

## Navigating a crisis

### Leaders in Construction

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Fingal County Council - Housing Excellence

Etag - Leading supplier of PPE

California High-Speed Rail

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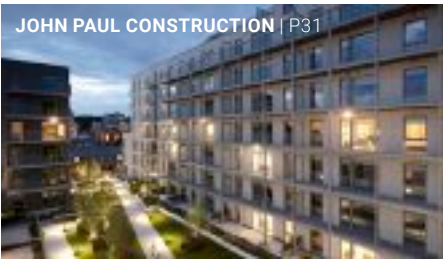
PJ RUDDEN | P10



JOHN SISK &amp; SON | P20



JOHN PAUL CONSTRUCTION | P31



ETAG | P69



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# Inside

## NEWS SECTION

- 2 News Round Up & Comment

## EXPERTS & ANALYSIS

- 4 Arthur Cox  
Legal File
- 7 Surety Bonds  
'Cash is King'
- 9 CERS - Additional Voluntary  
Contributions
- 10 PJ Rudden  
Leadership in Challenging Times
- 13 Construction Stimulus  
€500m Package

## LEADERS

- 16 Legacy of Leadership  
CIF President Pat Lucey
- 20 John Sisk & Son  
Steve Bowcott
- 25 BAM Ireland  
Theo Cullinane
- 31 John Paul Construction  
Liam Kenny
- 35 JJ Rhatigan  
Padraic Rhatigan
- 38 Walls Construction  
Eugene O'Shea
- 41 Roadbridge  
Conor Gilligan

BAM | P25



- 45 Ardmac  
Alan Coakley
- 48 Purcell Construction  
Michael Bane
- 51 Jones Engineering  
Jim Curley
- 55 Dornan Engineering Ltd  
Micheál O'Connor
- 58 Kirby Group Engineering  
Mark Flanagan
- 60 STS Group  
Liam Linehan
- 63 King & Moffatt  
Pat King
- 66 T Bourke  
David Doherty

## FEATURED

- 69 Etag - Construction's Choice  
for PPE and M&E
- 71 Sisk - Supply Chain  
Reaction
- 74 Quintain  
Scale model
- 77 CIF - Managing wellbeing
- 80 Euro Executive Recruitment  
Five Years in Business
- 81 LIT and CIT  
Colleges' online offerings
- 83 Fingal County Council  
Housing Excellence
- 85 Big Build  
California High-Speed Rail

## BIM

- 89 GagaMuller  
Digital Project Managers
- 91 Solibri - Case Study  
€400,000 in Cost Savings
- 93 Seán Harrington Architects
- 95 CitA Board Member  
Mary Flynn

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content and to access the Irish building archive.

## Kilsaran launch new Merriion Paving Range following €11m investment in new Paving Manufacturing Plant

**KILSARAN** have recently commissioned a new state-of-the-art Hermatic Press paving plant at their paving and walling manufacturing facility in Dunboyne, County Meath. One of the first new products to come off the new press is the contemporary Merriion Paving range. This new range will be available to all Kilsaran customers throughout Ireland and the UK. This major investment has secured 200 jobs on the Dunboyne site and added another 30 jobs directly.

Merriion's clean edges and smooth texture mirror the latest design trends helping customers achieve a contemporary look to their outdoor space. All flags are 40mm in depth for greater ease of application, offering a modern alternative to porcelain and natural stone.



Alan Donohue, Sales Leader,  
Roy McKeown, Director,  
Brendan O'Sullivan, Operations Manager

Hermatic Press are leaders in paving manufacturing technology producing 1,500 tonnes of pressing power and utilising wet colour mixes will guarantee a finished product that is second to none. Innovation in packaging has eliminated surface scratching with face to face and base to base packing of flags along with an intertwined roping system to help the concrete breathe.

Adding to an extensive list of advantages of concrete paving over natural stone, the new Merriion Range is manufactured with a robust, high performance surface layer improving strength, colour retention and slip/skid resistance. The real benefits of these new paving ranges are the reduced installation time, factory pre-sealed option that is readily

available and cost saving that is achievable over choosing natural stone or granite.

Roy McKeown, Director of Paving & Walling at Kilsaran International said: "There has been a growing appetite from our customers in recent years for paving products that are durable, easy to install, cost effective and easy to maintain. This is where our new Merriion Range comes in, the range is contemporary and offers a real alternative to porcelain or natural stone. We are excited about the new Hermatic Press and are currently working on an exciting new range of paving that will come to market in the coming months.

"With the recent pandemic, there is a global shortage of availability of imported paving materials, now we can offer both quality and supply to our local markets." For more information visit [www.kilsaran.ie](http://www.kilsaran.ie) ■

## AG Appoints Ross Telford Head of Marketing



AG (Acheson & Glover) has appointed Ross Telford as its new Head of Marketing.

Ross spent 10 years leading the marketing department in a builders merchant and a construction manufacturing company. He holds a BA Honours in Business Studies which he obtained from Ulster University; he then furthered his education at Ulster University by achieving a Masters in Marketing.

Rodney Davidson, AG's Commercial Director, welcomed Ross to the team.

He said: "We are delighted to welcome Ross to lead our marketing department. He has a clear depth of marketing knowledge and valuable experience working in the construction manufacturing industry."

The Head of Marketing role will involve creating and delivering marketing strategies in line with AG's wider business objectives, developing tactical marketing plans for day to day marketing as well as working closely with the Technical and Product Development teams to launch new products in various market segments across the UK and Ireland.

AG has nine sites located across the UK and Ireland at Fivemiletown, Dungannon, Dublin, Ballygawley, Birmingham, Magherafelt, Carryduff, Toome, Pomeroy and Derry/Londonderry. ■

## PJ Rudden named as Construction Sector Group Chairman of Innovation and Digital Adoption

Former President of Engineers Ireland PJ Rudden has been named as Chairman of Innovation and Digital Adoption by the Construction Sector Group (CSG). The CSG was established under the leadership of the Department of Public Expenditure and Reform (DPER) following the launch of Project Ireland 2040 and the National Development Plan in 2018. The role of the CSG is to ensure regular and open dialogue between Government and the construction sector and identify areas for action.

According to the recent 2020 CSG 'Building Innovation' report from the DPER, "the Government remains committed to investing public capital expenditure into the development of new social, economic and climate infrastructure. Grasping these opportunities in the face of COVID-19 requires overcoming challenges around capacity."

A new CSG innovation group has identified seven actions on innovation and digital adoption including a new Digital Build centre of excellence to be developed under

DPER supervision, a new Construction Technology Centre by Enterprise Ireland, a Construction Research Forum by the Construction Industry Federation and other innovations on construction technology and planning application digitisation to help streamline planning permission processes. The Innovation and Digital Adoption Group will be chaired by PJ Rudden, recent founder of Aengus Consulting, past Director of RPS and past President of Engineers Ireland.

Commenting on his new role Chairman PJ Rudden stated: "The challenge ahead is great as our industry recovers from the effects of COVID-19. We in the Group will seek to meet that challenge by developing smarter approaches to construction innovation, new learnings from national and international experience with a highly collaborative approach through architects, engineers, planners, surveyors, contractors, material manufacturers and suppliers.

