BLACKWELL

WESTON STRATEGIC FLOOD STORAGE

Client: North Somerset Council

Project Information:

Blackwell Role	Main Contractor
Form of Contract	NEC3 Option C
Contract Value	£5M

Blackwell Site Management:

Contracts Director:
Garrett Priestley

Project Manager:
Nick Rowe

Services Include:

Civil Engineering **Earthworks** **Geotechnical** Remediation

Background:

A growth plan to be implemented over the next 15 years will see the development of approximately 6,000 new homes, various school and community facilities and 40 hectares of employment land on a site adjacent to Weston-super-Mare. This plan required the creation of two flood areas and associated infrastructure to protect the new development from flooding.

Blackwell carried out the development of flood storage areas as two separate phases. The first phase, known as the Southern Superpond, involved the creation of a shallow storage area south of the old Weston Airfield. The second phase, involving the creation of a compound channel adjacent to the River Banwell, also included the upgrading of two dilapidated footbridges crossing the river.

Key Processes:

- The excavation of approximately 115,000m3 of material on the first phase to create the flood storage area and the building of raised development platforms using excavated material. Material was lime stabilised as required to ensure suitability for use.
- The excavation of 200,000m3 of earth, the stripping of 500,000m2 of topsoil and placing of material to create a compound channel and flood storage area on the second phase.
- The construction of 3km of high-specification access tracks.
- The restoration of 2 footbridges crossing the River Banwell for use as public rights of way.
- The implementation of a spillway to allow water to spill from the Hutton Moor Rhyne into the lowered flood storage areas during flooding.
- The implementation of outfalls to drain water from the new flood storage areas back into the Hutton Moor Rhyne.
- The installation of a sustainable urban drainage system.
- The construction of permanent access tracks to enable future maintenance of the flood storage areas.

Value Engineering:

Various value engineering opportunities were created on this project to reduce time and costs. The Blackwell team suggested refurbishing the existing footbridges crossing the River Banwell as an alternative to installing a new bridge – an idea that resulted in a cost saving of approximately £200K. In addition, the client was impressed with the underlying subformation layers Blackwell produced for the access tracks – establishing that they were stable enough not to require topping with gravel as originally planned, thereby saving time and money. The Blackwell team also reduced wastage through giving approximately 90,000m3 of excavated material to housing developer, Persimmon Homes for use in their work on a neighbouring construction site.