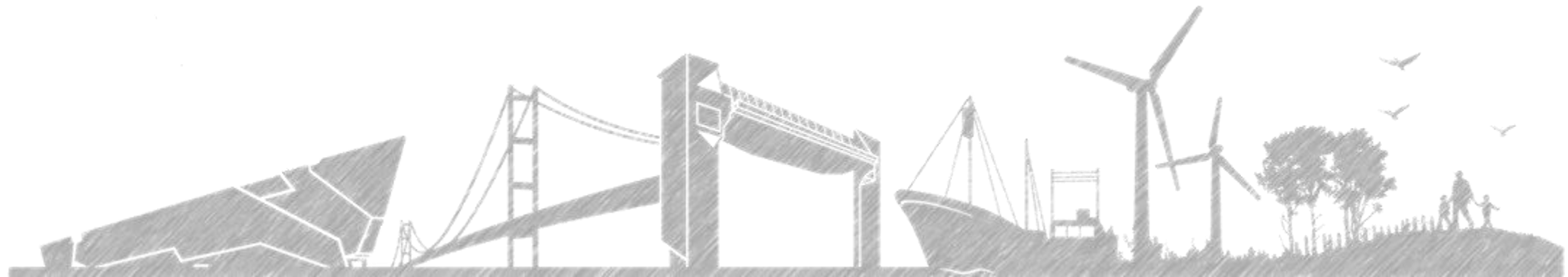




LIVING *with* WATER

Rachel Glossop- Flood Risk Planning Manager
Hull City Council





Hull's Geography

95% Area of city below the highest of tides

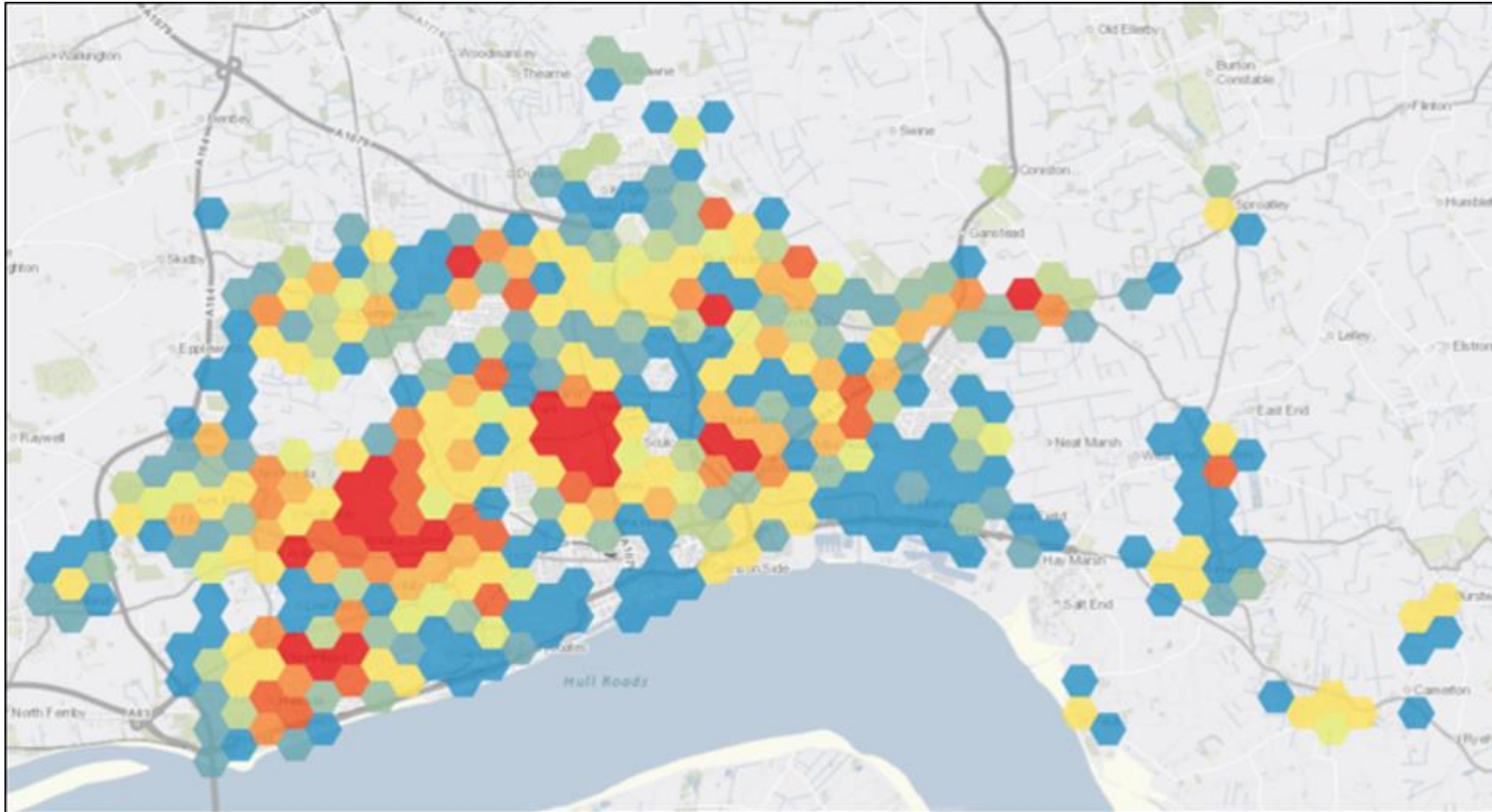
95 – 98% Dwellings at high risk of flooding