"A greater culture of innovation and digital adoption through Building Information Modelling (BIM) is already delivering higher efficiencies in the leading firms in recent years. We must now concentrate on inspiring the SMEs and smaller subcontractors to come on board with additional training and upskilling opportunities. We need to gain greater productivity for our industry and that will undoubtedly help to reboot our recovering economy." ■





Pictured at the Gala at Home experience launch: ICE Awards Judge PJ Rudden with Mona McCrea, ICE Awards Lead Coordinator and Colin Walsh, ICE Awards Media Director.

## ICE Awards to deliver Ground-breaking Gala Event

The pandemic has created its challenges but also inspired some new ideas and fresh ways of working for the Irish construction industry. The Irish Construction Excellence (ICE) Awards team have risen to meet these challenging times head on and are providing the industry and its partners with a unique and immersive evening to celebrate excellence in Irish construction.

The ICE Awards 2020 Gala at Home experience will take place on 7 November and will see the industry coming together for a much needed night of unity and celebration to round off the year.

"The ICE Awards and our partners will bring together the best of Irish food, and entertainment, virtual awards presentations

### GALA AT HOME EXPERIENCE

All the hard work has been done by the finalists' teams, project clients and design team partners when entering, preparing for and attending their interviews in the Convention Centre Dublin where over 270 delegates attended and presented in front of the ICE Awards Judges. On 7 November the finalists and their teams can enjoy the Gala experience in the comfort of their own homes.

A nationwide delivery of gourmet food boxes will be sent to attendees showcasing great Irish food all topped off with a bottle of champagne. Entertainment will be provided on the night.

***"We will bring the industry together while staying apart, giving the industry and clients a night to remember which has never been done before in Ireland."*** Colin Walsh

and a social media event. We will bring the industry together while staying apart, giving the industry and clients a night to remember which has never been done before in Ireland," said Colin Walsh, ICE Awards Media Director.

The Irish Construction Excellence Awards are the original and premier recognition of performance excellence for the contracting sector in Ireland. The ICE Awards provide an opportunity for the industry to showcase and reward best practice across the full range of construction disciplines and project categories.

The Judges found the range and quality of of the 2020 finalists' projects and initiatives to be the best so far in the competition.

A full event with presentation of the finalists and announcement of winners will be streamed via a professional event hosting platform. Attendees will be encouraged to interact and mingle using the Awards platform. All the finalist category winners will be announced plus the Project of the Year which was decided by public vote and received over 15,000 nominations.

On the night prizes will be given out as part of the charity raffle in aid of Make-A-Wish, the ICE Awards 2020 charity partner.

Winners will be invited to a socially distanced trophy photo opportunity in Dublin and will be featured in the following issue of Irish building magazine. ■

## Comment

### LEADERSHIP

Autumn is here, and in this issue, we have our Leaders in Construction interviews. Industry leaders speak of their work over the past year across sectors and markets, what they are doing to deal with COVID-19, the changes they are seeing in the industry and their visions for the future. These interviews are with the people who will lead the industry into a more collaborative and innovative future. From these interviews, we can see that contractors are adapting to change, embracing new ways of thinking and working, and adopting tools that allow for remote and greater collaboration.

CIF President Pat Lucey tells us about the challenges he has encountered in his career and the leadership qualities he has witnessed and admired. Pat also tells us that now is the time for the Irish Government to show leadership with investment in infrastructure and replace the Public Works Contracts. These contracts are not capable of managing change. With the industry requiring leadership in innovation, we hear of the leadership experiences of PJ Rudden who was recently appointed Construction Sector Group Chair of Innovation and Digital Adoption.

The Quantity Surveying profession is changing with BIM and the use of digital tools. CItA Board Member Mary Flynn tells us about her roles within the SCSl and other organisations, and how the profession has evolved over recent years.

Our mega project featured in this issue is California High-Speed Rail. CEO Brian P. Kelly tells us about the challenges and progress made on America's first high-speed rail project.

COVID-19 has changed PPE and safety technologies on site. Etag tell us about their range of PPE stock and the technologies used to protect construction people. The company have also seen an increase in demand for their M&E fabrications. Etag have shown great leadership and vision in responding to the needs of the industry and offering innovative solutions to companies during this pandemic.

We see how collaborative the industry was in responding to lockdown and restrictions when returning to work. The proactive approach and what was learned over the past decade indicate that we are going to see great innovation in the years ahead.

There is all this and more inside. ■

# Signed, sealed and delivered

Head of the Construction & Engineering Group at Arthur Cox Níav O'Higgins has witnessed considerable change in the construction industry over the course of her career, not least, most recently, the unprecedented impact of COVID-19.



**MORE THAN** 25 years ago when Níav O'Higgins started out as a construction lawyer in London, she invariably found herself not only being the only woman in a room full of men when attending clients' offices for meetings, but often in a room that had Pirelli calendars on the walls.

"Never daunted, my abiding memory of many of those early encounters with clients was that while there might have been suspicion at the outset as to whether 'this young one' would really be able to help them and you had to work hard to win trust, once you proved yourself and that you knew what you were talking about, these clients were ever grateful and unstintingly loyal," she recalls.

Thankfully, things have evolved a lot since then and continue to improve for women across various areas of the construction sector, in O'Higgins' experience. "There are now great opportunities for women. Unfortunately, there is still a way to go. I am more than mildly outraged when I see panels at industry conferences entirely made up of men, when there are so many talented women now working in this area," she says.

"Given the changes happening in how construction is undertaken, and the new challenges and opportunities presented by the increasing use of technology, the image of construction will continue to change and hopefully more doors will open for women to get involved."

A good example of this is the Arthur Cox Construction & Engineering team of 12 associates, 10 of whom are women. O'Higgins and her partner, Karen Killoran, lead this team, which has succeeded in becoming one of the leading construction law practices in Ireland.

"In terms of accomplishments, I am incredibly proud of the team that I have helped to develop at Arthur Cox over the past 16 years. I have long evangelised about how fantastic an area I believe construction to be for a lawyer and happily I have finally succeeded in convincing others of this," she says.

"I am a great believer in training, mentoring and giving people opportunities from an early stage. For example, we run regular seminars on construction issues and encourage every member of the team to do presentations. This empowers people to really take an interest and want to be part of a group and its development. Most people who train with us are amazed at the breadth of work we deal with."

Engaged across a range of sectors, the Arthur Cox Construction & Engineering team is involved in some of the most exciting and innovative projects in the country, including the Facebook data centre, Intel's €8bn expansion project, the new north runway at Dublin Airport and over 900 mega watts of installed renewable energy projects.

One area O'Higgins expects to see more growth in going forward is high-tech logistics, largely because of all that has happened with COVID-19. "In addition, construction methodologies will adapt, for example, with more off-site work, and greater use of modular construction and other technology to ease the processes on-site. As in many other sectors of the economy, technological solutions in construction are being fast forwarded."

While the team has been kept busy with COVID-19-related work, O'Higgins has been impressed at the number of parties that still have the confidence to carry on and negotiate new contracts and embark on new projects despite the pandemic. "COVID-19 hasn't brought the shutters down on construction. There is still plenty of activity," she notes.

