

Winter 2023 Newsletter

# Roughan & O'Donovan

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**Cover Photo:** The Whitegates to Athlone Castle Cycle Bridge in Athlone town centre

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# Foreword

By Jim Thorpe

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**Welcome to our winter 2023 newsletter.** As another year draws to a close, it feels like the annual cycle comes around more quickly every year. They say that time speeds up when you are busy, and it certainly has been a hectic last quarter for our team at ROD. Coinciding with our financial year-end in October, we had the National Standards Authority of Ireland (NSAI) audit of our quality, safety and environmental systems, which saw all three systems pass with flying colours. We are currently undertaking our annual financial audit and looking ahead to 2024 in terms of resource planning. These are all signs of a well-oiled machine working quietly in the background to support our delivery of the fantastic projects that fill these pages.

The same ongoing cycle of things comes to mind when I read the current edition, with articles celebrating the official openings of the Whitegates to Athlone Castle Cycle Bridge in Athlone and the Athy Distributor Road, and the continuing progress of the Clontarf to City Cycle scheme amongst others. Importantly, there are articles on new projects too, including the early phases of the Dundalk Bay to Carlingford Greenway, N81 improvements in Wicklow and the Lough Key to Carrick-on-Shannon Greenway, and news of our appointments to manage the tender and construction phases of the N15 McGroary's Brae Improvement Scheme and the South East Greenway in Kilkenny. We are particularly pleased to have been appointed to provide ongoing Active Travel Support Services to the National Transport Authority (NTA) in addition to signing contracts for a series of transportation projects for Fingal County Council and developing ongoing programmes for habitat protection both of Machair sites and popular tourist destinations around the coastline. As I write, we are also bidding for future work, with the TII Technical Consultancy Framework tenders about to be uploaded and submissions for the TII Greenways Framework and the YorConsult Framework in Yorkshire being prepared.

Our team is evolving too, and as we mark our colleague, Michael Conroy's, well-earned retirement, we also welcome fifteen new starters to the company. The theme of renewal is also evident in the article describing our annual celebration of Sustainability

Month at ROD and in our image gallery, which features photos of our STEPS visit to the Holy Family Senior National School in Swords, the Engineering and Environment Careers Fair at Trinity College Dublin, Ilaria Bernardini's achievement in making the final of Engineers Ireland's Chartered Engineer of the Year Award competition, and Seamus MacGearailt leading our longstanding hill walking group to the top of yet another summit.

2024 marks fifty years since Derry Roughan and Joe O'Donovan founded ROD, and we are looking forward to celebrating this important milestone in our history with our friends and colleagues in the coming year.

For now, may I wish all our readers a very happy Christmas and a prosperous New Year.

A handwritten signature in black ink, appearing to read 'Jim', with a horizontal line underneath.



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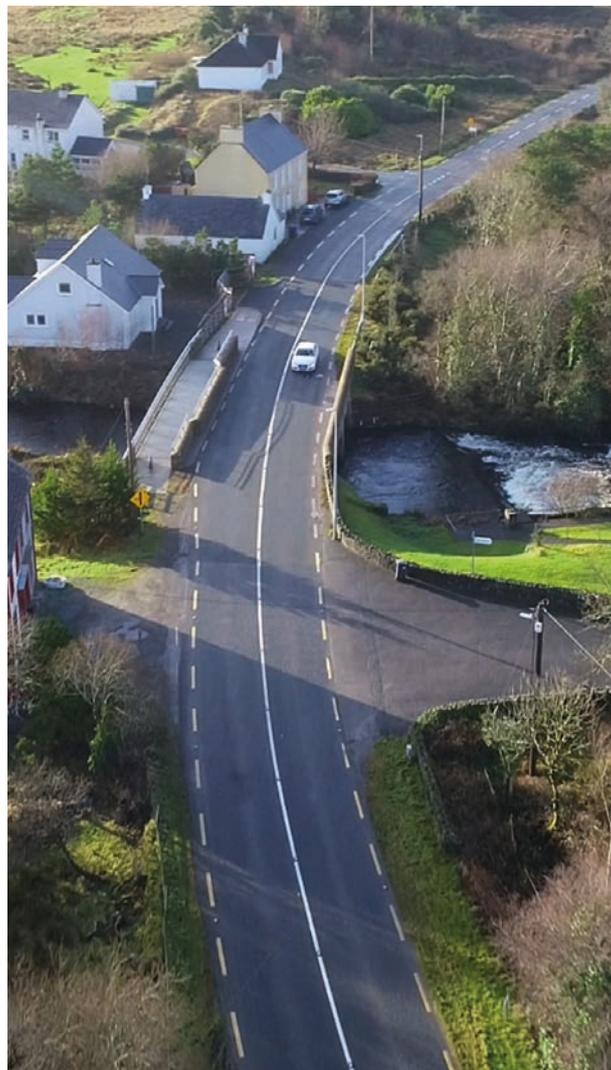
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# Construction starts on new Community Nursing Unit at St Vincent’s Hospital, Mountmellick, Co. Laois

By Laura Fernandez Vila



An aerial view of the building under construction. Image courtesy of Duggan Brothers Ltd.

Construction work has started on the first phase of a new 130-bed Community Nursing Unit (CNU) at St Vincent’s Hospital, Mountmellick, Co. Laois. The project involves the redesign of the entire hospital campus and the delivery of circa 7,500m<sup>2</sup> of modern healthcare facilities compliant with the spatial regulatory requirements of the Health Information and Quality Authority (HIQA) National Standards for Residential Care Settings for older people in Ireland.

ROD has been engaged by the Health Service Executive (HSE) to provide civil and structural engineering design services for the development. Our design team partners include Scott Tallon Walker Architects, Hayes Higgins Partnership, Atkins Global, FCC Fire Cert Ltd., Catalyst, and O’Reilly Hyland Tierney & Associates. The Contractor is Duggan Brothers Ltd.

## Phase one

The principal phase one deliverables include the design of the campus masterplan and the construction of a new 50-bed building to the east of the existing two-storey CNU on the campus. The new building will be connected to the main hospital and will provide a new entrance lobby for the overall campus. Upgrades to the existing hospital building will also be undertaken as part of the phase one works.

The new building comprises a two-storey reinforced concrete frame, sitting on piles. Additional structures, including the entrance canopies and balconies, are built on steelwork frames.

BIM (Building Information Modelling) processes, with standards agreed by all design team members, were followed during the design stage. A federated model of the new facility was also created to aid coordination and the production of deliverables; this will also be available to future maintainers of the facility.

Enabling works had been undertaken in 2020, and included the provision of a new car park and fire-fighting water storage tank.

## Phases two and three

Phase two of the project involves the refurbishment of a large section of the existing nursing care unit to provide 30 HIQA-compliant bed spaces. Phase three will involve the construction of a second 50-bed, two-storey, reinforced concrete framed building on the hospital campus.

Phase one of the project is expected to be completed in the first half of 2025, with the subsequent phases to follow.



# Dublin City Council Social Housing Regeneration Scheme nominated for prestigious European award

By Andrew Thomson



The project is a great exemplar of a low-rise, medium-density housing model.

Dublin City Council's O'Devaney Gardens Regeneration Phase 1 project has recently been nominated for the 2024 European Union Prize for Contemporary Architecture / Mies van der Rohe Awards (EUMies Awards). The awards recognise the best built works in Europe completed between April 2021 and May 2024. The winners will be announced in April 2024.

O'Devaney Gardens is located approximately 1km west of Dublin city centre, off the North Circular Road. It was constructed by Dublin City Council in 1954. The original complex consisted of 13 five-storey residential blocks, providing a mix of social and private housing.

With a construction value of approximately €20m, the first phase of the regeneration project comprises 56 housing units in a mix

of energy-efficient terraced housing and apartments above basements. Designed by DCC's Architecture Department, the buildings are punctuated externally by an attractive mix of brick and brick expression facades which, together with the detailing of the private balconies, enhances the overall attractiveness of the development.

As Employer's Representative on the scheme, ROD led the administration of the Public Works Contract on the council's behalf, and acted as the primary point of contact for the main contractor, P.J. Carey (Contractors) Ltd. Our responsibilities included ensuring the project was fully compliant with the requirements of the contract and delivering a high-quality solution for our client, with clear cost control.



The buildings are punctuated externally by a mix of brick and brick expression facades.



The saw-tooth form, with in-between, upper-level gardens, provides an interesting rhythm along the street.



# Clontarf to City Centre Project progressing apace

By Rebekkah Kaligorsky

Over the past 12 months, significant progress has been made on the construction of the Clontarf to City Centre project. 95% of the inbound cycle track is now complete (with some sections already in use), and the outbound cycle track is due to open to the public next spring.

The €62 million scheme will provide high quality walking and cycling facilities and bus priority infrastructure along a 2.7km route that extends from Clontarf Road, at the junction with Alfie Byrne Road, to Amiens Street, at the junction with Talbot Street.

The scheme will also improve the urban realm, landscape and built environment along the route, which is one of the busiest bus corridors in Dublin, the second busiest for cyclists, and the third busiest for general traffic. The improvements will be achieved through:

- upgrade works to junctions and existing utilities, including to the watermain and drainage network, as well as significant ducting; and
- the implementation of enhanced planting and biodiversity features, sustainable drainage systems (SuDS) measures and high-quality paving.

