

**Hull and East Yorkshire LEP Infrastructure Board  
Flood infrastructure and Resilience – Update  
Lucy Marshall – Environment Agency  
Paper B**

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## **1. Summary**

The Economic Growth & Workforce Wellbeing Strategy has an objective to work with partners to promote flood resilience. This paper provides an update on partnership activity to manage the current and future risk of flooding and coastal change to communities, business and infrastructure across Hull and East Yorkshire. A c£250m programme of improvements in flood infrastructure has been delivered since 2015 to better protect communities across Hull and East Yorkshire, and more activity is underway. Established partnerships of local authorities, Environment Agency, Internal Drainage Boards, Yorkshire Water, and others continue to work together to deliver long term, adaptable plans that increase resilience and aim to support a thriving region.

## **2. Recommendations**

That the Board note the update on the range of activity to manage flood risk across Hull and East Yorkshire.

## **3. Report**

### **3.1 Background**

There are over 300,000 people living in areas at risk of flooding within Hull and East Riding. Multiple sources of flooding affect the area, requiring a mix of solutions. Hull and East Yorkshire relies on an extensive system of flood embankments and walls, as well as pumping stations, flood gates, flood storage, and significant infrastructure like the Hull barrier. The Flood & Coastal Erosion Risk Management (FCERM) capital investment programme allocates national FCERM Grant in Aid.

### **3.2 Flood Infrastructure – Capital Programme Update**

Since 2015 there has been over £250m of investment in flood infrastructure, benefiting thousands of properties, land and infrastructure across Hull and East Yorkshire. In addition to central government flood funding (FCERM Grant in Aid), a myriad of partners and funding sources allowed this to happen, including the (Humber) LEP and Local Growth Funding, and National Highways. Examples of projects include:



River Hull defence pilling

- Substantial improvements to Hull’s River defences at 63 sites between 2017 and 2021, aligning with plans to showcase the City’s maritime history

- East Riding of Yorkshire Council led projects to create vast surface water storage areas and conveyance improvements at Cottingham & Orchard Park and Anlaby & East Ella. When combined with the earlier Willerby & Derringham scheme, they reduce the risk of surface water flooding to more than 10,000 properties.
- £1.2m refurbishment of Hempholme and Wilfholme pumping stations to benefit the area between Driffield and Beverley, and the wider agricultural economy.
- The £42m Hull: Humber Frontages improvements enhanced over 7km of defences and benefits over 100,000 properties across the city of Hull. It connects into tidal defence improvements either side of the city at Hessle and Paull completed by East Riding of Yorkshire Council.



Hull: Humber Frontage Improvements

Further project delivery and development is happening under the new 2021-2027 capital programme. Examples include:

- *Holderness Drain Flood Alleviation Scheme*: Replacement of the existing pumping station; and a major new aquagreen at Castlehill to reduce the risk of flooding to homes and business, while creating new green space. Construction of the pumping station began in 2021, and the aquagreen flood storage in summer 2022. Due to be operational in 2023.
- *Outstrays to Skeffling Managed Realignment*: is a joint venture by the Environment Agency and Associated British Ports (ABP) to realign existing flood embankments and create approximately 225 hectares of new intertidal and wet grassland habitat. It enables key flood risk infrastructure to be delivered around the Humber estuary. Good progress has been made over 2022 and construction is due to be completed end of 2024.
- *Green Blue Plan*: a programme of sustainable drainage schemes across Hull and Haltemprice that will help reduce flood risk and support regeneration. Delivery is due to begin in 2023, while community engagement to shape the programme and encourage community preparedness is currently ongoing.
- *Goole*: An asset management and investment plan is in development to inform the priority interventions needed to maintain and increase resilience of the existing defences that flank Goole and surrounding land. This is to manage the risk of breach and overtopping, which is increasing due to climate change. Key priority works are already being delivered at Airmyn and developed along the north-bank of the Dutch River, while wider assessment work is happening. Goole Town Deal funding is providing £3.1m of funding towards the Dutch River improvements, which will include a waterside cycleway and green travel corridor.



Delivery of the FCERM capital investment is subject to availability of additional partnership funding, to enable access to the national flood funds.

### 3.3 Wider Resilience Action

Flood defences reduce how often we are affected by floods, and they work very well. Maintaining and improving defences are an important element of a wider set of actions required to increase resilience to flooding and in adapting to climate risks. Other tools include flood forecasting and warnings, community and business preparedness to reduce exposure and speed up recovery, greater use of nature-based solutions with multiple benefits; land use planning and climate resilient design.

In this area, the Flood Innovation Centre currently operates to help eligible business and communities to become more flood resilient, and to develop new products and services in flood resilience.

### 4. Partnerships and climate change adaptation

Responding to complex flood risks and climate impacts requires ongoing and long-term collaboration. There is a strong foundation of partnership working across Hull, East Yorkshire and the Humber to enable the area to do things differently in the long term and successfully adapt to the challenges. Partnership outputs will influence future capital programme priorities.

As sea levels continue to rise and storms become more frequent, there could be catastrophic consequences in the years ahead. Tidal floods that we currently consider rare or extreme, will become more frequent. The *Humber 2100+ Partnership* is developing the long-term strategic approach to managing tidal flood risk on the Humber, setting the way forward for the next 100 years. The Partnership's focus through 2022 and 2023 is on building acceptance on the magnitude and consequences of current and future flooding, as a strong foundation for identifying the estuary wide solutions needed.



The Humber 2100+ partnership is currently delivering a winter communications campaign, to raise general awareness of tidal flood risk, to help communities understand the impacts and how they can be prepared.

In the low lying and predominantly agricultural *Upper and Middle River Hull*, partners are focussed on how flood management and land drainage assets can be managed in a sustainable and affordable way, to manage risk to the land and small communities.

*The Living with Water partnership* aims to address the significant water management risks posed to parts of Hull and Haltemprice. This partnership will underpin efforts in ensuring surface and sewer water flood risk is managed, but crucially also in engaging our communities to help ensure they are flood aware and resilient.

On the East Yorkshire coast, a 6 year *Coastal Transition Accelerator Project (CTAP)* is just beginning. East Riding of Yorkshire Council have been allocated national funding to plan for coastal transition and adaptation on the Holderness Coast. CTAP's focus will be on working with a range of stakeholders and coastal communities to build climate resilient places.

**More information**

[Humber 2100+](#); [Living With Water | Living With Water](#); [Flood Innovation Centre](#); [Prepare a personal/business and community flood plan](#); [East Riding of Yorkshire Coastal Transition Accelerator Programme \(CTAP\) | Engage Environment Agency \(engagementhq.com\)](#).