***"Force majeure is something everybody is talking about now, which wasn't the case previously. Most standard-form contracts include relief for force majeure events and change in law, but the way in which they are drafted varies considerably."***

## WIDESPREAD IMPACT

What makes this period unique compared to any other in O'Higgins' career is the fact that COVID-19 has impacted every single construction project and everybody in the industry is grappling with the same problem – managing the time and cost implications in the aftermath of the pandemic.

"The most interesting thing we have seen is that because every project, contractor, developer and contract is different, COVID-19 has given rise to a variety of responses," she explains. "Force majeure is something everybody is talking about now, which wasn't the case previously. Most standard-form contracts include relief for force majeure events and change in law, but the way in which they are drafted varies considerably."

As O'Higgins explains, force majeure, which appears in most standard forms, will in the majority of cases have applied to the mandated site shutdowns to allow the contractor an extension of time, generally without costs. Change in law provisions have also sometimes been available to deal with certain costs associated with regulations



and procedures mandated by government. But relief under one or both of these headings has not always been available. When it came to getting back to work, things became even more complex.

"In practice, what we have seen across the board, regardless of what the contract says, is parties taking a pragmatic and commercial approach to the actual time and cost implications of COVID-19, often opting to share the 'pain' resulting from this unprecedented situation," says O'Higgins.

***"Construction law is very much focused on contracts and contract law, in my view, is one of the most dynamic and interesting areas of law. In addition, construction contracts, though essentially a form of commercial contract, relate not only to managing financial and other commercial issues, but also result in something you can see and touch."***

"There are some exceptions to the rule where one or other party is simply not in a position to engage in any meaningful fashion. You tend to see more difficulties at the subcontractor level, where the pain might be too difficult for them to carry as they could be spread across 20 or 30 projects."

#### FUTURE IMPLICATIONS

Heading into autumn and winter, projects will undoubtedly progress but the re-imposition of restrictions is a very real possibility and news from the Brexit negotiations is currently not very positive. This makes a number of things really important in relation to construction contracts, according to O'Higgins.

"Firstly, parties should engage in sustained cooperation and increased advanced preparation to identify areas of risk and innovative mitigation strategies or

contingencies, both in the supply chain and in programme sequencing," she outlines.

"Secondly, it will be very important to ensure regular monitoring of progress on-site, recording of issues and timely service of clear notifications and/or claims. Contractors should be as clear as possible in their notifications of a potential problem, the measures taken to mitigate its impact and its specific impact on the ground. Failure to do this can contribute to disputes about the basis and extent of relief a contractor may be entitled to."

The challenges presented by COVID-19 have not dampened O'Higgins' enthusiasm for the world of construction, which she quickly learned to love while training as a lawyer at Masons, an international law firm specialising in construction and engineering.

"Construction law is very much focused on contracts and contract law, in my view, is one of the most dynamic and interesting areas of law. In addition, construction contracts, though essentially a form of commercial contract, relate not only to managing financial and other commercial issues, but also result in something you can see and touch," she says.

"I have met some truly outstanding people, both in design and construction, who are committed and rightly proud of the incredible buildings, roads, tunnels and so forth they have created. One moment that stands out for me is a site visit I made to Dublin Port Tunnel when it was under construction. The sheer engineering was breathtaking."

#### NEGOTIATING CONTRACTS NOW

Niav provides advice in relation to the key challenge of negotiating contracts in the current environment.

As it is a continuing pandemic and known about, certain provisions such as force majeure (depending on how they're worded) are unlikely to be triggered in new contracts solely as a result of COVID-19. Parties need to consider how the risks associated with potential future events related to COVID-19 which result in delays are to be allocated and managed in any new contracts being negotiated now.

The points to think about include the following:

- Does the agreed contract price take account of the costs of the measures required to comply with the legislation and public health guidance relevant to COVID-19?
- Does the programme factor in the impact of different working practices required as a result of the COVID-19 legislation and guidance? This would include possible adaptations to the site and working practices as well as supply-chain delays.
- What about further government mandated site shutdowns? Or site shutdowns by the contractor in compliance with the health guidance following a confirmed case on site? Or indeed a site shutdown ordered by the Health and Safety Authority?
- Have you agreed how you will deal with cost and delay risk arising from interruption to the supply chain, including availability of labour or materials?

These issues need to be considered and agreed commercially. They can be covered by amendments to existing mechanisms in the standard form contracts – but they do need to be considered before you sign up! ■





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# 'Cash is King' in Pandemic Times

In my previous article 'Construction Post Lockdown' I brought up the topic "Cash is King" in the time of COVID-19 and the fact that it will be a key criterion by the surety market in assessing the financial strength of any company looking to obtain bonds or bonding facilities.

**AFTER** further consideration and as we look forward to 2021 and beyond that term is going to ring loud and true not just for bonding requirement but for the very viability of any business in any industry. Cash is the lifeblood of any enterprise.

First, cash is the king because it cannot be changed. You cannot lie about cash. There are some numbers on the balance sheet or the business plan that can be manipulated to reflect opinions. Cash is not an opinion: the amount of cash you have is written in the summary of your bank account. Each company, especially new ventures, have to have a continuous focus on cash for two reasons. First, it is a measure of true

barrel is Brexit which creates uncertainty, uncertainty constitutes a lack of confidence for both consumers and investors. Pull the trigger on both barrels and you shoot confidence into a protracted coma.

Currently, it does not feel like we are in a recession or about to enter one because we are in a bubble of government support, that support is propping up jobs, balance sheets and cash flow but this is a short-term measure that cannot last. Central Bank figures show an increase of deposits by €3bn in April, EY chief economist Neil Gibson forecast an increase of between €8bn and €10bn in savings deposits by the end of 2020. While consumers have not been able to spend money in the short-

according to the Central Statistic Office, this is a blip due to a forced shutdown not due to a lack of demand and I'm certain that we will see a sharp increase in output as the industry plays catchup over the coming months.

However, this can be a precarious time for companies as the Government stimulus plans are reduced over the next six months or so, for those that have not managed cash or built up a cash surplus, stimulus withdrawal or any other economic surprise may be a shock too far.

The best advice I can give at this juncture is to make sure you prioritise the importance of cash. For a business, its availability is essential to not only avoid the possibility of bankruptcy, but also to take advantage of various expansion and growth opportunities which are sure to arise. ■

***"The best advice I can give at this juncture is to make sure you prioritise the importance of cash. For a business, its availability is essential to not only avoid the possibility of bankruptcy, but also to take advantage of various expansion and growth opportunities which are sure to arise."***

profitability and second it allows and supports the continuation of the company. Ultimately, it is a critical business performance metric which determines an enterprise's long-term success. A company may have a very high turnover but without the ability to generate cash it can easily fail.

Why am I harping on about cash? Well as a nation we are looking down both barrels of a gun, metaphorically speaking. The first barrel is COVID-19 which over a three-month period shut down our entire economy, this did as much damage if not more than the last recession and will take some time to recover due to ongoing restrictions. The second

term due to lockdown there is no indication of a spending spree as restrictions are lifted, indicators are that consumer confidence is low and consumers are preparing for a couple of tough years with uncertainty around employment. This feeds through to all levels of businesses, for consumers less eating out, less going to the cinema, will I or won't I buy a house, upgrade my car etc. From a business perspective they will hold back on investment for growth and may even contract in order to survive.

