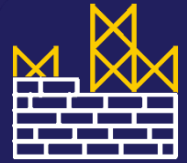




# Ebbw River Restoration, Newport

## Case Study



### Background

NEC4 contract awarded by Newport Council for the restoration of a damaged embankment on the River Ebbw, Bassaleg, following the recent flood events of Storm Dennis. We developed a winning tender proposal for the critical works to repair the washed away river bank that was undermining adjacent property. This included advising the client on the feasible use of a riprap solution in place of the indicative blockstone wall.

### Delivery

The project scope included ground preparation, river channel diversion, including creating dry work area, and approximately 150 metres of bank reconstruction, utilising imported quarried materials to form the revetment and protect the adjacent residential area. Works included;

- Main river fluctuations in river height due to rainfall, requiring liaison and working to NRW FRAP constraints
- Excavation / reprofiling of embankment formation
- Excavation of revetment toe in watercourse
- Import and deposition of Class 1A granular fill
- Import of rip rap stone toe and facework, including geotextile wrap
- Salix V Max C350 erosion protection and landscaping
- Environmental monitoring
- Flood monitoring
- Removal of shoaling and excavated gravels from watercourse, with relocation on site as directed by NRW
- Reprofiling of the River Ebbw channel
- Silt management



### Outcome

This has proven a very successful high-profile scheme, with a great deal of sensitive public and environmental constraints.

These constraints have been managed professionally, to deliver an emergency works scheme that provides long term stability to the river bank whilst leaving no impact on site biodiversity, including in the river.

Project successes in relation to site ecology and included:

- Stockpiling riverbed gravels adjacent to the original location for future habitat creation through generation of spawning sites on the riverbed.
- Management review of the scope to avoid disruption of an area of embankment where invasive species had been identified.



Martin Coombes, Newport CC Service Manager Highways & Engineering stated works "are being **delivered to a high**

**professional standard in both the construction and the approach to the scheme from an environmental perspective.** They (Centregreat) have adapted to engineering design changes and coped well with weather and river level challenges posed without fault. We would have no hesitation in inviting them to tender for further schemes".



Due to the highly sensitive nature of this scheme, we liaised closely with all parties, including the Client, key stakeholders and our specialist supply chain for the global management of the project to ensure effective coordination and communication. Selection and appointment of our appropriately skilled and experienced pre-approved supply chain partners facilitated integration of their expertise in materials selection and placement. This allowed for bespoke early contractor advice to inform the most appropriate solution, along with high quality delivery of the in-river works. Required Traffic Management works were also delivered through our sister company ERH.



One riverside property had been seriously undermined by the failed embankment, exposing the foundations. Therefore, we engaged the property owner, Leigh Adams, from initiation of our engagement in the project, keeping him informed throughout.



Leigh contacted our team to express his gratitude: *“Through the course of the event, of which there was an ongoing legal and*

*insurance claim Centregreat were in an unenviable ‘middle’ position. Relationships and communication between Newport County Council and myself were limited due to the legal position Newport County Council were placed in, so to have contact with Centregreat and their contracted workforce, including Site-Manager was vital.*

*Being in the middle position, Centregreat provided the information they could, as well as providing conduit contact where information was not theirs to share. **Information provided was informative, factual and accurate at all times. I felt fully supported by the individuals Managing and undertaking the repairs.** The team showed professionalism as well as*

*human-centric concern for my family who were at the time, during the COVID-19 lockdown, made displaced and dispossessed by the event.*

***I am extremely grateful for the team's courtesy, empathy, professionalism and support through this traumatic period. Thank you.”***

#### **Additional Works**

Through our close working relationship with Newport CC and the provision of early contractor advice, added value to this project from the Centregreat Construction Management and Delivery team led to further awarded works for Newport Council within the adjacent river network.

On successful completion of the initial works, we worked collaboratively with the client to develop solutions for further storm damage repair works nearby - Flow under a reservoir access bridge was restricted in two of three channels during the storms, causing total erosion of the embankment adjacent the bridge abutment. Newport CC's designers advised a Legato block wall, however we advised on the buildability feasibility of a blockstone and rip-rap solution, providing three options for construction of the concrete toe for NRW consideration.

To facilitate this, we developed the application for and extension to the FRAP with the client, providing our detailed method for the agreed mass fill concrete toe with blockstone wall. This was agreed by the Client and NRW, completely negating the requirement for the legato wall and reducing cost to NCC.



**Client:** Newport City Council

**Delivery Period:** July 2020 – October 2020  
(incl. Covid-19 lockdown period)