

Nominations for the 2008 Merit Award

The purpose of the Merit Award is to recognise and encourage excellence and imaginative concepts in civil engineering practice within the ICE North West Region. The judging panel will be looking at these projects in terms of design, construction and research and development.



A66 TEMPLE SOWERBY BYPASS AND IMPROVEMENTS AT WINDERWATH TEMPLE SOWERBY, CUMBRIA

Commissioning Authority

Highways Agency

Principal Designer Jacobs (UK) Ltd

Principal Contractor Skanska Construction UK (with Scott Wilson (Scotland) Ltd – employers agent)

Type of scheme Highway – Bypass of Temple Sowerby

The A66 Temple Sowerby Bypass has reunited a community long bisected by the A66. It enhances protection to the River Eden and integrates seamlessly into the landscape. The River Eden Bridge spans a habitat of international importance. To protect this environment the materials used were weathering steel, pre-cast cantilever units and environmentally friendly waterproofing products. Waste was not sent to landfill, but was reused in the works.

BLACKPOOL 3D MODEL BLACKPOOL

Commissioning Authority Blackpool Borough Council

Principal Designer Arup

Principal Contractor N/A

Type of scheme Interactive 3D Model



Blackpool Council appointed Arup to produce an interactive three dimensional computer model of nearly 4km of sea front. Arup also provided design and 3D visualisation services to provide a model of the central section of the promenade sea defences, proposed public realm and existing infrastructure including a 2km² area of the town. The model has been used for demonstration of the phasing of the sea wall defences to the public, consideration of design alternatives, and design and visualisation of key new developments. Blackpool Council now has an asset that can grow in size, detail, complexity and application.



CHURCHGATE PUBLIC REALM SCHEME CHURCHGATE, BOLTON TOWN CENTRE

Commissioning Authority Bolton Metropolitan Borough Council

Principal Designer Bolton Metropolitan Borough Council

Principal Contractor Aggregate Industries UK Ltd T/A Kennedy Asphalt

Type of scheme Public Realm Scheme

Churchgate is the historic centre of Bolton. Prior to restoration, local issues included traffic, parking, poor loading facilities, outdated street layout, difficulties for vulnerable users and high pedestrian use in the evening. Environmental regeneration and restoration of Churchgate has created an attractive streetscape and a shared use area. Re-use of existing materials and carefully selected new materials have created a high quality public space. Highway safety design is pedestrian friendly and assists vulnerable road users by the use of different materials for road and paving.

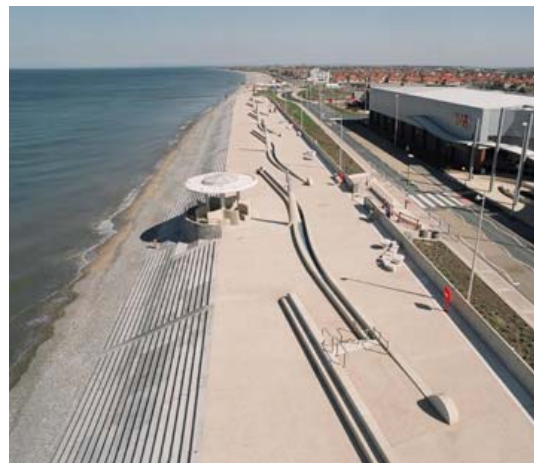
CLEVELEYS COASTAL DEFENCE IMPROVEMENT SCHEME PHASE 2 CLEVELEYS, LANCASHIRE

Commissioning Authority Wyre Borough Council

Principal Designer Faber Maunsell

Principal Contractor Birse Coastal (with Scott Wilson, DW Windsors, DEFRA, Environment Agency, NWDA, ERDF, SLP Ltd)

Type of scheme Coastal defence & environmental improvement scheme



The scheme has transformed a dilapidated 1920s seafront into a vibrant, modern seaside frontage. The scheme creates a 1km length of flood defence and enhanced public promenade. Whilst the new seawall has been raised by 500mm, sympathetic design, a raised promenade and soft landscaping has created an open aspect that can be enjoyed from both sides of the seawall. The tidally affected works have been constructed three times faster than by traditional construction techniques. The project had zero accidents.



