

WINTER 2021 NEWSLETTER

# Roughan & O'Donovan



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### Welcome to the ROD Winter 2021 Newsletter

This edition profiles several our current Bridge projects in Ireland and the UK, including the Narrow Water Bridge between Down and Louth, which has renewed impetus under the Irish Government's Shared Island initiative to enhance cooperation and connection on the island. For someone like me who has sometimes been challenged to stay awake when there are too many bridge engineers in the room, Joe Kelly's article on p10 on 'what keeps a bridge engineer awake at night' is a personal favourite.

This newsletter also includes a feature that profiles the personnel in our finance, administration, IT, HR and marketing teams. Many of our longstanding clients will recognise the names or will have heard the voices, without ever having met our 'back-office' personnel who contribute hugely to the ongoing success of the business, and we rightly celebrate them.

Roberta Keaney's article on p29 marks the success of the ROD-AECOM designed Motorway Operation Control Centre for Transport Infrastructure Ireland in winning the 'Project of the Year' award at the annual Association of Consulting Engineers of Ireland Engineering Excellence Awards for 2021. The ROD Buildings and ITS teams led by Andrew Thomson and Lewis Feely respectively provided multidisciplinary project management, civil and structural engineering, BIM modelling and contract administration services for the project. We congratulate them, the contractor John Paul Construction and design partners AECOM and MCA Architects on their achievement.

An article by Daniel Ahern on p22 chronicles the six days of his charity cycle from Mizen Head to Malin Head in company with Irish cycling legend Sean Kelly, winner of the Tour de France Green jersey on four occasions and winner of the Vuelta a España in 1988. Well done to Daniel who raised more than €6,000 for Cycle Against Suicide and the Irish Society for Coilitis and Crohn's Disease charities.

The summer '21 edition of our newsletter included an article by Kieran O'Riordan and Laura Fernandez about a Europengineers design sprint they attended in Paris at the start of 2020 to investigate the circularity potential of a Renzo Piano designed factory in Guyancourt, scheduled for demolition. The Europengineers team has continued to work together after the design sprint, developing

- the Sustainability Europengineers Database (SEED), which was launched at the IABSE Congress in Ghent in September '21. SEED is accessible at https://seed.europengineers.com.
- Europengineers is a network of independent European engineering consultants with members in France (Setec), Germany (Schüßler-Plan), Greece (Salfo), Italy (Hydea), Portugal (Consulgal), Spain (Pondio), Switzerland (Basler & Hofmann), The Netherlands (Aronsohn) and the UK (Buro Happold). Europengineers has been established for more than 50 years, and the CEOs in the member companies meet twice per year to freely share knowledge and experience, to discuss trends in engineering, innovations in consultancy and like matters. The members met most recently in Zurich for three days at the start of November, which included a visit to the Immersive Design Lab and Robotic Fabrication Laboratory at ETH University, Hönggerberg.
- ROD has been the Irish member of the Europengineers association for the past 10 years and I was honoured and privileged to be appointed Chairman of the association in June of this year following the retirement of Pierre Lescaut, former Chairman of the Setec Group.
- Finally, I am delighted to note that our colleague of 22 years and Chief Bridge Engineer in ROD, Tony Dempsey, has been invited by the President of the International Association of Bridge and Structural Engineering to become an IABSE Fellow. Tony joined the company in 1999 following the completion of his Ph.D and post-doctorate research as a European Commission Marie Curie Research Fellow, and has spent his entire career with ROD. We are very proud and delighted with this significant recognition of Tony's technical expertise and international standing in the field of Bridge Engineering.
- ROD wishes all our clients, colleagues, and friends a peaceful Christmas and best wishes for 2022.

# **ROD provides specialist consultancy and design services at Humber Bridge, UK**



When the Humber Bridge first opened in 1981, it was longest single span suspension bridge in the world - a distinction it held until 1997. The bridge across the River Humber Estuary has a main span of 1410m, with a 280m side span on the northern Yorkshire (Hessle) bank and a 530m side span to the southern Lincolnshire (Barton) bank. The structure carries the A15 dual carriageway and two

Article by John Collins footways on a steel deck box, with most of

the bridge's load being transferred up its hangers and into the main suspension cables. The cables pass over reinforced concrete towers, each made up of two legs with four cross-beams. The lowest crossbeam at each tower is below the bridge deck, and the road passes over these with deck discontinuity created by an expansion joint. Bearings on the lowest cross-beam support the bridge deck.

As a large structure, the Humber Bridge experiences significant induced longitudinal movements from thermal, wind, and traffic



loading - up to a range of almost 2m for the main span. In 2015, the main span bearings were replaced, with the end of each side span continuing to be supported on pairs of A-frame rockers, which are "A" shaped steel frames with a pin bearing at each apex. The top bearing is connected to the deck box, and the bottom bearings are connected to the tower portal beam. The A-frames are subject to loading in both tension and compression. They also transfer wind loads but allow for longitudinal displacements by a rocking motion.

In February 2020, Storm Ciara brought winds of more than 90mph to the UK, and forced the closure of the Humber Bridge for only the second time in its almost 40-year history. On its reopening, the bridge owner the Humber Bridge Board [HBB] identified that the A-frame rocker bearings to the side span at Barton Tower had suffered damage. HBB recognised that action was required and invited ROD to attend site the next day. ROD identified the possible consequences of the defect deteriorating further and suggested that structural mitigation works were required.

Given the implications of our assessment, a second opinion was sought by HBB, and AECOM subsequently concurred with our findings. This led to the decision to impose local lane closures on the Barton span to facilitate the daily inspection and monitoring, and also to limit loading during this investigatory period. Against the backdrop of the rapidly evolving COVID-19 pandemic, and with the introduction of movement restrictions imminent, ROD and AECOM undertook the necessary inspections, whilst the bridge remained open, and devised an emergency repair that could be implemented quickly. The emergency repair works involved welding strengthening steel plates around the defect, and these were installed in March 2020.



While the cause of the defect was thought to be related to the seizure of the A-frame bearing pins, this was difficult to confirm. Drawing upon our research and development (ROD-IS) team's expertise in Structural Health Monitoring (SHM), ROD developed a specification for the installation of over 50 gauges. Once installed, the gauges provided valuable output during an overnight load trial involving a convoy of lorries during July 2020. This showed that the Barton Tower side span A-frames were not functioning correctly and, even with the additional support provided by the emergency repair, the A-frames required additional temporary works. In December 2020, with the emergency repair starting to show signs of distress following a series of storms, the findings of ROD's inspections and investigations, and analysis of the SHM outputs, resulted in further repairs being undertaken.

With daily inspections by HBB and weekly monitoring by ROD ongoing, tenders were sought for the design of temporary replacements for the A-frames. Working with AECOM, ROD successfully won the tender and undertook the design during 2021. This included a novel arrangement of a standard spherical sliding bridge bearing to take downward loads, with a separate load path designed for upward loads. Drawing on ROD's experience in modelling cable supported bridges, such as the Northern Spire Bridge in Sunderland and the Mary McAleese Boyne Valley Bridge in Drogheda, ROD built a nonlinear finite element model of the Humber Bridge. Following the development of the concept design with AECOM, ROD then acted as category 3 checker for the detailed design.

An ambitious construction programme was devised to ensure the temporary replacement would be installed ahead of winter 2021/22. ROD delivered support throughout the construction process, including providing specialist comment on the structural steel during fabrication and again during trial jacking. On the night of 9/10 October 2021, ROD attended site during the final jacking when the

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loading was transferred from the A-frames onto the new bearings.

The works undertaken by ROD were complex. They required a detailed knowledge not just of the Humber Bridge and its behaviour, but also of the challenges of construction on a large, moving structure. It was a great opportunity for our UK structural team in Otley to showcase the depth of their capabilities, supported by the broad range of technical experience across ROD and ROD-IS. Given the challenge posed by aging infrastructure across the UK, and ROD's highly specialised bridge engineering expertise, our UK team is well-placed to assist other bridge owners and operators who will face similar challenges in the future.

### Engineering Manager at the Humber Bridge James Barnes said:

We are extremely satisfied and grateful for the support you have offered on this project and have the following comments:

#### Programme

Your ability to react to our needs couldn't be better, and the works have been delivered quickly and efficiently, with minimum disruption to the travelling public

#### **Quality of service**

Excellent, not just the formal documents but preparing and leading meetings to ensure efficient communication between parties.

### Health and safety

Very well considered within proposals and valued comments made on site



# **Narrow Water Bridge**

Article by Daniel Coleman



During the summer, Taoiseach Micheál Martin announced funding to progress the Narrow Water Bridge linking the Mourne Mountains in Co. Down, Northern Ireland and the Cooley peninsula in Co. Louth, Republic of Ireland. The funding will come from the Shared Island Fund.

The Taoiseach said that the project "was first proposed decades ago and has been a long standing and highly symbolic Government commitment" and he is determined "that the repeated commitment to build the Narrow Water Bridge will now be delivered upon". The bridge, he said, would "act as a key enabler for improved cross-border active travel and recreation activities, including the development of greenways, walking trails and park amenities" and was "a true allisland project, with strong cross-party political support North and South."

Northern Ireland Minister for Infrastructure Nichola Mallon welcomed "this long-awaited progress on the iconic Narrow Water Bridge",

saying it would bring with it "potential for huge opportunities for tourism and connectivity to the local area of Carlingford Lough and right across our island".

Chief executive of Louth County Council, Joan Martin, said that the Taoiseach's announcement was "the culmination of decades of work by council members, officials and local community groups who recognise the huge benefits the Narrow Water Bridge will bring to the area" and that the proposed bridge had "always been a strategic infrastructure priority for the region, and will serve as a structural reminder of the importance of cross-border links".

The project consists of approach roads from the south, a fixed cablestayed bridge and a rolling bascule cable-stayed bridge to allow river traffic to navigate the Newry River, and ties in with the A2 roundabout in Warrenpoint.

ROD has been assisting Louth County Council in progressing the project since 2008.

"Given the renewed impetus, ROD is delighted to be assisting the council with developing this project further. Whilst the engineering challenges are significant, the real challenge with this project has always been funding availability. It is a credit to all those involved, north and south, that the project has been reinvigorated."

Tony Dempsey, Project Director



### Waterford Public Infrastructure Project Update

Article by Christian Smith



Having led the Waterford Public Infrastructure project since its reinception over five years ago, ROD is delighted to report that the scheme is now moving through the final construction procurement stages.

The project comprises:

- 1.3km of urban dual carriageway and local road upgrades in the Ferrybank area, together with significant junction works;
- a new train station and transport interchange within the North Quays Strategic Development Zone [SDZ];
- a 220m long pedestrian, cycle and public transport bridge across the River Suir, with an opening span to accommodate river traffic;
- the creation of a plaza on the south side of the river to connect the new bridge to the existing city centre;
- significant flood defences along 2km of the river to futureproof both new and existing infrastructure on the north side of Waterford; and
- 400m of rock engineering works to the railway cutting above the existing railway station, which will dovetail with track upgrade works being undertaken independently by Irish Rail.