While the construction industry suffered its worst quarterly decline between April and June with output slumping to 45.2 percent

Colm McGrath,  
MD, Surety Bonds



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\* Extended until 10th Dec 2020 if you pay via ROS.



# Additional Voluntary Contributions and Tax Relief

## Why should we pay Additional Voluntary Contributions (AVCs) if we are already paying into our pension?

**THE MOST** compelling reason is to provide a higher level of retirement benefits. The larger the contribution, the larger the potential retirement fund.

In 2040 it is expected that only two people will be working for every one retiree, placing a pressure on public expenditure budgets. For those of us in today's workforce, we may need to face the possibility of a reduced State Pension or perhaps no State Pension at all.

When planning for your retirement, you will also need to consider what income you require between the age that you stop working and the age that you will receive any State Pension. The State Pension is currently payable (where applicable) at age 66, however this age is due to increase in the future. If you retire at age 65 will you have sufficient income from your pension arrangement to provide you with a reasonable standard of living until you become eligible to receive the State Pension? Paying AVCs now will give you an additional buffer should the age of retirement be increased.

### IMMEDIATE BENEFITS

For those of us focused solely on today and feel that retirement is a long way off, there is an immediate benefit of AVCs – tax relief. Paying AVCs will ensure you can avail of tax relief. This is something that will benefit you now and benefit you when you come to retire.

**1. Tax relief on the way in:** Tax Relief is given at your marginal tax rate of tax on AVCs paid (see the table).

There is no relief available in respect of PRSI and the Universal Social Charge and there is a maximum annual amount of earnings for which tax relief is given. Currently this is €115,000 p.a. This amount is adjusted from time to time by the Minister for Finance.

**2. Tax advantage for the duration of your retirement saving:** There is no tax deducted on any gains you make over the years you save for retirement – this compares well to other investment types where DIRT or CGT are applied.

**3. Tax free amount when you draw down:** Subject to Revenue limits, when you retire you can take a substantial amount of your fund tax free.

Whether you pay AVCs on a regular basis or as a lump sum really depends on your circumstances. If you are a PAYE employee and a member of an occupational pension scheme, or have a PRSA, that you contribute to by means of salary deduction via payroll, then you will receive your tax relief at source. Therefore a regular AVC payment would probably suit you best.

However, if you have other sources of income that necessitates a manual tax return each year then you may wish to pay an AVC prior to the end of each tax year to reduce your tax bill. You can make an AVC prior to 31 October (or later if you complete your tax return online – i.e. 10 December in 2020), each year and claim tax relief for the previous year. This will not only reduce your tax bill for the previous year but also your provisional tax bill for the current year.

### A SIMPLE EXAMPLE IN ACTION

Let's imagine you have a tax bill of €10,000 to pay for 2019 and preliminary tax of €10,000 for 2020 by 31 October 2020. You could write a cheque to Revenue for €20,000 and your job is done.

But say you wish to take advantage of available tax relief. Rather than pay the full amount, you pay an AVC of €5,000 to your pension. This will have the effect of reducing



Frances McNally,  
Manager CERS.

last year's tax bill by 40% of that €5,000 (i.e. €2,000). As preliminary tax is 100% of last year's bill, you also reduce the preliminary tax by the same amount (i.e. €2,000).

### MAKING A CHOICE

This leaves you with two clear options: Pay Revenue €20,000 or you can put €5,000 in your pension and pay Revenue €16,000 (i.e. €20,000 – €2,000 – €2,000). Your total spend is only €1,000 more, but for that extra €1,000 you pay Revenue the amount due and also have €5,000 in your pension fund – it's a win win situation!

Making AVCs to your pension arrangement provides great benefits – today and for your retirement.

For further information please contact our experienced team on [info@cers.ie](mailto:info@cers.ie) ■

Age	Contribution Limits for Tax Relief % of Net Relevant Earnings
Under 30	15%
30-39	20%
40-49	25%
50-54	30%
55-59	35%
60 and over	40%



# Leadership in Challenging Times

Founder of Aengus Consulting and Past President of Engineers Ireland PJ Rudden speaks of the need for leadership during this COVID induced recession and draws on examples of leadership in challenging times from a long career working on Ireland's major infrastructure projects.

**THIS PRESENT** pandemic is testing leadership like never before. It is challenging our way of life and also our employment and industrial strategies. Yet despite the many challenges, it also brings disruptive but enduring opportunities.

## OPPORTUNITIES

It often takes a good crisis to enable tangible reform of society. The pandemic has led to more remote working, less traffic on our streets and cleaner air and water in our rivers. It has also accelerated the adoption of digital technology in ways not dreamed of before. We must engage with these opportunities for greater collaboration, productivity and joined up strategic thinking for the future.

In Autumn 2015, I hosted a UCD Autumn Panel Discussion on the 'Digital Future for Ireland' bringing in speakers including the Irish CEOs of Google, IBM, Vodafone, SEAI and Silicon Valley venture capital company Atlantic Bridge. The Google CEO was asked to predict the likely future innovations of his US multinational five years away in 2020! "The sun is just rising over the California Hills a few minutes after sunrise," he replied "and as the pace of technology moves so fast, in terms of that day we only have a vague notion of where we will be a few hours from now say at 9am! Our most powerful models and algorithms can only see a tiny fraction of future certainty."

## EXPERIENCE

Leadership based on experience though must find a way forward. Leadership is a mix of many skills including vision, courage and ability to influence those around us through collaboration and communication. As we are now dealing with so much of the unknown, it is important for leaders to also engender resilience and trust. Focusing internally on our teams and focusing constructively on other collaborators will help leaders to cultivate the essential elements of emotional intelligence.

Research shows that as people rise through the ranks, their ability

to maintain personal connections with their staff suffer. Good leaders must not allow that to happen especially in challenging and uncertain times. Empathy needs to be learned and built, even rebuilt in times like these as priority now centres on the quality of human life.

Leadership, at all times must be positive, collaborative and constructive. Positive because out of most challenges will also come new opportunities. Indeed, it is often times of crises that teach us new leadership skills and open up new avenues of business and opportunity.

Leadership is about making the difficult things happen – difficult because nobody else wants to or can do it and also because delays in decision making make it even more difficult to achieve. Difficult, because the problem in scale and extent has never been experienced before, as indeed is happening right now.

***"The keys that unlock best leadership potential to deal with difficult situations are often the ability to look far beyond today's immediate challenges. This will require vision. You also need to lead by example to share with those around you."***

Innovation is often required to show that entirely new transformation of the situation onto an entirely different plateau is often the key to problem-solving. This is because the most intractable problems of their very human nature can never be solved on the same plane or level on which they were created. That will undoubtedly create new opportunities never before envisaged but creating a transformation which will at the same time solve a whole lot more issues that never were quite envisaged at the start. A few examples later from my own career.

