debris, sediment or other blockages. This ensures the Cured In Place Piping (CIPP) lining used to rehabilitate deteriorating culverts has a clean surface to adhere to.

Once complete, a CCTV van is used to operate a small remote-controlled vehicle as it travels through the culvert. This double checks the length, and condition of the culvert, ready for lining. The CIPP lining is then ordered based on accurate measurements.



Water jetting tanker



CCTV operator



Remote camera vehicle

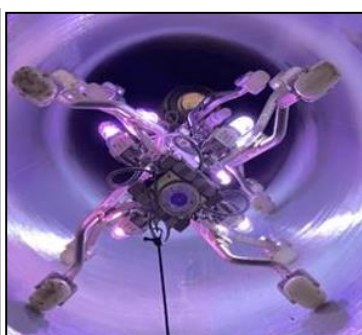
To complete the work a new pipe is created within the existing one by inserting a flexible liner saturated with resin. Existing flows are diverted at the surface using a 6" super silent pump with 6" wire armoured hoses. A winch is then used to pull the lining tube through designated manholes into the existing culvert. The lining is then expanded using air pressure and exposed to ultraviolet light to cure (harden), giving the pipe back its internal structural integrity and improves the flow of water.

There are many advantages to this method, it is trenchless meaning there is minimal excavation and quick to install which reduces disruption to traffic and the environment.

Youtube videos showing recent CIPP lining projects completed by OnSite can be found by typing this link into your browser: <https://onsite.co.uk/capability/cipp-relining/>



6" pumps



UV light curing the liner



A CIPP lined Pipe

What time of day will the works be undertaken?

Works are typically carried out between 8.00am and 6.00pm (daylight dependent), Monday to Friday. Weekend work may be required. This will be agreed with individual residents or businesses in advance. Pumping vehicles will not operate at night.

What will we see?

Vehicles used to undertake the work include a water jetting tanker, a 6" super silent pumping vehicle, a winch and smaller remote-controlled vehicles (as shown on the previous page).

How will the land be left once the survey works have finished?

Prior to any works being undertaken a full photographic record of the present condition will be taken. On completion of the works land will be reinstated to its original state, as close as practicable. There are no foreseeable works that will cause long-term damage.

How many people from Onsite will there be undertaking surveys?

This will vary. There will be a minimum of two operatives, one supervisor and one specialist operating the specialist equipment. The total number of operatives at any given location will be kept to the absolute minimum required.

How long will you take to complete this work?

We envisage it will take 1-2 days at each location to conduct preparatory works and measure the length of the lining required. Culvert lining work will start the following week once the lining is received. We aim to complete the installation process over a 5-6 week period.

Will you need to access individuals land, gardens or need diversion routes?

We inform any affected residents where we need to gain temporary access to gardens or driveways. Notices of diversion routes are put in place if required and residents in the immediate vicinity will be informed directly. Information on diversion routes are also uploaded to the Flood Hub website – see below.

Where will we find the latest information?

We will be keeping the Flood Hub up to date with information relating to the investigation works, news on any diversion routes and the Flood Risk Management Scheme over the coming weeks and months. For more information visit www.thefloodhub.co.uk/kendal

Contact us

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VolkerStevin Engage

Our new project app allows you to keep up to date on the Kendal Flood Risk Management Scheme, view construction progress, images and provide feedback.



Keep up to date

Visit www.thefloodhub.co.uk/kendal

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