1 metre Forecast sea level rise in 2110

84% surface water flows to combined sewers

100% City reliance on pumped systems

Scale of the challenge

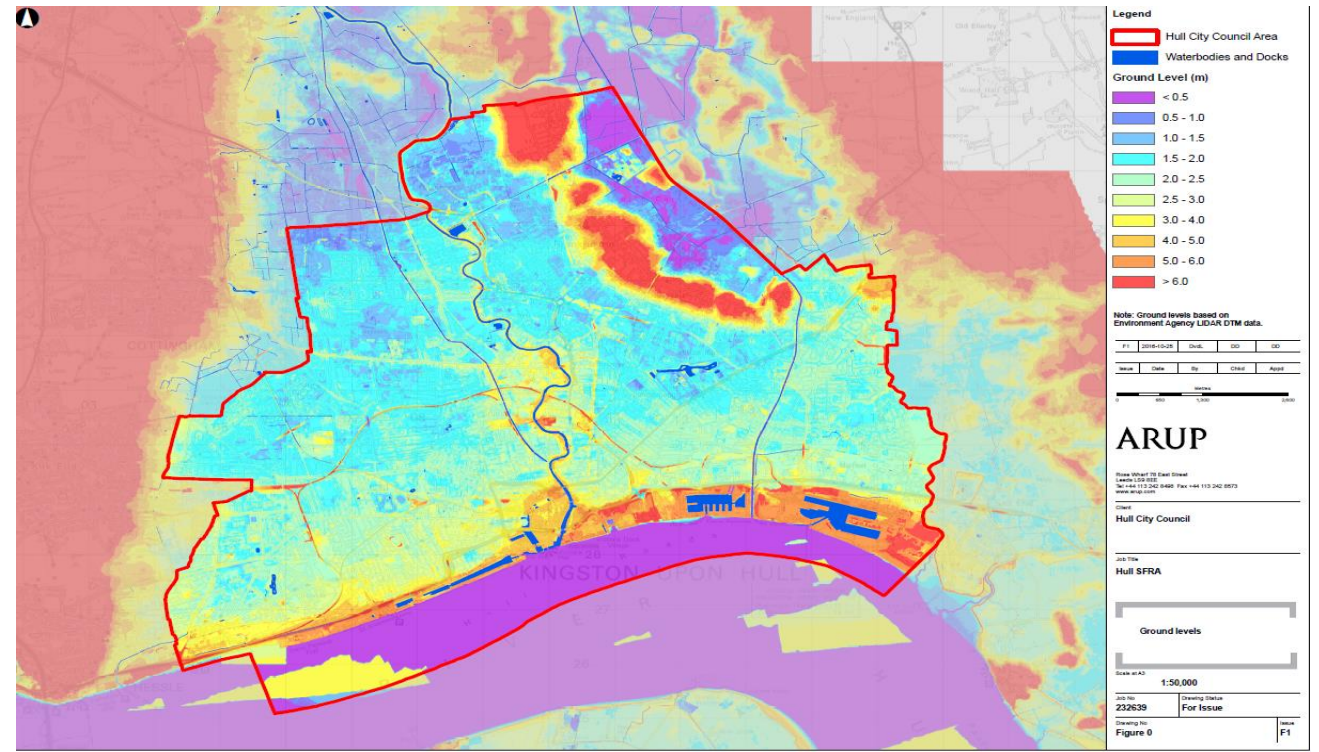


Drainage Plan



Dependant on flood alleviation to enable city to continue to develop

Traditional flood alleviation = engineered grey infrastructure
Such as walls, banks and pumping stations