Three enabling works contracts involving the clearance of vegetation from the cliff face at Plunkett station, the diversion of services, and the demolition of several large properties have already been completed. Two further enabling contracts to relocate and upgrade a foul water



and surface water pumping station and to divert services on the South Quays for the bridge landing area are at contract appointment stage. The tender for the rock engineering works to stabilise the cliffs at the existing Plunkett station was recently advertised, and the final enabling contract to divert the existing drainage systems in the Ferrybank area to the new pumping station is at advanced design stage and will be advertised in the coming weeks.

The most significant works package will include the new bridge across the River Suir, the new train station and the road improvements and access bridges to the SDZ site. It has been advertised as a single contract. Sustainability, pedestrian and cycle priority and universal access were among the key design factors in the project, a flagship of the recently published National Development Plan.

ROD managed and coordinated the design of the entire project, bringing each of the elements through the planning and other statutory processes and liaising with the various stakeholders. ROD is once again working with Hardesty & Hanover on the movable bridge and Sean Harrington Architects on the Transport Hub. We will now bring the main contract procurement to conclusion and supervise all of the works to completion and handover stages. Tenders are expected in Q2 2022.

Tony Dempsey, Project Director commented, "We first commenced on this project in 2007 for a feasibility study of a moveable bridge across the River Suir. It is not often we get to be involved with the development of a new part of a city in Ireland – it is a 1 in 100-year event! The efforts of Mr. Michael Walsh, Chief Executive, and his team in progressing the project to this stage, and support from the NTA has been immense."



### **ROD's two new Opening Bridges** in Dublin's Docklands

Article by Matthew Ringrose



Tom Clarke Bridge, image courtesy of Óglaigh na hÉireann

Dublin City Council [DCC] has commissioned ROD - Hardesty & Handover [H&H] JV and Sean Harrington Architects to upgrade the Tom Clarke Bridge (formerly known as the East Link Toll Bridge) and design a new moveable pedestrian and cyclist bridge over the River Liffey as part of a multi-party framework agreement for design team services for opening bridges in the Dublin Docklands area. ROD and H&H had already been separately engaged by Dublin City Council to design the proposed Public Transport Opening Bridge across the Dodder.

Commenting on the appointment, Tony Dempsey, Project Director, said: "We are delighted to have been appointed by Dublin City Council for this complex project at this strategic location and crossing of the River Liffey. Coming up with the correct solution for increasing levels of public transport and sustainable modes and facilitating Dublin Port traffic will require clever solutions working in collaboration with all stakeholders."

Built by the then National Toll Roads [NTR], the Tom Clarke Bridge was opened on 21 October 1984. When constructed, it as the only crossing of the Liffey east of Talbot Memorial Bridge, which had been completed six years prior. Nearly 40 years later, it provides a critical north-south connection, in particular to the more recent M50 Dublin Tunnel. A 150-metre long, five span structure, its central bascule with a 31m opening span allows the passage of marine traffic along the river. The two lane bridge carries high volumes of Heavy Goods Vehicles [HGVs] between the Dublin Port sites on both sides of the river. The high HGV volumes, together with its narrow footpaths have made it unsuitable for the increased pedestrian and cyclist demand as a result of the city's recent eastward expansion; and upgrade works are necessary.

A feasibility study prepared in 2017 concluded that widening the existing bridge to create a new road layout, with enhanced provision for pedestrians and cyclists, would not only be prohibitively expensive, but would have a detrimental effect on traffic management in the city. As such, the option of a new parallel pedestrian and cycle bridge upriver to provide a safe, segregated pedestrian and cyclist route is to be examined as part of the ROD – H&H commission. Widening of the Tom Clarke bridge southern spans to provide an additional traffic turning lane to the proposed Dodder Bridge is also being examined. The new pedestrian / cycle bridge and reconfigured Tom Clarke Bridge will link up with the Dodder Public Transport Opening Bridge, the Point Junction Improvement scheme, BusConnects Ringsend Core Bus Corridor, the East Coast Trail, and the Liffey and Dodder Cycle Routes. The completion of two new bridges (Point and Dodder Bridges) will therefore complete a world-class network of sustainable transport connectivity in the Ringsend and east docklands areas.

The new parallel pedestrian / cycle bridge is to be designed taking account of existing conditions and span arrangements of the Tom Clarke Bridge. The options study is currently evaluating several bridge configurations and control house locations to determine the most appropriate option to take forward to preliminary design and a planning application. Options include a combined control room that allows for the integration of the new and existing bridge's MEICA [Mechanical, Electrical, Instrumentation, Control and Automation] systems. The options evaluation will consider aesthetics, the level of amenity provided, environmental impact, durability and future maintenance needs, construction and whole-life costs, and construction programme. The options selection will be completed by December 2021, and preliminary design will commence in 2022.

## **Tony Dempsey elected fellow of IABSE**



ROD's Tony Dempsey has been elected a fellow of the International Association for Bridge and Structural Engineering [(IABSE)] in recognition of his work on complex bridges and major infrastructure projects. IABSE is a scientific/technical association that aims to advance, through the exchange of knowledge, the practice of structural engineering in the service of the profession and society.

Tony joined ROD in 1999. In addition to leading our cablesupported and movable bridgesteam, he has also undertaken the role of project director on many of ROD's major multidisciplinary civil engineering projects. Tony is a graduate of Trinity College Dublin ([TCD)], where he earned a first class honours degree and a doctorate in civil engineering. As a European Commission Marie Curie Research Fellow, he undertook post-doctoral research work at the Laboratoire Central des Ponts et Chaussées ([LCPC)] and the Centrale National des Recherche Scientifique (National Centre for Scientific Research) in Paris and at University College Dublin [(UCD)].

### Recognition

### Commenting on his election, Tony said:

"This is a great honour not just for myself but for the team here at ROD, many of whom I have worked with since we were graduates. It is recognition from the engineering community that the work we are doing on major infrastructure projects across Ireland, the UK and internationally, is important and of the highest quality. This work includes figuring out solutions to 'the hard problems' while designing structures that are buildable and represent value for taxpayers' money."

"One of the requirements of a fellow is to contribute and support IABSE's special programmes, such as the Young Engineers Programme ([YEP)]. It is important that we train and support our younger engineers - because they are the future in terms of developing novel design solutions to our infrastructure challenges. In light of climate change, finding new ways of thinking about infrastructure development has never been so important," he added.

### About IABSE

Founded in 1929, and headquartered in Zurich, Switzerland, IABSE has 56 national groups worldwide and members in 100 countries. The association is focused on "the science and art of planning, design, construction, operation, monitoring and inspection, maintenance, rehabilitation and preservation, demolition and dismantling of structures, taking into consideration technical, economic, environmental, aesthetic and social aspect.". The term 'structures' encompasses all types of civil engineering structures, including buildings and bridges.

To become a fellow of the association, an individual must:

- be at least 45 years of age;
- have served as a member of the association for more than eight consecutive years; and
- have served IABSE and/or the profession in a way that is judged by the executive committee to merit an invitation from the president of IABSE.



BRIDGES

BRIDGES

# What keeps a bridge engineer awake at night?

Article by Joe Kelly



Have you ever wondered what 248 tonnes crossing a cable-stayed bridge at 10kph would look like? Well, that's the sort of question that keeps bridge engineers awake at night. The good news is that any one of us could have solved that particular conundrum if we had been on the Mary McAleese Boyne Valley Bridge (carrying the M1 past Drogheda) on certain nights between last March and July!

**Abnormal Indivisible Loads [AILs]** periodically travel around the road network when most of us are asleep. With varying payloads, these infrequent events are something that some Irish bridges would not necessarily have been specifically designed for.

Several years ago, ROD developed an in-house assessment tool for Transport Infrastructure Ireland [TII] for most standard arrangement underbridges (i.e. main road passing over) on the motorway network. The tool uses influence lines to examine the effects of an abnormal load against the effects of the original design loading. However, the influence line analysis approach used for mainline underbridges could not be undertaken for the Mary McAleese Boyne Valley Bridge, due to the significant number of influence lines required for cablestayed bridges. A bespoke analysis, using a 3D structural model analysed using the finite element method, was therefore required for this complex bridge structure.

Our analysis for a southbound AIL movement assumed that other vehicles would be prevented accessing the southbound carriageway of the M1 across the bridge during the transportation of the AIL. The results indicated that, while it was necessary to restrict heavy goods vehicles (HGVs) from the northbound carriageway when the AIL was passing southbound on the bridge, cars and light goods vehicles could continue travelling across the bridge.

Given the significance of our findings, it was recommended that, in addition to recording the deflection response of the bridge due to the abnormal load, several strain gauges / crack monitoring devices be installed at locations on the structure of high stress (i.e. pylon cross beam, cable anchorages, etc.). The strain gauges were installed and operated by Lloyds Datum Group, while Murphy Surveys undertook levels monitoring to measure the deflections as the AIL crossed the bridge. This allowed 'sense checking' of the modelled linear elastic deflections against the surveyed actual deflections of the structure. The maximum modelled deflection at mid-span of the main span was 94mm downwards for the southbound carriageway longitudinal girder, with a corresponding downward deflection of the northbound longitudinal girder of 32mm. During the passage of the AIL, the downward deflections recorded were 97mm on the southbound carriageway longitudinal girder and 39mm on the northbound longitudinal girder. The close correlation between modelled and actual deflections was a welcome endorsement of our model.Buoyed by these results, we can now use our models with confidence to support the PPP Concessionaire, Celtic Roads Group and motorway operator, North-Link M1, to track not just the long-term behaviour of the Mary McAleese Boyne Valley Bridge under typical working loads, but also the behaviour of the bridge under future abnormal loads.











### **Great Yarmouth Third River Crossing** on track for completion by spring 2023

Article by Gerard Kiely



Artist's Impression of an open view of the Great Yarmouth Third River Crossing.

The Great Yarmouth Third River Crossing is a challenging movable bridge, marine and urban works project, with an ambitious 28-month construction programme. A joint venture [JV] between BAM Nuttall and Farrans Construction started construction in January 2021 and, with progress continuing apace, the works are on track for completion by spring 2023. ROD and Hardesty & Hanover led the detailed design of the project and are continuing to support the JV contractor and the client, Norfolk County Council, in the delivery of the project. As Tony Dempsey, ROD Project Director, states: "In complex design and build bridge projects, the ongoing and timely collaboration of design and contractor is an important key to success ."

The centrepiece of the project is a new 68m (trunnion to trunnion) twin bascule bridge that will provide a new link road across the River Yare. The cofferdams and bridge protection structure have been

installed, and dewatering of the cofferdam and backfilling of the bridge protection structures commenced in October. This involved driving steel tubular piles up to 32m in length. The fabrication of the bridge deck is ongoing off-site. Forthcoming works include the construction of pile caps / bascule chambers and continued fabrication of the bridge leafs and bridge machinery.

