



Grontmij and partners address construction industry safety issue



Grontmij operations manager, Andy Wilson (second from right), designed the new manhole cover

All designers in the construction industry have a duty to mitigate hazards wherever reasonably practicable. One such hazard that has been identified is the risk of operatives falling through manhole openings during construction. In response, Grontmij instigated a design initiative to produce a solution to this potential issue.

In order to achieve a solution that took into account the opinions and concerns of contractors, engineers and water companies, Grontmij engaged with strategic partner Morgan Est, supplier FP McCann and

client Severn Trent Water. The result was a collaborative meeting of supply chain representatives to discuss, adapt and develop a new design that could be adopted to benefit all parties.

The chosen design incorporates a grid seated on corner bearings within the opening to prevent anyone falling down the manhole, but that can also be removed if access is required. Prototypes of the design have been manufactured and FP McCann is now incorporating the revised opening detail as a standard option for their pre-cast concrete manhole slabs, hoping to have the product available in all sizes by year end.

Mike Taylor, senior operations manager with Grontmij comments, "The high standard of the entries that we received through the design initiative is testament to the innovation and expertise within the company. It also demonstrates Grontmij's proactive commitment to safeguarding the welfare of its people, its partners and the industry that we work in."

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Life on the front line

Josh Greaves, graduate engineer in Grontmij's water expertise area, participated in a six month tour of Afghanistan with the Territorial Army between March and October 2008.

With responsibility for locating enemy batteries using radar based equipment, Josh was often located very close to the front line. He was also frequently confronted with high pressure situations, for instance, when conducting mine sweeping operations.

Whilst the main focus of his operations was military-oriented, Josh said that a great deal of effort was put into interacting with local civilians and supporting infrastructure development initiatives.

Talking about the living conditions during his tour, Josh comments, "We were living in forward



Josh helped support infrastructure development initiatives

operating bases where conditions were quite basic. Temperatures reached up to 50 degrees centigrade in the daytime and the only ways to keep cool were in the shade of the tarpaulin or under the hanging bags of water that we used as showers. Apart from my family and friends, the thing that I missed most was some nice, clean sheets!"

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CONTRACT NEWS

Thames Water

Grontmij has secured a high profile appointment on the consultancy framework to provide design support services for the proposed London Tideway Tunnels. The Lee and Thames tunnels are being designed to substantially reduce the 32 million cubic metres of untreated sewage that overflows to the River Thames each year from London's Victorian sewers after rainfall.

Muse Developments

Blackpool has celebrated the signing of a major development deal that is set to transform the town centre and create a booming new business district. Grontmij | Whitelaw Turkington has been appointed by Muse Developments as landscape architects for the public realm.

Scottish & Southern Energy / Airtricity

Grontmij has received a commission to undertake the client's engineer role for Griffin Wind Farm as part of the Scottish & Southern Energy / Airtricity framework agreement. This includes the site investigation, geotechnical advice on ground risks and design review of the site and an alternative access route.

University of Leeds

Grontmij | Whitelaw Turkington has been appointed to undertake the public realm design on Innovation City Leeds. The purpose of the initiative, which is being led by the University of Leeds, is to dramatically improve the city's enterprise rates and act as a gateway for building links between businesses in the region and in key innovation cities across the globe.

Anglian Water

Grontmij is in the latter stages of negotiations with Anglian Water to be reappointed as a partner within the @one Alliance for AMP5. In AMP4, all six design and construction partners within the @one Alliance operated within a commercial arrangement where the partners were jointly incentivised at a programme level with project teams fully integrated into the @one Alliance organisation.

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WELCOME



Welcome to the latest issue of Dialogue, the newsletter from Grontmij.

Over recent months, we have been playing a proactive role in supporting our clients to weather the current economic downturn. Central to this is an appreciation that projects must be delivered in the most sustainable and cost-effective manner.

In the water industry, we have helped to lead the recently launched Water Industry Telemetry Standards, which will serve to lower costs and reduce the historical reliance on a single manufacturer of telemetry systems. Our strong asset management and MEICA capabilities are also helping clients to achieve cost and energy efficiencies; benefiting both the environment and their customers.

We have played a central role in the award-winning shared space scheme in Ashford, Kent. By dramatically re-landscaping selected areas of Ashford's centre, this pioneering initiative has helped to revitalise the town and pave the way for future growth.

I hope this newsletter gives you a flavour of the many exciting developments currently taking place.