DOUGLAS UIDS WIGAN WWTW STORM TANKS WIGAN WWTW IN THE DOUGLAS VALLEY

Commissioning Authority United Utilities plc
Principal Designer Montgomery Watson Harza (engaged by client)
 GHA Livigunn (engaged by design & build contractor)
Principal Contractor Volker Stevin
Type of scheme Wastewater treatment

The wastewater treatment works serves a total population of 200,000 and a catchment of 95km². The purpose of the project is to reduce the number of storm overflow events to the nearby River Douglas and increase the storm storage capacity from 45,000 m³ to 110,000 m³ by the construction of three new 133m x 62m x 4m tanks with a combined storage capacity of 65,000m³. The design water level was taken at existing ground level which varied significantly across the site. The solution was a varying depth concrete blanket tied to the structure which satisfied the robust design criteria, required no special sub-contractors and enabled construction to proceed rapidly. The walls are reinforced with special mesh prefabricated into U-shaped cages which slot together on site with nominal lacer bars.

LAYTON DISTRICT CENTRE BLACKPOOL

Commissioning Authority Blackpool Borough Council
Principal Designer Blackpool Council Tourism & Regeneration
Principal Contractor Blackpool Council Streetscene (with DSD Construction, Boreham Consulting Engineers)
Type of scheme District Shopping Centre Improvements



The design of this district shopping centre took an innovative approach in the use of materials and layout. A busy dual carriageway had become a barrier between the two sides of the shopping area. High vehicle speeds, barriers, railings and a general gloomy feel to the area were stifling the growth of what should have been a thriving, attractive and safe shopping area. The design included the principle of psychological traffic calming, and blurred the traditional boundaries between vehicles and pedestrians. The scheme was delivered with no accidents. Close liaison with local businesses and suppliers contributed to the success of the project.



LIVERPOOL LOOP TRACK SLAB RENEWAL – JAMES STREET TO MOORFIELDS STATION LIVERPOOL

Commissioning Authority Network Rail
Principal Designer Scott Wilson Railways
Principal Contractor Birse Rail
Type of scheme Track bed renewal

The Liverpool railway tunnels opened in 1977. Problems included heavy wear to the rail foot and Pandrol housings, clips, insulators and pads replaced routinely to 'tighten' the track system, and a very aggressive environment caused by water, minerals and stray 3rd rail currents. Pre-blockade works included; asbestos removal, topographical and gauging surveys, trial breakouts of existing concrete haunch, protection of existing services and other infrastructure surveys. The work was executed under a blockdate of 43 days and included breaking out existing concrete haunches, placing new concrete haunches, aligning and installing new rails and baseplates and finally third rail installation. Working in a confined location with limited clearances necessitated the use of an innovative

rail installation system to place the new track and an innovative approach to bringing concrete to the work site.

MANCHESTER CIVIL JUSTICE CENTRE MANCHESTER

Commissioning Authority Dept for Constitutional Affairs
Principal Designer Mott MacDonald
Principal Contractor Bovis Lend Lease
Type of scheme Law Courts Building

The Manchester Civil Justice Centre (MCJC) is one of the most original buildings to be constructed in the North West. The courts needed to have natural daylight, natural ventilation and acoustic privacy whilst maintaining comfort temperatures. Building form, orientation, layout, shading and engineering systems were key elements in achieving these requirements. A concrete anti-vibration beam enabled vibration criteria to be met, reduced the depth of supporting steel beams and saw the total steel weight reduced by approximately 25%, resulting in a very significant saving to the overall building cost. Innovative features for ventilation and lighting will see the MCJC's CO₂ emissions reduced by around 505 tonnes per annum and energy consumption reduced by around 20%, saving the client nearly £2 million at current prices in energy costs over 25 years.





MANCHESTER METROLINK TRACK RENEWALS MANCHESTER

Commissioning Authority GMPT
Principal Designer Corus Railway Infrastructure Services
Principal Contractor Carillion Rail
Type of scheme Track renewals & associated bridge works

This scheme was successfully completed with a collaborative approach adopted between the contracted parties, phased blockade closures to minimise passenger disruption, and a number of innovative works to maximise productivity and reduce scheme costs through value engineering. The scheme was completed on time, within the Client's budget, and with no RIDDOR incidents in over 250,000 man hours worked. Feedback since the completion of the main site works has been very favourable with regards to the significantly improved ride quality, reduced noise to passengers and neighbours, and vibration.