Despite the challenging geotechnical conditions in the area, works are now well advanced on the road approaches to the new bridge. Hundreds of precast concrete piles to support the approach embankments have already been completed. Other heavy civil works are being progressed in parallel, with tubular steel piles, bank seats and precast concrete beams installed at various locations for ancillary structures. Work on the construction of a new roundabout, dualling of Williams Adams Way and installation of the Southtown Road Underpass is expected to commence in early 2022.



### **Glenmore Bridge on the R232** in Co. Donegal

Article by Marcin Nikonowicz



ROD is delighted to be working with Donegal County Council on the mature trees, the river ravine and dense vegetation. To inform Glenmore Bridge project. Our approintment to provide technical design development, ROD's ecology and bridge inspection teams support services for the bridge widening, which is located along have undertaken surveys of the area and of the existing bridge. A the R232 - an important link road connecting Laghey near Donegal key project constraint is the requirement to maintain traffic along Town with Pettigo on the Donegal / Fermanagh border. Our scope the R232 for the duration of the construction works. To achieve this, includes preliminary design, planning, detailed design, contract we have developed a phased bridge widening and embankment procurement and construction supervision. construction process.

The primary aim of the scheme is to improve safety for road users on We look forward to delivering the benefit of an improved, safer the R232. Glenmore Bridge is a single span, masonry arch structure access route to the local community with minimum disruption over spanning the Loughultan River, a tributary of the Waterfoot River, the coming year between Tieveboy and Glenmore. The existing road width pinches at the bridge location to just 5.5-metres between the safety barriers, and there are no hard shoulders on the approaches.

The proposed scheme will upgrade the existing road cross-section to Type 2 single carriageway (7m roadway plus hard verges), bridge widening to suit, and road realignment to tie into earlier separate road improvement works.

The project is currently at preliminary design stage. We have developed options and are currently managing the detailed geotechnical investigation. The geotechnical and ecological challenges include soft ground, upland bogs, steep side-slopes,





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### **Engineers Ireland turns the spotlight** on ROD's Graduate Programme

Article by Roberta Keaney

On 7<sup>th</sup> October 2021, ROD delivered a webinar on our 2022 Graduate Programme to an online audience of graduate and student members of Engineers Ireland. The webinar provided an ideal opportunity to showcase the talent of our younger engineers while highlighting the breadth of experience, across a range of discipline areas and projects, that programme participants can expect to gain.



Design Engineer, Ilaria the Bernardini. ioined programme in 2017 after civil completing her studies at engineering Jniversita degli Studi di Padova in Italy, Lodz Iniversity of Technology in Poland and Trinity College Dublin. In her presentation, Ilaria highlighted the key learnings she took from her

rotations in our research, transportation, bridges and water teams, namely the value of teamwork, the importance of multidisciplinary cooperation, and the benefit of embracing different perspectives when designing solutions. She also spoke about her recent experiences working with our research and development team, ROD-IS, on the Risk-based Geometric Design programme for Transport Infrastructure Ireland (TII) and with our bridges team on the Great Yarmouth Third River Crossing – two unique projects that have engaged and challenged her in equal measure.



Design Engineer, Miguel Angel Hidalgo, spoke next, describing his early years as a student of civil engineering in UPC in Barcelona and Tongji University in Shanghai. He discussed his rotations in our bridges and geotechnical teams and the experience he gained working on the A6 Dungiven to Drumahoe Dualling

scheme in Northern Ireland. Miguel described his site rotation on the Royal Canal Premium Cycle Route Phase 2 project as his progamme highlight. Over the course of the project, he advanced from assistant resident engineer to resident engineer and gained a

greater appreciation of the value of a cooperative relationship with the contractor.

Last to speak was Design

Engineer Brian Feighan. In

addition to describing his

time as a student of civil

engineering at University

and his summers spent

interning at ROD. Brian

spoke passionately about

the importance of young

engineers developing their

technical knowledge and

Dublin

[UCD]

College



wider skills. He described the ROD Chartership Support Programme, which sets out a clear pathway for young engineers to advance towards chartership, and how his recent project work, including the Dublin Port Network Improvement, the West Clare Railway Greenway and the enhancing Motorway Operation Services (eMOS) programme, have helped strengthen his technical experience and professional practice skills.

Commenting after the event, Community Engagement Executive at Engineers Ireland, Micheál Gallagher, said:

"Engineers Ireland was delighted to collaborate with ROD on this webinar. It was a natural win-win for us both, with students learning about what a top graduate programme might do for their careers, and ROD gaining access to a pool of potential candidates actively deciding on which programme to apply for. It was also great to hear Brian Feighan, President of our Young Engineers Society, speaking about his professional experience, his extensive volunteering with Engineers Ireland, and his current leadership role with us."

He added: "The questions that followed the presentation were particularly fascinating, with prospective applicants trying to see if they could get an edge in applying for the programme. But what was apparent in the answers from the ROD panel was the robustness and fairness of ROD's recruitment process, meaning that everyone who applies stands an equal chance of securing a place on the programme."

For readers who may have missed the live webinar, the video of the event is currently available to access on Engineers Ireland's YouTube channel.

See: https://www.youtube.com/user/EngineersIreland/videos

## Let's go for a spin: the Wolseley Vintage Car Rally 2021

Article by Matthew Ryan



It all started with a late-night phone call from my former colleague at ROD, Thomas Houlihan. An avid car enthusiast, Thomas was preparing to take part in the silver anniversary of the 'Wolseley Car Club Vintage Rally' that weekend. He was, however, in urgent need of a navigator and, for reasons best known to himself, thought I would fit the bill. Delighted with the opportunity to escape the boredom and isolation of life since Covid, I eagerly accepted his invitation to compete.

Thomas did not waste any time in letting me know that this was a competitive event, with as many as 40 vintage cars taking part in the two-day rally. Most of the cars competing dated back to the 1920s and 1930s. They included supercharged Alfa Romeos and powerful Alpine Rally-winning Talbots, considered by many as the 'royalty' of pre-war race cars. Thomas and I were competing in a 1937 Riley Special, a nifty little two-seater often referred to as 'The Gentleman's Racer', a nod to its success at the famous Brooklands racetrack in the UK.

The competition comprised two main parts: jogularities and driving tests. A jogularity is a specific type of route navigation wherein each car has to follow a precise route based on written instructions at a specified average speed. The aim is to arrive at various undisclosed checkpoints at the correct time. And therein lies the rub: only the competition marshals know the expected time of arrival of each car. In theory, following the instructions correctly while sticking rigidly to the specified speed would ensure an 'on time arrival' at each checkpoint. The key words here are: in theory.



Initially, I thought that my responsibility would not extend beyond admiring the scenery whilst occasionally shouting at Thomas not to miss the next turn. In reality, my attention was glued to the speedometer, odometer, stopwatch, and navigation instructions as I attempted to stay one step ahead while also maintaining constant communication with Thomas. Arriving at a checkpoint as little as one second off incurred penalties.

The driving test meanwhile took us along the winding roads of Kildare, Meath, and Westmeath, where we caught glimpses of the Hill of Tara and the Boyne River. The route book brought us to some beautiful castles and country houses, where we stopped for our designated lunches and tea breaks. After each break, our car was guided towards the property's farmyard or a designated driving test area, where the marshals had set up a short time trial course using cones and obstacles comprising various implements salvaged from around the farm. Our aim was to put our car through its paces and, hopefully, set the fastest time on the course. As Thomas manoeuvred the Riley at speed around the farm buildings, I immediately saw the attraction of these historic machines. They are much faster than you could possibly imagine!

Despite it being my first time to compete in a car rally, Thomas and I managed to win some of the rally's top prizes. We came 1st in our class and were placed 2nd overall. The icing on the cake for me, however, was winning the best navigator prize for the entire event. To say it was an exciting weekend really does not do it justice!



### N11 safety scheme opens to traffic

Article by Daire Ó Riagáin



In 2016, the National Transport Authority [NTA] published its available verge width was insufficient to allow its construction, and Transport Strategy for the greater Dublin Area 2016 - 2035, providing a framework for the planning and delivery of transport infrastructure within the region surrounding and including Dublin over the next 20 years. The strategy identified several demand and safety deficiencies along the N11-M11 corridor, between Junction 4 (M50/ M11) and Junction 14 (Coyne's Cross). The first project identified for implementation was the completion of the N11 Parallel Service Road at Kilmacanoge. This project has been successfully completed, significantly improving road safety along the N11 – M11 corridor through the village of Kilmacanoge in Co. Wicklow.

The project involved many complexities. The provision of 1.6km parallel service road allowed the closure of various accesses onto the mainline, improving safety and capacity. However, the

the southbound mainline carriageway had to be shifted into the central median between N11 Junctions 7 and 8. This work had to be undertaken while maintaining the 54,000 vehicles that use the route daily without disruption. Construction also included two new cantilevered sign gantry structures, construction of 1.1km of foul rising main, rehabilitation of the existing hard shoulder, modifications to the existing drainage infrastructure, and construction of separation islands between the mainline traffic lanes and the new parallel service road.

ROD provided consulting engineering services to Wicklow County Council for all phases of the scheme through planning and design to construction and handover. Works began on site in Q1 2020 and were completed by SIAC Construction Ltd. in Q3 2021.

## **Construction begins on Athy Distributor Road**

Article by Harry Meighan



With the main construction contract for the Athy Distributor Road project executed by Kildare County Council and BAM Civil Ltd. in October 2021, construction has since begun. The scheduled completion period is two and a half years.

The project involves the construction of a 3.4km single carriageway the works, and prepared the main construction contract tender distributor road around the southern side of Athy, largely following documents. the line of the disused Athy-Wolfhill railway. The route crosses the River Barrow, a Natura 2000 site that forms part of the River Nore The main construction contract was procured under a restricted and River Barrow Special Area of Conservation. It requires the procedure, with award based on 80% price and 20% quality criteria. construction of an 80m single-span steel composite bridge across Tenders were received from six contractors in May 2021, and, the River Barrow and a two-span bridge over the Dublin to Waterford following the tender assessment process, the letter of acceptance railway line. The design incorporates extensive improvements to was issued to BAM Civil Ltd. in October 2021. ROD-AECOM is now pedestrian and cycle facilities, including the repair and repurposing providing the Employer's Representative and a team of site-based of a listed, disused railway bridge over the River Barrow as a supervision personnel to undertake the administration of the cycleway/footway. Dedicated links will be provided to the Barrow contract through the construction and handover stages. Way, a long-distance walking trail that follows the original towpath Following the award of the contract, Sonya Kavanagh, Interim Chief of the river, and to Athy Railway Station.