Lawrence Hughes
Managing Director - UK & Ireland



Environmental considerations formed a central part of the road design

A new era as 'road to the isles' is upgraded

One of Britain's last remaining single track trunk roads, the A830 or 'road to the isles', has been upgraded to single carriageway standard, Transport Minister Stewart Stevenson announced on 15th April at the official road opening ceremony. Grontmij acted as designers for Morrison Construction on the project, which comprised the final stage of the full upgrade of the Fort William to Mallaig route; a programme that has taken over 30 years to complete.

Under warm spring sunshine, the ceremony was witnessed by dignitaries, residents of Arisaig and local primary school children who sang a song that was written to mark the occasion. During the opening, the project was praised for the way in which it integrated into the surrounding landscape.

Mr Stevenson said, "The road to the small isles is one of the most stunning in Scotland, with unrivalled views that showcase some of the best scenery anywhere in the Highlands. For years, the road has been famed for its single track status, and in many ways this is the end of an era.

"However, anyone who has ever experienced the road will know that this is vital investment which will be welcomed by the local community, visitors and businesses alike. This project will bring real benefits by improving journey times, promoting safety and providing better links with Mallaig's ferry connections to Skye and improving the routes to market for the local fishing industry."

Some of that scenery meant special consideration had to be given to environmental factors during the design and construction phases. As the road passes through Glen Beasdale Special Area of Conservation, noted for its ancient oakwood, its otters and its fresh water mussels, significant effort was made to retain the existing character of the area. Furthermore, a new habitat is currently being developed to maintain and improve oak woodland.

Alasdair Fowler, Grontmij operations director, added, "Designing the road at Arisaig was an exciting and challenging project. We worked closely with Transport Scotland and Morrison Construction to deliver an upgraded road that will provide a safer passage to the western isles. Arisaig is an area of Outstanding Natural Beauty, so it was imperative that we took this into account in the design of the road."

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ON THE FRONT PAGE

An 80 tonne pipe bridge being lifted into place as part of the upgrading to Huddersfield waste water treatment works, where Grontmij has been working with Morgan Est and Yorkshire Water.

Pipe dream comes true



The new pipe bridge will help to improve water quality in the River Calder

A key milestone in the upgrading of Huddersfield waste water treatment works was completed in March, when an 80 tonne pipe bridge was installed at the site.

The pipe bridge, which is 1.9m in diameter and 55m in length, was skilfully lifted into position on the River Calder by a 1000 tonne crane at the Lower Brighouse Treatment Works. Its purpose is to provide a route for transferring partially treated sewage from one treatment works to another. This will help to improve the water quality in the River Calder to the standard required by the European Fresh Water Fish Directive, which becomes law in the UK in 2010. The pipe bridge also provides a pedestrian route across the River Calder.

Work on the new treatment plant, which has been designed by Grontmij in conjunction with contractors Morgan Est, is expected to be completed in March 2010.

Andy Sang, Grontmij's major projects director for water said, "Getting the new pipe bridge into place is an important milestone in this project and a real feat of engineering. As a consequence of the environmental improvements brought about by the engineering works, it's hoped, over time, species not often seen in the Calder will become more common as new colonies begin to thrive in the cleaner water and along the river banks."

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Advanced eco-building nears completion

The 7 More London Riverside scheme will be the final major building to be erected on the prestigious More London development adjacent to Tower Bridge, London in August 2009. The new PricewaterhouseCoopers offices comprise the fifth building on the site for which Grontmij | Roger Preston & Partners has provided full building services and environmental design.

In collaboration with More London Developments and the base build design team, Grontmij | Roger Preston & Partners has enabled PricewaterhouseCoopers to significantly reduce its corporate carbon footprint.

Extensive energy efficiency measures have been adopted to produce a building with approximately 55% lower carbon dioxide emissions than required under (2006)

Part L2 Building Regulations. A biodiesel tri-generation system has been installed that produces power and utilises waste heat to provide a proportion of the building's cooling via absorption chillers and heating the main office ventilation air. Solar hot water panels are also utilised at roof level for heating the domestic water supply.

Externally, numerous energy saving measures, such as selective transmissivity coated glazing, have been incorporated to maximise daylight penetration, reduce unwanted solar gains and provide better insulation.

A building management system complete with automated energy management and targeting software will be specified to assist facility managers. This has the potential to further reduce the energy demand by 10-20%.