NORTHWICH SALT MINES STABILISATION PROJECT NORTHWICH

Commissioning Authority Vale Royal Borough Council
Principal Designer Arup
Principal Contractor Wrekin Construction Ltd
Type of scheme Mines infilling & stabilisation



This project has involved the infilling of four brine filled mines to ensure the future stability of 32ha of the town centre. The project is fundamentally sustainable; waste and recycled materials account for 98% of the total used. This is the first time in the UK that a cementitious PFA grout mixed with brine has been used to infill a flooded salt mine. Pipelines were laid between the mines and a brownfield facility for the simultaneous abstraction of brine and the delivery of grout. The design has overcome unique challenges involving the chemistry and durability of the grout, fluid dynamics and the effects of entrained air. Accident rates were significantly below industry average.



PENDLE WATER FLOOD ALLEVIATION SCHEME
BARROWFORD, NR NELSON

Commissioning Authority Environment Agency, ncpms North West

Principal Designer Faber Maunsell

Principal Contractor Volker Stevin

Type of scheme Flood Defence improvement project

The Pendle Water scheme included the construction of embankments, stone clad sheet piled or reinforced concrete floodwalls, repair of existing stone floodwalls and channel re-grading. The project team successfully managed many significant risks including: Predicting design flood levels of a river with a complex topography; Restricted access in an urban area with overhead power cables limiting headroom; Working in very close proximity to a number of residential properties; Designing and constructing the works in a watercourse notorious for flash flooding whilst satisfying budgetary and environmental constraints; Effective quick response to design modifications required during construction.

RIDGEGATE WTW AMP4 WQ IMPS (CT)
LANGLEY, NR MACCLESFIELD

Commissioning Authority United Utilities

Principal Designer MWH

Principal Contractor GCA

Type of scheme Water treatment works quality improvements



This project provides primary disinfection of treated water for a population of circa 30,000 people in North Cheshire. This is achieved by a process used for the first time by United Utilities. Contact time between the chlorine and treated water is provided in a 90m length of buried, 1200mm diameter, pipeline instead of a traditional contact tank. The benefits of this process include a smaller contact volume because of the increased efficiency of mixing in a pipe, a completely buried structure with no visual impact, elimination of the need for routine inspection and cleaning of a civil structure with no ongoing operational or maintenance costs.



WIGAN INLET WORKS
WIGAN WWTW, DEANS LANE, HOSCAR,
NR ORMSKIRK

Commissioning Authority United Utilities

Principal Designer Atkins

Principal Contractor Galliford-Costain (with
Atkins Mechanical/Electrical Engineers & UU
Process Design Group (PDG))

Type of scheme Wastewater Treatment –
maintenance project

Wigan Inlet works scheme is a maintenance project for United Utilities, which safeguards operational plant performance in line with EA standards. The new inlet works incorporates coarse screen, inlet high lift pumping station, elevated fine screens and elevated grit detritors. Seamless team delivery of an innovative inlet works solution has realised major capital savings and has demonstrated true partnering at its best within United Utilities Southern Area Integrated Alliance. The innovative inlet works solution has “originality” at its core – client, designers and contractors acting as one, in true collaborative partnership to successfully deliver a new inlet works project within the very tight confines of the existing operational site whilst ensuring operational continuity did not compromise the constructability, environmental, health and safety (H&S) aspects of the project.

Nominations for the 2008 Community Award

This award recognises a civil engineering project that demonstrates a clear benefit to society and improves the quality of life for the people who use it or are affected by it. The Community Award puts the focus on end-users of a civil engineering project — ie, the public — rather than on the technical merits of the project itself, although the project must also be demonstrably sound in terms of concept, design and construction.

A66 TEMPLE SOWERBY BYPASS AND
IMPROVEMENTS AT WINDERWATH
TEMPLE SOWERBY, CUMBRIA

Commissioning Authority Highways
Agency

Principal Designer Jacobs (UK) Ltd

Principal Contractor Skanska
Construction UK (with Scott Wilson
(Scotland) Ltd – employers agent)

Type of scheme Highway – Bypass of
Temple Sowerby



Temple Sowerby is a conservation area and, following a 30 year campaign, now has a bypass. The A66 with its 15,000 vehicles/day (25% HGV) bisected the village generating noise, vibration, air pollution and a poor accident record. The bypass, screened from the village to blend seamlessly into the landscape, removed 95% of the traffic passing through the village. Over £10m of the construction cost was reinvested in the local economy, with roadstone, drainage, concrete and drystone walling materials coming from local suppliers. The bypass returned the village back to its inhabitants and can truly be considered to be an 'Environmental Bypass'.