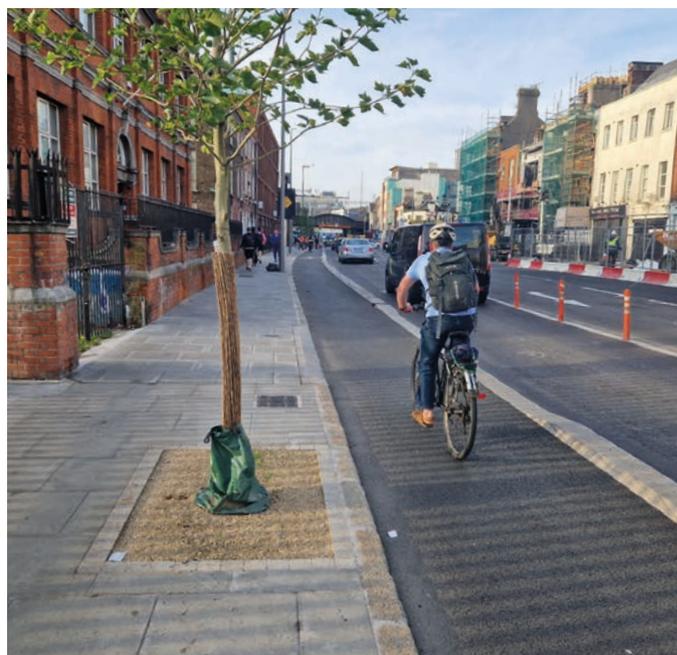
Having been engaged by Dublin City Council to complete the preliminary design, assessment, detailed design and tender documents for construction, ROD is now administering and supervising the construction contract in partnership with the Council. Our team is being led by Project Director Eoin Ó Catháin and Employer’s Representative Daire Ó Riagáin, supported by Senior Resident Engineer, Michael Cawley, who is leading a team of six ROD resident engineers. DCC also has three full time personnel on site.

Some of the innovative features implemented to date include kerb gullies to improve ride quality for buses, pedestrian priority at side roads, protective measures to allow construction next to mature trees, and bespoke tree pit designs to maximise the growth potential of newly planted semi-mature trees. A key aspect of the works is traffic management, and ongoing engagement with local representatives, and the local residential and business communities has been critical to keep the public informed.

The project is being managed by DCC and funded by the National Transport Authority (NTA). Clonmel Enterprises Ltd. is the main contractor.



Bus on North Strand Road.



Cyclist on Amiens Street.



# ROD-AECOM Alliance appointed for Dundalk Bay to Carlingford Greenway

By Richard Spencer



Bellurgan Point and Cooley Mountains.

Louth County Council, in conjunction with TII and Westmeath National Roads Office (NRO), has commissioned ROD-AECOM Alliance to bring the Dundalk Bay to Carlingford Greenway project from inception through to planning.

The project will deliver approximately 30km of greenway between Dundalk town and Carlingford in Co. Louth. When complete, it will provide a strategic connection to the 52km Carlingford to Newry Greenway, allowing the council to achieve its vision of a world-class, looped greenway linking Dundalk and Carlingford with the town of Newry and offering spectacular views of the Cooley and Mourne Mountains to the north, and of Laytown and Skerries to the south.

The scheme presents numerous challenges for our project team, not least the significant environmental constraints presented by Dundalk Bay and Carlingford Lough, both designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The challenging topography of the Cooley Mountains and the constant coastal erosion in the surrounding environment add further complexity.

ROD is delighted with the opportunity to build on the strong relationship we have developed with the council over the past long number of years and, in particular while working together on the Narrow Water Bridge Project, a major cross-border infrastructure project linking the Mourne Mountains and the Cooley Peninsula.



Templetown Beach.



Carlingford.

Image source : Co. Louth | Fáilte Ireland- ContentPool



# ROD signs transportation contracts with Fingal County Council

By Richard Spencer



Pictured at the contract signing are front row (L-R): AnnMarie Farrelly, Fingal County Council and Harry Meighan, ROD and back row (L-R): Barry Corrigan, ROD, Paul Carroll, Fingal County Council, Richard Spencer, ROD, Nicola Humphries, Fingal County Council, Ciaran Markey, Fingal County Council, and Matthew McAleese, Fingal County Council.

In August 2023, ROD signed contracts with Fingal County Council for several new transportation projects in Donabate and Lusk, north County Dublin.

The contract signing took place in Newbridge House, a Georgian villa designed for the Rev Charles Cobbe, Archbishop of Dublin, in the 1740s, and purchased by the council in 1985. It was witnessed by Minister for Housing Darragh O’Brien and Mayor of Fingal, Councillor Adrian Henchy.

Commenting at the contract signing with AnnMarie Farrelly, Chief Executive of Fingal County Council, ROD Chairman Harry Meighan said:

**“ ROD has provided planning and design services in Fingal for more than 30 years, since our design of overbridges on the Blanchardstown Bypass in the early 1990s. We are delighted to have been appointed to the Framework for Engineering Consultancy Services for Donabate Transport Projects, and we look forward to working with the Planning and Strategic Infrastructure team in Fingal County Council to enhance active travel provision and improve road safety on the Donabate-Portrane Peninsula. ”**

The initial four projects under the framework require feasibility / option selection services for the following:

- A study of the M1-Lissenhall Interchange to assess all technical and operational traffic issues associated with this strategic motorway junction. It will be undertaken in collaboration with TII;
- Phase 2 of the Donabate Distributor Road project, which will improve access to Donabate and Portrane from the M1-Lissenhall Interchange for all road users, including pedestrians and cyclists;
- Blake’s Cross junction upgrade, which will provide a safer junction layout to cater for both motorised traffic and active travel modes; and
- Active travel projects within Donabate village, which will increase local connectivity for pedestrians and cyclists.

The starting point for our project team is to review the individual project objectives and to arrange the required studies, including topography, traffic, noise, and pollution surveys. The projects will be developed to complement other planned and ongoing projects in the area, including the Fingal Coastal Way and Broadmeadow Way projects.



# N81 Road Improvements

By John Ahern



N81 Eldon Bridge Bends, Tuckmill Upper.

ROD has been awarded the technical consultancy service contract for PMG phases 2 to 4 of the N81 Whitestown Lower Project and the N81 Hangman's Bend and Tuckmill Project. The two projects address road safety issues on 7.7km of rural road north of Baltinglass, Co. Wicklow, in particular at: Castleruddery Crossroads; Hangman's Bend; Tuckmill Crossroads; and Eldon Bridge. Solutions to a wider network issue resulting from a lack of safe overtaking opportunities on the route will also be considered.

With the Constraints Study Report now completed, we have moved into the options selection phase. Both online and minor

offline solutions are under consideration. Potential interventions to improve forward and junction visibility range from boundary setbacks to the removal of hidden dips. Potential interventions to improve road user safety when overtaking and junction configuration include realignments of the mainline and sideroads.

A public consultation event, at which a shortlist of options at each location will be put on public display, is expected to take place in early 2024. Feedback from all interested parties will be used to inform the preferred option selection.



N81 Hangman's Bend, Saundersgrove Hill.



Cllr Ivan Keatley, Ceann Comhairle Sean O’Fearghail TD, Mayor of Athy Cllr Vera Louise Behan, Cathaoirleach of KCC Dara Fitzpatrick, An Taoiseach Leo Varadkar TD, Minister Martin Heydon TD, Alistair Henderson BAM Contractors, and KCC CEO Sonya Kavanagh at the official opening of the N78 Athy Distributor Road. Image courtesy of Kildare County Council.



## An Taoiseach Leo Varadkar opens Athy Distributor Road

By Daire Ó Riagáin

ROD-AECOM Alliance is delighted to announce the opening of the Athy Distributor Road by Taoiseach Leo Varadkar on 31st October 2023. The new road provides 3.4km of distributor road and 5.8km of active travel facilities to the south of Athy, largely following the line of the disused Athy to Wolfhill Colliery railway line.

Athy previously experienced significant traffic congestion, with typical journey times up to 80% longer than those experienced under free-flow conditions. Over 15,000 vehicles a day crossed the historic Crom-a-Boo bridge (1794) over the River Barrow, as well as the 1897 Grand Canal Bridge and the 1845 Dublin-Waterford Railway Bridge. Athy Main Street, designated as the N78, is a narrow, heavily-trafficked street, with narrow footpaths and no cycle facilities. This is reflected in the accident statistics through Athy, which has historically experienced a significant number of



The new N78 roundabout at the southern end of the scheme.



Traffic congestion in Athy town center was a daily occurrence before the distributor road opened.

collisions, approximately 50% of which involve pedestrians. This required a solution that would remove traffic from the town centre, reduce reliance on the historic structures and provide for vulnerable road users, thereby improving safety, to bring considerable benefits to the residents of Athy.

A road scheme for Athy was first mooted in the 1960s, and various options were considered over the preceding years including an inner relief road that was refused planning by An Bord Pleanála in 2004. In April 2015, ROD-AECOM was appointed by Kildare County Council to carry out multidisciplinary engineering consultancy services for the proposed Athy Distributor Road – a new road to the south of the Main Street; to take the scheme from Feasibility stage through the statutory process and through to supervision of construction.



ROD-AECOM developed the scheme from inception, undertaking extensive traffic studies, environmental surveys, design development and public engagement to identify and assess a number of route options, ultimately identifying a Preferred Route Corridor. The traffic modelling undertaken highlighted the congestion issues with the existing N78, and quantified the benefits of the proposed distributor road. This showed that over 11,000 vehicles would be removed from the town centre, greatly enhancing the amenity value of this architectural conservation area, in particular for pedestrians and cyclists.

### Active Travel

Segregated active travel facilities have been provided throughout the design, with approximately 5.8km of active travel provision. This includes linkages to the Grand Canal towpath / Barrow Blueway, Athy Railway Station, and the residential estates the scheme passes by. Kildare County Council has a number of projects that can also now be implemented in the centre of Athy following the removal of significant volumes of traffic in the town centre, allowing the reallocation of road space to enhance provision.