ROD-AECOM was appointed to provide technical consultancy services for the project in April 2015. Our appointment covers all significant infrastructure project and, with the main works contract stages of the project from feasibility through to handover. During now in place, we are keen to see it come to fruition for the people of the first two years of our appointment, ROD-AECOM developed Athy and Kildare as a whole'. macro-simulation and micro-simulation traffic models to assess the BAM Ireland CEO Theo Cullinane said: 'As a local company optimum solution to traffic congestion on the N78 through Athy. We headquartered in Kill, BAM is delighted to have been appointed undertook constraints and route selection studies of routes to the by Kildare County Council to deliver this vital project for Athy. The north and south of Athy, which were assessed in accordance with distributor road will alleviate congestion in Athy's beautiful historic the Common Appraisal Framework. The Route Selection Report was centre, reduce journey times significantly in the area, and provide a published in August 2016, and the Environmental Impact Statement, wonderful amenity along the Barrow'. Natura Impact Statement and Compulsory Purchase Order were published in April 2017.

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An Bord Pleanála held an oral hearing in July 2017, and planning consent and approval for the scheme was granted in October 2017 without the imposition of any additional conditions. Following planning approval, ROD-AECOM procured and supervised several advance works contracts, completed the detailed design for

Executive, Kildare County Council, said: 'Kildare County Council is delighted to have reached this important milestone. This is a



### **N60 Active Travel and Safety Measures Scheme**

Article by Madalin Bunda



ROD has been commissioned by Mayo County Council to bring the In addition to catering for commuting and school trips, the N60 Active Travel & Safety Measures Scheme through phases 3, 4 and 5 of the TII Project Management Guidelines. This follows our previous work on a feasibility study that proposed the introduction of safety improvement measures in Breaffy Village (2012-2014) and, more recently, on the Proposed Safety Improvement Measures on the N60 at Breaffy in 2020.

The proposed scheme is part of a 24km long linear cycleway/ walkway route from Castlebar to Claremorris. As one of six sections of the route, it will stretch approximately 4.8km westbound from the N60/L5760 (Breaffy Post Office) junction. The scheme will run along the N60 and past the new N5 compact grade separated junction, splitting at the N60/R373 Kilkenny Cross roundabout, and will terminate approximately 800m from the roundabout along both the N60 and R373.

The scheme will improve road safety for all users, and vulnerable road users in particular, by applying the National Speed Limit Review recommendations (80km/h in Breaffy village), introducing new pedestrian crossings and two bus bays and eliminating hard shoulder parking at Breaffy village. It will provide segregated footpaths and one-way cycle facilities on both sides of the N60 and R373 in the semi-urban sections between Castlebar and the new N5/N60 junction, and a wide shared pedestrian/cycle facility on one side of N60 in the more rural areas.

scheme will provide an attractive amenity, well integrated with the surrounding environment, for recreational and tourism use. It will also connect key nodes in the area, such as the village centre, community facilities, businesses, housing developments, schools and hotels. The project is expected to be completed in autumn 2023.





Article by Ed Warren

An Taoiseach Micheál Martin visited Co. Roscommon on 18th October for the official sod-turning ceremony to mark the start of construction on the N5 Ballaghaderreen to Scramoge Road project. The €200 million upgrade scheme will improve the section of the N5 described by Minister for Transport Eamon Ryan as "one of the worst sections of primary road in the country." It will also boost economic, social and tourism development in the region by enhancing connectivity between the west, the midlands and Dublin.

Chief Executive of Roscommon County Council Eugene Cummins said the long-awaited road development is "one of the most, if not the most, important projects in the county, region and the country. By opening up the 'Hidden Heartlands' region and taking away the clogging of traffic, the road "will mean a betterment of local life and enterprise."

The scheme includes the construction of:

- 34km of new Type 1 single carriageway;
- 15.4km of realignment of existing roads;
- Five roundabouts;
- 16 'T' junctions;
- Three road under bridges;
- One road overbridge;
- Four river bridges; and
- 14 culverts.

The new route will bypass the towns of Frenchpark, Ballinagare, Tulsk and Strokestown, and will include improved facilities for pedestrian and cycle facilities along the route.

ROD-AECOM Alliance has worked closely with Roscommon National Roads Regional Office for over seven years to bring the road development through the preliminary design and statutory planning phases, as well as the more recent contract procurement phase. The construction contract was awarded to Roadbridge Ltd. last June. Our current responsibilities include contract administration and monitoring of the construction and handover stages of the project. The project is scheduled to take three years to complete.



# **Ballaghaderreen to Scramoge Road**





### Baldoyle Cycle Network Improvement Project

Article by Deirdre Neff

It was while working on-site on the Windmill Lane public realm upgrade works in 2017 that ROD first engaged with GMC Utilities Group [GMC]. Like all good contractors, they were pragmatic, forward-thinking and enjoyed making wise cracks about the comparative comfort of our consultancy offices. Needless to say, we kept in touch!

Fast forward four years and GMC has engaged us as designers on the Baldoyle Cycle Network Improvement project, to which it was appointed by Fingal County Council [FCC]. The scheme forms part of FCC's NTA-funded programme to provide safer infrastructure for cyclists and pedestrians in towns and villages across the County. ROD's responsibilities include:

- producing designs of protective measures for the existing onroad cycle tracks along Grange Road, Warrenhouse Road, Howth Road and Dublin Road. The infamous Sutton Cross junction is among several junctions included in the challenge; and
- devising a strategy for Willie Nolan Road, Brookstone Road / Dublin Street, and Main Street Baldoyle, where cycle infrastructure is not currently in place.

Fingal County Council required GMC and ROD to devise a suitable form of segregation between the cycleway and roadway that ensures cycle protection while minimising impacts on the road drainage regime and hazards to other road users. For us, the best-fit solution involved providing one-metre high bollards at four-metre spacing, delineated either side by a solid white line. This solution deters irresponsible car parking while allowing cyclists to weave into and out of the cycle track as necessary. The team also includes Mitchell & Associates Landscape Architects to soften the visual impact of the schemes and to enhance the receiving environment with planting, where practicable.

Our review of Willie Nolan Road, Brookstone Road and Main Street Baldoyle showed that the roads were too narrow to facilitate a six-metre wide carriageway, with segregated cycle tracks on both sides. To overcome this constraint, a one-way circular system has been devised. Following an options assessment, an anti-clockwise circulation regime for cyclists appears to offer the most benefit. The scheme will also include enhancements along Baldoyle Main Street, subject to public consultation in early 2022.

Sutton Cross has for years presented a challenge to engineers to reduce its hostility to pedestrians and cyclists while maintaining

traffic throughput. FCC invited us to look at the junction afresh, and to propose what we felt would be the optimal solution. Our proposal, to replace the signalised junction with an elongated roundabout with zebra controlled crossings, was informed by several international study trips undertaken by our transportation team to France and the Netherlands in particular, where we've seen traffic signals being removed to be replaced by roundabout type junctions. By replacing signalised crossings with zebra crossings, our design significantly reduces the waiting time for pedestrians and, provides an opportunity to enhance the landscaping and incorporate SuDS measures. As "controlled" crossings, zebra arrangements are also considered suitable for use by the visually impaired. Time will tell whether the concept will garner the support necessary for its implementation.

It has been a real eye-opening experience to work collaboratively with the Client team, the Contractor and Landscape Architects in devising and developing the scheme concepts. It is a model which has worked very well, and has removed stress and conflict from the project delivery process. We hope to see other local authorities follow Fingal's initiative and look to similar innovative project delivery structures in future.





# **Extending Ireland's power grid**

Article by Ernest Etim



ROD has been commissioned by Energia Renewables to undertake a review of potential routes for two new 110kV connections to connect new solar farms in Fingal and Meath to existing ESB power stations in south and west Fingal. The commission follows our successful design and installation of a 10kV installation from St. Margaret's Road ESB substation in Finglas to Huntstown Waste to Energy Station.

New substations will be provided at the end of each of the new connection routes, which will extend the national high voltage electricity grid further into these areas, as well as facilitating the new power inputs. The work is being undertaken by Energia Renewables on behalf of the ESB and Eirgrid, who will energise the connection and own the infrastructure when it is complete. Increasing renewable power supply to the national grid cannot be achieved without such grid extensions.

The 110kV connection will require the construction of a bank of 5 ducts (3 power with 2 communications above) approximately 1.0m wide x 1.2m deep, with a continuous 4m wide right of way along

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its entire route. In addition to the trench itself, major joint bays are required every 650-metres or so. Where feasible, it is preferable to follow existing public rights of way so as to avoid the need for land acquisition and/or licensing. Indeed, the Eirgrid specification requires such cables to be provided along existing public road corridors unless a feasibility study has ruled it out. The nature of this construction can be destructive to existing roadways, and full lane resurfacing is standard along any such in-road installation.

Having undertaken an initial feasibility assessment based on major constraints, work is now ongoing to develop a programme of ground investigation to inform the design. This is largely focussed on slit trenches, which are required to determine the space available for the new duct routes, which in turn in informs the traffic management requirements during construction. It is desirable to avoid the need for full road closures where practicable to minimise the impact on local communities. The Ground Investigation will also include some boreholes to inform the design of directional drilling, which is required under major roads and watercourses. WINTER 2021

### The wheel deal: Danny Ahern gets on his bike for Cycle Against Suicide



On Sunday, 19<sup>th</sup> September, over 130 enthusiastic cyclists from Ireland and abroad gathered in Cork to begin the 770km charity cycle from Mizen Head to Malin Head in aid of Cycle Against Suicide. While the thought of cycling 770km over six days might be daunting for some, not so for the New Ross Barrow Wheeler cyclist and ROD Senior CAD/BIM Technician, Danny Ahern. For him, it provided a unique opportunity to savour Ireland's stunning landscape while raising over €6,000 for both Cycle Against Suicide and the Irish Society for Colitis and Crohn's Disease. Danny has suffered with ulcerative colitis for over 20 years, and while navigating his own life's journey though illness, surgery, anxiety and grief, he has found comfort in what he calls "cycling medicine" and "Mother Earth's healing beauty". Completing the event was an immense achievement, and Danny is an inspiration to us all!

### Day One: Mizen Head to Killarney 136kms

After a relaxing train journey from Dublin to Cork, we arrived at Ireland's most southerly point, Mizen Head, ready for the challenge ahead. With international cycling legend Sean Kelly, several former Irish cycling Olympians, and legends from Rás Tailteann (Tour of Ireland Race) as peers, our spirits were high. The West Cork/East Kerry countryside formed a beautiful backdrop to our ride, and the views into Glengarriff were stunning. Our first day in the saddle was not all plain sailing however, as we had to deal with difficult climbs over the Caha Pass and Moll's Gap. By the time we reached Killarney, we were feeling sore and well ready for a rest in the Gleneagle Hotel.