LWW Partnership

Reduce Flood Risk



Build Community Resilience



Share Knowledge



Improve Place



Enhance Economy





- Aims to reduce flood risk, build community resilience, enhance economy, improve place and share knowledge.
- Uses the integrated hydraulic modelling to identify locations where schemes can be delivered to reduce flood risk to maximum number of properties in line with funders requirements
- LWW Performance Commitment
 - YW £23m BGI to deliver



1 in 5	1 in 30	1 in 75
494	808	644

- Wider match funding identified

AMP7 Overview



CHECK
PREPARE
REGISTER



Flood CPR can save lives and protect properties. Learn it. Use it.



All programme streams support the AMP7 investment and delivery:

- Education
- Engagement
- Funding
- Research
- Governance
- Infrastructure



AMP7
Investment



**GREENING THE CITY:
SHARING OPPORTUNITIES
FOR BUSINESSES
'LIVING WITH WATER'**



Sustainable drainage systems (SuDS) help to manage surface water caused by rainfall by acting in a similar way to natural water processes.

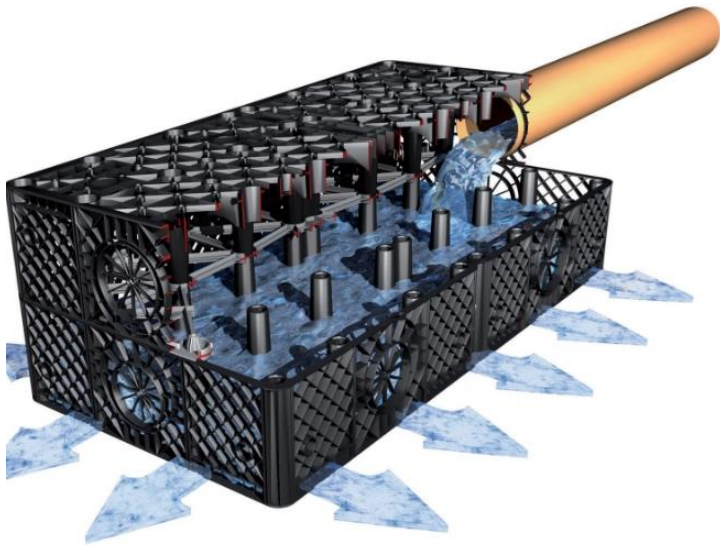
Green SuDS improve water quality, water quantity, amenity and biodiversity

Benefits for; Nutrient Neutrality, Biodiversity Net Gain, Net Zero and combined sewer outfalls (CSO's)



Images courtesy of Susdrain

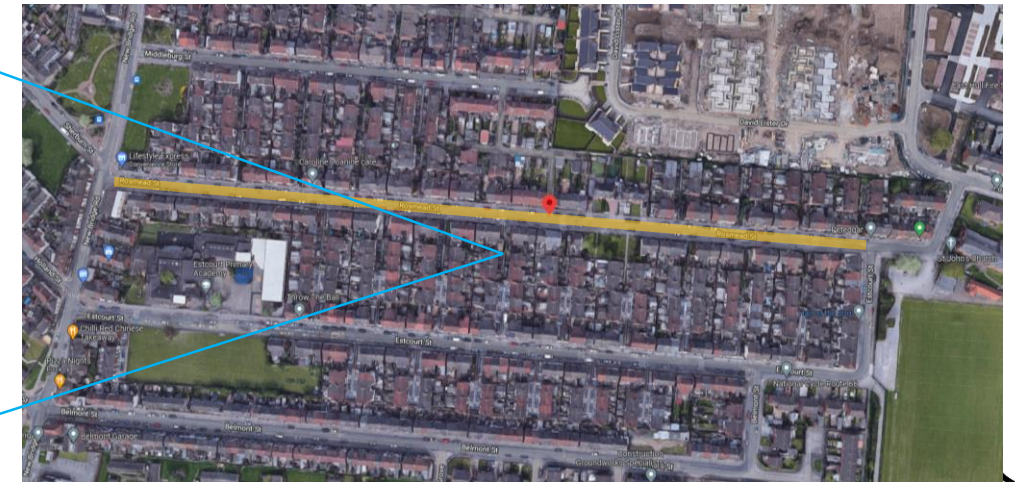
- Below ground SuDs address flood risk but do not deliver multiple benefits that above ground green SuDs do.
- Examples; oversized pipes , storage tanks, permeable paving



