

## **SOUTHWELL FLOOD ALLEVIATION SCHEME UPDATE April 2018**

### **General**

The Southwell Flood Forum (“SFF”) and Nottinghamshire County Council (“NCC”) believe that it is important that the people of Southwell, and especially those directly affected by the risk of flooding, should be informed about the status of the Flood Alleviation Scheme (“FAS”) and proposals that were announced in mid January.

The scheme’s objective is to reduce flood risk for a flood that is estimated on the basis of probability to occur every 75 years (defined by the Environment Agency as “significant flood risk”). The design of the measures proposed, combining traditional engineering solutions with surface water management proposals, will in some instances provide significant additional benefits, generating significant wider flood risk reductions and benefits to properties within the moderate risk bands. The scheme will deliver an increased level of protection for nearly 250 households and over 60 business properties with £4.524m of funding allocated and an additional £350k allocated for the natural flood management (“NFM”) measures upstream of the town and community work.

There are six key elements to the FAS, all of which are necessary to deliver the required level of protection. NFM and community work are a seventh element, which for convenience and consistency of delivery, have been brought alongside the larger funded scheme, both under the direction of NCC. They are all outlined below.

### **1: Southwell Trail Conveyance Improvements**

This element is designed to reduce the accumulation of surface water in the Archers Field and Crafts Way area by utilising the Southwell Trail as a surface water storage and drainage mechanism by:

- (a) adding pipe connections between Archers Field and the Southwell Trail to increase rate at which surface water drains from residential areas;
- (b) adding pipe connections and gulleys in Crafts Way to prevent surface water ponding in residential areas;
- (c) regrading or replacing the trail ditch to allow surface water extracted from the Crafts Way and Archers Field area to be dispersed via the existing watercourses; and
- (d) regrading the channel and removing hydraulic constrictions on the watercourses.

### **2: Norwood Park / Kirklington Road Flow Diversion**

The purpose of this element is to intercept overland flow from the Norwood Park Dumble and alleviate the flood risk to the Springfield Road area and further down the catchment towards Crafts Way by:

- (a) adding a new headwall upstream of the Kirklington Road culvert to contain the flow to the west of Kirklington Road;
- (b) blocking the existing culvert between Kirklington Road and Springfield Road to divert all piped flow into the existing Kirklington Road pipe; and
- (c) constructing a raised bund to the rear of the Springfield Road properties to intercept overland flow.

### **3: Interception Of Surface Water From Halam Hill Via Norwood Park Retention Pond (‘Starkey’s Pond’)**

The intention here is to optimise the effectiveness of the existing retention pond located at the junction of Halam Road and Hopkiln Lane. The aim is to increase the interception of surface water from Halam Road and restrict the outflow from the pond outlet to the Hopkiln Lane and Dudley Doy Road area by:

- (a) constructing a retaining bund at the eastern edge of the existing pond to restrict the bypassing of the control structure and to increase storage capacity;
- (b) upgrading the existing control structure to restrict the activation of the overflow mechanism and to provide greater control of outflows from the pond outlet;
- (c) improving the capture of surface water from Halam Road by re-profiling the Halam Road surface and pavement coupled with improvements to the gully network.

### **4: Improved Surface Water Management**

This part of the scheme will affect a total of 2.5km of road covering sections of Glenfields, Kirklington Road, Woodland Drive, Leeway Road, Lower Kirklington Road, Station Road, Normanton Road, Newark Road and Easthorpe. It is designed to retain and/or collect as much surface water as possible on the road network by:

- (a) raising kerb levels;
- (b) refining road cambers; and
- (c) making use of other features that have the potential to improve surface water management.

## **5: Potwell Dyke Flood Storage (Harvey's Field)**

The purpose of this element of the scheme is to attenuate flood flows on the Potwell Dyke and reduce flood risk in downstream areas. This approach will also allow existing surface water systems on Church Street and Easthorpe to operate more effectively by reducing levels in the Potwell Dyke and allowing more free discharge for surface water outfalls. Works will include:

- (a) converting the existing floodplain into a formal flood storage area on both the left and right banks in a structure that will be designed to attenuate or hold back up to 30,000m<sup>3</sup> of flood water (amongst other requirements the design and maintenance will be required to comply with the Reservoirs Act);
- (b) constructing a retention bund on the right bank, tying it in with the higher ground levels on the left bank; and
- (c) replacing the existing double culvert access bridge and including a hydraulic throttle to control the activation of the storage area.

## **6: Individual Property Flood Resilience**

This aspect of the scheme will involve the installation of property flood resilience measures to 145 properties in the town. NCC will prioritise the work for the most vulnerable in the community, so that the initial work being delivered on the ground will be individual property flood resilience. NCC and the organisations appointed who specialise in this work will be in touch soon with the property owners and occupiers affected by these options. Drop in sessions in Southwell will be organised to begin the process.

## **7: Natural Flood Management And Community Risk Awareness Measures**

This work, partially funded by European money, falls into two categories:

- (a) Trent Rivers Trust will lead on the NFM measures upstream of the town. Designed to slow the flow of water into Southwell during storm conditions, they comprise in stream flow attenuation with interventions such as reinstated meanders, leaky barriers and earth bunds to hold back water temporarily. Much has already been achieved in this area by the Trent Rivers Trust and Nottingham Trent University at its Brackenhurst campus.
- (b) The National Flood Forum will work with the community to improve awareness of flood risk and enable the people of Southwell to address the flood risks they face. The project will go under the banner of "Improving Flooding Resilience in Southwell".

In each case there will shortly be an announcement notifying us of the two people appointed to lead the work in these two areas.

## **One Flooding Aspect Still Under Consideration – Overflow Bypass Near Hopkiln Lane**

The current risk from rural run-off in the Halam Hill area is widely recognised and is now to be addressed by the NCC plans to capture water from Halam Road into the Norwood Park Retention Pond, extending its capacity and, at the same time, managing the amount of outflow down into the existing culvert. That culvert runs underground from Humberstone Road to the Ropewalk roundabout and was sized for the Southwell of the 1960's before all the more recent developments took place.

It will be crucial to demonstrate that the proposed Pond enlargement sufficiently removes this risk especially when taking into account the higher run-off rate from developed land. For that reason NCC and SFF are discussing a joint feasibility study for a by-pass scheme that would direct all the run-off from Halam Hill, away from the town, linking up with an existing pipe under Kirklington Road that was installed by the authorities in 1996.

This could also solve the challenge of handling Pond overflow and preferably any storm run-off from new housing developments within the Neighbourhood Plan. Until the benefit of such extended measures can be shown to be sufficient against the risk and cost, however, the completion of a bypass lies outside the plans for delivery.

## **Delivery**

The construction element of the project will be delivered and the scheme overall project managed on behalf of NCC by Via East Midlands ("VIA"), a company which provides management services in Nottinghamshire who have extensive knowledge of the area and which is best placed to deliver this complex project.

Whilst much of the detail and design has yet to be addressed and the project brief and delivery plan have still to be agreed with VIA, the first phase will start in the next few weeks. On-site work is not expected to start until April, 2019, although this will depend on the granting of planning permissions and reasonable ground and weather conditions. It is hoped that the scheme should be substantially completed by the end of March, 2021.

## **Future Information**

There will be further updates as and when more information becomes available, which will also be accessible at the library. See the Southwell Flood Forum [www.southwellfloodforum.org.uk](http://www.southwellfloodforum.org.uk) and Nottinghamshire County Council [www.nottinghamshire.gov.uk](http://www.nottinghamshire.gov.uk) websites for further details.