### Day 2: Killarney to Lahinch 133kms

Day 2 brought us from Killarney to Tarbert, where we took a ferry across the Shannon Estuary into Co. Clare for the stage finish in Lahinch. Clare is famous for its traditional music so, not surprisingly, the musical instruments were produced after dinner, and we enjoyed 'craic agus ceol' (fun and music) over some well-earned drinks in Lahinch's pubs.

#### Day 3: Lahinch to Oranmore 88kms

We were up early the next morning, but before getting back into the saddle and heading for Connacht, there was just enough time to venture into the Atlantic's rough waves for a swim. While saying goodbye to the cool, surf town was hard, the experience of cycling through the Burren landscape more than made up for it - the scenery was breathtaking! Before we knew it, we were in Oranmore outside Galway city, where a yoga class had been arranged to help us stretch our muscles before we headed to bed.

#### Day 4: Oranmore to Castlebar 128kms

Day 4 got off to a memorable start, with Sean Kelly waving us off before he hopped on a plane to Belgium, where his commentary and race analysis were required at the UCI World Championship in Flanders. The Carrick-on-Suir man is considered one of the greatest cyclists of all time (second only to Eddie Merckx in the world rankings), and it was a huge boost to have him with us for the first three days of the event.

As we left Connemara and headed for Mayo, the Gardaí and Ambulance Services formed an escort for us, stopping traffic at the junctions to allow the peloton to pass. The presence of the emergency services along the route served as a vivid reminder of the



lives lost through suicide in Ireland each year and underscored the importance of our fundraising efforts.

### Day 5: Castlebar to Donegal Town 155kms

At the start of day 5, we left Castlebar behind to travel the N17, a road made famous by the Galway band, The Saw Doctors. Cycling in the shadow of Ben Bulben, Ireland's sacred mountain, we passed along Sligo and Leitrim's coastlines on our way to the stage finish in Donegal town, in the northern province of Ulster.

### Day 6: Donegal Town to Malin Head 130kms

The final day of the cycle saw us leave Donegal town in heavy rain. The Wild Atlantic Way road on the way to Malin Head was tough, but we were not to be defeated, not even by the leg-breaking hill to the finish line at Malin Head! When the last rider passed the finish line, the sense of achievement was immense and, although legs were aching and backsides were sore, the smiles were proud and genuine, particularly when the medals were presented. In that moment, we all became Mizen to Malin cycling legends, and the celebrations began in earnest when a glass of champagne was handed to every rider! That evening, the hotel bar was busy. The 'Barrow Wheeler boy' played the Bodhrán alongside 'Pat the Banner man' on guitar. My



own rendition of the 'N17' got a good sing-song going, and the craic was mighty! The cycle had been a huge physical, mental and emotional challenge. There were times when we all felt the burn and our bodies screamed stop. But, we kept pedalling, and before we went to bed that night, planning for next year's event was already underway!



Danny and Sean Kelly





### **DART+ West Public Consultation 2**

Article by Victoria da Silva Pereira



DART+ West is the first of the major infrastructural projects of the DART+ Programme, which is a key transportation improvement to form a high quality and integrated public transport system in the Greater Dublin Area. DART+ West will modernise and optimise the railway between Maynooth / M3 Parkway and Connolly Station / Dublin Docklands.

The key elements of the project include:

- Electrification of 40km of dual railway lines.
- Capacity enhancements at Connolly Station (to include modifications to junctions and the station) to facilitate increased train and passenger throughput.
- Relocation of Spencer Dock Station to a more central location with improved interchange with the Luas Red Line.
- Closure of level crossings & provision of bridge crossings (where required).
- Interventions at existing bridges over the rail line where there is insufficient clearance to accommodate the new overhead electrification system.
- Construction of a new DART depot facility west of Maynooth Station for the maintenance and stabling of trains.
- All civil and bridge works as necessary to accommodate electrification.

The DART+ West project will have far reaching positive transportation effects by providing a sustainable transport system with increased passenger capacity and frequency. This will benefit surrounding and future communities and will assist in reducing dependency on private cars.

The DART+ West Preferred Option public consultation was launched in July and ran until 6<sup>th</sup> October 2021. This built on the feedback received from the public at public consultation No. 1 in October 2020

Alongside IDOM, ROD worked closely with Iarnród Éireann and the National Transport Authority [NTA] to manage the preparations for the public consultation. Led by ROD Director, Barry Corrigan the team undertook the consultation in a covid-compliant manner with a predominantly virtual event. In order to reach as many of the affected communities and passengers as possible, we undertook an extensive targeted mail-drop to almost 20,000 homes along the corridor. This introduced the preferred option and referred the reader to the project website www.irishrail.ie/DARTWest.

The project website invited the public to the DART+ Programme Virtual Room from which all of the DART+ projects will be accessed. The DART+ West and the other future projects each has its own virtual room. Along with the leaflet, a detailed scheme information brochure, Frequently Asked Questions, feedback form, and the Option Selection Report were provided on the website.

A series of public information webinars was held to assist the public to gain a better understanding of the project and to inform their submissions. As with any major infrastructural project in an urban location, there was significant interest from affected communities, landowners and business owners, as well as public transport users. The Scheme Community Liaison Officer along with the key team members had a busy 10 week period responding to emails, calls and requests for meetings. Since the closing date, the team has been busy analysing the thousands of submissions received to ensure that all feedback is considered in the finalisation of the option selection process. The project team looks forward to submitting a Railway Order in 2022 that reflects the feedback received from the public and reflects the value of meaningful engagement at public consultations.





period and through various tidal cycles.



## **Wintering Bird Surveys**

### **Reflections on my first** five years at ROD

Article by Gemma Rothwell



I joined ROD as a Graduate Environmental Scientist in September 2016, having graduated with a 1st class honours degree in Environmental Science from University College Cork. I joined ROD's environmental team, where I was assigned to work on the Waterford to New Ross Greenway project. I quickly got involved in drafting the Environmental Impact Assessment (EIA) Screening Report and Part VIII Planning Report for the planning application. As a Wexford native, it felt great to be starting my career on a project in my home county, and it is even better to see the scheme coming to fruition today.

My first six months at ROD coincided with the implementation of the new EIA Directive, 2014/52/EU, which gave me the opportunity to assist ROD Director, Barry Corrigan, in updating the planning documentation for the N5 Ballaghaderreen to Scramoge Road project to align with the updated requirements. I was delighted to be involved in producing the first Environmental Impact Assessment Report [EIAR] for a major Transport Infrastructure Ireland [TII] project, and one that has recently started construction following An Bord Pleanála's [ABP] approval of the EIAR.

Under Barry's guidance and with the support of my mentor, ROD Associate, Frances O'Kelly, I worked on a wide variety of projects during my first few years at ROD, including the Core Bus Corridors, Athy Distributor Road, Sutton to Sandycove Cycleway, and the Strategic Environmental Assessment (SEA) of the Waterford Strategic Development Zone [SDZ] Planning Scheme. I also attended and assisted at several Oral Hearings. These experiences stood to me when I took on a central role in the coordination of the EIAR and

Natural Impact Statement (NIS) for the Trinity Wharf Development in Wexford Town. It was exciting to be involved in a project aimed at regenerating Trinity Wharf, a brownfield site, and restoring it to its former glory as a centre of business activity on the Wexford Quays. The project presented several technical challenges for the team, including contaminated land, asbestos, development in an area of the foreshore and within the Slaney River Valley Special Area of Conservation [SAC] and Wexford Harbour and Slobs Special Protection Area [SPA]. I was responsible for managing the team of specialists who contributed to the EIAR, and together, we developed solutions to the various challenges, successfully taking the project through the ABP approval process in April 2020.

During that same period, I started work on the Foynes to Limerick Road (including Adare Bypass), which ROD, in alliance with AECOM, was advancing. The road development is approx. 35km in length and will form part of the TEN-T Core road network from Limerick to Foynes Port. With the improvement of the N21 route between Adare and Rathkeale, including a bypass of Adare, it will also provide part of the TEN-T Comprehensive road network. When I joined the project, it had already progressed through the Option Selection Stage, and the design and EIA stages were beginning. Initially, I worked alongside Aecom's EIA Coordinator, and subsequently took on the role of Lead EIA Coordinator. This increased responsibility required me to coordinate the compilation of the EIAR and the Natura Impact Statement, including the various inputs from our team of environmental specialists. It also required me to work closely with the design team to ensure the constraints identified were protected and, where possible, any impacts were mitigated.



Environmental Management and Assessment [IEMA] and undertook Over the course of the project, several challenges emerged, including the mitigation of potential impacts to Barn Owl, which was managed an Advanced Diploma in Planning and Environmental Law at King's with the assistance of Ecologist Paul Murphy of EirEco, leading Barn Inns in 2020/2021. My sights are now set on achieving chartership, Owl expert John Lusby and Landscape Specialist, Mark Boyle of further expanding my portfolio of project experience, and embracing Murray and Associates. The emerging focus on the carbon impact whatever new learning opportunities come my way. of transportation projects and the calculation of the embodied Five years may not seem very long, but when I reflect on the work I carbon associated with the project and its potential impacts on have done and the skills and knowledge I have acquired since I first climate added further complexity. I worked with the engineers and set foot in the ROD offices, a lot has changed. I am looking forward to our Climate expert Dr Edward Porter of AWN to develop ways of the challenges and opportunities the next five years will bring. I hope reducing the embodied carbon associated with the development to enjoy them as much. and offsetting its impact. The Strategic Infrastructure Development application was submitted to ABP by Limerick City and County Council in December 2019.

Over the past 18 months, the COVID-19 pandemic has transformed every aspect of our lives, including the ways in which we work. While the shift to remote working felt very abrupt, I adapted to the virtual world and when a virtual Oral Hearing was scheduled for February 2021 for the Foynes to Limerick Road project, I felt ready and equipped to respond. Faced with the challenge of securing a suitable venue to host the Oral Hearing in a Covid-compliant manner, I organised for our (substantially vacant) offices in Sandyford to be set up to host the Applicant team's inputs to the hearing. The hearing lasted nine days in total, with the Applicant, Limerick City and County Council, its Senior Counsel and Solicitor accommodated in our offices for the duration. Thankfully, with the assistance of other offices personnel - in particular Michelle and the IT Team, the hearing ran smoothly.

Since starting out as a graduate, ROD has always encouraged my professional development. I have attended many courses and seminars over the years and learned a lot from my mentors. I September 2020, I gained practitioner membership of the Institute of







## **Urgent Care Centre in Tallaght Hospital opens**

Article by Andrew Thomson



ROD is pleased to report the official opening of the new, state of the art paediatric Outpatient and Urgent Care Unit at Tallaght Hospital. This follows the successful completion of a similar facility at Connolly Hospital in Blanchardstown in July 2019. As part of the National Children's Hospital, these two satellite facilities will provide urgent care and secondary acute outpatient services, including a rapid access general paediatric clinic, complementing the principal facility at the St. James's Hospital campus. The purpose-built threestorey building will provide 17,000 outpatient appointments and 30,000 emergency care presentations annually.