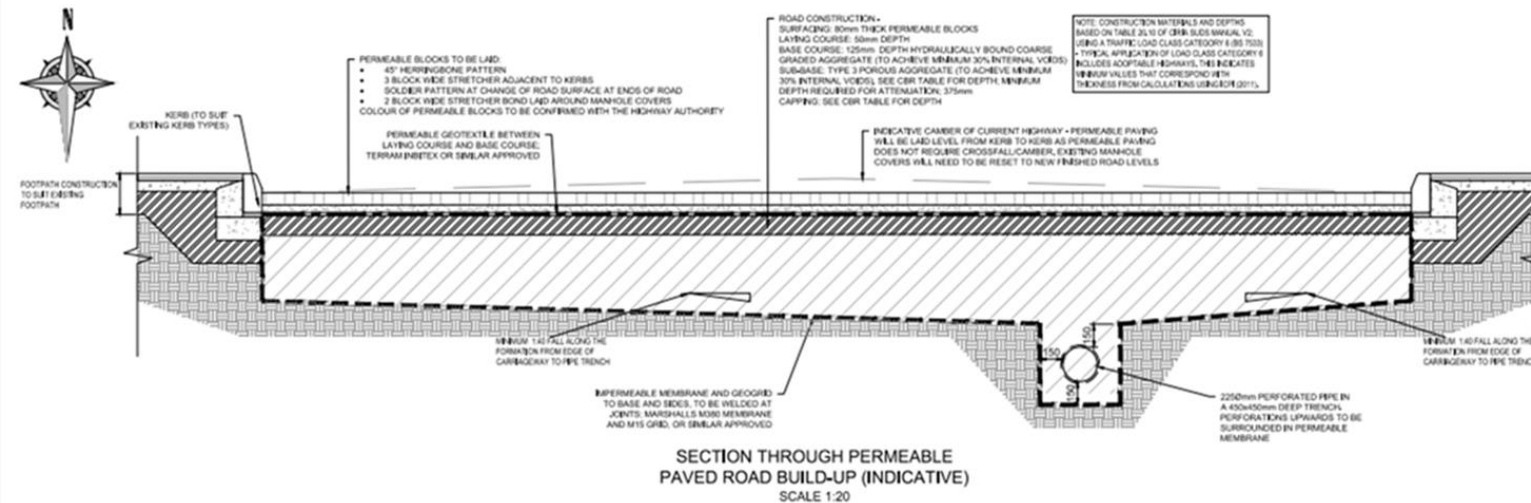
- Above ground SuDs; ponds, wetlands, basins, swales, rain-gardens/bioretention, planters, tree pits, water butts.



- Working in partnership with Hull City Council Housing and their property refurbishment scheme.
- Delivery Partner: MWS
- Dense residential inner-city area.
- Diverse community including vulnerable and minority groups



- 3,775m² of permeable paving.
- 500mm deep porous subbase to provide flow attenuation.
- Interlinks with Hull Council Housing scheme to convey flows from property roof and frontages.
- Investigating further opportunities for SuDS including small bioretention areas/ planters at ends of street.