The 7 More London Riverside scheme has been awarded an 'Excellent' BREEAM rating

Matthew Thurston, director for Grontmij | Roger Preston & Partners comments, "The scheme has been awarded a BREEAM 'Excellent' rating, which is the world's most widely used method for evaluating the environmental performance of buildings. We are proud to have played a central role in achieving this on such a prestigious development."

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Blue water, green energy



Grontmij has the capability to work on both large and micro hydro energy schemes

Grontmij has been appointed by Scottish Water to undertake a feasibility study for a hydro energy recovery turbine on the outfall of the proposed Loch Ryan Waste Water Treatment Works near Stranraer.

The proposed plant would incorporate high efficiency Turgo water turbine technology with an electrical installed capacity of 162kW; generating approximately 1348MWh of electrical energy per year. Installations of this nature provide financial and environmental benefits by reducing the electrical energy and whole life cost to the client.

The Loch Ryan turbine would offset the equivalent of 708,840kg of carbon dioxide per

year based on its mean energy usage; the equivalent of 400 average sized households powered for a year.

Grontmij undertook the detailed feasibility for this hydro generation plant including mean flow determination, outline system design, annual energy generation and identification of any substantive environmental impacts. In addition, the project cost benefit analysis was determined and presented using the format required for Scottish Water governance.

David Wilkie of Grontmij's sustainable energy team said, "Emissions reduction through increased generation from renewable energy generation projects is a major driving force for all our clients. Such projects compliment the overall hydro generation technology project capability and experience that Grontmij possesses."

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Grontmij has applied its asset management capabilities across numerous industries and countries

Phillip Floate, technical manager with Grontmij, is a key member of the consultancy's specialist asset management group. In a recent question and answer session, Phillip highlights how organisations from across numerous industries and countries are reaping significant benefits from optimising their various assets.

What are the benefits of effective asset management?

Asset management is about an organisation sustainably managing its assets in order to optimise the achievement of its business objectives. This means that the organisation builds a detailed understanding of issues such as what assets it owns, their condition and the whole life economic and environmental costs of these assets. In following integrated asset management processes, savings of up to 30% can be achieved over time.

Leading the way in asset management

Which industries can take advantage of asset management?

Asset intensive industries can benefit the most from asset management. These include the water, transportation, energy, building and property development sectors. However, the risk based principles of asset management mean that they can be applied wherever assets are used to provide services.

Why is asset management likely to become even more important in the future?

Asset management allows businesses to demonstrate to all their stakeholders, including shareholders, regulators and customers, that they understand how to manage their business risks and that they can sustainably deliver efficient services.

As well as being important in the current economic climate, it is becoming increasingly imperative in light of more stringent environmental legislation being imposed on both the public and private sectors. Furthermore, the UK Government

requires that public monies are used effectively through the application of asset management.

Where has Grontmij applied these techniques?

Working with Poland's second largest water and sewerage utility, Aquanet, we have benchmarked the organisation's asset and investment processes against international best practice using the PAS 55 standard. A development plan covering operational management, maintenance management, investment planning and business planning has in turn been created to improve these processes.

In the UK energy industry, we are supporting the Nuclear Decommissioning Authority (NDA) in developing asset management in order to achieve their mission of safely and efficiently decommissioning their nuclear sites.

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Grontmij cements its position in the premier league

On Friday 20th March, Grontmij was honoured in the NCE/ACE Awards ceremony in London by achieving second place in the Major Consultant of the Year award.

This year's results demonstrate the consultancy's excellent reputation both with clients and peers in the UK. It is also testament to the company's continued organic growth and expanding services portfolio, which was bolstered by the three strategic acquisitions in 2008 of Whitelaw Turkington, Trett Consulting and Roger Preston & Partners.

The judges remarked, "This year marks Grontmij's promotion to the premier league of consultants just five years after being runner-up in the Medium Consultant category...something only a handful of firms have done." They also commented on the various initiatives put in place across the business to support this growth, such as the performance improvement process as well as the focus on sustainability and carbon management both internally and in the solutions delivered to clients.



Anthony Oliver delivers the opening speech at the awards ceremony

Lawrence Hughes, managing director for Grontmij UK and Ireland said, "To be recognised and confirmed as one of the leading companies within our industry clearly demonstrates what the company has achieved in terms of growth and reputation in the past five years.

We are in a strong position to face the challenges presented by the current economic climate and this prestigious accolade further strengthens our commitment to becoming a top ten UK consultancy."

