

Tony Gee News

Dawlish sea wall and promenade take shape

Tony Gee is the lead designer for phase 2a of the Dawlish sea wall replacement works. The work involves the design and construction of approximately 300m of new sea wall and high level promenade running along the Dawlish Station and adjacent sections.

The replacement work is part of a three-phase £80m project by Network Rail to construct roughly 1km of new sea wall. Tony Gee is providing the permanent works design as well as many additional temporary works designs to support the construction.

To date all design deadlines have been successfully met, on budget and programme, and the first stage of construction has commenced. This stage involves the installation of steel CHS piles into the bedrock in front of the existing sea wall which will act as the foundations for the new wall. This method eliminates the need to excavate at the toe of the existing sea wall in challenging ground, and reduces the risk of destabilising the railway running above.

To overcome the limits of tidal working and rough seas over the winter months, BAM Nuttall commissioned a jack-up barge for the site which is capable of walking on its legs to support the piling rig. This enables continuous piling to allow improved delivery times. After Christmas, installation of scour protection and landing of facing panels is due to commence followed by backfilling and installation of new recurve units – designed to reduce the amount of spray reaching the railway.

Construction is due to end in late 2021 with Tony Gee employed to provide assistance throughout.



Benchmark restoration at Eridge station

Tony Gee has been part of a team praised by Network Rail for its benchmark delivery of a footbridge renewal and canopy refurbishment project at Eridge station in East Sussex.

Once a busy country junction station, Eridge now offers southern services to London and Uckfield, and is the southern terminus of the Spa Valley Railway from Tunbridge Wells West Station.

The former timber footbridge was to be replaced with a new, durable structure providing passive provision for a lift to the platform. The replacement structure was to look similar to its predecessor, with refurbished canopies.

Working for BAM Nuttall, Tony Gee was the designer for both these elements. The work involved the temporary dismantling of the end bays of the canopies to allow the original support columns to be repositioned further apart at the stair interface. The new enclosed steel footbridge was clad using a fire-resistant fibre-reinforced polymer material to minimise maintenance.

The work was completed in October and Network Rail praised the excellent design, in keeping with the surroundings, and the materials used to reduce costly future maintenance, saying it would be used as a benchmark for future similar projects.

Looking ahead

The end of the year tends to be a time for taking stock and planning for the future. This year is no different but for obvious reasons the reflections are very different this time. What we take from the year, both professionally and personally, will be like no year-end before.

I don't intend to dwell on the negatives. I know there have been personal tragedies and economic hardships in many businesses but I want to find positives and look forward.

Our staff, our clients and our suppliers have shown a phenomenal capacity to evolve and adapt. From personal solutions for home working to the rapid deployment of the Nightingale hospitals, our industry has shone through the gloom. Ours is an industry of problem solvers, and to a large extent we've just treated this year as a problem to be solved and we can all be proud of what we have achieved.

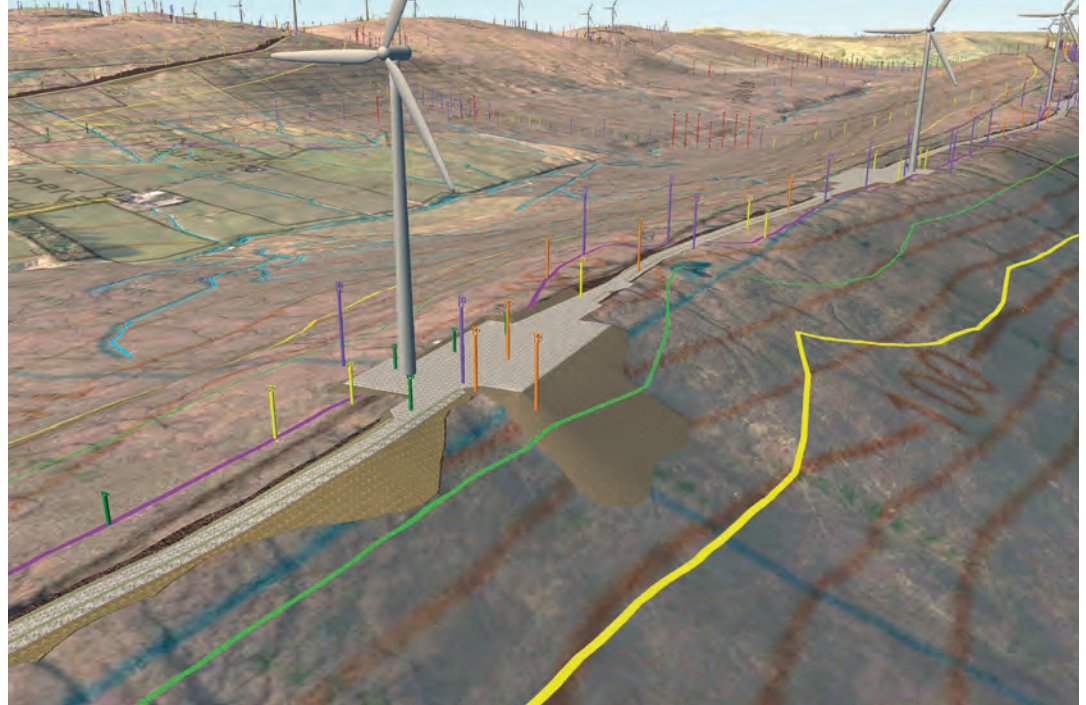
The important thing now is to hang on to the solutions and take them forward. I believe the industry is primed for a busy year ahead, particularly with the promised increase in infrastructure spending, and there is a real ambition to be more sustainable, more efficient and productive. We have seen technology and communications leap forward this year and I'm looking forward to these continuing to develop.

