



The River Irwell at Kearsley Flood Risk Management Scheme

20th September 2023- Comm

What has been done so far

Completed the Strategic Outline Case and working towards the Outline Business Case

Modelling flood scenarios to assess defence height and economic damage to the area during various flood return period

Fitted non-return valves on surface water outfalls

Carried out further ground investigations and soil nail testing

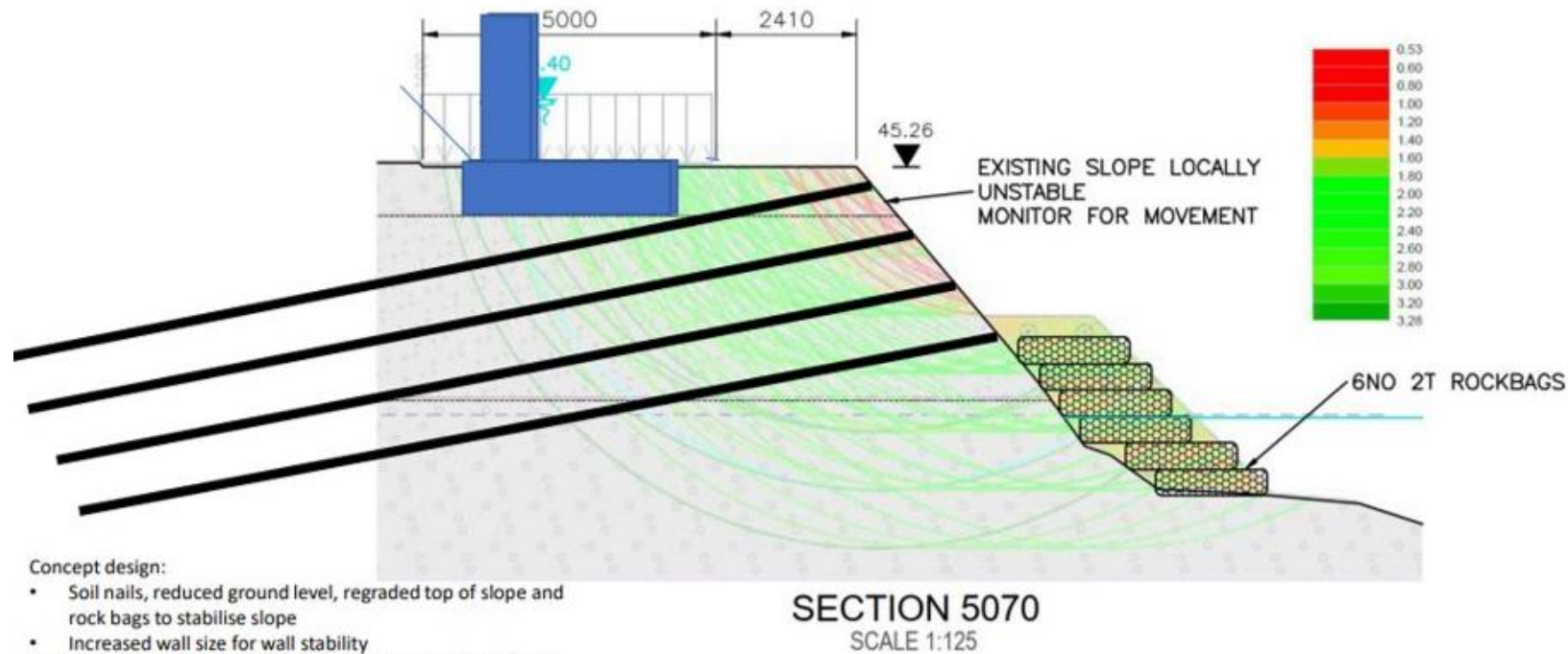
Consultants and contractors investigating numerous design options

Assessed planning application requirements and challenges to manage risk

Continue to work with the Riverside Drive Flood Forum

Workshop with consultants and contractors to discuss results and design risk

Conceptual design - Flood Wall, soil nails and rock bags



Concept design:

- Soil nails, reduced ground level, regraded top of slope and rock bags to stabilise slope

- Increased wall size for wall stability

All technical details are subject to an assessment of viability of construction and design.

Sequence

1. Lower ground level
2. Install rock bags
3. Regrade slope
4. Soil nail
5. Build wall

This option includes a combination of methods. Soil nails and rock bags provide stability to the riverbank to allow the construction of a flood wall at the top of bank.

Main Challenges from Recent Investigations

Difficult ground condition: All soil nails refused to penetrate below 6m due to hard strata which was unexpected. The design requires the soil nails to penetrate below 6m. Consultants and contractors will be investigating alternative drilling techniques and different machinery to determine if the soil nails can penetrate below 6m.