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Experts praise vision for Ashford's shared space



Ashford's shared space scheme has already won two high profile awards

Over 60 urban designers, transport professionals, planning consultants and local authority representatives descended on Ashford, Kent at the end of March. They were attending a seminar celebrating the success of Ashford's shared space scheme organised by landscape architects at the heart of the scheme, Grontmij | Whitelaw Turkington.

The event, entitled 'Ashford's Shared Space, the Road to Recovery?' included presentations from Grontmij | Whitelaw Turkington on the design process, Kent County Council on the vision for Ashford and urban design expert Ben Hamilton-Baillie on the concept of shared space in practice.

The overwhelming feedback from the group was that Ashford now has a unique and distinctive public realm that has created a

more pleasant environment and improved the link between the town centre and the station.

Lindsey Whitelaw of Grontmij | Whitelaw Turkington commented, "Ashford's new public realm offers a unique opportunity to see a shared space scheme in action in the UK - in the past we have had to travel to the continent, specifically the Netherlands, to see such projects."

"Now on home soil we have set an example of how to revolutionise urban design. By moving away from the segregation of pedestrians, cyclists and cars and through collaboration with artists we have created a unique and distinctive sense of place which, I hope, is an inspiration for town centres everywhere."

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A fresh approach to water



In this feature, **Scott Aitken, Grontmij's director of water for the UK & Ireland**, provides an overview of the latest developments within Grontmij in the water market sector.

Scott is also proud to announce Grontmij's recent appointment to three major framework contracts. In addition to the

extension of its Q&SIII framework with Scottish Water, Grontmij is in the latter stages of negotiations with Anglian Water to be reappointed as a partner within the @one Alliance for AMP5. In partnership with Morgan Est, Grontmij has also been appointed as designer on Severn Trent Water's Pipeline and Sewerage lots as part of the AMP5 asset delivery strategy.

Grontmij helps set new water industry standards

Experts from Grontmij have been instrumental in the creation of a ground breaking initiative, which is delivering major changes and significant benefits to the water industry. The Water Industry Telemetry Standards (WITS) group has been set up by water professionals to address the lack of inter-company cooperation and standardisation in the telemetry sector.

The WITS group, comprising of individuals from WMO's, Grontmij and Parsons Brinckerhoff, working closely with a number of selected manufacturers, has been seeking to standardise the way remote telemetry devices communicate with central systems.

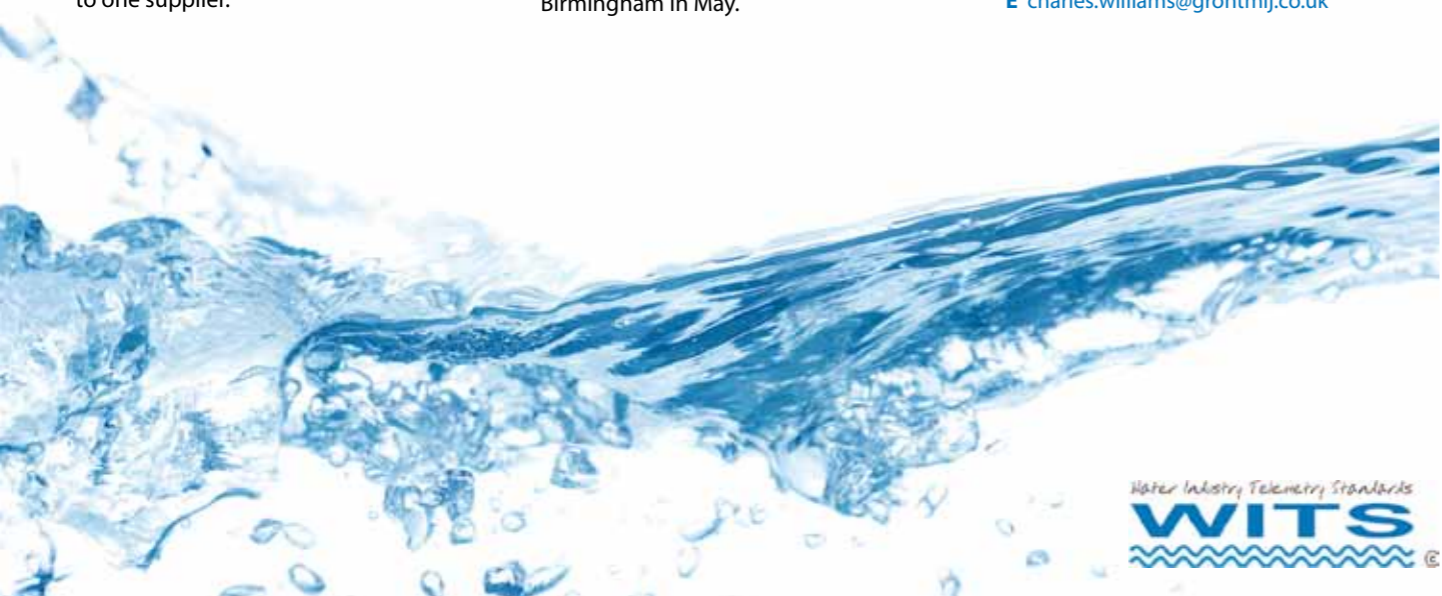
Producing application notes to specify the required functionality that work in conjunction with an established international standard, (DNP3), they are readying themselves to launch a fully tested and documented standard later this year. This will be with working products for implementation on current and future systems, many of which were unveiled, for the first time, at the IET Water Conference in Birmingham in May.