Rosmead Street Scheme



Rosmead Community Engagement



- Extensive community engagement commenced in November 2021 with 2 face-to-face events with HCC Housing.
- Surveys sent to 430 residents in June 2022
- Social media updates, letters sent in post and a door knock delivering hand delivered letters used to communicate with residents
- Community engagement events held in September 22, December 22 and in January 23 and planned in every 2 weeks at Church on Rosmead.
- Road closure impacting c. 200 properties along Rosmead Street.
 - Solution refinement has reduced construction period to 6 months.
- Challenges with community and local councillors has required close partnership working with HCC, YWS, MWS and LWW

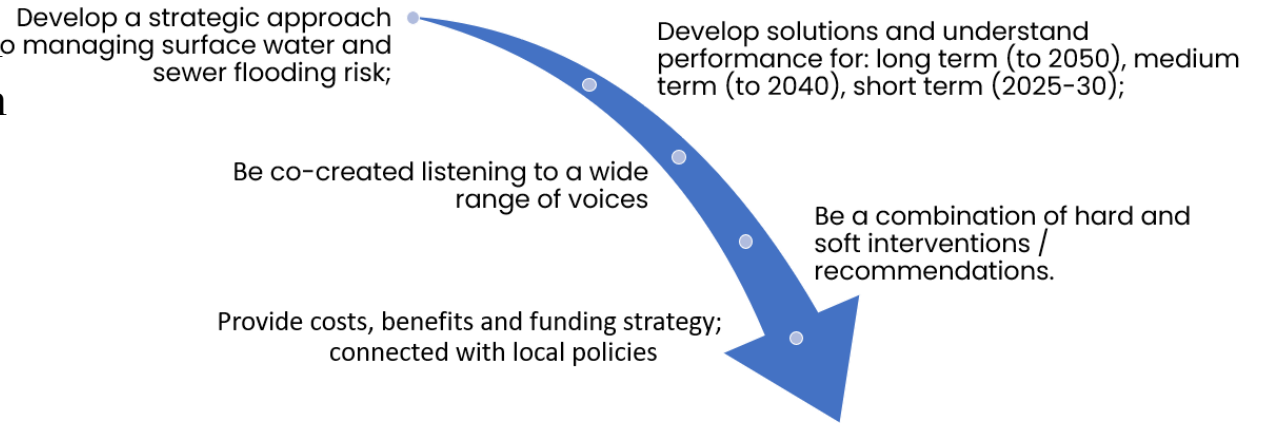





- LWW day held at Estcourt Primary School held 26 Jan 23 incl.
 - LWW Assembly to whole school
 - LWW lessons and activities
 - Co creation of SuDS in school grounds
- Investigating disconnection and attenuation of surface water drainage for:
 - St John's Church with SuDS that supports local planting groups.
 - Estcourt Primary School
- Water butts /planters
 - to be offered to residential properties.