The keys that unlock best leadership potential to deal with difficult situations are often the ability to look far beyond today's immediate challenges. This will require vision. You also need to lead by example to share with those around you. At times too, you need fearless courage to directly confront and eliminate conflict on the team or within the project community. That courage builds influence that in turn engenders trust. Courage also builds capacity, accountability, collaboration and teamwork which are essential to success.



## CHALLENGES

I was often tested to demonstrate these skills. In the national waste management issue, I found that political will and backing is key to success with a most sensitive human issue. Thus the political decision in the late 1990s to transcend the problem from the individual county to the regional model allowed for better-scaled options and more innovation opportunities.

The technical challenges also required the essential ingredients of leadership – vision, courage, collaboration with the people and elected members, communications, trust, resources and especially enabling the success of local authority operational staff and your own staff around you. We produced a regional strategy and then a Dublin regional plan which was based at looking at a number of quite different scenarios compared on technical, environmental, social and economic grounds thus enabling a balanced integrated and cost-effective approach.

The four Dublin Authorities at both executive and political levels considered the recommendations that would bring recycling up from 5% to 45% of waste generated and landfill down from 95% to 20% with the remaining 35% to waste to energy incineration with district heating for city quays.

Another major challenge was undertaking a national strategic study ‘Gas 2025’ on our natural gas network for the Department of Energy/Bord Gáis (now known as Gas Networks Ireland) to give security of supply which was highly reliant on a single Cork-Dublin pipeline from Kinsale Field and a single subsea interconnector from Scotland. This challenge created the opportunity to supply gas to the Midlands and West for the first time and to accelerate the pace of change from fossil fuels to cleaner natural gas as fuel for ESB power stations around Ireland. There I led another international

consortium who recommended in 1999/2000 duplicating the gas interconnector from Scotland and a new gas pipeline to the West via the Midlands, Galway and Limerick with the future possibility to connect to a possible new Corrib Gas Field off Mayo.

The planning and construction of the gas pipeline to the West, construction of a new large 350km pipeline from Gormanstown Beach in Meath to Limerick via Galway in the one summer season in 2002 was a huge challenge for three international consortia employing some 1,800 staff led by Roadbridge in Leinster, BAM Ireland in Connacht and PJ Hegarty & Sons in Munster. This project required wayleaves through seven counties, 1,300 landowners and 500 crossings of roads, canals, archaeology and the River Shannon twice at both Athlone and across the Foynes Estuary.

***“We also need a low carbon transformation to rebuild our economy, to reconfigure our buildings, our energy systems, our transport systems, our heating systems, our water infrastructure and telecommunications networks.”***

It was a very wet season in 2002, severely challenging project delivery. We therefore substantially reduced the project management risk by ensuring a very high degree of collaboration between contractors and employer. Contract certainty in terms of quality, time and cost was successfully achieved by encouraging greater collaboration and even advance payments to the contractors to assist with overcoming the extraordinary wet ground conditions. The contract was therefore reconfigured to deliver on time and within budget through incentivisation and collaboration and not confrontation.

That was followed by the Shell Corrib Pipeline in West Mayo which had run into very difficult local objections when in 2007, I was asked to lead the rescue of the project five local residents were released from jail after 94

days. We led the essential reconfiguration of the local community relationship by intensive stakeholder engagement thus lowering the pipeline pressure and rerouting it further away from homes. This involved reconfiguring the project based on Aarhus Convention principles and then bringing it through the statutory planning processes again to ensure its completion in 2016 just as the Kinsale Field was depleting. As we now know, it was just in time in national security of supply terms with the prospect of an uncertain Brexit now looming.

Further challenges/opportunities were to keep ‘the lamps burning’ in those recessionary periods in Ireland arose when elected President of Engineers Ireland at the start of the last decade (2011-2012) and subsequently as President of UCD Engineering Graduates Association (2012-2016) all in the midst of

the 2008-2015 recession in construction. Both of those roles required a different kind of leadership recipe mix to influence, to inspire future leaders and thus give national leadership on the importance of research and development leading to innovation, enterprise and greater job creation as the country and the construction industry slowly recovered.

So let us begin to do the same as we approach the Autumn/Winter of 2020/21 – to confront and beat the ongoing coronavirus by adhering to the public health guidelines. We also need a low carbon transformation to rebuild our economy, to reconfigure our buildings, our energy systems, our transport systems, our heating systems, our water infrastructure and telecommunications networks. ■

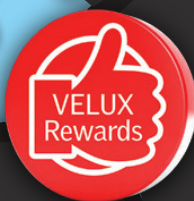


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# €500m Construction Stimulus Package

Minister for Public Expenditure and Reform Michael McGrath TD describes to Irish building magazine the €500m July stimulus package for construction, and we get the views of Construction Industry Federation Director of Communications Shane Dempsey and Engineers Ireland Director General Caroline Spillane.

**THE JULY** stimulus included a further €500m capital expenditure being allocated to Government Departments in order to accelerate a broad range of projects in 2020 and support the momentum of economic recovery in 2021. The projects and programmes have a wide geographic and sectoral scope, covering housing, education, sustainable transport, environmental protection and heritage/tourism.

They include:

- €75m for grants to primary and secondary schools for minor works and enhancements;
- €113m for transport infrastructure including local authority support for pedestrian and cycling accessibility, funding for rail and national road maintenance and renewal and repair of other essential transport infrastructure;
- €10m for the OPW to undertake minor works on modern and historic buildings as well as expediting works on other projects;
- €48m for a range of projects in the culture and heritage sector including upgrading our National Heritage sites;
- €115m for peatlands rehabilitation, the Energy Efficiency National Retrofit Programme;
- €83m to returning vacant local authorities' properties to use and investment in Irish Water;
- €17m for the redevelopment of Howth Pier and Fishery Harbour Centre, investment in on-farm renewable energy, and rewetting of Coillte lands;
- €15m for projects in the area of Rural and Community Development including the Enhanced Town and Village Renewal Programme and improvements to community centres;
- €24m for capital projects in the justice sector including courts, prisons and Garda projects.

## MINISTER MCGRATH

Regarding delivering on the plans presented in Project Ireland 2040, the latest details of the Government's approach are set out in the Build 2020 Report which Minister McGrath published in July. As presented in that report, the following four elements will continue to underpin the approach adopted: Increased public investment; Communicating effectively for industry confidence; Securing the skills pipeline; Driving productivity improvement.

Looking to 2021 Minister McGrath says, "As set out in Project Ireland 2040 there will be increases in public investment in many sectors in 2021, including housing, climate action, and in particular in transport."

***"Through the work of the Construction Sector Group it will be important to continue to closely monitor the impacts of COVID-19 on the sector in order to inform appropriate responses to be adopted as necessary."* Minister McGrath**

The Minister says a range of measures have been undertaken by Government in response to COVID-19 to ensure the sustainability of the construction sector and provide confidence for the industry. "Through the work of the Construction Sector Group it will be important to continue to closely monitor the impacts of COVID-19 on the sector in order to inform appropriate responses to be adopted as necessary," he adds.

Regarding the review of the National Development Plan, the Minister says it is important to note that COVID-19 will be just one of many factors which will need to be considered. "Policy for infrastructure

and construction must also look beyond COVID-19 in the context of Ireland's long-term plan, Project Ireland 2040."

