



South Korean funicular railway system on track for final commissioning

A specialist engineering team from Qualter Hall are in South Korea for the final commissioning stages of a major Funicular Railway System for the High 1 Switchback Leisure Resort located in Gangwon Province. The resort, which provides skiing, mountain views, nature trails, golf, a revolving restaurant and other leisure facilities is in the process of being significantly extended. The new trains will be an exciting new attraction, travelling between stations at the top and bottom of the mountain

POSCO Engineering, a major South Korean civil company, awarded Qualter Hall the prestigious contract in 2012. Secured against international competition it follows on from Qualter Hall's special expertise in transport systems for personnel incorporating rope management and winders, in this case with

the additional special requirement of 20 family rail bikes. Each bike carrying up to four people, is used for travelling down the mountain on a scenic and separate dedicated rail line.

continued on page 2 →

→ George Orton, Managing Director, on behalf of Qualter Hall, comments:

'This has been an extremely interesting and unique project. The contract was secured against international competition and is testament to our specialist expertise in transport systems for personnel incorporating rope management and winders, in this case with the additional requirement of the family rail bikes. Having also previously supplied Legoland's Windsor Park Hill Train in the UK, a similar Funicular Railway System to the one for South Korea, Qualter Hall is building up a strong reputation for supplying the leisure sector as well as other industrial sectors such as mining and commercial transportation.'

QUALTS



Fact Sheet
Track length 1000m
Gradient 15.6 degrees
Operating speed 5 m/s
Daily capacity
Passengers: 2100
Family rail bikes: 600

1 Family rail bikes
2 Inside the Winch House

The trains will be an exciting new attraction, travelling between stations at the top and bottom of the mountain.

One function of the train system is that on its ascent, it attaches and pulls the family rail bikes from the bottom loading station to the top of the mountain. Passengers for the family rail bikes ride inside the train on the ascent along with other passengers.

The Funicular Railway System provides a loop type simultaneous operation of two trains, one going up the gradient and one descending, connected through a continuous rope arrangement using a 400kW balanced friction winder. The trains run on a single track with a central pass-by to enable the two trains to pass each other.

Qualter Hall has designed, manufactured, supplied and is currently supervising the installation and commissioning of the two trains (two cars per train) and operating system which also includes all related specialist control and safety equipment.

The trains have automated doors, built-in communication systems plus automatic brake system capable of stopping a fully loaded train safely in an emergency situation. In the event of electric power failure, a diesel generator system will enable trains and bikes to be returned to the station safely.

Qualter Hall has previous experience of working in Korea on a number of projects including

- Han Bo Coal – two manriding trains for coal mine, one 4 car, 84 seat capacity and one 5 car, 96 seat capacity.
- Kyung Dong – two manriding trains for coal mine, both 7 car, 160 seat capacity.
- Jinro Construction – several diesel locomotives.

Scaling great heights!

Qualter Hall's Scale Lane Bridge scoops a raft of prestigious awards!

Qualter Hall is delighted to have received a number of awards and commendations for the Scale Lane Bridge in Hull.

To date these include:

- **Canal and River Trust - Living Waterways Awards**
Won Contribution to the Built Environment Category
- **Structural Steel Design Awards**
Won Commendation
- **WAN - World Architectural News Transport Award 2013**
Awarded to Scale Lane Bridge
- **World Architectural Festival Transport Award 2014**
Awarded to Scale Lane Bridge



- **Civic Trust Award**
Awarded to Scale Lane Bridge along with a Special Award for Community Impact and Engagement
- **RIBA - Royal Institute of Architects**
Won Award for Yorkshire
- **American Institute of Architects (UK Chapter) Design Awards**
Won Honourable Mention

- 1 Representatives from NDA, Magnox and Cavendish visiting the Qualter Hall team to view equipment on simulated testing in the Qualter Hall works.
- 2 Factory roof removed and preparing for Package 1 testing
- 3 Section of Package 1 being lifted into position for testing
- 4 Package 2



Completion of major waste retrieval contract for Cavendish Nuclear

Qualter Hall is in the final stages of completing a major contract for Cavendish Nuclear.

Berkely Nuclear licensed site is undergoing a programme of decommissioning following 30 years of operational life.

Part of this involves the retrieval of Fuel Element Debris, Miscellaneous Contaminated Items and Activated Components from the Active Waste Vaults and other locations on the site. These are then processed and packaged in Ductile Cast Iron Containers and interim stored prior to final disposal at a Geological Disposal Facility.

→ Steve McNally, Site Director, said: 'Our aim is to reduce risk and cost associated with the Magnox programme through innovative approaches to decommissioning. The bespoke design of the vault retrieval support machines is a great example of this and has been achieved through integrated working with our supply chain.'

→ Qualter Hall's Managing Director, George Orton said: 'With the completion of this major commission for Cavendish Nuclear, along with a number of others, Qualter Hall further establishes itself as a key supplier to the nuclear industry for the design, manufacture and supply of highly specialised equipment.'