### Bridges

As part of the design development of the scheme, a bridge options study was undertaken to determine the most appropriate form of bridge crossing of the River Barrow. Due to the proximity of the existing railway bridge, which is a protected structure, a landmark structure would have detrimentally impacted on its setting, and therefore a low-key bridge form was preferred. The existing bridge would be repaired and retained to act as a crossing of the River Barrow for pedestrians and cyclists. This allowed the new road bridge to be of a narrower cross section, minimising materials required for construction and future maintenance.

The new bridge is a new 80m single-span steel composite bridge road crossing over the River Barrow and Grand Canal. The bridge was designed as a single span arrangement comprising 4 no.



The new 80m single-span steel composite road bridge crossing the river barrow.

weathering steel plate girders of constant depth, made composite with a reinforced concrete deck slab to minimise the potential for construction and future maintenance impacts on the aquatic environment of the River Barrow, which is designated as a Special Area of Conservation. The use of weathering steel also mitigated the health and safety risks associated with maintenance regimes of a painted structure over a River.



The refurbished existing railway bridge now caters for pedestrian and cycleway traffic over the river Barrow.

In addition to the River Barrow Bridge, a new bridge crossing of the Dublin to Waterford railway was required, consisting of an integral bridge with infill slab type deck, reinforced concrete abutments supported on reinforced concrete circular columns, supported by a 1.2 m thick pile cap and twelve 600 mm diameter CFA piles.

The project also involved the refurbishment of the disused railway bridge over the River Barrow – a protected structure built in 1918. This was re-purposed as a footway / cycleway. The existing bridge was the first reinforced concrete railway bridge over a river in Ireland. The bridge is 77m long and 4.5m wide between parapets. As part of the refurbishment works, repairs were carried out to the existing substructure; a new deck slab was cast; and the original parapets were carefully cleaned and restored where necessary to reflect the original character of the bridge.

### Planning

Following the development of the design, ROD-AECOM prepared a comprehensive suite of planning documentation in consultation with key stakeholders, Kildare County Council and legal advisors. The planning application required the preparation of an Environmental Impact Statement, Natura Impact Statement and Compulsory Purchase Order. These were published in April 2017.

An Bord Pleanála held an oral hearing in July 2017. ROD-AECOM provided expert witness testimony highlighting the benefits of the project to the community of Athy. Planning consent 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 the works, and prepared the main construction contract tender documents. The main construction contract for the scheme was awarded to BAM Civil Ltd. in October 2021, resulting in a construction period of just over 2 years.



# ITS Ireland Conference

Robert Corbally

The annual Intelligent Transport Systems (ITS) Ireland conference took place in the Rochestown Park Hotel in Cork in October. The main theme of the conference was the transition to sustainable mobility. Sustainable mobility can be defined as the provision of services and infrastructure for the mobility of people and goods, advancing economic and social development to benefit present and future generations in a manner that is safe, affordable, accessible, efficient, and resilient, while minimising carbon and other emissions and environmental impact.

The role of ITS in the delivery of sustainable mobility solutions was examined by several presenters at the conference, including ROD Senior Research Engineer, Robert Corbally, who addressed the topic in his presentation 'Advanced Data Analytics for Enhancing Motorway Operations in Ireland.'

Rob outlined how ROD is providing TII with advanced data analytics services to enhance its understanding of the complexities of the motorway network and to enable it to provide a more integrated road management service to road users. By analysing large quantities of data, collected through ITS equipment installed on

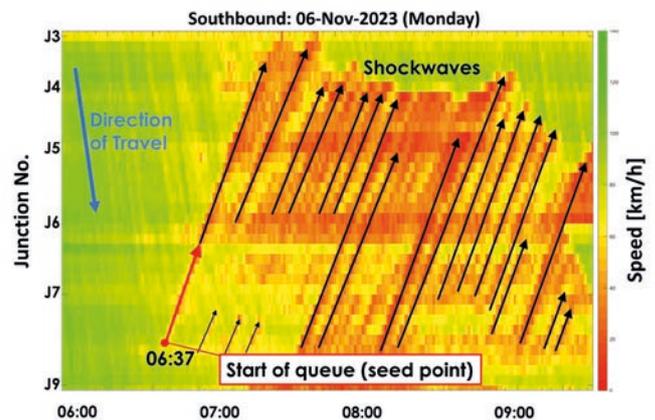
the M50 motorway, our researchers have been able to provide TII with a deeper understanding of daily traffic conditions on the M50. This, in turn, has enabled us to support TII in developing suitable operational response procedures such that speed limits and warning messages reflective of real-time conditions on the motorway can be displayed to road users, for example, during periods of heavy congestion or when incidents occur on the network.

In addition to providing an overview of the software tools we have developed to facilitate our analysis, Rob described how the insights gained from large-scale data analytics play a central role in managing traffic flows, reducing the level of stop-start traffic behaviour on the motorway, resulting in a smoother driving experience for road users and a reduction in traffic-related emissions.

The figure below shows a heatmap visualisation of traffic speeds on part of the southbound carriageway of the M50 on Monday, 6 November 2023. Heatmaps help us to identify 'seed points' i.e. where congestion typically starts, and 'shockwaves' i.e. when a small disturbance in traffic flow causes a shockwave of traffic congestion to propagate along the carriageway, often for many kilometres. This occurs when one car brakes in response to a change in conditions in front, the following car brakes slightly harder, then the car behind harder again, and so on. Heatmaps help promote a deeper understanding of how congestion patterns typically develop on the M50 and support the development of appropriate variable speed limit plans to counteract congestion.



Robert Corbally presenting at the 2023 ITS Ireland Conference in Cork.



Heatmap visualisation of traffic speeds on the M50 showing 'shockwave' behaviour on the southbound carriageway between junction 9 and junction 3



# MCAAS-2 Region West: Core Team and Task Order Activities

by Edward Warren



Construction Phasing and Traffic Management for Maintenance Works on the N18.

In 2021, TII appointed ROD as service provider for the Motorway Contracts Audit and Administration Services Region West (MCAAS-2RW) commission. Region West covers the midlands and western regions of Ireland and includes 325km of motorway and dual carriageway maintained under the Network B of the Motorway Maintenance and Renewal Contract (MMaRC) and 148km of motorway maintained under Public Private Partnership (PPP) contracts.

ROD is providing audit, supervision, contract administration and other technical and advisory services to TII for the MMaRC and PPP operations and maintenance contracts within Region West. Our network services are principally delivered through a core team of eight staff led by Senior Operations Engineer, James O'Dwyer, and based at various TII maintenance depots across the Region West national road network.



Lighting Column Removal on the M6.

Our core team is being supported by a separate team of designers and technical specialists, managed by ROD Technical Director, Edward Warren, and based in our Dublin and Leeds offices.

Over the past two and a half years, ROD has delivered a wide range of task orders and technical specialist advice services, including:

- Road safety design
- Pavement renewal design
- Gantry design
- ITS communications infrastructure design
- Environmental barrier rehabilitation design
- Structural inspections
- Network asset data collation and interrogation
- Operation and Maintenance (O&M) procedures development

Environmental and planning services for the expansion of maintenance depot facilities and accommodation at several locations on the network were also provided between 2022 and 2023.

Additional specialist support is being provided on an ongoing basis in several key areas, including sustainability, biodiversity, energy efficiency and data management.



# ROD-AECOM appointed to N56 Letterilly to Kilraine Phase 2 Road Scheme

By Gerard Ward



The N56 road running alongside the environmentally sensitive Owenea River which is home to the Freshwater Pearl Mussel.

In late 2022, Donegal County Council appointed ROD-AECOM to deliver engineering services for the N56 Letterilly to Kilraine Phase 2 Road Scheme in Co. Donegal. The commission includes a due diligence review of the draft tender documents, management of the tender phase, contract administration and site supervision services.

The 2.6km scheme is located on the N56 - on the southern outskirts of Glenties, where the route is narrow and poorly aligned with several sub-standard junctions. It comprises a pavement overlay, with the construction of a combined cycleway/footway adjacent to the existing road and the realignment of five local side roads. Ancillary works include fencing, accommodation works, road restraint systems, drainage works, and limited earthworks, including the excavation and replacement of peat, rock cut, and peat surcharging.

The site is located within the west of Ardara/ Maas Road Special Area of Conservation (SAC) and the Owenea Freshwater Pearl Mussel catchment. As a result, An Bord Pleanála's planning approval includes extensive environmental restrictions, including a prohibition on bulk excavation of peat/soft material within the Owenea Catchment area.

Our project team completed its due diligence review of the draft tender documents in early 2023, and we are currently managing the tender phase, with contract award and construction expected to commence in early 2024. I was responsible for coordinating the due diligence review and managing the tender phase. Upon contract award, Patrick Grennan will lead the project team as

Employer's Representative, and I will assume the role of Senior Resident Engineer on site, managing the site supervision team during the construction phase.



The N56 Letterilly to Kilraine Phase 2 Road Scheme is the final section of the larger N56 Dungloe to Glenties Road Project, which was developed by the council as part of a TII pilot project to upgrade low traffic volume, bog rampart roads along the west coast of Ireland. This 28km scheme is based on Type 3 single carriageway design and includes a combined cycleway/footway facility. Construction was divided into six separate phases, with ROD providing engineering services on the N56 Cloghbolie to Boyoughter Road Scheme and the N56 Letterilly to Kilraine Phase 1 Road Scheme, in addition to environmental services on the N56 Boyoughter to Kilkenny Road Scheme. When complete, the €100m project will greatly improve road user safety, enhance accessibility, boost economic activity in the north-west region and provide a valuable recreation/tourist amenity for the local area.