Over €17bn in public investment will be delivered over the course of 2020 and 2021 in line with Project Ireland 2040. This includes the additional investment made in direct response to COVID-19 as well as the July stimulus investment. "This level of investment will provide a wide range of investment across Ireland in sectors such as housing, education, water, health, transport, climate action and so on."

The Minister says the details on specific projects can be found in the Investment Tracker on gov.ie and he encourages Irish building magazine readers to review the information provided there. "That is also supplemented by the MyProjectIreland

mapping tool which allows you to see where the different investments are around the country," he adds.

Public investment in construction in Ireland in 2020 and the coming years will remain among the highest in the EU, in spite of COVID-19 the Minister tells us. This investment is required for the development of new social, economic and climate infrastructure. "In order to deliver on Project Ireland 2040, Ireland needs a competitive, dynamic, and sustainable construction sector that delivers high-quality physical infrastructure for all our citizens. In the short-term, the focus has been on managing

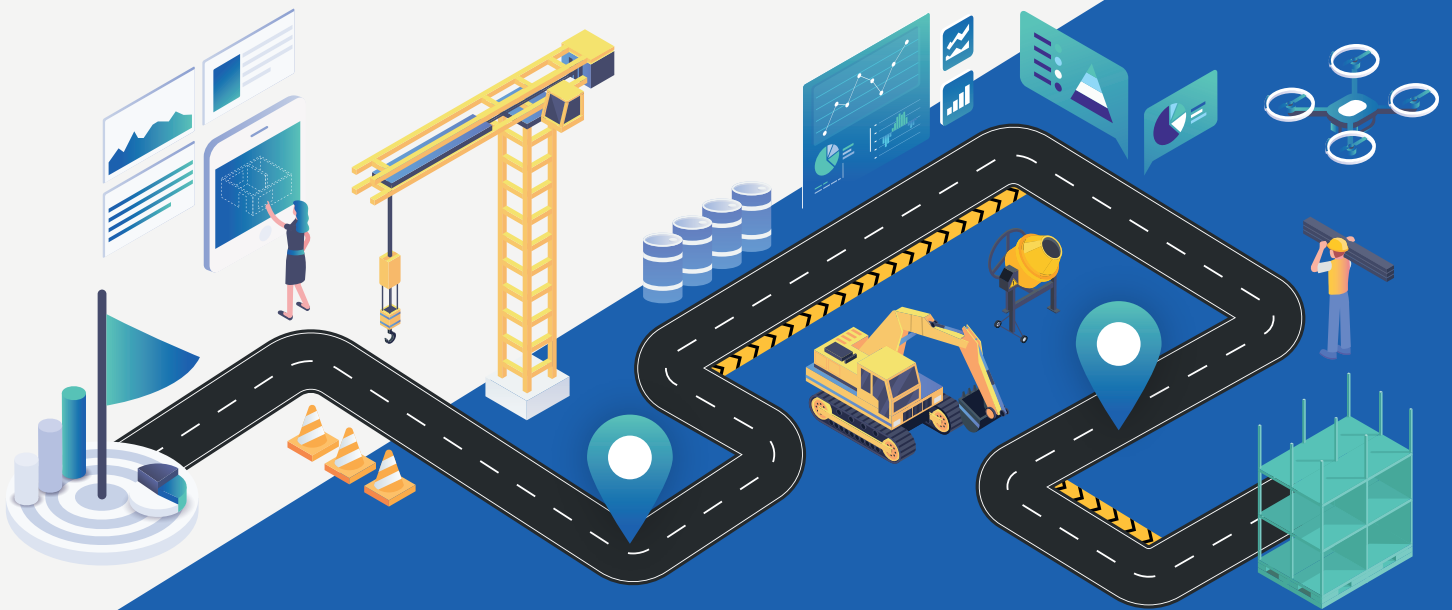


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the risks posed by COVID-19 to society, workers, projects and the industry itself. In the medium-term, the capacity of the sector will likely remain an important consideration and can be increased through productivity growth and the development of the skills pipeline. Both Government and industry are undertaking a wide range of measures to address these risks."

Shane Dempsey and Caroline Spillane give Irish building magazine their thoughts on the Government's package.

#### SHANE DEMPSEY

The CIF has input into the Government's Programme for Government, the July stimulus, its medium-term plan and the annual budgetary process. Speaking to Irish Building magazine, CIF Communications Director Shane Dempsey says, "As ever with Government initiatives, the July stimulus

our climate change goals. Now is the time to invest in long-term capital infrastructure and housing that will underpin sustainable, competitive growth and societal development. Now is the time to be brave and ambitious."

"The coming years has become a very nebulous concept," he says. There's a probabilistic cloud of scenarios that could unfold that will affect the environment construction companies and potential investors face. "Ireland, the Government and this industry need to 'control the controllables' as much as possible over the coming months. On the industry side, companies are in completion phase since reopening in May. For example, housing completions are expected to be higher than originally feared. Any optimism is misplaced because commencements are down 45% year on year. This is probably indicative of the rest of the industry, barring some subsectors and investors generally."

Looking ahead he says, generally, it's expected that there will be a pause in new investment that will be reflected in a drop off in the commencement activity mid next year. "This would be lethal for the industry and the wider economy so the CIF is calling on the Government to 'control' the flow of activity in the pipeline," he adds. A significant investment in public infrastructure and housing is absolutely essential to keep our industry, one of the only few operating in our economy's self-induced coma. Every euro invested

in public infrastructure and housing, generates employment and tax revenue and wages that will be spent within the domestic economy. In addition, Shane says international investors and global companies considering Ireland as a destination, are more likely to respond positively if they see Ireland Inc powering in developing the critical infrastructure such as roads, rail, housing, wastewater etc, that underpin competitiveness.

package had some positives and some missed opportunities. The Government are, like everyone else, trying to adapt to the new parameters set by COVID-19 and are making decisions at an unprecedented velocity with only partial information; so no package is going to be perfect." He says the CIF has been engaging extensively with all levels of Government to firstly ensure the industry can reopen and operate as safely as possible.

***"Now is the time to invest in long-term capital infrastructure and housing that will underpin sustainable, competitive growth and societal development. Now is the time to be brave and ambitious."***

*Shane Dempsey*

Construction is best-placed to lead a recovery in the domestic economy. In addition, Shane says, "Our industry is continuing to facilitate the strong growth in Foreign Direct Investment coming into the Irish economy. Both are critical to the recovery of the Irish economy in the short-term. In the long-term, out to 2040, our industry will be instrumental in delivering a new regionally balanced economy and society for Irish people and in delivering on

Shane says with support available from the EU, including multiple grants, reduced state aid rules and cheap long-term money on the markets, now is the time to borrow and invest ambitiously. "This debt and that of dealing with COVID-19 will roll on to the next generation of course but so will the fully functioning, high employment economy we create in the process. The trick is to ensure the money borrowed is invested wisely and sustainably. Through this lens, €1bn invested

in housing, climate change-related retrofitting programmes or road-building for example, yields thousands of jobs, transforms society or houses our population; that investment in other industry sectors unfortunately simply keeps them treading water. Both are totally necessary but I'm concerned that the Government will not take on the debt to support those unfortunate sectors in shut-down and to make the smart investment in infrastructure and housing that will pay off over the next 25 years."