Magnox Ltd is the end client with Cavendish Nuclear the contractor, and Qualter Hall the sub-contractor for two packages of highly sophisticated nuclear waste handling equipment involving robotics, with fully integrated control systems.

Two Vault Retrieval Support Machines make up **Package 1** and include winch tower, remotely controlled robotic arm with various tools, hydraulic power equipment, control systems and structural steelwork. The job of the robotic arm is to sort and manipulate the material within the vault, but does not at any time remove the waste material from the vault. The two machines can be transferred as required between the three Active Waste Vaults.

Package 2 comprises the Waste Retrieval and Transfer System which is used to remove all waste forms from the Active Waste Vaults. The equipment includes three vault shield doors, three load modules, two transfer tunnel modules, three grapple modules, a hydraulic power unit, control systems and structural steelwork. Each grapple module has a wire rope winch which is attached to a retrieval grapple which delivers waste into a waste transfer tray, which then continues its journey through the tunnel module via a rail system finally delivering it to the appropriate processing module.

Qualter Hall is responsible for the concept design of Package 1 and the detailed design, manufacture, supply, assembly and integrated works testing of both Package 1 and Package 2.

IN BRIEF

Major New Order | Won Cleveland Potash Plant



Qualter Hall has been awarded a major contract for the design, supply, installation and commissioning of a new Polyhalite Crushing Plant as part of CPL's continued upgrade at Boulby Mine in North Yorkshire. Work will begin immediately and is scheduled for completion in early 2016.

The work continues from the successful completion of the replacement Headgear in 2013, reported in the previous issue of Qualts and this summer's replacement of the Round House Transfer Tower (see picture).

The go ahead for the Round House was given in April 2014 and preliminary demolition and site preparation began in early July. The deadline for completion was 11 August and the work had to be done during the holiday shutdown in the 2 weeks prior to this. The project included the demolition and replacement of the outfeed conveyor system, mechanical equipment and civil works.

Project | Ongoing Dover



At Dover, Qualter Hall are carrying out major refurbishment works to No 7 and No 2 Ro-Ro Berths in the Eastern Docks, Port of Dover, having already successfully completed similar major works on Berth 3. This work includes the design, manufacture, supply,

installation and commissioning of all the mechanical, hydraulic and electrical control equipment required for each berth.

Project | Completed Adur Ferry Bridge, Shoreham

Qualter Hall has successfully completed a major project to design, manufacture, supply, install and commission the M & E Operating package for the 50m long swing footbridge (Adur Ferry Bridge) at Shoreham in West Sussex.

Indonesia

Qualter Hall are pleased to report that we have appointed PT Sinar Tripilar Solusi as our representatives in Indonesia. Our contact in this company is Franz Kleindl and he will be assisting us to find new business for Qualter Hall in Indonesia, including synergies with our sister company PT Waagner-Biro Indonesia.

Production Update

We are pleased to report that our new **Soraluce FR Milling Centre**, has now been utilised on several of our recent projects. This state of the art milling centre is a significant addition to Qualter Hall's production facilities.

New Starters

We are pleased to welcome the following new starters to Qualter Hall.

- **Kim Baldwin** - Interim Accountant
- **Liam Sellers** - Junior Engineer
- **Melvin Tinkler** - Plater
- **Marcus Cooper** - Painter/Shotblaster
- **Brian Dinsley** - Sales and Marketing Engineer
- **Nikolaos Magoulas** - Electrical Project Engineer
- **Tom Fleming** - Hydraulic Engineer
- **Chris Abraham** - QA Manager
- **Gordon Bingham** - Production Planner
- **Thomas Rushforth** - Apprentice CNC Machinist

Long Service Awards

Congratulations to **Steve Conway**, **Mark Goode** and **Mike Henderson** who celebrate 25 years with Qualter Hall this year.

Success for Darfield Junior Football Team

Congratulations to the Darfield Junior Football Team Under 13 side, on winning the Sheffield & District Junior League Division Under 13s 'G' League, and for being voted 'Team of the Year' by the other Darfield JFC for their achievements both on and off the pitch (sportsmanship, fairplay and fundraising). The team is proudly sponsored by Qualter Hall.

Adoption Leave

Congratulations to Claire Middleton, currently on 12 month leave following the adoption of her little girl, Jess. We send them our very best wishes and look forward to welcoming Claire back to Qualter Hall next May.

Retirement

We wish both Peter Woodhouse and Mick Robinson long and happy retirements. Peter retires after 12 years service at Qualter Hall and over 50 years working in engineering. Mick retires after 11 years service at Qualter Hall and nearly 50 years working in engineering. Both started work as apprentices with the former Newton Chambers at Sheffield.

Obituary

We are very sorry to have to report the sad loss of Gary Bestall who passed away in February. Last year Gary received a long service award for 25 years at Qualter Hall.



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