# N60 Balla to Claremorris realignment on track for 2024 delivery

By Conor Lehane

Construction of the N60 realignment between Balla and Claremorris, Co. Mayo, is progressing well, with the project on track to be completed in the second half of 2024.

The scheme will enhance safety for road users by improving the substandard horizontal alignment, upgrading junctions with local roads, and rationalising the number of domestic and agricultural accesses along this 3.6km section of the N60. The provision of an active travel facility adjacent to the carriageway will further improve accessibility and safety for cyclists, pedestrians, and other non-motorised users in the local and wider community.

The scheme design incorporates several sustainable drainage solutions, including swales and grass water channels, and geotechnical design solutions for karst features. Close consideration was given to the Balla Turlough Special Area of Conservation (SAC),

which is adjacent to the scheme at the northern tie-in, and an undesignated turlough nearby.

ROD's service delivery began during the detailed design and procurement stages of the project, TII PMG Phase 5, and continues with the provision of contract administration services through TII PMG Phases 6-7. The main works construction contract was awarded to P&D Lydon Ltd. in October 2022, and works commenced on site in November 2022.

This project is a welcome addition to our portfolio of major road and linear infrastructure schemes in the west of Ireland, which includes the N5 Westport to Turlough Road in Co. Mayo, which opened to traffic in June 2023, and the N5 Ballaghaderreen to Scramoge Road in Co. Roscommon, which was granted Government approval to progress to construction in September 2023.



Aerial view of the ongoing works along the N60 showing the integration of an active travel facility alongside the realigned Type 2 single carriageway.



# Dublin's M50 Variable Speed Limits installation reaches Substantial Completion

By Cliona Rogan

On 22 September 2023, Transport Infrastructure Ireland's (TII) enhancing Motorway Operation Services (eMOS) programme reached a significant milestone, with the substantial completion of the M50 Variable Speed Limits (VSL) strand of the programme. VSL technology is now installed along the full length of the M50, from Junction 3 (M1) to J17 (M11). This technology will enable TII to optimise road safety, enhance the efficiency of the road, and improve journey time reliability by reducing the number of 'stops and starts' that take place along the M50 and the need for drivers to brake suddenly in response to standstill traffic.

Digital signs were first switched on in October 2021, starting at Junction 4 Ballymun. The roll-out continued in a phased manner through 2022 and 2023 to give road users time to familiarise themselves with the new signs, and to adjust their driving behaviour accordingly before the introduction of regulatory speed limits.

## M50 Traffic Flow Optimisation (MTFO) contracts

The civil and structural works required to support the implementation of VSL on the M50 were undertaken as part of the M50 Traffic Flow Optimisation (MTFO) contracts strand of eMOS. They were delivered in two separate phases:

### Phase one

encompassed the Public-Private Partnership (PPP) area between Junction 3 (M1) and Junction 14 (Dún Laoghaire) and included the upgrade of 85 existing gantry sites, and the installation of two full-span and four half-span gantries. It was completed by Jons Civil Engineering Ltd. in 2021.

### Phase two

Encompassed the area between Junction 14 (Dun Laoghaire) and the M11, which is part of the Motorway Maintenance and Renewals Contract (MMaRC) A. It included the installation of 11 half-span gantries, one 44m full-span gantry, and one twin gantry spanning over both carriageways, with a mid-span support. It was completed, also by Jons Civil Engineering Ltd, in 2022.

Both phases included duct refurbishment and installation, the installation of new service bays, and the general installation of infrastructure to house future intelligent transport systems (ITS) equipment.

## MTFO Intelligent Transport Systems Deployment Contract (ITS DC)

The successful completion of the civil and structural works part of the programme allowed the Intelligent Transport Systems Deployment Contract (ITS DC) project to continue its progress across the M50.

MTFO ITS DC comprised the installation of 387 Lane Control Signals (LCS), 61 Variable Message Signs (VMS) with graphics capability, 54 Slip Road Signals (SRS) and other roadside ITS equipment along the M50. It was divided into six sections, marked as A to F on the diagram below.



## Network Intelligence and Management System (NIMS)

Speed limits on the digital signs are set using the Network Intelligence and Management System (NIMS), an overarching, adaptive computer system designed to receive and assimilate information from multiple roadside traffic monitoring devices, including Automatic Incident Detector (AID) loops and CCTV cameras. The data collected and aggregated by NIMS provides motorway operators with a comprehensive view of real-time conditions on the motorway and enables them to implement an appropriate operational response to incidents as they occur.



Gantry installation at Junction 9 Red Cow.

It enables motorway operators to:

- slow traffic in response to collisions, roadworks, adverse weather conditions, and congestion;
- enhance safeguards for emergency responders dealing with incidents on the M50; and
- keep road users better informed about incidents ahead and how they may affect journey times.

In the two years that followed the introduction of VSL on the M50, control centre operators implemented over 4,500 variable speed management plans in response to incidents on the motorway. Approximately 65% of the incidents were congestion related, with collisions, breakdowns, and debris making up the greater part of the remainder.

NIMS is expected to be deployed across the full length of the M50 by the end of 2023.

### Monitoring and improving the application of VSL on the M50

The ROD-AECOM operations team, in collaboration with TII and Egis Road and Tunnel Operation Ireland (ERTO), has developed procedures to ensure that VSL is applied safely and consistently across the range of incident types routinely encountered on the M50. Our detailed weekly reviews of how incidents are managed on the motorway feed into the development of training material for a range of operational scenarios. Meanwhile, operator feedback continues to inform further system development and improvement.

As the geographic rollout of NIMS continues, the functionality of the system is being increased. Since the digital signs first went live in October 2021, the system has been upgraded to include calculated journey times, additional variable message plans, and regional events. The latest release of the software will include Automatic Incident and Congestion Detection (AICD) using a series of algorithms that read in the data from the AID loops to determine if congestion is about to form or if an incident has happened. The eMOS data analytics team will go through a period of shadow running to test this functionality, tweaking the algorithms to ensure they are working as expected along the entire roadway. When this has been completed and approved, the burden on the operators in the control centre will be reduced.



Completed gantry with ITS equipment.



# N15 McGroary's Brae Improvement Scheme

By Daire Ó Riagáin



The existing N15 cross section at McGroary's Brea, outside Ballybofey.

Donegal County Council has engaged ROD to provide construction and handover stage consulting engineering services for the N15 McGroary's Brae Improvement Scheme in Co. Donegal. The appointment was made under the TII Technical Consultancy Services Framework Lot 1C.

As a strategic transport link and part of the Trans-European Transport Network (TEN-T), the N15 route between Donegal town and Ballybofey/Stranorlar has benefited from significant improvements in recent years. McGroary's Brae, outside Ballybofey, is one of the last remaining substandard sections of the network.

The proposed scheme involves improving the cross section of the existing N15, construction of a new hard shoulder and verge over approximately 900m, a new drainage system and integration into the existing network. Ancillary works include fencing, signage and associated accommodation works, diversion of existing utilities and the provision of new ducting and new signage, road lines and markings.

Close monitoring of construction in soft ground and temporary traffic management during construction are considered key to the successful delivery of the scheme.

Construction is due to begin in December 2023, with Priority Construction Ltd. as the main contractor.



The existing N15 cross section at McGroary's Brea, outside Ballybofey.



# ROD provides Active Travel Support Services to the NTA

By Eoin O Cathain



Leopardstown Junction Upgrade, Sandyford.

ROD, in joint venture with Clifton Scannell Emerson Associates (CSEA), has been appointed to provide Active Travel Support Services to the NTA. This office is effectively a dedicated design and advisory service for the NTA, which is managed on a call-off basis. It involves a combination of seconded staff and design office support. We are supported in this endeavour by Brady Shipman Martin, Mobycon, DBFL and CivicEngineers.

This commission affords us an opportunity to build on our extensive respective portfolios of work for the NTA, which includes BusConnects Dublin and Cork, and the Clontarf to City Centre Project and Royal Canal Greenway projects in ROD's case, and the Navan Town 2030 project, N3 Snugborough Junction and Dodder Greenway in CSEA's case. It is an important commission, in that it also allows us to influence policy and standards, and to support the NTA in its development of same.

Initial tasks to be developed include:

- Preparation of standard details;
- Preliminary and Detailed Design services – in particular for rapid implementation schemes;
- Construction support;
- Training support; and
- Technical assistance.

We look forward to working with the NTA on this commission in the coming years.



Busconnects Ballymun to City Centre Core Bus Corridor.



Royal Canal Greenway Phase 2.



# ROD appointed to South East Greenway Project

By Daire Ó Riagáin

Wexford County Council has appointed ROD to provide construction and handover stage consulting engineering services for South East Greenway Lot 5A, under TII Technical Consultancy Services Framework Lot 1C.

The project involves the construction of 5.5km of greenway from Ferrybank to Curraghmore in Co. Kilkenny. The route follows the disused railway line between Waterford City and New Ross, Co. Wexford, which was closed to the public in 1963 after almost 60 years in service. It traverses the River Barrow and River Nore Special Area of Conservation (SAC), over and under historic bridges, and offers magnificent views of the River Barrow.

Ancillary works include site clearance, landscaping, finishes, fixtures and fittings, drainage, fencing, structures, lighting, adjacent landowner accommodation works and level crossing works. Enhancement works to the first phase of the project, a 6km stretch from New Ross to Ballyverneen, Glenmore, which opened last July, are also included.

ROD has a long association with the project, having previously undertaken the feasibility stage design, prepared the Part 8 planning application and carried out all necessary ecological and environmental surveys along the route corridor. The project team for the current phase is being led by Daire Ó Riagáin as Employer’s Representative, and Ed Warren as Project Manager.