ROD was delighted to be involved in the scheme, with our team providing civil and structural engineering services on the project. The design team included Coady Architects and Ethos Engineering (M&E). BAM was the Main Contractor. The building was designed and built to comply with the highest building, environmental, regulations and health standards. As one of the first large buildings projects designed and constructed by ROD through a full BIM (Building Information Modelling) process, it represents a significant achievement for our buildings team.

ROD was from the very beginning engaged in a collaborative design process that included several unique challenges. Our innovative

engineering solutions ensured all the works, including the repurposing of a ground floor area of the existing Tallaght hospital facility, were carried out without any disruption to existing hospital services.

Minister for Health, Stephen Donnelly T.D. welcomed the successful completion of the facility saying: "This new building will offer patients, their families and our paediatric healthcare workers a modern, light-filled and fit-for purpose environment, supporting delivery of care for children in the Tallaght and surrounding areas into the future, alongside our new children's hospital on a campus shared with St. James' Hospital".

Chief Officer, National Paediatric Hospital Development Board [NPHDB], David Gunning, said: "This is a very significant milestone for the Children's Hospital Project and we are very proud of the hard work that went into achieving it. I would like to acknowledge the role played by the Main Contractor BAM and its subcontractors, the Design Team, the team at Tallaght University Hospital and of course the teams in Children's Health Ireland and the National Paediatric Hospital Development Board who have worked so tirelessly to bring the facility to this stage - particularly in the uniquely challenging circumstances of the last 18 months".



**ACEI 'Project of the Year'** 





ROD was delighted to win the coveted 'Project of the Year' award to the extension footprint added further complexity. at the annual Association of Consulting Engineers of Ireland [ACEI] The project team included Andrew O'Sullivan for TII. AECOM - ROD's Engineering Excellence Awards 2021. The award is in recognition design partner on the project, who provided the M&E design services of the company's work on Transport Infrastructure Ireland's [TII] and quantity surveying, MCA Architects, and John Paul Construction. motorway operations control centre, a state of-the-art facility that both modernises and futureproofs the environment in which TII The ACEI awards recognise projects that demonstrate a high degree manages the Irish motorway network. The winners were announced of achievement, value and excellence in engineering design. The short-list for the 'Project of the Year' award included two very fine at a ceremony that took place in Dublin on 21st September. projects, namely, Jennings O'Donovan & Partners' Lumcloon The project is a highly successful rejuvenation of the Dublin Tunnel Control Building in Dublin's docklands. It consists of a steel framed Consulting Engineers' 101 George Street, Croyden, London, UK.

Battery Energy Storage and Derrycarney 110kV and Barrett Mahony extension with precast concrete floors, structurally independent but In accepting the award, Lewis Feely, Technical Director at ROD, with ties to the existing building. ROD took an integrated approach to TII's demanding technical brief for the project, combining cuttingoffered his warmest congratulations to TII, "whose vision of edge input from many disciplines, including project management, delivering a more efficient, flexible and responsive service to road contract administration, and civil and structural design from planning users inspired us to bring the scheme to life." He also praised the and detailed design through to construction. The key constraint for hard work and dedication of the project team who "developed an innovative building solution that not only meets TII's complex the project team was ensuring the tunnel and motorway operations housed within the existing building remained operational 24 hours a current requirements, but also has the potential to satisfy its future day at all times during the works. The restricted nature of the site and needs." the extensive array of existing underground services under and close

# win for Roughan & O'Donovan



### **ROD supporting the Delivery of Social Homes in Ireland**

Article by Andrew Thomson



Conscious of the ambitious new targets set by Government for the completion of social and affordable homes in Ireland, ROD continues to make progress on several housing schemes across the country. These include six social housing projects at construction stage; four projects that, with detailed design completed, are due to go to tender shortly; and five projects at various stages of detailed design.

Our projects under construction consist of:

- three housing developments ranging from six to 20 units for Laois County Council;
- a scheme of 47 units to be delivered in two phases in Rosslare, Co. Wexford:
- a combined refurbishment and new build scheme of 21 a 58 unit scheme on the Convent Lands in Portlaoise; houses in Laytown, Co. Meath; and
- Court for Dublin County Council.

We have recently completed designs for four schemes currently with the Department for Housing, Local Government and Heritage for stage approval prior to being issued for tender to contractors. These include:

- two schemes comprising a total of 10 units in Rathdowney and Mountmellick in Co. Laois:
- 31 units in Tramore, Co. Waterford; and
- an elderly care-in-the-community scheme in Dundalk, Co. Louth.

Finally, the following schemes are at various stages of design - from planning to detailed design:

- a 12 unit women's refuge in Wexford;
- a 58 unit apartment and housing scheme in Cornamona a 42 unit house and apartment scheme in Wexford; and an infill scheme in Trim, Co. Meath.



### **Office of Government Procurement: Commercial Skills Academy Masterclass**

Article by Aonghus O'Keeffe and Claire Cable



Oifig um Sholáthar Rialtais Office of Government Procurement

### **Commercial Skills Academy** Masterclass

### Demystifying the Cloud

The Office of Government Procurement [OGP] established the Commercial Skills Academy in 2019 to provide training to public servants involved in the delivery of public capital works projects. A series of masterclasses has since been developed to give public service managers an understanding of the best practice approaches for effective delivery throughout the entire lifecycle of a project.

Tony Redmond, TII Head of Procurement, recommended that risk On 29 June 2021, a virtual masterclass was held on the topic 'Award analysis be used to identify the key project risks best managed by Criteria and Evaluating Tenders for Works Projects, with over 400 a contractor - risks which should form the basis of project-specific delegates from a wide cross-section of Government departments, award criteria. Tony offered examples from the procurement of public agencies and local authorities in attendance. These included: works at the M8/N25 Dunkettle Interchange Upgrade in Cork, which the Office of Public Works; the Health Service Executive; the required a second round of procurement for the Main Contractor. A Department of Housing, Local Government and Heritage; TII; and round table discussion followed, with Colm and Tony joined by Cork Irish Water. County Council Senior Executive Engineer, Joan Dineen, PJ Hegarty & Sons Building Contractors Commercial Director, John Curtain, The purpose of the masterclass was to provide attendees with independent procurement and dispute resolution consultant, Gerry O'Brien, as well as Aonghus and Claire.

practical examples of project-specific award criteria for public works procurement projects. The event was hosted by Killian O'Donoghue, Assistant Principal Officer, OGP Procurement Practice and Commercial Skills Academy, and chaired by Virginia Kangley, Senior Engineering Inspector, TII. ROD Director, Aonghus O'Keeffe and ROD Senior Environmental Consultant, Claire Cable were invited to speak at the event and were delighted to contribute to the discussion on procurement issues and the future of sustainability criteria in public tenders.

Aonghus urged attendees to use selection and award criteria that are proportionate to the works being procured, related to the contract requirements, and not so prescriptive as to unduly constrain the number of qualifying participants. He also maintained that effective award criteria should facilitate differentiation in quality marks at evaluation stage. Claire spoke about the challenges we face as a society in relation to climate change, biodiversity, and carbon emissions. She described how sustainability award criteria Colm Brennan, Cork County Council Executive Engineer, presented could be used to help Ireland to meet its 2030 emissions targets and lessons learned from procuring long-term consultancy contracts recommended that award criteria be sufficiently specific to enable for flood relief schemes - lessons that have produced an evolution evaluators to differentiate between tender responses.





in award criteria and contractual terms over the past 10 years. The Council avoids disadvantaging realistic prices by awarding a suitable proportion of marks for well-resourced tenders and seeking percentage fees rather than fixed price lump sums for services from detailed design stage onwards.

## The support team at ROD

ROD's support team is at the heart of the company. Working sideby-side with our management and executive teams, the support team contributes a significant amount to the achievement of our organisational goals. From organising office moves and improving our processes and procedures, to preparing submissions and chasing progress reports, their work supports the successful delivery of our projects and, by extension, the continued growth of the company.

Comprising our finance, administration, IT and HR departments, the team is made up of people of a range of ages, backgrounds and experience. While their work can be stressful at times, particularly when diaries are full and emails and requests for support are coming in thick and fast, their collective ability to collaborate, work under pressure and adapt to changing circumstances is second to none. With their constant support, ROD will continue to embrace opportunities and tackle whatever challenges may arise.



### Ciarán Downes

Ciarán is ROD's financial controller. Over the past 14 years, he has been managing our accounts team and keeping a close eye on the financial side of the business as we continued to grow in Ireland and commenced operations in the UK.



### **Charlie Johnston**

Charlie joined ROD's IT support team in 2019. His primary duties comprise turning things off and on again, frenetic googling and providing moral as well as technical support to over two hundred cherished end-users.



### Gary Selby

Gary joined ROD as IT manager in spring 2021. At the beginning of the summer, he and his team completed a major upgrade of our IT systems. The project provided a great initiation for Gary and an opportunity for the IT Team to demonstrate their project delivery skills to the rest of the company.



### Melissa McNabb

Melissa joined ROD as an assistant accountant in October 2021. Melissa holds a BSc in Business and Law from TUD. After graduating, she spent four years with the Metropolitan Life Insurance Company, better known as MetLife, where she worked in financial reporting. Melissa is studying to complete her final exams to achieve the ACCA qualification. In her spare time, she enjoys running, hiking and travelling.



### **Elaine Byrne**

Elaine joined ROD's accounts team last May, taking over from Carol Flanagan, who retired last June after 16 years with the company. While Elaine is very clear that no one could replace Carol, she has settled well into her new role managing payable/payment runs and processing expenses. Her hobbies include reading crime novels and watching rugby games. If fact, she likes to attend as many Ireland and Leinster games as she can, both home and away.



### **Roberta Keaney**

Roberta began working with ROD as a content consultant in 2016 before taking on the role of marketing and communications manager in 2019. She is responsible for content development at ROD, which includes researching, writing and editing information for print and online publication. She also manages our website and social media channels. Roberta also works with clients to ensure the successful delivery of their public communication campaigns.





### **Claire Lambert**

Claire joined ROD as a graphic designer in 2010. Since then, the company's design needs have evolved significantly, and website and digital design now feature strongly in Claire's day-to-day work. As the company has grown in size, project managing multiple jobs, all with tight deadlines, has become part of the challenge for Claire, and she continues to enjoy the variety in her job and the opportunity it presents for interacting with the whole team



### **Michelle Harvey**

Michelle joined ROD as our receptionist in December 1998. Many of our clients, partners and suppliers have come to know Michelle well through her work managing the switchboard and greeting visitors to our head office in Sandyford. Over the years, she has taken on several additional duties, including acting as the company's safety coordinator and serving as a member of our social committee. More recently, Michelle has assumed the role of office manager at ROD, with responsibility for our Sandyford and Northwood offices. WINTER 2021



### **Jennifer Morris**

Jennifer, better known as Jen, joined ROD as a junior administrator in 2013. Fast forward eight years and she is now a senior administrator, with several role responsibilities, including Continuing Professional Development [CPD] administrator, document controller on the Great Yarmouth Third River Crossing project and member of the Employee Representative Committee. Jen loves working in the administration team.



