

Somerset Rivers Authority Board Paper (for information)

Taunton Strategic Flood Alleviation Improvements Scheme (TSFAIS)

Purpose of the item

This paper summarises the current status of Phase 3 of Taunton Strategic Flood Alleviation Improvements Scheme (TSFAIS).

Background and context

The main purpose of Taunton Strategic Flood Alleviation Improvements Scheme is to reduce flood risks from the River Tone and its complex network of tributaries, particularly the Galmington, Sherford and Mill streams. There are 1031 properties in Taunton currently at risk, including homes, health centres, emergency services, North Town Primary School, electricity substations, sports facilities and much more. By 2118, because of climate change, the number is expected to rise to 2548.

To protect existing property in Taunton, and to allow the town to develop safely, a holistic and strategic solution is required. Somerset West and Taunton Council (SWTC) and the Environment Agency (Eare working together to provide that long-term strategic solution to reducing flood risk to Taunton and where possible to the wider catchment.

TSFAIS is an important part of Somerset's 20 Year Flood Action Plan, and of SWTC's programme for regenerating Taunton town centre, bolstering Taunton's Garden Town status and boosting Taunton Vision 2040.

Phase 1: Studied flood risk and identified a combination of (i) improved flood defence walls in the town and (ii) an area for storing flood water upstream, to provide capacity for the long term (100 years). This study was completed in 2014. This solution required major engineering work to provide the desired level of protection. The capital cost and ongoing maintenance of this single intervention was estimated to be upwards of £50million.

Phase 2: Provided a Project Delivery Plan with phased local intervention solutions that provide a useful increase in flood capacity pending the longer-term delivery of the larger flood risk reductions identified in Phase 1. The local interventions are a combination of flood defences and storage which provide protection for:

- an extreme flood event today, where a significant amount of water enters the river system and would cause severe flooding, this is called 1% annual exceedance probability (AEP) or a 1 in 100 Years flood event and has a 1% chance of occurring in any one year;

- significant changes in water levels as a result of climate change in the medium term, that could see peak flows in the river increased by 20% compared to what we would experience today in an extreme flood event; and
- significant changes in water levels as a result of long-term climate change, that could see peak flows in the river increased by 30% compared to an extreme flood event we would experience today.

The local interventions also have:

- no significant impact to third parties, including on the Levels and Moors;
- recommended timing of delivery or “triggers” for delivery (short, medium or long term);
- established benefits of the components, individually and together;
- estimated costs (capital and full life) and possible funding sources;
- potential alignment with other programmes/development.

Phase 2 work was undertaken between July 2016 and August 2019.

The Phase 2 deliverables were discussed with the SRA Technical Group in August 2019 and duly shared with the SRA Board in January 2020. Board members endorsed the TSFAIS recommended strategic and long-term approach to the management of flood risk in Taunton and confirmed their ongoing support of the project and its wider objectives.

SWT Full Council on 26 February 2020 endorsed:

- the strategic and long-term approach set out in the Phase 2 works;
- continued partnership working with the Environment Agency to detail and deliver the TSFAIS short-term measures;
- £6million capital funding and dedicated project management capacity to support next steps;
- development of a future funding strategy.

Current status and next steps

Phase 3: SWT in partnership with the Environment Agency is progressing three of the short-term measures identified in Phase 2:

1. River Tone Left Bank Flood Defences – a combination of repair, replacement or new flood defences between Frieze Hill and Town Bridge to provide reduced flood risk to homes, businesses and facilities such as the police station and council offices, BT exchange and French Weir surgery and key transport routes

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including the A3027 bridge street, A3027 Staplegrove road and the A3087 station road, and the North Town and Firepool areas of Taunton;

2. Firepool Lockgate and associated bund between the River Tone and Bridgwater to Taunton Canal – raising levels of the lockgates and area around them in conjunction with creating an earthen bund defence between the canal and the river from Firepool to Obridge which will prevent flows entering the canal. This provides reduced flood risk for Priorswood and Crown Industrial Estates and of floodwater overtopping into Maiden’s Brook and then Allen’s Brook at Bathpool;
3. Longrun Meadow flood attenuation improvements - optimisation of the existing flood storage area at Longrun Meadow through new embankments, inlet and outlet to remove excess water from the river and control when the water is put back into the River. This reduces flood risk in Taunton Town Centre and further downstream including areas of North Town, Firepool, Priorswood and Crown Industrial Estates, Bathpool and benefiting tributary flows reducing flood risk in Tangier area.

The TSFAIS programme has a high profile within Somerset West and Taunton Council and sits within the External Operations Directorate and is linked to the SWTC Carbon Neutrality and Climate Resilience work stream and the Council’s programme for the regeneration of Taunton town centre - Garden Town status and Taunton Vision 2040.

River Tone Left Bank Flood Defences: a Collaborative Agreement between SWTC and the Environment Agency is scheduled to be signed in July. Atkins have been appointed for detailed design work and associated consents and permissions, Kier to support with physical investigations work of existing defences and ground conditions.

Firepool Lockgate and associated bund between the River Tone and Bridgwater to Taunton Canal: Project managers have been appointed to progress the scheme which will be led by SWTC with Environment Agency support. Some preliminary studies have been commissioned by WSP to support the schemes design, consents and permissions work. Tenders for the detailed design, consents and permissions work were received in March 2021 and discussions are ongoing with consultants for their delivery.

The Longrun Meadow Optimisation: the third project to progress and project managers will be appointed in due course. This scheme will be led by SWTC with Environment Agency support.

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