SHEPLEY AVENUE, GREAT ESTATES
PROJECT
BOLTON

Commissioning Authority Bolton At Home

Principal Designer Broadway Malyan

Principal Contractor P Casey (Land reclamation) Ltd (with % for Art / Environmental Services Highway Division)

Type of scheme Environmental Improvements

This scheme aims to create a better street environment. The challenges were to ensure that residents were engaged in the design process and their aspirations achieved on a topographically and spatially challenging site. The issues were the street being used as a 'rat run', a desire by most residents for off road parking, and increased security to property frontages. The final design closed the road at one end, created a chicane effect to slow traffic, provided a single drive to all properties within the front garden, and replaced fencing with a robust wall and bespoke steel gates and railings.

EAVES GREEN LINK ROAD
CHORLEY

Commissioning Authority Lancashire County Council

Principal Designer Lancashire County Council

Principal Contractor Birse Civils Ltd

Type of scheme Highways & Infrastructure



The Eaves Green Link Road is a 1.4km single carriageway completing the southern and western bypass of Chorley, and it includes a new traffic-signal controlled junction and a 60m concrete bridge over the River Yarrow. The community benefits through traffic relief, viable public transport routes, and improved access to facilities. 6,000 wagon movements have been removed from local roads and there is a 98% reduction in carbon emissions through lime stabilisation to create an earthworks balance. The scheme scored 99% in the Considerate Constructors Scheme audit.



REGENERATION OF KEY WALKING
ROUTES THROUGHOUT THE
BOROUGH
STOCKPORT

Commissioning Authority

Stockport Metropolitan Borough
Council

Principal Designer Stockport
Metropolitan Borough Council

Principal Contractor SK Solutions

Type of scheme

Replacement/Refurbishment of
bridges & surrounding footpaths

This scheme modernised and enhanced bridges, retaining walls and footpaths on key walking routes throughout the borough. This improved both public rights of way and local footpaths, increasing accessibility to all and encouraging regular use leading to a healthier, safer and more vibrant community. A number of older footbridges located throughout parkland and on public rights of way have been replaced with improved modern designs facilitating access for wheelchair users. Footpaths surrounding the structures have been widened to 2m and have been surfaced with a more durable material to improve access. Through close inter-departmental co-operative working and the input of numerous bodies including schools, local residents, cycling organisations and friends of the park groups this scheme has been successfully delivered within the time and budget constraints

Meet the nominees for the Education Volunteer of the Year Award

This award honours an individual who has shown outstanding commitment to civil engineering by giving his or her time to represent ICE and/or the profession at school or university events.

ERAINA SMITH Nominated by: ICE North West Regional Support Team



Eraina Smith attends many educational events in the area and is a Science and Engineering Ambassador. Eraina studied Civil Engineering at Bolton Institute and since starting her degree has taken part in numerous educational events, speaking to secondary school children, A level students and adults about how she decided to enter the profession and coped with the challenges encountered. Eraina spent much of her childhood in a wheelchair, and as a young adult nursed her terminally ill mother. A mother of 4, she started her degree at the age of 28, and a week after starting was told she was dyslexic. Eraina is Assistant Engineer for Highway Development at Manchester City Council. Deborah Hilton, Recruitment and Careers Adviser at ConstructionSkills North says of Eraina: "her enthusiasm, motivation and commitment for her chosen career are so evident and she is, quite simply, an excellent ambassador for the industry."

MATTHEW STOTT Nominated by: ICE North West Regional Support Team



Matthew is a Graduate Civil Engineer at Jacobs in Manchester and is a Science and Engineering Ambassador. He graduated with a 1st class MEng from the University of Nottingham. He has been involved with careers events at Canon Slade School in Bolton and took part in the Engineering Your Future Career Awareness Day in Bolton, the first time such an event had been held outside London and which was coordinated with SETPOINT Greater Manchester and Lancashire. He sits on the University of Nottingham School of Civil Engineering's Industrial Advisory Board, and is the Events Secretary for the Manchester Branch of ICE. Karen Wilkinson, Head of Careers at Canon Slade School comments: "his presentation was extremely entertaining, the slides were relevant, and his delivery was professional without being patronising. I was extremely impressed."