View along the greenway at the northern end of the Lot5A scheme.



# An Bord Pleanála holds Oral Hearing for DART+ West Railway Order

By Victoria da Silva Pereira



Project team for the Dart+West Oral Hearing.

A major milestone in the DART+ West project was met recently when the Oral Hearing took place from 28th September to 13th October at the Gresham Hotel and An Bord Pleanála's offices. ROD Directors, Barry Corrigan and Mark Kilcullen led the project team at the Oral Hearing, together with our project partners, IDOM. They were ably supported by Morgan Hart, Frances O'Kelly, John Paul Rooney, Paul Kissane, Patrick O'Shea, Victoria Da Silva Pereira and others, including our environmental experts. The team particularly welcomed the opportunity to engage in-person with the public at the hearing, as the non-statutory public consultations for the scheme were delivered virtually due to the Covid-19 pandemic.

The format for the Oral Hearing presented several challenges for our project team, not least the absence of Briefs of Evidence. However, they acquitted themselves admirably during their cross examination by the prescribed bodies, local authorities, elected

representatives, landowners and observers present, and in their responses to the 156 submissions made to An Bord.

Project Director, Mark Kilcullen, was delighted with the dedication and resilience shown by the project team at every stage in the process; from the long days of preparatory work, which extended over several years, through to the robust performances delivered by the experts during the hearing. He said: "It was a privilege to see a strong team deliver something special."

Iarnród Éireann is now awaiting the decision of An Bord and hoping that the first of the DART+ Programme projects can progress to construction. This in turn will allow the change to a fully electrified suburban rail fleet to commence, supporting the transition to a low carbon and climate resilient society.



Broombridge DART/Luas Interchange.



An aerial view of the new landmark bridge crossing of the River Shannon in Athlone town centre.



## New landmark bridge crossing of the River Shannon opens in Athlone

By Pankaj Kumar Das

### Whitegates to Athlone Castle Cycle Link in Athlone town centre opens to the public

Crowds gathered in Athlone town centre on the 8th of August for the official opening of the new pedestrian / cycle bridge across the River Shannon. The bridge is a vital link in the Euro Velo Route 2 Galway to Dublin Cycleway project, which will deliver Ireland's first ever dedicated inter-city route for cyclists and walkers.

The 104m long, two-span bridge comprises a structural steel deck supported on concrete lined steel support piles. Modern and sleek, the bridge brings definition to the urban landscape – from the Church of St. Peter & St. Paul and the Luan Gallery on the west bank of the river to the Radisson Hotel and the marina on the east side. The centre line of the river is marked at deck level with an inlaid polished and engraved stainless steel disc, marking the threshold between Leinster and Connacht - between east and west Ireland, half-way down the River Shannon and the symbolic centre of the island.

Speaking at the event, Minister of State for Transport, Jack Chambers, described the bridge opening as

**// A milestone in the delivery of the Galway to Dublin Cycleway project //**

and affirmed the Government's commitment to "expanding our active Travel and greenway infrastructure network".

### Background

The ROD-AECOM Alliance was awarded the commission to develop the Dublin to Galway Cycleway project through concept development and statutory process in 2012. We were also appointed for the detailed design and construction stages of the Mullingar to Athlone Castle section of the route. ROD-AECOM worked in partnership with Seán Harrington Architects to deliver the design of the landmark structure. Detailed design of the bridge followed a decision by An Bord Pleanála to award Westmeath County Council planning approval in 2017. Work commenced on site in September 2021, with Jons Civil Engineering Ltd. as the main contractor.

The architectural theme focused on the heritage setting of the bridge in the symbolic centre of Ireland. Sean Harrington proposed a two-span concept rising to a summit over the pier in the centre of the bridge to provide both a focal point and viewing point along the river and to all of the principal heritage structures surrounding the river. The architectural and engineering teams worked together to develop a technically complex but visually simple and elegant structure. Key sensitivities related to form were: variable trapezoidal deck cross section; the Luan Gallery and Radisson interfaces; the flat soffit over water; constrained gradients and social spaces at landings; clear definition of the elevated structure relative to solid embankment; highly tangible detailing; and safety in use. The architectural lighting design and opportunities for photography also featured significantly in design development. The



engineering design was complicated by the extreme slenderness of portions of the structure and the need to mitigate loads on the approach structures. The dynamic characteristics of the bridge were tested robustly during the opening event when Irish dancers spread across the bridge and danced a jig in unison.



### A complex installation

The bridge has a pier in the middle of the river and end supports on the riverbanks. The structural steel for the bridge was fabricated in Spain by Tecadé, and transported to site in 13 separate pieces - by sea and road via Dublin Port. The steelwork was assembled on site and transported downstream for installation. Openings were left in the top of the bridge deck to accommodate the final welding activity and to allow concrete to be poured into the bridge deck to stabilise the bridge dynamically while in use.

Transporting the assembled units down river to the bridge location required the specialist expertise of Mammoet and Ocean Crest Marine. The bridge units weighed more than 150 tonnes each. They were slid onto a barge on skids via a temporary jetty at the site compound.

The skids extended out over the river until the water reached a sufficient depth to allow the deck units be transferred to special supports positioned on a barge. The supports incorporated jacks that were used to raise the bridge deck units to their final position. The jacks remained lowered during transfer and travel to ensure stability during transportation, and to facilitate the steelwork passing under the existing railway bridge between the site compound and the destination.

Multiple small motorboats were used to manage the movement of the barges, with the finest of adjustments made to the path and orientation of the assembly, when necessary.

After the installation of the main bridge components, the primary connections between the components were made, the infill concrete to the deck was poured, mortar was poured at the bearings, and the temporary supports in the river were removed.

### Challenges

The principal challenges associated with construction of the bridge related to the very restricted space along the river banks to construct the approach structures; the complexity of steelwork; the need to alter the Luan Gallery to accommodate the bridge

landing in a seamless fashion; achieving the high quality of finish necessary for such a landmark structure in an urban centre; and constructing the western approach ramps and boardwalk while maintaining the existing mature treeline along the river.

Constructing a pier in the middle of the river while maintaining navigational access and avoiding any negative impacts on water quality represented a further challenge. The central pier was founded on a combination of steel driven piles with concrete infill and mini pile anchors drilled five metres into rock below the riverbed. The river pier is elliptical in profile and extends from below the riverbed to the underside of the bridge deck. The pier works were constructed within a cofferdam which facilitated dewatering to below foundation level so personnel and equipment would work in the dry.

### Public reaction

The reaction to the bridge has been hugely positive, with many praising the beautiful simplicity of the design, others hoping it would encourage more active commuting within the town, and more still seeing its potential to tap into the growing international tourism market for cycling. Cathaoirleach of Westmeath County Council, Cllr Liam McDaniel, summed up the general feeling when he said the cycleway project would benefit the wider community by “providing active travel linkages for schoolchildren, students, employees and local residents”.

For Mark Kilcullen, Project Director at ROD, it was a day to celebrate: “This complex and sometimes challenging project has been delivered thanks to the combination of cutting-edge design and unique technical solutions delivered by ROD-AECOM in conjunction with Seán Harrington Architects. It has been a huge team effort and we are grateful for the trust placed in us by our client, Westmeath County Council, and for the efforts of the contractor, Jons Civil Engineering Ltd. in managing the difficult construction logistics required to ensure its successful construction. Special acknowledgement is due to Ambrose Clarke, Michael Kelly and Darren Fulham of Westmeath County Council, to John Pentony who took a personal and invaluable interest in the project, to Gary Gilshan the construction lead on site, to Seán Harrington and Pankaj Kumar Das, the respective architectural and engineering design leads, and to Rachel Harney and Daire Ó Riagáin for their work at the construction stage.”





# LIFE on Machair: Improving the condition of Ireland’s Machair Habitats

By Síoifra Sealy



Machair- a rare habitat remarkable for its colourful diversity of wildflowers and abundant birdlife.

ROD has been commissioned by Fáilte Ireland to produce guidelines and management plans for sustainable tourism at Machair sites across Ireland, with a focus on nine Special Areas of Conservation (SACs) and four Special Protection Areas (SPAs) in Counties Donegal, Mayo and Galway. Our work forms part of the EU-funded LIFE on Machair (LOM) project, which aims to improve the conservation condition of Ireland’s ‘Machair’ habitats and the ecological conditions for breeding waders and pollinators within the target sites.

Machair is a coastal habitat unique to the north and west of Ireland and Scotland. Characterised by a species-rich grassland plain, developed on wind-blown sand, it provides an important refuge for pollinators and threatened breeding wader bird species, such as Dunlin, Lapwing and Redshank. The typical flower-rich vegetation of machair is traditionally maintained through low-intensity livestock grazing, but is susceptible to pressures from

recreational activities and over grazing. Post Brexit, the entire EU land cover of machair occurs in Ireland. As such, its conservation is of significance on a European level.

The project objectives include:

- **Improving** the conservation status of Ireland’s machair grassland and fixed dune habitats and the ecological conditions for breeding waders and pollinators within the nine project sites;
- **Coordinating** community workshops aimed at exploring the sustainable use of machair sites for tourism and recreation in project target areas. The workshops will help scope out ways of reducing the negative impacts of recreational use on intensively used areas through the development of a sustainable tourism model;
- **Supporting** local community initiatives through the provision of small grants (seed funding) for eco-friendly tourism initiatives; and
- **Developing** and coordinating a primary schools programme aimed at raising awareness of machair systems habitats and species and how to care for them.



Healthy machair habitat.