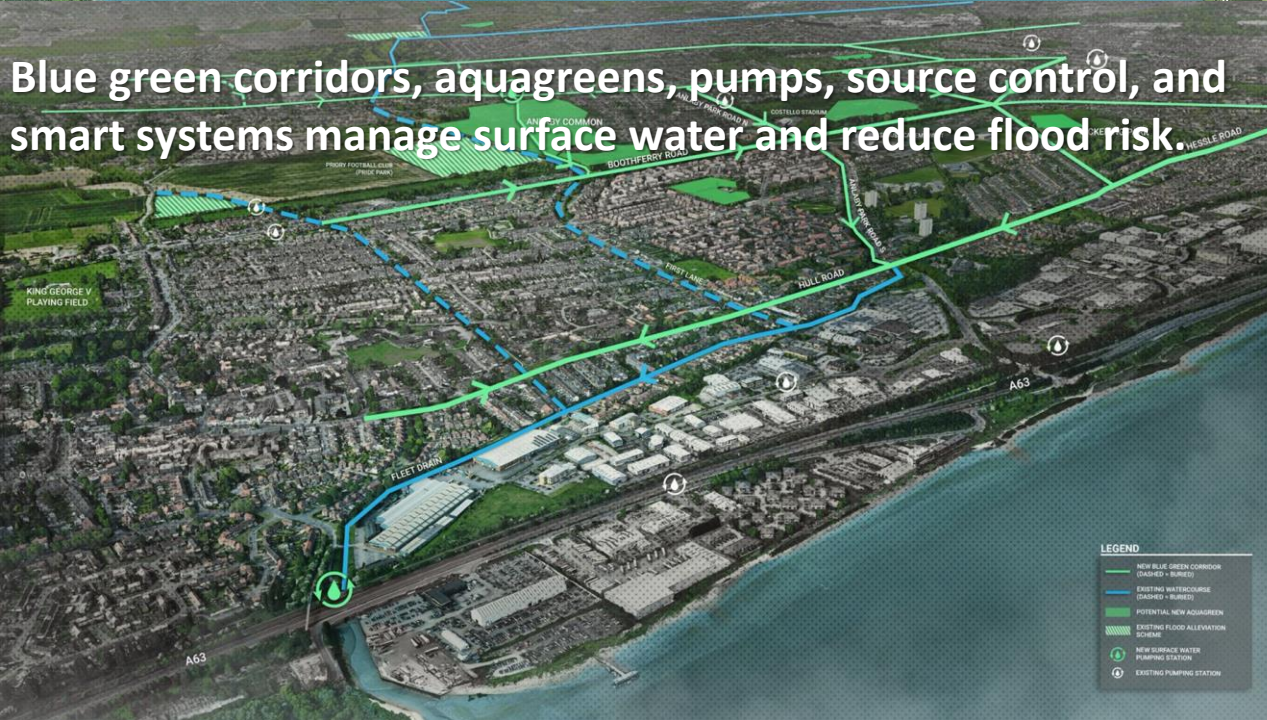
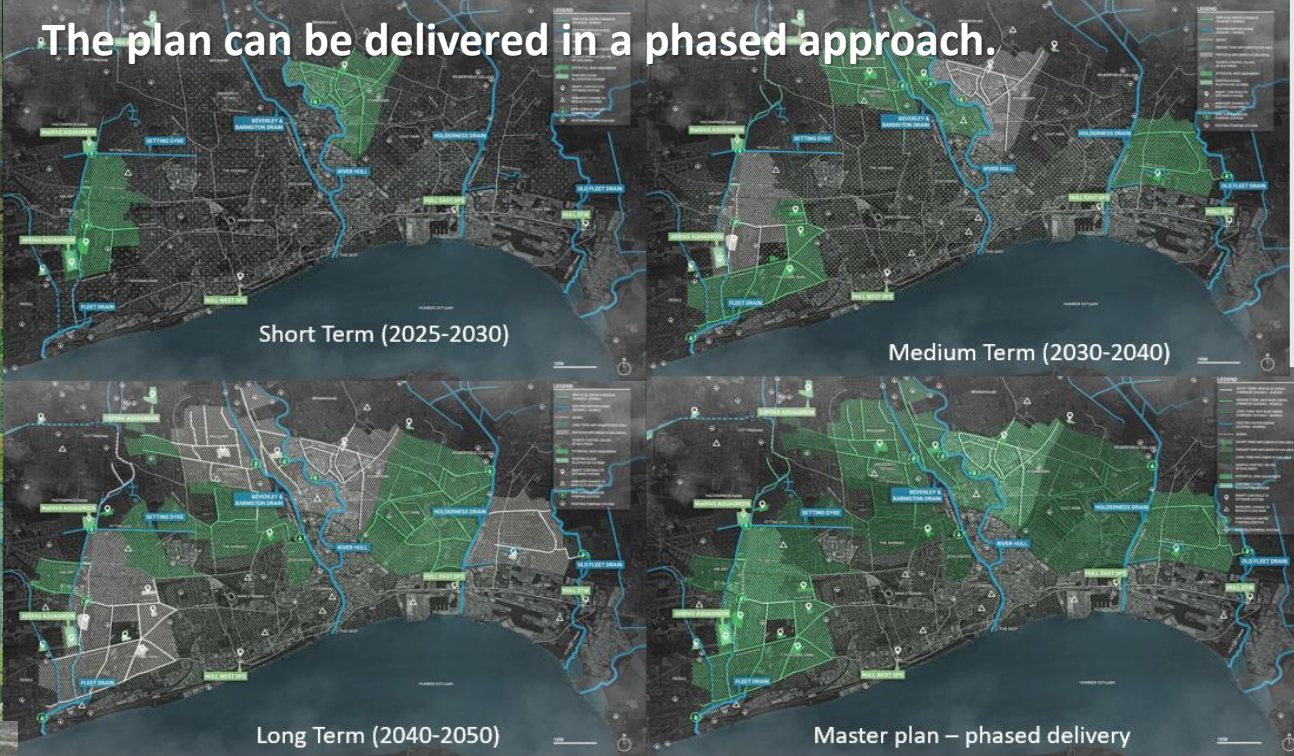
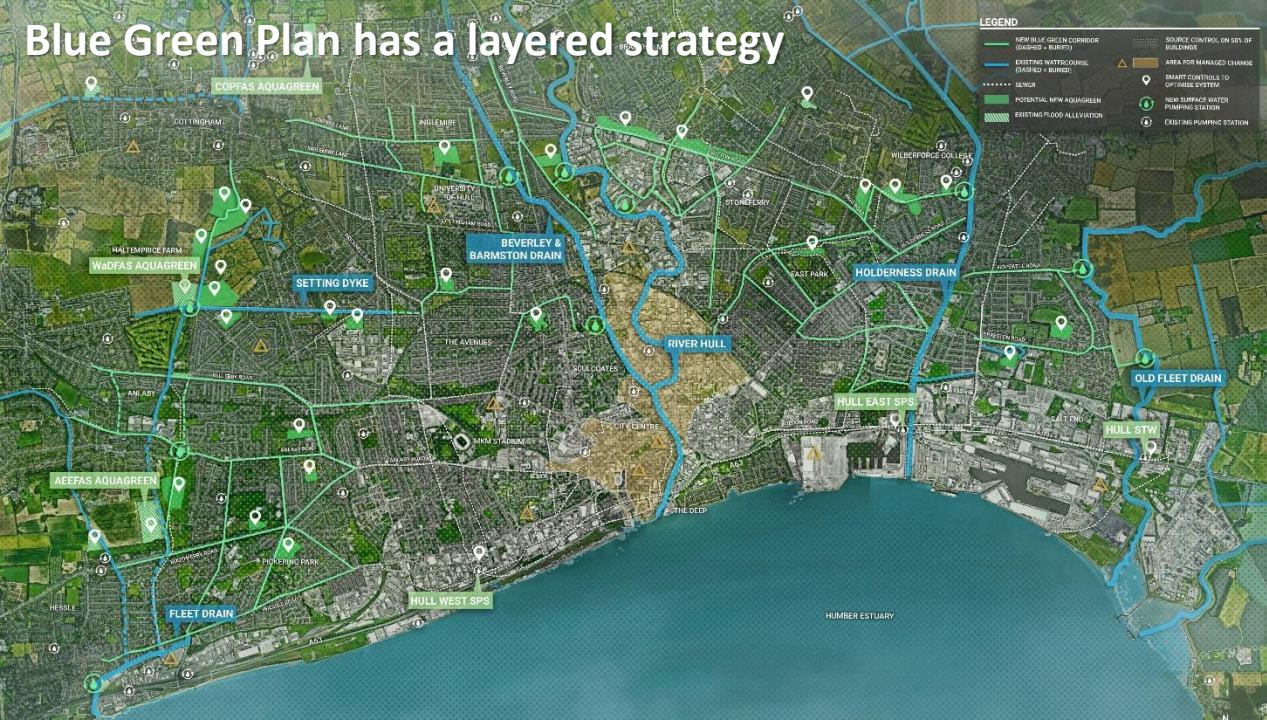




- Our long term blue-green plan for Living with Water outlines our approach to manage the impact of climate change on surface water and sewer flood risk in Hull and the surrounding area.
- The plan utilises the Living with Water hydraulic model to understand in detail the impacts of climate change on the cities networks and identifies a holistic approach to surface water management.
- The layered strategy that underpins the plan includes SMART, blue-green corridors and necessary grey infrastructure, source control, managed change and is underpinned by people and culture.
- Public facing document and associated comms to be delivered from May 23.



 BUILDING RESILIENCE Raising awareness of flood risks within communities and deliver practical advice and information to help local people protect their homes and businesses, and to make them feel safe. Our aim is to achieve a year-on-year reduction in flood risk.	 SHOWCASING OUR PLACE Shining a light on Hull and the East Riding as a thriving place to live, work and visit. We celebrate the region's rich maritime heritage and connections with the water that surrounds us – from the North Sea, to the Humber Estuary and the River Hull.	 DRIVING SUSTAINABLE SOLUTIONS Exploring innovative water management systems and collaborating with local communities and global experts to develop long-term urban water resilience in Hull and the East Riding.
--	--	---



Thank you

Questions ?