#### **Rachel Richardson**

Rachel joined ROD's enhancing Motorway Operation Services [eMOS] programme team in September 2020. As programme administrator, her responsibilities include providing programme management support and document control. Rachel recently completed a PGDip in Construction Project Management and BIM at the Institute of Technology Carlow. She plans to further develop her project management skills by pursuing the PRINCE 2 qualification.



### **Gillian Bailey**

Gillian joined ROD as a HR administrator in 2019 and recently celebrated her two-year anniversary with the company. Her role has evolved significantly during that period, and she now holds the position of HR Generalist, supporting our HR Manager, Clare Valente. Gillian is enjoying the variety her new role provides.



#### **Colette Holt**

Colette joined ROD's UK team as PA/office manager in 2019. Over the past two years, she has assisted our Managing Director, Jim Thorpe, in setting up the Otley office. Colette deals with all aspects of administration, including human resources, recruitment, continuing professional development [CPD], accounts, health and safety, and ISO audits. More recently, she has become involved in procurement and projects. In addition to her role as health and safety coordinator in Otley, Colette is a member of ROD's social committee.



#### Clare Valente

Clare was appointed HR manager at ROD in 2021, having first joined the company as a HR generalist in 2016. With responsibility for over 200 employees across our Sandyford, Northwood and Otley offices, Clare's primary focus is on growth and retention. As such, she appreciates the importance of nurturing a supportive culture at ROD, where all team members are valued as individuals and their differences are celebrated. On a personal level, she enjoys the opportunity her role provides to engage with the team, to share in their good news and to help them during times of need.



#### **Roisin Doyle**

Roisin is ROD's administration manager and recently celebrated 20 years with the company. As our administration team lead, quality management system (QMS) coordinator and internal auditor, Leonie Slater Roisin works closely with both our company directors and senior Leonie joined ROD's administration team in August 2021. While management team. In addition to her wealth of administrative her first few weeks working in the print room were non-stop, they experience, she has a deep understanding of the tendering and gave her a good insight into how the company works. Leonie put project delivery processes, which enables the business to submit for her career on hold while raising her children, but now that they are and win high quality work in the civil, structural, water, environmental a little older, she is looking forward to gaining as much experience and geotechnical markets. A key member of our team, Roisin works as she can within the company. Her first port of call is to begin a with both internal and external partners to deliver high value course in accounting. Already well settled in her role, Leonie says she engineering projects, including the A6 Dungiven to Drumahoe is enjoying every job that comes her way and is excited to see what Dualling scheme and the DART+ West project. the next few years will bring.

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### **Rachel Breen**

Rachel joined ROD's administration team in December 2007. Her primary role involves supporting our building team's tenders for housing, healthcare and school projects amongst others and acting as document controller for the Community Nursing Unit CNU PPP project. She has also been involved in the BusConnects project for several years, where her tasks include document control and general day-to-day administration. Rachel also enjoys putting her graphics skills to good use, when the opportunity arises.





# **ROD-IS News Update**

Article by Mark Tucker



### Waterways Ireland commission

Waterways Ireland recently engaged KPMG-Future Analytics in partnership with ROD-IS, to undertake a feasibility study into Sustainable On-Water Living in Ireland. With growing interest in canal boat living in Ireland, Waterways Ireland is seeking a more detailed analysis of the potential for it to become more widespread. The study will examine the suitability of international on water offerings to the canal network in Ireland, the environmental impact of any such increase in canal-boat living, and the resources required to support implementation.

To address Waterways Ireland's needs, KPMG-FA and ROD-IS have proposed a bespoke methodology focused on:

- Understanding and evaluating the wider economic, social, environmental, and cultural effects of the organisation's current policies and practices;
- · Identifying local and global best practice in demonstrating and quantifying the wider economic, social, and

environmental benefits of liveaboards, the infrastructure required, the investment needed, and the development potential;

- Forecasting the potential wider economic, social, environmental, and cultural effects of liveaboards across the Waterways Ireland network; and
- Developing a sustainable business model, based on best practices, to maximise the opportunities for inclusive growth as part of future operations, investment, and development.

### The World Road Associations' Special Project

ROD-IS has recently completed the World Road Associations' [PIARC] Special Project: Bridges and Tunnels Strikes by Oversize Vehicles. The outcomes of the project were presented at a virtual PIARC Council meeting that took place between the 19th and 21st October 2021.

Bridge and tunnel strikes by oversize vehicles are a threat to both



#### Four boats resting at a mooring point at Lock 26 on the Royal Canal.

road user safety and the operation of highway and rail infrastructure. The objective of our study was to examine:

- · proven countermeasures, practices, and technologies that reduce the incidence of oversize vehicles striking bridges and tunnels; and
- bridge strike occurrences.

The study identified successful technologies, approaches, and · effective processes for accurately reporting and tracking mitigation strategies to address bridge and tunnel strikes, allowing information transfer to other countries. It included lessons learned The study involved a detailed review of the causes, consequences from around the world on deploying and operating various and mitigation measures associated with bridge and tunnel strike countermeasures, practices, and technologies. It specifically by oversize vehicles. Data was gathered through a combination of identified practices and technologies that can be used in lower and surveys, interviews and desk-based research. To develop a business middle-income countries. The findings of the study may also be beneficial in preventing overloading of bridges by exceptional load case, the economic situation was evaluated by way of a cost-benefit vehicles.



analysis [CBA]. A formal CBA methodology was developed to enable road administrators to discern the best mitigation practices for a given scenario. CBA was also carried out in a global approach to demonstrate the methodology and to draw broad conclusions about effective mitigation measures.

# **New Recruits 2021**



Melissa McNabb Assisstant Accountant

Melissa joined ROD as an assistant accountant in October 2021. Melissa holds a BSc in Business and Law from TUD. She is currently studying to complete her final exams to achieve the ACCA (the Association of Chartered Certified Accountants) qualification. In her spare time, she enjoys running, hiking and travelling.



Brendan Somers Senior Engineer

Brendan joined ROD as a senior resident engineer on the N5 Ballaghaderreen to Scramoge Road project last October. A chartered engineer, he has 27 years' experience working on major transportation projects across Ireland. In fact, he spent two years working with ROD on the M6 Kinnegad to Athlone scheme between 2005 and 2007. He holds an MSc in Civil (Water) Engineering from UCD and completed his primary degree in civil engineering at TCD. He enjoys hiking, reading and all sports, particularly rugby, golf and soccer.



**Aga Niedziela** Project Manager

Aga joined ROD as project manager for the MCAAS commission last June. Her responsibilities include the management of various of tasks for TII. She holds a master's degree in civil engineering and a higher degree in BIM. During her early career, Aga worked as a technician, road designer and site representative. She enjoys spending time outdoors or indoors and is as happy alone as she is with other people.



Zach O'Beirne Administrator

Zach joined ROD as an administrator on the N5 Ballaghaderreen to Scramoge Road project last August. He has seven years' experience working on major transportation projects across Ireland. In his free time, Zach enjoys playing board games, particularly chess. He also collects hard copies of albums.



**Lisa Haverty** Assistant Project Manager

Lisa joined ROD as an assistant project manager on the Motorway Contract Audit and Administration Services [MCAAS] West Region commission last June. She holds a BEng in Civil Engineering and a HDip in Engineering in BIM from GMIT. Prior to joining ROD, Lisa worked as a senior project engineer for RPS in Galway where she was involved in the delivery of roads projects and gained particular experience in traffic sign and road marking design and kerbs, footways and paved areas design. She enjoys hiking, camping, DIY and laughing a lot.



**Rebekkah Kaligorsky** Graduate Engineer

Rebekkah joined ROD as a graduate engineer last September, and she is currently working with our environmental and transportation teams. Rebekkah undertook a BSc in Structural Engineering with Architecture followed by a ME in Engineering with Business, both in UCD. In her spare time, she enjoys travel, painting and walking her dog. Rebekkah has previously featured in our newsletter describing her experience as an intern during the disruption of the Covid pandemic.



**Ben Gallery** Structural Engineer

Structural engineer Ben Gallery joined ROD's buildings team last August. He has seven years' experience in Irish design consultancies and spent two years working for a steel fabricator in Brazil. He graduated with a BE in Civil Engineering from UCD in 2008. His hobbies include football and guitar.



**Michael Walsh** Resident Engineer

Michael joined ROD as a resident engineer on the N5 Westport to Turlough Road scheme last July. Prior to joining ROD, he worked as a civil engineer on a broad range of major infrastructure projects across Ireland, the UK and Australia. Michael is a graduate of IT Sligo, where he gained a BEng (Hons) in Civil Engineering. His hobbies include travelling and sport.



James O'Dwyer Senior Operations Engineer on MCASS

James has joined ROD as a Senior Operations Engineer on the MCAAS commission. He is responsible for project managing the high-speed network in the western region for TII. A chartered engineer, James has over 25 years' experience in the design, construction and operation of motorway infrastructure projects. Over the past eight years, James performed the same role on the first generation of MCAAS commissions. In his spare time, he enjoys sports and is involved in his local GAA club, the camogie club in particular, where he coaches U14 and U16 girls.





**David Byrne** Senior Resident Engineer

David joined ROD as a senior resident engineer on the M50 Variable Speed Limits project last June. A chartered engineer, David has over 20 years' experience working as the main contractor, designer's representative or employer's representative on major civil engineering projects in Ireland. He holds a doctorate in the recycling of bituminous materials.



**Brian McDonnell** Environmental Consultant

Brian joined ROD as an environmental consultant last October. He is a graduate TCD, where he gained an MSc in Environmental Science, and NUI Maynooth, where he earned a BCL in Law and Business. As the newest member of our environmental team, Brian will be responsible for undertaking environmental assessments on a wide range of infrastructure plans and projects. In his spare time, he enjoys hurling with his local club, attending live music events and spending time outdoors.



**Alan O'Malley** Resident Engineer

Alan joined ROD as a resident engineer on the N5 Westport to Turlough Road scheme last July. Alan has over five years' experience in water treatment works, wastewater works, roads and microtunnelling. He graduated with a BEng (Hons) in Civil Engineering from GMIT in 2016. His hobbies include golf and swimming.

# **New Recruits 2021**



**Kevin Nally** Resident Engineer

Kevin joined ROD as a resident engineer on the N5 Westport to Turlough Road scheme last September. Kevin spent 15 years working as a project manager for a reinforced concrete frame contractor in the UK before returning to Ireland in 2018 to work as a resident engineer on the Ballinasloe Street Enhancement project and, more recently, as a technician with Galway City Council. In his spare time, Kevin enjoys coaching his son's underage hurling team, playing five-a-side soccer and the occasional round of golf.