Over the summer, ROD ecologists carried out site visits at each of the sites. We also engaged in workshops, some of which were conducted largely as *Gaeilge*, with local community groups at each of the sites. The feedback gathered at the workshops is currently being analysed and will feed into the guidelines and management plans being developed.

Farming and farmers are central to the project in the role that they can play in protecting and restoring machair systems. The project is being coordinated by the Department of Housing, Local Government and Heritage through collaboration with the Department of Agriculture, Food and the Marine (DAFM), Fáilte Ireland and Teagasc. It will run for six years, from 2022 to 2028.



Damage caused by vehicles driving across machair habitat.



Storm damage to machair habitat.



## Sustainable Tourism: Preserving the Beauty of the Natural Environment

By Patrick O'Shea

As part of its National Surveying and Monitoring Programme, Fáilte Ireland commissioned ROD to undertake visitor and environmental monitoring at four sites in 2023, namely: Keem Bay on Achill Island, Co. Mayo; Malin Head on the Inishowen peninsula in Co. Donegal; Dursey Island on the Beara peninsula in West Cork, and Bray Head, Valentia Island, Co. Kerry. By monitoring visitor sites and their usage, Fáilte Ireland hopes to facilitate tourism in a safe and sustainable manner. In addition to recording visitor data, including dwell time, demographic data, transport modes, trail conditions, signage, and features of interest, our ecologists recorded habitats and habitat conditions along the trails.

experience and protect the environment. These included providing way-marked trails and quality signage, and formalising sections of trails where erosion is problematic. We also developed a methodology for the survey of a further 19 sites across Ireland, which will take place in the summer of 2024.

Following the completion of our surveys, ROD made several recommendations to Fáilte Ireland to improve the visitor

ROD has considerable experience in the tourism sector. In addition to our work on the Dursey Island Cable Car and Visitor Centre Project and the Dublin Mountains Visitor Centre Project, we are preparing guidelines and management plans for Fáilte Ireland, as part of the EU-funded LIFE on Machair project, which is described in detail in Síofra Sealy's article.



Keem Beach, Achill Island.



Malin Head, Inishowen Peninsula.

Image source : Fáilte Ireland- ContentPool



# Public consultation on Lough Key to Carrick-on-Shannon Greenway opens

By Aishwarya Katyal



Cyclists pedalling alongside the 50-berth marina in Lough Key Forest and Activity Park, Boyle, Co. Roscommon.

Roscommon County Council, with the support of Transport Infrastructure Ireland (TII), has commissioned ROD to assist in the planning and design phases of the Lough Key to Carrick-on-Shannon Greenway project. The proposed greenway will link the towns of Carrick-on-Shannon and Boyle, and will provide a connection to Lough Key Forest and Activity Park, Coillte’s flagship tourist destination in the region. The project’s active travel infrastructure improvements are expected to benefit residents of the nearby villages of Cootehall and Knockvicar by facilitating modal shift from private cars to walking and cycling.

An in-person public consultation event took place last September, with a significant number of local residents, landowners and county council officials in attendance. The event sought to provide the public with an understanding of the project objectives, and to gather local knowledge from those present. The key opportunities and constraints identified to date in the project study area were presented, as were drawings showing the study area, features

of ecological, architectural, archaeological, and cultural heritage significance, as well as key destinations and features of interest, such as local amenities and existing walking and cycling routes.

The event provided ROD’s project team an opportunity to address queries, and to gather information from the local population to better understand the opportunities and concerns from their perspectives. Landowners played a pivotal role in discussions by sharing their perspectives on the positive and negative aspects of the scheme.

The feedback gathered from the public is currently being reviewed by our project team. The submissions received will inform the selection of a preferred route corridor, with a commitment from the project team to endeavour insofar as practicable to minimise any adverse impacts on the environment and on local communities.

The initial concept and feasibility stage of the project is expected to be completed by the end of 2023.



Trifold Brochure for the Public Consultation.



An aerial view of Lough Key Forest and Activity Park.



# Biodiversity Quiz

## Question 1



Puffins can dive up to 60 metres below the water's surface to catch fish. Is this statement true or false?

- True
- False

## Question 2



Badgers are the largest native land carnivores in Ireland and the UK. Is this statement true or false?

- True
- False

## Question 3



Machair is a rare grassland habitat that only occurs on the northwest coastlines of Ireland and Scotland. Is this statement true or false?

- True
- False

## Question 4



Broad-leaved helleborine, a rare orchid native to Ireland and the UK, was found growing naturally on a university campus in Dublin in 2023. Was it found in UCD, TU Dublin or TCD?

## Question 5



Bottlenose dolphins are social animals. They travel in groups of 10-15 and hunt and raise their young calves together. Are their groups called flocks, pods or schools?

## Question 6



Orchid seeds are about the same size as a speck of dust. They have no food store, so they rely on other organisms to germinate. Are these organisms fungi, insects or birds?

## Question 7



There are only two species of seal for which Ireland and the UK are home; the common seal, also known as the harbour seal, and the grey seal. Which species of seal is pictured here?

## Question 8



The birds pictured above hang upside down on branches when pecking at buds and foraging for insects. Can you identify them?

## Question 9



What is a Madra Uisce (water dog) more commonly known as?



# ROD celebrates Sustainability Month

By Claire Cable



October marked ROD’s annual celebration of all things sustainable. A key focus for the month was provided by our Sustainability Committee, which coordinated a series of lunchtime presentations that identified the ways in which we can improve the sustainability outcomes of our projects, of our operations, and the systems we use to hold ourselves accountable.

ROD Director, Joe Kelly, and Senior Environmental Consultant, Claire Cable, kicked off the presentation series with an informative discussion on the development of ROD’s roadmap to net zero and the monitoring framework that will be used to measure our progress towards achieving our sustainability goals. This was followed by an engaging presentation by Assistant Professor in Environmental Systems Modelling at the Department of Civil, Structural and Environmental Engineering, Trinity College Dublin, Dr. John Gallagher, on the application of circular economy principles to the engineering design process.

Senior Hydrogeologist, Maryann Nwankwo, gave a fascinating presentation on hydrogeoethics, an emergent transdisciplinary field in geosciences focused on ethical research and best practices related to responsible groundwater science and engineering, creating conditions for sustainable water resources management while respecting human needs and environmental dynamics. In addition to exploring the themes of nature-based solutions, water conservation and management, Maryann discussed the lessons we can draw from ancient practices from around the world.



Our next presentation examined how ROD is supporting clients in implementing sustainability practices on their projects, with the Liffey - Tolka project and the Fingal County Surface Water Management Plans among the many projects discussed by various groups within the company. Our colleagues Rebekkah Kaligorsky and John Daly followed this with demonstrations of both the Transport Infrastructure Ireland (TII) Carbon Tool and the Institution of Structural Engineers (IStructE) Carbon Calculation tool, both of which calculate the carbon impacts of construction projects, allowing design teams in turn to reduce or eliminate impacts through design choices, where possible.



Our Sustainability Manager, Frances O’Kelly, and Claire Cable presented on our current progress towards achieving the sustainability targets set out in our Sustainability Plan. Joe was back in the hotseat to close the presentation series with a timely update on the developments within our Integrated Management System (IMS) that take the environment and sustainability into account.

In addition to coordinating the presentation series, our environmental team ran a set of competitions and weekly

updates during the month. These included a low-carbon recipe competition, a biodiversity wildflower quiz, and an upcycling/donation clothing drive.

The team’s hard work in developing an engaging, informative programme of activities with sustainability as the core component was rewarded with well-attended presentations, strong participation in the competitions and quizzes, and €1,000 raised for various charities, including Enable Ireland, FoodCloud, the Native Woodland Trust and the Woodland Trust UK.



## ROD Sponsors CIHT Y&H Summer Barbecue

By Sharath Jayaramu

ROD was delighted to sponsor the Chartered Institution of Highways and Transportation Yorkshire and the Humber (CIHT Y&H) summer barbecue, which took place on 20th July in the Parkside Tavern, Leeds.

With more than 30 people in attendance, the event provided an ideal opportunity for our young engineers to network with fellow

transportation professionals from across the region. For some of the attendees the highlight was the sumptuous array of meats prepared by the grill masters, while for others it was the chance to showcase their skills in playing pool, darts and shuffleboard.

For ROD’s Michael Chung, Chair of CIHT Y&H, the primary goal of the event was to promote the professional development and growth of younger engineers. He said:

**// Coming to events such as this, it is good to remember that not every competitor is competitive. Some might want to work collaboratively with you or might become good allies for future projects. Some might even know that person you need to get in touch with and offer an introduction. It is good to be able to help each other out. //**



Pictured (L-R): Yuwen Li, Michael Chung, Sharath Jayaramu and John Thorpe.



# ROD joins the frontline in the fight against litter

By Emeline Lafortune



Last August, two teams of volunteers from across ROD set out for Dublin’s Royal Canal armed with litter grabbers, gloves and high-visibility vests. Our goal? To support the huge community effort to keep this beautiful, natural amenity free from litter, so it can be fully enjoyed by local residents, visitors and wildlife.

ROD has a particular interest in this section of the canal, since we have designed and assessed the proposed greenway works on this section, which are currently before Dublin City Council for consideration through the Part VIII planning process.

Our first team of volunteers took the Ashtown to Broombridge section of the canal while our second team chose the Broombridge to Phibsborough section. Arriving at our respective starting points, we were encouraged by the sight of relatively clean canal banks. Clearly, the routine clean-ups organised by environmental and clean-up organisations, have made a big difference!