#### CAROLINE SPILLANE



Director General of Engineers Ireland Caroline Spillane says the professional body welcomes the July stimulus package and the €500m committed in additional capital investment. "We believe that this investment in capital spending will provide for vital social, environmental and economic infrastructure for Irish society."

Caroline says, "The package presented in the July stimulus represents a major opportunity to make further inroads in the transition towards a cleaner and more sustainable future, particularly within the construction sector, such as the €113m for active travel, public transport and renewal of transport infrastructure, €100m investment in the Energy Efficiency National Retrofit Programme, and €60m for returning vacant local authority housing to use and investment in water infrastructure." This investment will help to maintain employment, enhance wellbeing by providing critical services for our citizens, and enable industry to respond to challenges arising from Brexit and climate change, Caroline adds.

Speaking of her concerns and recommendations for construction investment over the coming years, Caroline says all investment decisions must be evidence-based and climate action must underpin all investment, using long-term modelling and evidence-based solutions. ■





# Legacy of Leadership

CIF President Pat Lucey talks of leadership in challenging times, the challenges he encountered in his career working in Britain in the 1980s and coming through the last recession with the burden on the industry of inadequate contracts. He believes leadership is now needed from the Government and industry to get through the coming years.

**PAT LUCEY** started his career in Cork with M.C. O'Sullivan Consulting Engineers, he would go on to work for two more companies. Due to the recession in Ireland and shortage of work Pat joined Christiani & Nielsen in 1988, spending five years working in Britain. Moving back home, Pat joined John Sisk & Son in 1993, establishing the Civil Engineering Division and spent 27 years leading major projects across Ireland and the UK until his retirement this year. As a leader, his experiences included great challenges and he witnessed great leadership qualities in others along the way.

## RECESSIONS

In London in the late 1980s, Pat worked as an engineer on the installation of foundations for buildings in Canary Wharf. Major civil works interested him from the beginning due to the challenges that arise. Canary Wharf was a building site at the time. "Once you go into the ground in a place like Canary Wharf, you never know what you are going to find. The problem-solving is attractive to many engineers." Moving to estimating, Pat worked with the Christiani & Nielsen's chief estimator before returning to site again.

In 1993, Pat took the opportunity to return home. The new challenge was to establish John Sisk & Sons' Civil Engineering Division he tells us. "Kevin Kelly was the Sisk MD and this influenced me to join. Even though Sisk had a great track-record, building the

***"Contracts should be updated over time as the industry is changing, and how we undertake work is changing. The legal profession has been brought more into construction with the use of the Public Works Contracts. It has not helped the industry to have the spin-off of a separate dispute industry."***

civil engineering arm wasn't easy due to the economic climate. Competition was incredible; and still is to this day." Sisk undertook large jobs, including PPP projects, in the decades following. When the next recession came, with past experience, Pat focused on London, Scotland and Wales, tendering and winning major projects with large clients like the Welsh Government and Crossrail.

What stands out in Pat's memory is the recession starting in 2007/2008 and the introduction of the Public Works Contracts. Despite Government spending, he says the civil sector has not since come out of the recession. "Large contractors built up capabilities to undertake major projects and move on to the next job, but the recession turned off the tap. The Government introduced the Public Works Contracts, and below cost tendering under difficult contract conditions became the norm."



Irish companies looked to Britain with the upcoming London 2012 Olympics, opportunities with Crossrail, local authorities and water authorities. Sisk partnered with Dragados who had major tunnelling capability and the contractors won the C305 Eastern Running Tunnels. "There was major investment in London and excitement in construction," he recalls. "Ireland's had a feeling of deflation and no signs of sustainable work."

There are learnings from the last recession. COVID-19 restrictions will be in place for the foreseeable future and the industry is looking with concern at the work pipeline while still bearing the risk and burden of the contracts from the last recession. Pat believes leadership is needed to drive change.

## CONTRACTS

The CIF President says the Public Works Contracts must be replaced. This is where the Government has to show leadership. “The contracts cannot deal with COVID related issues and this is one example that highlights the weakness of the contract suite. The contracts do not deal fairly with change and construction is full of change. The risk is passed to the contractor.” Employer’s staff are discouraged from making decisions at site level and pass issues to dispute resolution. “People have gone through job after job, not able to make decisions to progress their project. That promotes low standards in construction and inhibits professional development.”

Pat says Government needs to work with the professional bodies that have developed contracts that have been tested on major projects and reacted to COVID better than the public contracts. “Contracts should be updated over time as the industry is changing, and how we undertake work is changing. The legal profession has been brought more into construction with the use of the Public Works Contracts. It has not helped the industry to have the spin-off of a separate dispute industry.” Pat says contractors used to be able to undertake contracts more easily, where the contractors’ people could focus on delivering work, and contracts had better mechanisms for dealing with change and resolving issues at site level.

***“For every euro the Government spends the private sector will spend two. Spending on construction will build confidence. The Government should say it loud and say it clear that they will increase spending on the National Development Plan and accelerate it and get more work out in 2021 and 2022 than what has been planned.”***

Overall, clients are varied in response to the additional costs of dealing with COVID-19 he tells us. “Some clients are looking at ways to mitigate costs. The public sector is looking at what they call burden-sharing. This approach could drive a contractor into an unprofitable contract. Typically public sector profit margins are tight, 1% to 1.5%. One or two bad contracts could put a contractor out of business.”

## STIMULUS

Pat is proud of the CIF’s work on the Construction Sector C-19 Standard Operating Procedures document but says there are new challenges ahead. “The SOP was developed to a high standard using members expertise harnessed through the CIF policy committee framework. This was to get people back to work. Now that we are back, we have to keep people safe and find ways to improve productivity with the new constraints.”

Pat believes the Government needs to provide greater certainty. “CIF members are concerned about work after Q3 2021. The recent meeting of the Construction Sector Group had the architects and engineers voicing concerns over their current work pipeline. The flow of work for these professions ends up on sites as work for CIF members.

“Visiting the CIF Branches nationwide, I heard the concerns of our members. Branches outside Dublin are looking for more work. There are major projects such as the M20, the M28, Galway Outer Orbital, that when they go ahead will encourage private sector companies to invest, as private money follows public money. The Irish Government must show leadership.”

Pat says generally what happens during recessions is the Government turns off the tap on construction expenditure. However, it is different now as money is cheaper to borrow. “For every euro the Government spends the private sector will spend two. Spending on construction will build confidence. The Government should say it

loud and say it clear that they will increase spending on the National Development Plan and accelerate it and get more work out in 2021 and 2022 than what has been planned.”

On the positive side, the CIF President says trust is developing around the Construction Sector Group, chaired by Robert Watt of the Department of Public Expenditure and Reform. “This is a great forum for open dialogue between industry partners and the Government and is an example of successful collaboration. I find that it has been beneficial and we are developing trust with the partners.”