Grout Loss: After installation of the soil nails, the contractors pumped grout around the nails in order to seal them in place. It was found that in some locations more grout was being pumped to fill this void than expected, this raised concerns around grout loss/seepage. Consultants and contractors are looking at different methods to contain the grout, such as casing, to ensure there are no environmental impacts.

Maintenance: We are yet to understand what maintenance for this scheme for the 100 year design life will fully involve which needs to be investigated further.

Construction methodology: The methodology needs to be refined further.

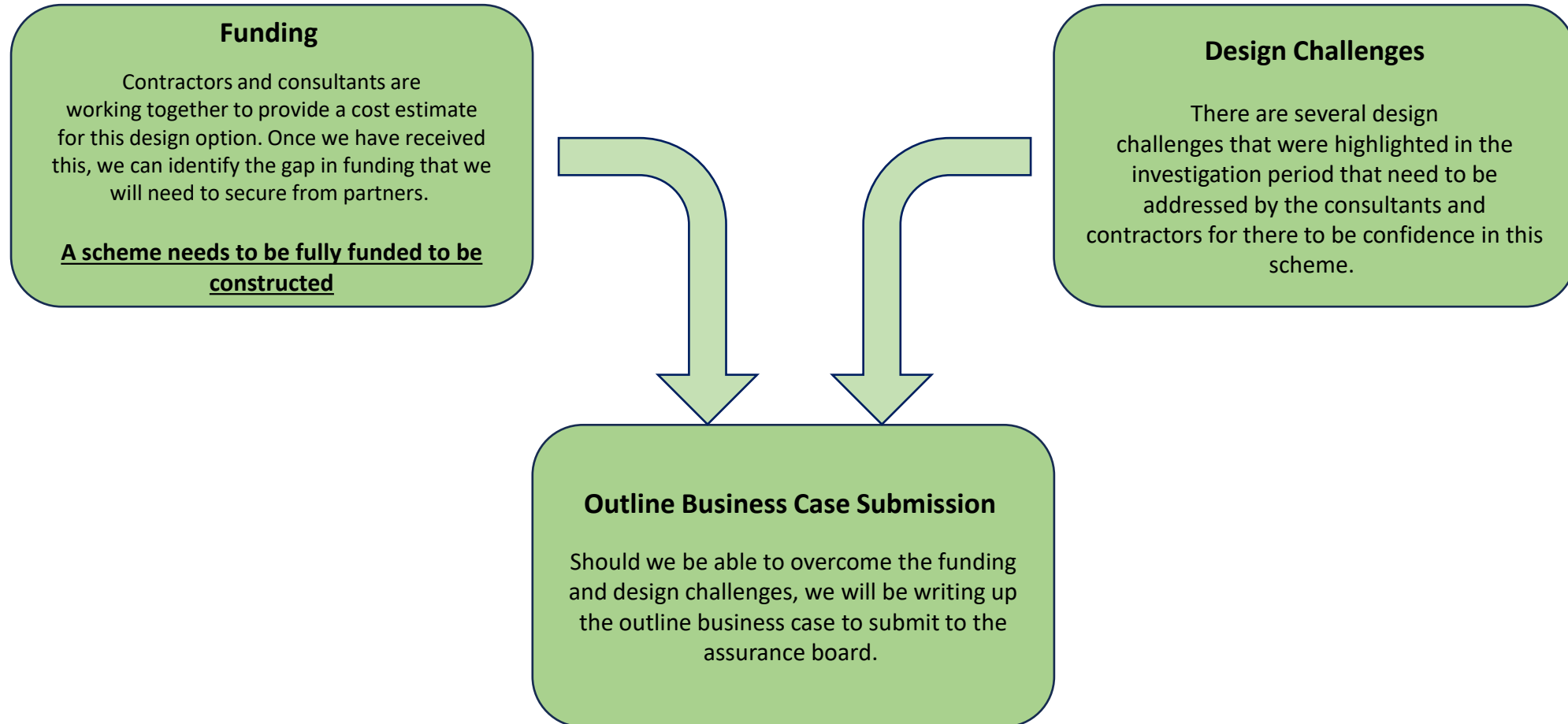
Investigations July 2023



Over the summer ground investigations and soil nail tests were carried out on the riverbank to identify if this intervention is appropriate in this location.

Results from the 'pull out tests' showed that there is a possibility that this option may provide the required bank stability however there are still challenges with the design that need to be addressed before we have full confidence in the scheme.

Next Steps



We will continue to engage with the community on any progress we make.