Inspired by the thanks we received from passers-by, our volunteers decided to go the extra mile, scouting out hidden litter within the side hedges and other vegetation surrounding the canal. While these elusive pieces of rubbish required some careful searching, by the end of the evening, our bags were brimming with cans, glass bottles, paper, pieces of scrap metal from destroyed toys, and various discarded items.

Organised by our Sustainability Committee and supported by Dublin City Council, who supplied the all-important collection bags, the clean-up evening provided a useful reminder of the impact of littering on our environment and how important individual and collective efforts are to maintaining the beauty of our natural surroundings. With our work done, our two teams rendezvoused at The Bad Eagle Pub, where we enjoyed a sociable evening, peppered with good food and great conversation with colleagues, new and old.



Tackling the canal cleanup hand in hand.



Ready to make a positive impact.



## ROD Social Group heads to Sligo for a weekend of adventure

By Yana Bersunukayeva



Staff getting ready to take on the waves at Strandhill Beach, Co. Sligo.

Surfing, kayaking, hiking, and poetry – ROD’s social committee made every effort to ensure the success of our annual autumn weekend away, which this year took us to Strandhill, the beautiful seaside village in Co. Sligo. The well-researched itinerary had something to satisfy all tastes, from our international recruits keen to see what Ireland’s northwest has to offer, right through to the seasoned adrenalin junkies in our team! The sun shone for the entire weekend, lending even greater truth to the tourist slogan, ‘Sligo is surprising’.

Strandhill, famed for its waves, and home to Ireland’s first purpose-built surf centre, was the perfect destination for the surfers (and would-be surfers) among us. On Saturday afternoon, fifteen of our team pulled on their wetsuits, grabbed their boards, and headed into the surf. The beginners among us gratefully accepted the offer of surf lessons whilst the more advanced bravely battled the high waves, immune to the cold.

Nine of our group chose to go kayaking on Lough Gill, where tranquil waters, stunning scenery, and an unexpected recital of the W.B. Yeats poem, The Lake Isle of Innisfree, combined to create a special memory! As part of our tour, we stopped off on Cottage Island, the second largest island on Lough Gill, where our guide told us the story of Mrs Beezie Clerkin, who lived alone on the island for many years. We visited the ruins of her home and a nearby medieval church, before sitting down to a picnic of tea, coffee and biscuits.

On Saturday evening, the entire group came together for an evening of good food and great craic, with entertainment provided by the Irish rugby team, whose win against Scotland topped off an amazing 24 hours!

On Sunday morning, with the sun still shining, some in our group were a little reluctant to say goodbye, so they decided to hike the Queen Maeve trail, a 6km loop reaching a height of 315m at the summit of Knocknarea Mountain. At the end of their two-hour climb, they were rewarded with incredible views over Sligo and Ballisodare Bay.

With winter closing in, our social committee will be moving the action indoors, with plans already in place for a karaoke night, pub quiz and, of course, the annual Christmas party. There is a lot to look forward to!



Staff enjoying a coffee and tea break on Cottage island in Lough Gill, Co. Sligo during their kayaking activity.



# Michael Conroy's Retirement

By Jim Thorpe

## **Michael Conroy retired from ROD on 8th September last.**

Michael joined ROD in 2006, becoming a shareholding Technical Director in 2008. Over the last 17 years he has delivered a wide range of projects, initially leading the Dublin Road Kilmore roundabout in Cavan while supporting Mark Kilcullen in the level crossing replacement programme. Back in those early years with ROD, Michael also led the D&B tender designs for the N8 Fermoy to Mitchelstown, N18 Gort to Oranmore and the successful tender design and subsequent detailed design of the M50 N3 to N4 upgrade, removing the Westlink toll plaza and installing the infrastructure for the barrier free tolling.

Michael's leadership of major Phase 1-4 route selection, preliminary design and statutory procedures includes the Killaloe Bypass, for which he led the Oral hearing, Judicial review and CPO Arbitrations, the Dundalk to Sligo route studies, Limerick Northern Distributor Road and more recently the Foynes to Limerick scheme. Between these he fitted in the D&B tender designs for the Aberdeen Western Peripheral Route and N22 Ballyvourney to Macroom, and inputs to the Kilmacanogue Safety Scheme.

Most recently Michael has undertaken the Project Management of various elements of the BusConnects programme.

For several years Michael was the co-ordinator of our Risk Management Group and also represented ROD at

Europengineers gatherings on numerous occasions, where he supported the network's efforts to promote knowledge-sharing and collaboration among independent engineering and consulting companies across Europe.

Before joining ROD, Michael worked with DeLeuw Chadwick O'Heocha, working on building structures, then joining Arup where he worked on both the Shannon Bridge and Westlink. While at Carl Bro he worked on the SE Motorway Bridges, which was shared among various consultants including ROD, and then spent 6 years with Mott MacDonald Pettit, through the boom years 2000-2006, where he moved from Bridges to overall Scheme Manager for various elements of the Major Inter-Urban programme, most notably as Design Manager for the Dundalk Western Bypass PPP.

Aside from the numerous roles that he has undertaken, and perhaps more importantly, Michael has always been a people person, looking out for and taking an interest in supporting individuals, whether staff, fellow directors or members of the client's team.

We are pleased to say that Michael has agreed to continue to be available to ROD as a part time consultant to provide ongoing support on specific tasks. We wish Michael and his wife Carrie a long and happy retirement and thank him for his valuable contribution to ROD over the past 17 years and his contribution to consulting engineering throughout his 43-year career.



# New Recruits



### Isabela Oliveira Pontes

Isabela joined ROD as an intern in August. As a secondary school student in Belo Horizonte in Brazil, Isabella decided to explore her interest in engineering by undertaking two technical courses in electronics and quality control. She subsequently undertook project work, including redesigning an apartment, through which she developed her AutoCAD and SketchUp skills. Now part of our bridges team, she is learning more about structures, developing her drawing skills and getting to see what life in a design consultancy is really like. In her free time, Isabela enjoys taking photos of nature.



### Rebecca Bailey

Rebecca joined our team as a graduate environmental scientist in July. Born and raised in Atlanta, Georgia, she moved to Ireland in 2021 to undertake an MSc in Environmental Policy at UCD. After graduating, Rebecca joined Friends of the Earth Ireland to pursue her passion for supporting marginalised communities impacted by the climate crisis, nature-based solutions and international politics. During her time there, she was given the opportunity to contribute – through research and interviews with stakeholders – to a report on how Ireland is meeting its environmental targets within the Programme for Government. In her free time, Rebecca enjoys solo travelling, watching films, and spending time with her dog, Dumbledore.



### Svitlana Putanenko

Svitlana joined ROD's transportation team in October. Originally from Ukraine, she has worked as an engineer for 15 years, mainly focused on road and residential projects. Svitlana enjoys creating 3D models, so clients can see what their projects will look like after construction. A happy mother of two children, Svitlana loves travel and spending time with friends and family. Her dream is for the war in Ukraine to end.



### Toby Beattie

Toby joined ROD's bridges team as a junior technician in August, shortly after completing his Leaving Certificate exams. As a student at Temple Carrig School in Greystones, Co. Wicklow, Toby studied both design and communications graphics, and construction studies. He is interested in music, movies and art and enjoys spending time with friends, skateboarding, and walking in the woods.



### Tilly Skidmore

Tilly joined ROD as a graduate engineer in August and is working with our highways team in Otley. She is a graduate of Newcastle University, where she earned an MEng in Civil Engineering, with a specialism in Environmental Engineering. In her spare time, she enjoys playing netball, reading and watching football.



### Chidinma Nwanja

Chidinma joined our transportation team as a project administrator in October. Born and raised in Nigeria, she graduated with a BSc in Biochemistry from the University of Nigeria, Nsukka, in 2016, before deciding to pursue a career in project management. Prior to moving to Ireland, Chidinma worked in several different industries across Nigeria, building valuable project management experience, which she hopes to put to good use in her work at ROD. In her free time, Chidinma enjoys reading, travelling and visiting galleries.



### Fatima Quadri

Fatima graduated with an ME in Engineering with Business from University College Dublin (UCD) in 2023. Following graduation, she joined our graduate programme and is working with our water team in Sandyford at present. Fatima is excited to see what life in an engineering consultancy is like and is looking forward to working in different teams and exploring a range of civil engineering disciplines. In her free time, she enjoys painting, reading and baking cakes.



### Mike Amiel Mekell

Mike joined our team as a graduate environmental planner in August. Born in the Philippines and raised in Dublin, his early interest in social and environmental justice led him to pursue a BA degree in Politics, International Relations and Sociology at UCD. After graduating, Mike worked in the social care sector for over two years, supporting people directly affected by homelessness in Dublin. Motivated by a passion for creating sustainable solutions and helping those most likely to be affected by the climate crisis, he subsequently undertook an MSc in Planning and Development at Queen's University Belfast. Mike is a big nature and photography lover and enjoys hiking, travelling, and taking care of his many houseplants.



### Muhammad Saad Masood

Saad joined our graduate programme in Dublin in September. He is working with our transportation team at present. Saad was raised in Dubai but is originally from Pakistan, where he studied civil engineering. He is passionate about the positive impact of transport infrastructure on society and recently earned a master's in transport from University of Leeds. Saad loves travelling and is excited to explore the Irish landscape.



### Alex Cronin

Alex joined ROD in August, shortly after completing his Leaving Certificate exams. He originally heard about our trainee technician programme from his career guidance counsellor in school. Alex is from Dublin and is currently studying civil engineering part-time at TU Dublin, Bolton Street. In his free time, he enjoys playing football, going to the gym and socialising with his friends.



### Cristina Olgado Azpiazu

Cristina joined ROD as a graphic designer in July. Her experience encompasses graphic design, web design and product design. Prior to joining ROD, Cristina worked in Spain, Germany and Asia. In her spare time, she enjoys hiking, travel, photography, and spending time with friends and family.