Part of this initiative has seen the development of WITS DNP3 (Distributed Network Protocol), a new protocol for telemetry system communications. Until now, replacement of field device assets has had to match the protocol provided by the main system, often tying Water Management Organisations (WMOs) to one supplier.

Charles Williams, Grontmij's strategic business director and one of the founding supporters of the WITS management committee, said: "We established WITS to both reduce costs to the WMOs and to open up the market for the suppliers. This has not been an easy task, with a great deal of effort being supplied by both the manufacturers involved and the WMOs."

Grontmij has played a leading role in this development with significant support from the DNP3 international committee provided by Barry Shephard, principal engineer at Grontmij. In addition, Malcolm Tyler and Ed Oborn are acting as chairman and secretary of the WITS group respectively.

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The residents of Albrighton have been appreciative of the sensitive manner in which the scheme has been developed

The village of Albrighton in Shropshire, which has experienced substantial sewer flooding in recent years, has benefited from an innovative new tunnel and water system designed by Grontmij and built by construction specialist, Barhale.

Flood alleviation scheme picks up top award

The scheme, funded by Severn Trent Water, has won first prize at the UK Society of Trenchless Techniques awards and is unique because it is installed on a curve. The design will benefit residents, improving the capacity of the sewer network and controlling water flow more effectively, thereby reducing the risk of flooding.

Grontmij conducted a site survey, which was followed by a thorough assessment of the area and resulted in a 1.8m diameter online storage tunnel pipeline being designed and installed.

Will Dorman, Grontmij's project manager, said: "An online solution, although unusual on a curve, was more suited to the area. The sewer in question was on the main, busy high street in Albrighton, and using an offline system would have meant massive disruption to the busy high street. Taking into account the existing infrastructure, as well as the sandstone bed beneath the road surface, we came up with a unique design for an online solution."

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INTERNATIONAL FOCUS

Pioneering waste water treatment process underway in UK



The United Utilities SHARON plant will provide a more environmentally friendly approach to treating liquors from sludge treatment

United Utilities has begun implementing an advanced system for treatment of ammonia in wastewater treatment.

Developed by Grontmij in partnership with Delft University of Technology in Holland over 10 years ago, the 'Stable High rate Ammonia Removal Over Nitrite' (SHARON) process, has been created in a bid to reduce nitrogen pollution in watercourses. The process also provides a more energy efficient way of breaking down the ammonia present in liquors from sludge treatment plants.

Gordon Thomas, principal engineer at Grontmij said, "The major extension at the United Utilities Mersey Valley

processing centre, has resulted in strong centrate liquors from the new dewatering process. By incorporating the SHARON process, United Utilities is making an active effort to protect the environment by treating these liquors before discharging them to Widnes waste water treatment works".

The Mersey Valley processing centre near Liverpool will treat 1,650kg NH₃-N per day. Grontmij expects to see the technology spread throughout the UK, as other utilities recognise that by treating the sludge liquors separately with an efficient process, the loads on the main treatment works are considerably reduced.

Several SHARON plants are already operational in Holland and a large facility with a capacity of 5,000kg NH₃-N per day is close to completion in New York City. The cities of Paris and Geneva have also selected SHARON for treatment of liquors at major wastewater plants.

Incorporating a SHARON plant reduces energy usage by 25% and carbon dioxide emissions by 20%, while converting to nitrite uses 40% less carbon source in the process than conversion to nitrate.

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