So, while it's tempting to dwell on the past, let's all look ahead. We are excited to move forward to 2021 and help drive change, sustainability and productivity in our industry.



Chris Young

Executive
Managing
Director



3D benefits for Viking Wind Farm

Once completed, Viking Wind Farm in Shetland will be a 103-turbine, 443MW farm producing enough energy to power almost half a million homes. It will be one of the UK's largest onshore wind farms in terms of annual output.

Working for SSE, Tony Gee has been involved since 2015 and designed multiple aspects of the scheme including the wind turbine foundations, a 2.2km public highway diversion and pre-construction designs for c.75km of track and hard-standing layouts.

The highway diversion will initially provide temporary access to the site during construction. On completion, the road will be upgraded and become part of Sandwater Road.

3D modelling using INFRAWORKS was used for the design of the internal tracks and the hardstanding layouts. These models allowed the team to gain a detailed understanding of the topography and the layout of the site, which significantly reduced the number of site visits required. This was then ground truthed on site and gave an accurate representation of the real-world conditions.

The use of 3D modelling to communicate the access track and crane hard-standing earthworks to the whole project team brought significant savings to the design development financial costs.

The scheme is due for completion in 2024.



The wind farm will save 500,000 tonnes of CO2 emissions each year



103 wind turbines



443MW capacity – enough to power half a million homes



3D modelling helped significantly cut the design costs

New toolkit supports value-based decisions

Tony Gee is working with the Construction Innovation Hub to develop an interactive toolkit, the Value Toolkit.

The aim of the project is to create an industry-led approach to value-based decision-making and drive social, environmental and economic outcomes.

The Value Toolkit will set out a new process and supporting

tools that will drive better decision-making, support the path to Net Zero, boost productivity and resilience, and deliver higher quality projects.

The toolkit will also follow the outcomes-focused approach, mandated by the UK Government's Construction Playbook, and mirror the industry's own ambitions as

laid out in the Construction Leadership Council's Roadmap to Recovery.

The countdown to the toolkit started with the launch of a new interactive digital resource to help clients navigate the critical steps in value-based decision making. The final Value Toolkit will be launched in spring 2021.



Keeping West Midlands Metro extensions right on track

In the past six months, major milestones have been met in both the design and construction of three major route extensions for the West Midlands Metro, as part of a wider transport plan for the region.

Site work commenced throughout the 12km Wednesbury to Brierley Hill route with Tony Gee, as a proud partner in the Midland Metro Alliance, providing temporary works designs to enable plant operations and demolitions, including complex post-tensioned structures. The detailed design of several multi-span viaducts, up to 400m long, are now well progressed in readiness for on-site project commencement in 2021.

The Birmingham Eastside Metro extension aims to support the potential of HS2 and help regenerate



the eastside of the city centre. As the works are taking place in an urban environment there are a number of challenges. Tony Gee designed solutions to address existing basements and the provision of buried equipment facilities, to integrate the new route within the city constraints.

On the other side of Birmingham, for the Westside Metro extension to Edgbaston, there have been significant steps towards the opening, due in late 2021. Tony Gee played a key role in the design of structures and detailing of track slab including fibre reinforced components. In November the switch and crossing was successfully installed and local leaders, including the Mayor of the West Midlands, Andy Street, congratulated the construction team on achieving another milestone on the project. Learn more at: metroalliance.co.uk



Demolition in the dry at Northumberland Energy Park

Dewatering of the Ash Dock is well in progress at Northumberland Energy Park Phase 1, in Blyth.