### Kate Doherty

Kate joined ROD in July. She is working as the site administrator on the Waterford City Public Infrastructure Project. Prior to joining ROD, Kate worked in administration roles in hospitality and retail settings. In her free time, she enjoys spending time with her family and friends, going to the gym, spending time outdoors and going for the odd pint! She has travelled to several different parts of the world over the years, including Texas. Liverpool is, however, her favourite city of all.



**Bailey Thoresby**

Bailey joined our UK team as a technician in July. He completed an apprenticeship in construction and the built environment prior to undertaking a bachelor's degree in civil engineering at Leeds Beckett University. As part of his apprenticeship programme, he contributed to various maintenance operations at the Humber Bridge, including initial inspections of its A-frames, replacements for which were subsequently designed by ROD-AECOM. Beyond work, he enjoys exploring new foods from around the world and eating out in the best restaurants of the cities he visits. His dream is to one day open his own restaurant. Bailey likes to challenge himself, both physically and mentally, and is gearing up to tackle next year's Ironman 70.3 triathlon.



**Pierre O'Loughlin**

Pierre recently joined ROD as a Senior Resident Engineer on the Waterford City Public Infrastructure Project. A Chartered Engineer, Pierre has over 25 years' experience in the project and contract management of large-scale public infrastructure projects. He has worked on numerous national road projects and several landmark bridge structures throughout Ireland, including the Rose FitzGerald Kennedy Bridge in Wexford and the Cathaleen's Falls Bridge in Donegal. He holds an honours degree in Civil Engineering from the University of Liverpool, a Master's in Business Management from the UCD Michael Smurfit Graduate Business School, a Postgraduate Diploma in Construction Law and a Postgraduate Diploma in Environmental Engineering, both from TCD, and a Professional Diploma in Arbitration from the UCD School of Law. In his spare time, Pierre enjoys cycling with his local club, the Barrow Wheelers. He is also a keen GAA and Liverpool FC fan.



**Kate Ballance**

Kate is a recent graduate of Technological University (TU) Dublin, Bolton Street, where she studied structural engineering. In the summer of 2021, she undertook a three-week student placement at ROD, an experience she describes as "hugely beneficial". Two years later, she's back, having secured a place on our graduate programme. Kate is passionate about a greener and more sustainable environment and based her final dissertation on the reinforcement of glue-laminated timber beams, winning an award for the best thesis on timber construction. In her free time, she captains the J1 women's rugby team in Old Belvedere Rugby Football Club and plays a social form of non-contact rugby called 'touch rugby', a sport that has enabled her to travel to many different countries!

**Biodiversity Quiz Answers**

Question 1	A - True	Question 2	A - True	Question 3	A - True
Question 4	TCD - Trinity College Dublin	Question 5	Pods	Question 6	Fungi
Question 7	Common (Harbour Seal)	Question 8	Blue Tit	Question 9	Otter



# 5 Minutes with...

## Rico Raymundo



### What is your role in ROD?

I work as a design engineer in the traffic and urban transport team. I am involved in both urban roads and streets and cycling and pedestrian facilities projects. I am currently working on BusConnects Dublin and BusConnects Cork.

### What inspired your interest in engineering?

I grew up in a small town in rural Philippines, where the transport infrastructure was basic. We had paved roads with no line markings, no footpaths, and no traffic lights. When I moved to Ireland, I was struck by how advanced the country's infrastructure was by comparison. One of my college professors once said, "the work of a civil engineer will always go unappreciated by society, until you remove it," and that really resonated with me. I think that to fully appreciate the role civil engineering plays in society, one needs to experience life in less developed parts of the world.

### How did you navigate the move to a new country, with a new language and culture?

I was nine years old when I came to Ireland, which made the transition easier than it might have been had I been older. Language was not a barrier for me because English is the second language taught to school children in Philippines. When I started primary school, I quickly realised the best way to make friends was to play Gaelic football, and I made it all the way to an all-Ireland final in Croke Park.

### As a teenager, you spent a year playing tennis in California. What did you take away from that experience?

I played junior tennis at a high level in Ireland. When I was fourteen years old, I was given the opportunity to train in California for a year. I trained six hours a day, seven days a week. It was too much pressure, and I was homesick, so I decided to return to Ireland to enjoy a regular teenage life. I did learn a lot from the experience, however, including how to be responsible and independent at a young age, how much sacrifice is required of a professional tennis player, and how lonely and isolating that life can be.

### What did you study in college?

I studied civil engineering at Dublin Institute of Technology, Bolton Street, now Technological University Dublin (TU Dublin), before undertaking a Master's degree in Sustainable Infrastructure at the same university.

### Who or what influenced your decision to specialise in transportation engineering?

My college lecturers, Dr. Martin Rogers, Chartered Transport Planner, TU Dublin, and Dr. Lorraine D'Arcy, Sustainability Research & Innovation Lead, TU Dublin, influenced my decision to specialise in transportation. I always enjoyed their lectures in college and felt I learned a lot from them.

### You worked part-time while studying full-time for your Master's degree. How did you find that?

Working part-time on the graduate programme allowed me to complete my full-time Master's degree course in one year rather than two. I worked a full day in the office on Mondays and a half day on Tuesdays, Wednesdays, and Thursdays. I attended lectures three days a week from 4pm to 10pm, and I spent Fridays working on college assignments. It was a challenging year for me, but it was worth the effort.

### Has travel influenced your thinking in relation to transportation?

When I look at the poor public transport systems in southeast Asia, I am grateful for Dublin's buses, trains, and trams. However, when I visit other European cities, I'm struck by how far behind we are in terms of our transport infrastructure. I visited Amsterdam recently, and was impressed by its cycle culture and infrastructure. I had never before seen a city so dominated by cyclists, never mind a multi-storey building dedicated to bicycle parking!

The cycle infrastructure in Netherlands is the gold standard, so I was delighted to see the National Transport Authority release an updated Cycle Design Manual last September that takes inspiration from its design standards.

### Where do you see yourself in five years?

In five years, I hope to be chartered and still working on projects I am passionate about. I use different modes of transportation on a weekly basis, so I am invested in making our transport system work for everyone and ensuring the user is kept at the centre of design decisions.

### What has been your highlight of 2023?

Getting married was the highlight of my year! My wife and I met in college – she was studying mechanical engineering – and we got married in Barberstown Castle in Co. Kildare last May.



# Image Gallery

## Contract signing for N5 Ballaghaderreen to Scramoge Road scheme

Cathaoirleach and Chief Executive Roscommon County Council (RCC) and Directors Wills Bros Ltd. pictured with representatives from RCC senior management and N5 project team, ROD and Wills Bros. Ltd.

Image courtesy of Ger O'Loughlin.



## Engineers Ireland Chartered Engineer of the Year Award

Pictured at the Engineers Ireland Chartered Engineer of the Year Award competition final are (L-R): President of Engineers Ireland, Dr Edmond Harty; ROD Senior Engineer, Ilaria Bernardini; and Ireland Country Leader at Arup, Joe Burns.



## West Clare Railway Greenway contract signing

Members of the ROD team pictured with Seán Lenihan and Gráinne Reddan of Clare County Council at the contract signing for Sections 3 and 4 of the West Clare Railway Greenway.





### Careers Fair 2023

Pictured at Trinity College Dublin's Engineering and Environment Careers Fair 2023 are (L-R): Harry Jones, Ernest Etim and Cliona Rogan.



### ROD hill walk from Pier Gates to Luggala and Lough Dan

Pictured taking in the breathtaking scenery are (L-R): Edward Warren, Peter King, Eoin Ó Catháin, Mayur Chopde, Seamus MacGearailt, Manus MacGearailt and Cristina Olgado Azpiazu.



### West Cork Greenways Project contract signing

ROD's Eoin Ó Catháin and AECOM's Nick Perrin at the contract signing for the West Cork Greenways project.

Picture: Gerard McCarthy.





**Highways UK Conference 2023**

Pictured at the Highways UK Conference and Exhibition 2023 are (L-R): Michael Chung, John Collins, Aonghus O’Keeffe, Bailey Thoresby, and Jim Thorpe.



**St. Cronan’s Avenue and Brackenstown Road Active Travel Project Opening**

Pictured at the official opening of the St. Cronan’s Avenue and Brackenstown Road Active Travel Project are Minister Darragh O’Brien and Mayor of Fingal Cllr Adrian Henchy.



**ROD Quiz/Karaoke night**

The winning team at the ROD Quiz and Karaoke Night on 19 October featured (L-R): Nicholas McCann, Cliona Rogan, Rebekkah Kaligorsky, Conor Lehane, Kerim Yurek.



### TU Dublin Annual Pasta Bridge Competition

ROD Director, Joe Kelly, pictured making a presentation to the winners of the 2023 TU Dublin Pasta Bridge Competition, Hooria Khan, Eoghan Casey, Ashlin Pleetus and James Gannon. Also pictured are Dr. Cairtriona de Paor, Dr. John O'Donnell and Dr. Sean Bond of TU Dublin.



### Engineers Ireland STEPS visit to the Holy Family Senior National School

ROD design engineers, Ernest Etim and Miguel Angel Hidalgo, pictured with students of Holy Family Senior National School in Swords, Co. Dublin, during their Engineers Ireland STEPS visit in November 2023.



### ROD Social Committee weekend trip to Lahinch

Pictured during our annual weekend trip to Lahinch in Co. Clare are (L-R): Daniel Ahern, Walter Malavolta, Emmanuel Vincent Philip, and Ernest Etim.





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