

Project Case Study



Ely Mill Development

The Ely Mill Regeneration Scheme was a site preparation project for the construction of 800 new homes and a neighbourhood centre. The construction site was previously occupied by Arjo Wiggins Paper Mill which was closed in 1999 and lay derelict for 10 years due to complexities with access, flooding and contamination.

Griffiths started work on this Design and Build Contract in February 2016 to construct a new 100m multi span bridge on piled foundations, 1km of single lane main carriageway, 3.5km of drainage, additionally to this:

- Remediation of 50,000m³ of contaminated ground including:
 - Hydrocarbons – buried underground and covered with 600mm of clean cover
 - Asbestos – picked and removed off site to a licensed specialist waste facility
 - Knotweed and Himalayan Balsam
- Breaking out, processing and re-use of ground slabs and hard dug materials. Screen and crushed 40,000 tonnes of aggregate based materials to type 1 sub base, used for roads and footpaths
- 99% of waste was recycled and re-used on site this involved incore recycled material used to form build flood bunds on the main site and existing rugby field reducing virtually all disposal costs
- 3500m surface and foul water drainage, up to 6m deep, construction of pumping all to adoptable standards

Project Details:

Client
Ely Bridge Development Corporation

Location
Cardiff

Completion Date
September 2017

Value
£10.4m

Contract
NEC Option A Design and Build

Key Project Aspects

- Bridge Construction
- Remediation Works
- Recycled Materials
- Highway Improvements
- Environmental Improvements

- Earthworks for the construction of three new access roads and through link road onto Cowbridge Road West of around 1500m in length
- Alterations to the surrounding highways network (Cowbridge Road West and Sanatorium Road) to integrate the two signalised junctions, 278 works and improve capacity
- Utility provisions to service 800 new houses
- Dedicated Public Transport access to and from Cowbridge Road East
- Construction of the Ely Trail providing the final link of a largely off-road pedestrian/ cycle route along the River Ely between Cardiff Bay and St Fagans
- Construction of a Riverside Park for residents
- Extensive landscaping

The project was delivered maximising sustainability through the reuse of 99% of material on site, and safely, with no recordable accidents in 180,000 hours worked. The high quality of the housing led to the project being a finalist for the Welsh Housing Awards 2017.

Value Engineering

Griffiths saw value engineering opportunities following commencement of the contract which involved redesigning the sluice for stability purposes which was approved by Natural Resources Wales. This involved lowering and realignment of the river bed using gabion baskets and rock armour for supporting purposes.

Redesign and alternative products for the attenuation tanks, amendments and alterations during the construction stage on the drainage and streetlighting in reducing the quantities required saved money for the client as it allowed Griffiths to be more efficient during construction.

Following completion of the works two otters have been seen inhabiting the now environmentally friendly site.

Community Benefits

To reduce disruption to surrounding residents, businesses and a school, a fulltime Community Liaison Officer was appointed. Monthly bilingual newsletters were produced and distributed and a project specific micro-site was created on the Griffiths in the Community website to communicate with wider stakeholders. A Community Benefits Plan ensured the project maximised value for local people and extensive engagement with Ysgol Gymraeg Treganna and the Institute of Civil Engineers was undertaken to raise the profile of our industry and inspire future Civil Engineers.