**Ciarán Hanley** Senior Engineer

Ciarán joined ROD's bridges team as a senior engineer last June. A chartered engineer, he is experienced in the design, assessment and inspection of bridges and marine structures. Ciarán holds a PhD in bridge engineering from UCC, where he is an adjunct lecturer in prestressed concrete and structural analysis. In his spare time, he enjoys watching American football and rugby, walking his dog Brinkley, and poker night!



**Leonie Slater** Administration

Leonie joined ROD's administration team last August and is currently working in the print room. Having settled in well at the company, she is focused on gaining as much experience as she can across a wide range of fields, including accounting. With her children getting a little older, Leonie is looking forward to building a career for herself at ROD. She is excited to see what the next few years will bring!



**Oliver Scales** Graduate Engineer

Oliver joined ROD as a graduate civil engineer last September. He is currently working with our transportation team in Otley on the N60 Balla to Claremorris road scheme. Oliver gained an MEng in Civil and Structural Engineering from the University of Leeds in 2021, writing his dissertation on the human-structure interaction on the world's first 3D printed steel bridge. He has been a Leeds United season ticket holder for over 10 years.



Anatasia Putzier Assistant Project Manager

Anatasia joined ROD as assistant project manager on the MCAAS commission last August. Prior to joining ROD, she worked as a senior resident engineer with Mott MacDonald in Cork, where she was involved in the Mungret and Croom LIHAF Distributor Road scheme. Anatasia is a graduate of the Cape Peninsula University of Technology in South Africa, where she studied civil engineering. Married with four kids, Anatasia says she has no time for hobbies! Fortunately, engineering is her passion!



**Mary Jo Costello** Deputy Project Resident Engineer

Mary Jo joined ROD as deputy project resident engineer on the N5 Ballaghaderreen to Scramoge Road project last August. A chartered engineer, Mary Jo has 24 years' experience working on major transportation projects across Ireland. She holds an MSc in Environmental Sustainability from UCD, a PgDip in Project Management from TCD and a BE (Hons) in Civil Engineering. She enjoys walking, reading, summer barbeques and spending time with her family.



**Noel Kelly** Structural Engineer

Noel joined ROD last August and is currently working as Clerk of Works on the Coonagh to Knockalisheen Distributor Road scheme in Limerick. Prior to joining ROD, Noel spent nine years working for Highway Safety Developments Ltd., as part of TII's national signage maintenance contract for the southeast. During his early career, he spent six years with Sisk, where he worked as a senior engineer on large infrastructure projects, including the M9 motorway, the Limerick University Hospital expansion and the construction of the Johnson & Johnson Vistakon Plant extension in Limerick. Noel is currently studying for a chartership in construction management with the Chartered Institute of Building [CIOB]. In his spare time, he enjoys watching rugby and GAA, managing his local GAA football team, as well as coaching underage teams.



**Ronald Duffy** Senior Resident Engineer

Ronald joined ROD as a senior resident engineer on the N5 Ballaghaderreen to Scramoge Road project. This marked a return to the fold for Ronald, who had spent eight years working a resident engineer with us between 2005 and 2013. During this period, he was involved in a broad range of schemes, including the M6 Kinnegad to Athlone and the M50 widening. He has also worked in Canada and the USA. In his free time, Ronald enjoys triathlons, rugby and hiking.



**Sean Bartlett** Graduate Engineer

Seán completed an internship with ROD in 2020 before returning last October to join our graduate programme. His first rotation is with our water team. Seán studied structural engineering with architecture at UCD. He grew up in Sligo, but he is originally from Kerry. In his spare time, Seán enjoys karate, cycling, and cooking.





**Trevor McCarrick** Senior Resident Engineer

Trevor joined ROD as a senior resident engineer on the N5 Ballaghaderreen to Scramoge Road project last August. A chartered engineer, Trevor has over 15 years' experience working as either the main contractor or Employer's Representative on major civil engineering and construction projects in Ireland and the USA. He holds a BEng (Hons) in Civil Engineering and has recently completed an LLM in Construction Law and Practice. Trevor is a keen sports fan, loves the great outdoors, but spends the majority of his time just trying to keep up with his son!

### **Myles Geraghty** Technical Advisor

Myles joined ROD as technical advisor and quality manager on the MCAAS commission last June. His responsibilities include design coordination and the management of the quality system on the western region for TII. Myles has over 25 years' experience in the design, construction and operation of motorway infrastructure projects. Over the past eight years, Myles worked on the Contractor side for the sister MCAAS commission in the Greater Dublin Region, which included 180km of high-speed network.



#### Tell us a little bit about your early years

I grew up as an only child in Dundrum. In my youth, I got to explore the area plenty as we literally walked everywhere from Kilmacud to Marlay Park. I spent many summers with my cousins in Co. Donegal, doing odd-jobs around the quarries and mines, counting/chasing sheep, saving the hay or the turf – life experience that you don't quite get around Dublin!

As a student at St. Benildus College in Kilmacud, my friends and I spent our lunchtimes playing football or exploring the old Harcourt Street railway line. This was back in the day when the thought of having a cinema in Dundrum was unimaginable and cycling up from Dundrum crossroads wasn't quite yet on the Tour de France route!

I played hurling for Ballinteer St. John's from a young age too. Back when I joined the adult team years later, there were several other engineers , which proved useful when it came to securing summer work placements. I still see some of them the odd time at the Trinity Old Boys matches.

#### How did you find yourself working at ROD?

When I was finishing my doctoral thesis, a friend from my hurling club suggested that I send my CV into ROD. When I had my interview with ROD's then Senior Geotechnical Engineer, Fintan Buggy, I realised straight away that I could learn a lot at ROD. I grew to enjoy the experience of navigating the risks and uncertainties in geotechnical designs. I am indebted to Fintan for his guidance and support over the years. He was instrumental in helping me to realise my potential.

### Has ROD changed since you first joined the company?

ROD has had a few makeovers since I first joined the company. While I have always appreciated the view over the city to Howth from the Sandyford office boardroom, our remodelled canteen with its mural of Lough Tay, where I love to bike, was an inspiring improvement. The coffee machine is also a hit! Over the years, I've watched more than a few young people come in - fresh from college - to take up places on our graduate programme. I'm blown away by what our graduates can do, particularly with technology and information skills. That said, I don't think they are ever ready for the full onslaught of our charity football match at Christmas (my favourite event of the year)!

One thing that has remained constant at ROD, however, is the company ethos the directors have enshrined and maintained throughout. I have felt encouraged, motivated and ultimately very happy in what I do to make the big picture happen.

#### What have been your career highlights to date?

This has to be the pairing of the A6 Randalstown to Castledawson and the A6 Dungiven to Drumahoe dualling schemes in Northern Ireland. I still remember listening to my geography teacher explaining how The Creagh was formed during the melting of the glaciers at the top of Lough Neagh - so getting to investigate and design the earthworks and bridge foundations in this area was an exciting prospect. It became more special to me when we sifted through the available information and appreciated the scale of the challenge facing us. This wasn't the only challenge on the project, and at one stage, it was touch and go whether the drillers could complete their work without losing their equipment into voids below ground!

On the earlier Randalstown to Castledawson commission, I proposed availing of the seasonal environmental restrictions for the Whooper Swans that severely curtailed works activities as an excuse to construct a trial instrumented embankment. Not only did this inform the main surcharge designs and reduce the risks associated with consolidation and settlements - it also allowed us to prepare a critical cable trench area long before the initial programme had suggested.

With this project almost complete, we were well-placed to review the



subsequent A6 Dungiven to Drumahoe tender when it came in, and I think that gave ROD an edge in terms of our tender designs. There were plenty of challenges in that project too, especially with so much of the route being beside existing embankments.

#### What has been your standout moment at ROD?

Winning the Engineers Ireland Geoscience Ireland Award in 2018 for the Northern Spire Bridge in Sunderland was my standout moment. When ROD was announced as the winner of the award, I distinctly heard Fintan exclaim "Get up" as the team stood up to receive the award. However, as my involvement in the project had ended once my work on the detailed design was complete, I didn't immediately consider going up to the podium with the main group who saw it through construction and stayed with our other colleagues at the table, which annoyed Fintan a little bit. It was an unbelievably proud moment for me regardless and I'll satisfy myself with working towards another award.

#### What motivates you?

I like getting my head around the Ground Investigation data, believing there are more layers to the story hidden within it, reviewing it methodically and presenting ipso facto what the data themselves say in a simplified manner. Some of the hardest projects can take weeks, months, or even years to complete, but when the preferred options have been selected and they go to site, there is no better feeling than seeing our calculations and design assertions being validated on site. I also enjoy having the intuition and experience to manage risks, plus a dash of bravery to make sense of things that are not straightforward or written in the data logs. I am gratified when the specification I recommended for a job proves correct and I get my 'crystal ball' moments with the site team.

#### What should engineers do more of?

As civil engineers, we need to do more to sell ourselves. When it comes to making the best use of what the earth has given us, we have a lot to offer society. Our biggest challenge is getting non-engineers to see beyond the glossy image of a finished scheme and helping them to understand the technical challenges it presented, the many issues faced by so many individuals, and the many different solutions and decisions that were required to reach completion.





### ROD's UK office donates weekly fruit order to NHS

Article by John Collins

At the beginning of the pandemic, our office fruit supplier in the UK, Fruitful Office, launched an initiative to deliver fruit to National Health Service (NHS) workers caring for those affected by Covid-19. Fruitful Office asked its clients to support the initiative by diverting – rather than cancelling - their fruit box orders during the lockdown. Naturally, our Otley office was delighted to help. ROD Managing Director, Jim Thorpe, commented: "We are so grateful to the NHS and its frontline staff for their hard work during the pandemic. This is just a small gesture of appreciation for their incredible sacrifice in helping to keep us safe."

In the first week alone, Fruitful Office delivered over 23,000 portions of fruit to 11 NHS hospitals. By February 2021, they had delivered over 100,000 portions of fruit to over 20 NHS sites. Feedback from NHS staff was overwhelmingly positive. Cardiff & Vale NHS said: "On behalf of all the NHS teams here in Cardiff and the Vale of Glamorgan, we thank Fruitful Office and their clients from the bottom of our hearts for their generosity." Helen Swambo, NHS nurse, said: "Thanks for supplying us with lovely boxes of fruit on B4 haematology and our fellow colleagues on wards A4, B4N, C4 and T4, it was very well received and a much needed boost for everyone."

"On behalf of all the NHS teams here in Cardiff and the Vale of Glamorgan, we thank Fruitful Office and their clients from the bottom of our hearts for their generosity."

Cardiff & Vale NHS said:





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