

Eastern Bay Link

The Eastern Bay Link connects Queens Gate and Ocean Way Roundabout, improving access and connections to Cardiff Bay and the Cardiff Central Enterprise Zone from the M4 to the east within the Cardiff City Region. We delivered a design and construction solution that **reduced journey times, enhanced road safety** and **improved resilience** of Cardiff's strategic road network.



Welsh Gov /
Cardiff CC



£37m



2015
– 2017



Design
& Build

The project was delivered under a NEC3 Option C contract, following a two stage Early Contractor Involvement (ECI) approach. We designed and constructed 1.2km of new dual carriageway, a 3.5m wide combined cycle / footway and improvements to two roundabouts, including diversions to existing highways. The alignment required a high-skew bridge to accommodate an existing dockland access road, two level-crossings and a railway line connecting CELSA's Castle Works and Rolling Mill. Ground contamination, reliance on land acquisition and phasing of significant underground utility diversions in an environmentally sensitive location all presented additional constraints within a tight programme.

We procured all imported slag material for the piling platforms and embankment construction and all reinforcement from the neighbouring CELSA works. We collaborated with the client, our designers, key stakeholders and statutory bodies to design an optimised solution eliminating key construction risks. The increased costs of the new approach structures were offset by savings gained through utility diversions mitigation measures, keeping disruption to an absolute minimum.

We met our wider environmental and economic objectives, protecting and enhancing the adjacent Sites of Importance for Nature Conservation and Sites of Special Scientific Interest and executing an Archaeological Watching Brief with Gwent Glamorgan Archaeological Trust.



ADDED VALUE

- Offsite manufacture of viaduct components to remove interface issues with local stakeholders, achieving zero disruption to the 24/7 CELSA railway operations
- Modified the client's design from piled embankments to multi-span viaducts to avoid utility diversions and accelerate the programme
- Achieved £4m efficiencies through early consultation with utilities companies to reduce the length of the Victorian sewer and electricity diversion. Also eliminated large diameter gas main and fibre optical cable diversions
- Achieved over 400,000 RIDDOR-free hours
- Delivered to CEEQUAL Excellent by protecting cultural heritage
- Achieved 11% above Welsh Government KPI benchmarks
- Partnered with the Prince's Trust to form the Get into Construction Programme – providing training and employment for local people

“ The challenges and solutions delivered on this scheme have kept us busy for the last two years. It is a story of the benefits of Early Contractor Involvement and collaborative working at its best. ”

Rhys Griffith
Project Manager for Welsh Government

1.2km new dual carriageway	New 21-span viaduct	2 roundabouts upgraded
85% of the initial project alignment required utility diversions	70% of the road was re-designed from embankment to concrete structure	5% delivered under the Target Price budget