A temporary dock closure wall has been installed to allow the demolition works to be undertaken in the dry dock. The site's heavy industrial background included extensive underground relic structures left from the former Blyth power station so Tony Gee proposed and developed the concept of demolition in the dry for principal contractor, Farrans, as a safe and quick solution.

Northumberland Energy Park is part of Energy Central, the UK's unique port-based service, investment and growth cluster for companies operating in the offshore energy and sub-sea markets.

CATAPULT
Offshore Renewable Energy

ENERGY CENTRAL
The offshore energy cluster at the heart of the port of Blyth

PORT OF BLYTH

Northumberland
County Council

Framework progression in the power sector

Tony Gee has been appointed onto SSE's Engineering Design Thermal, Renewables, Transmission Framework for the Renewables and Grid Lots.

The framework replaces the SSE Civil Consultancy North Framework which Tony Gee has been a part of for the last seven years. Peter McDonald, Power Group Director, said: "It is a great achievement to be appointed onto this framework and great recognition of our growing presence in the power sector. We look forward to continued working with SSE on transmission grid and renewable projects all over the UK and Ireland."



DAVID NIVEN, SSE

Team portfolio builds in ASEAN

Construction companies working on priority infrastructure projects in Malaysia have been considered 'essential services' during the pandemic and will be key to the country's post-COVID-19 economic recovery.

Tony Gee's team there has been working within the lockdown restrictions and continuing on site, with social distancing in place, to progress Line 2 of the Klang Valley MRT and Line 3 of the KL LRT.

The first of these is a 52km metro system (13.5km of which is underground) linking the Kuala Lumpur suburb of Sungei Buloh with the new federal capital of Putrajaya. Tony Gee has provided temporary works support for the contractor Acreworks for one of the required viaduct packages.

The second is a 37km long LRT project linking Bandar Utama with the port city of Klang, the majority of which is on elevated viaduct. Tony Gee worked with the principal design consultants, Minconsult (a local contractor), on the design of four major long span crossings, and with WCT to provide temporary works and construction engineering services.

The team similarly supported Acreworks in the construction of a major 270m balanced cantilever bridge over the Klang River, a contract which included the design of an innovative precast shell



pilecap install which avoided the need for a costly and more time-consuming cofferdam.

The Malaysian Government has now green lighted a number of additional infrastructure schemes to progress in 2021 as part of its post-COVID-19 recovery strategy. These projects include the RTS commuter rail link between the state of Johor and neighbouring Singapore; the high speed rail link between Kuala Lumpur and Singapore; and Line 3 of the Klang Valley MRT.

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Anniversary 'climb' for charity fundraising



Tony Gee's supported charity, REDR UK, celebrated its 40th birthday in September and encouraged fundraising efforts to help mark the anniversary.

The Tony Gee Charity Committee responded to the call and challenged all its UK offices, socially distanced and virtually, to climb the equivalent of Mount Everest in what they designated 'The September Summit' charity challenge.

The initial goal was to collectively climb the equivalent of Mount Everest's over the course of the month by walking or hiking 8,848 metres of elevation, the same height as Everest, in 30 days. The team set up an online Strava club to virtually record their efforts and keep everyone motivated. The challenge came at a fantastic time; encouraging staff to explore their local surroundings in aid of the challenge and share their experiences with colleagues.

The collective efforts of Tony Gee employees saw elevation totalling 66,650 metres recorded through a range of activities from climbing the stairs in the house to climbing mountains in Scotland!

The metric climb target was well and truly met and the Tony Gee team raised over £900 for RedR UK.



Tony Gee heads to Instagram platform

Tony Gee has stepped up its social media activities with the launch of an Instagram account (@TonyGeeLLP).

Live since August, the account is being used to showcase projects, achievements and events.

The Instagram platform allows users to easily digest information and images, and serves as a great tool for demonstrating brand awareness, brand culture, and generally allowing the audience an opportunity to connect and engage with the company on a more personal level.

The platform also serves as a great forum for talking to a wider audience about Tony Gee's on-going projects, the company's business culture and its social value activities.

Instagram is also the perfect tool for reaching out to potential job applicants, especially students and new graduates, whilst also getting involved online with other industry initiatives that encourage young people to consider careers in engineering such as the #lottietour.

You can follow us at @TonyGeeLLP

Highways UK goes virtual

Facing the challenge of lock-down and social distancing, Tony Gee recently exhibited at Highways UK, in a new virtual format.

Exhibiting for the fifth year in a row, Tony Gee took a virtual booth and sponsored and moderated two

panel discussions on social value and sustainability.

A virtual event may not replace all the benefits of face-to-face networking, but it was great that Highways UK was able to still go ahead and proved a good opportunity to meet clients virtually.