## LEADERSHIP

Asked about what we need in the industry now, from his experience, he says good decision-making, communication and vision are critical to getting through the coming years, giving us examples of people who changed Irish construction. “From the people that I have worked with, not necessarily CEOs or MDs, I have seen people display characteristics that I admire, qualities that can be recognised as being of benefit to those around them and their work. Some people leave great legacies. Collaboration is key to problem-solving. Brian Keogh of Sisk was the best JV director I have worked with. On JVs it is important to share the risks and the rewards. He was great at building relationships that stood the test of many challenging issues.

“Larry Fallon, a civils general foreman who recently passed away had a great approach to decision making. When there was a big task coming up, he would plan in advance, analyse it, and get the input of project personnel and others in the organisation, finding the best solution and taking the responsibility of making the call

himself. Working with a person like this has positive influences on the people around them. It is positive, inclusive and sets high standards.”

Other leaders across the industry have impressed Pat. “John G. Sisk had the foresight to start a company in Africa and established Ascon with a Dutch partner. He had great vision, leaving a strong company behind him. At Roadbridge, Pat Mulcair left a company that was at the peak of earthworks productivity. On the consultants side, people like Joe O’Donovan displayed great qualities: knowledgeable, direct and fearless in how he approached challenges. Jerry Grant was my first manager at M.C. O’Sullivan and has great communication skills. Jerry is a person that treated people with respect whether you were a county engineer or graduate engineer. A rare and inspirational quality.”

With the present industry leaders, Pat says they must ask what legacies they are going to leave. “Now is a testing time. We need decision-makers and visionaries that can make our industry better. I would ask them, ‘What will you leave behind?’” ■



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# A 360 Approach



Steve Bowcott, CEO, John Sisk & Son, on why safeguarding workers' mental health should be the primary concern in the industry, fostering the talent pipeline and strategies for recession-proofing.



**MENTAL** health is on Steve Bowcott's mind. Sisk recently won the 'Best in Class - Mental Health' Award at the Ibec KeepWell Awards, in recognition for work that the company's Health & Wellbeing team have done over the past number of years.

"Sisk has run a mental health programme for the past four years and in the past year we've launched 'I am Here' which encourages everyone across the company to keep an eye on their colleagues and to check in with them," Bowcott says. The company has trained 120 people in the skills required and will continue to add to that number, as the scheme continues to be a top priority.

A UK analysis of deaths from suicide in different occupational groups, between 2011 and 2015, found that the risk of suicide among men in construction was three times higher than the national average. The highest risk was among building finishing trades; particularly, plasterers and painters and decorators.

"On average, between two and three men a day are taking their own lives, in our industry, between the UK and Ireland," states Bowcott. "When you think about what we've achieved in improving safety; when I started in the industry over 150 men were dying in site accidents in the UK each year. The industry is losing about 20 people a year in workplace fatalities now, which is still too many, but we are losing about 1,000 a year with men in our industry taking their own lives."

"What we've found is that often, people are reluctant to speak to family or friends but may speak to their work colleagues about mental health issues. We are now unlocking that and getting far more of all of our staff, men and women coming forward and asking to have a chat. And that's really good news. When people returned from the lockdown, we requested that everyone have a one-on-one with their line manager, just to check in with them to see how they're doing, how they got on during lockdown, how they feel today."

## THE TALENT PIPELINE

Protecting the talent pipeline coming into the industry is another issue Bowcott feels very strongly about, particularly in light of the spectre of recession looming: "We must not make the mistake that's been made in all the geographies, in Ireland and the UK, if we do go into difficult times. We have to ensure we continue to take young people into our industry."

He points to the three-year Sisk Excelerate programme, for graduates of Civil Engineering, Construction Management, Building Services or Commercial/Quantity Surveying, as an excellent opportunity on offer: "They see our company, every single department, they're well paid, they move around, we pay all the expenses and at the end of the three years they can decide which part of the industry they want to be in."

Although the company currently has over 400 young people in training, between Sisk Excelerate, Engineering Excellence the company's two-year programme and trade apprenticeships, he is concerned that this year the flow of talent applying has stalled. "We've got an enormous amount of work to do in the industry because that's our lifeblood and there is definitely a drop-off already this year, whether they are not applying anywhere because of the uncertainty...I hope it's not lost, so we're working hard now to get into all the universities and schools."

## BOW WAVES

This year has hit Sisk, like every other company, but all is not lost, according to Bowcott, with some major contracts being delayed rather than cancelled. "We would have had our biggest year ever in the history of Sisk in 2020," he says. "We were aiming for about €1.75bn and we'll do about €1.54bn losing about €200m in revenue this year, down to COVID-19. The good news is that it



will be rolling into next year, the contracts are not being lost. They've been pushed back."

"Probably one reason why we're going to have a good year this year," notes Bowcott, "is because pre-COVID we had that bow wave of opportunity and investment coming from 2018-2019." In 2019 Sisk delivered turnover growth of 19% to just under €1.4bn, profit before interest and tax increased 9.9% to €31.1m and shareholders' funds increased to €85.4m. The Group has high levels of cash and has no bank borrowings so it is in a very strong and stable financial position.

"We've got about €185m cash in the bank and no debt and that's the real key, when times are tough, cash is absolutely so important," he says. "Customers are paying us, we're paying the supply chain and they're paying their employees. Recessions always have a bit of a bite where one client doesn't pay or aren't paying until later. This is very different. It's really honourable amongst all the contracting fraternity. That is quite unique and really encouraging."

***"A major project highlight for us during 2019 was the official opening of Center Parcs in Longford Forest following a rapid build process to construct 446 lodges and 30 apartments as well as restaurants, administration buildings and the feature sub-tropical paradise swimming pool and spa."***

#### MILESTONES

The Group employed an average of 1,735 people in 2019 and is recognised by its global clients as world leaders in safe delivery. As part of its wider group of companies Sisk can offer facilities management via Sensori FM, its 50:50 JV business with Designer Group. It also acquired Vision Built in Galway in 2019 which specialises in the design, manufacture and installation of steel frame building structures.

"A major project highlight for us during 2019 was the official opening of Center Parcs in Longford Forest following a rapid build process to construct 446 lodges and 30 apartments as well as restaurants, administration buildings and the feature sub-tropical paradise swimming pool and spa," says Bowcott. "We also completed the iconic new grandstand and entrance facilities at The Curragh Racecourse last year."

In the current year, despite the challenges of COVID-19, construction of a significant new bioprocessing facility for Johnson & Johnson at Ringaskiddy in Cork Harbour is nearing completion. In Dublin, the company is continuing to progress the delivery of the Fibonacci Square office development in Ballsbridge, the redevelopment of a prominent commercial site on Nassau Street in the city centre and in Wilton Park,



an office development over nine floors adjacent to the Grand Canal. The major revamp of Pearse Station in Dublin took shape during 2019, a flagship project for the Sisk Civil Engineering team which was completed in 2020. Among ongoing active projects in Ireland is the enabling works at the Dunkettle Interchange project in Cork.

In the UK, the International Convention Centre Wales at Celtic Manor was completed and opened for business. "In London, key milestones were reached on our two residential projects for Quintain at Wembley Park," adds Bowcott. "We also completed the handover of the Boeing Goldcare Hangar at Gatwick Airport."

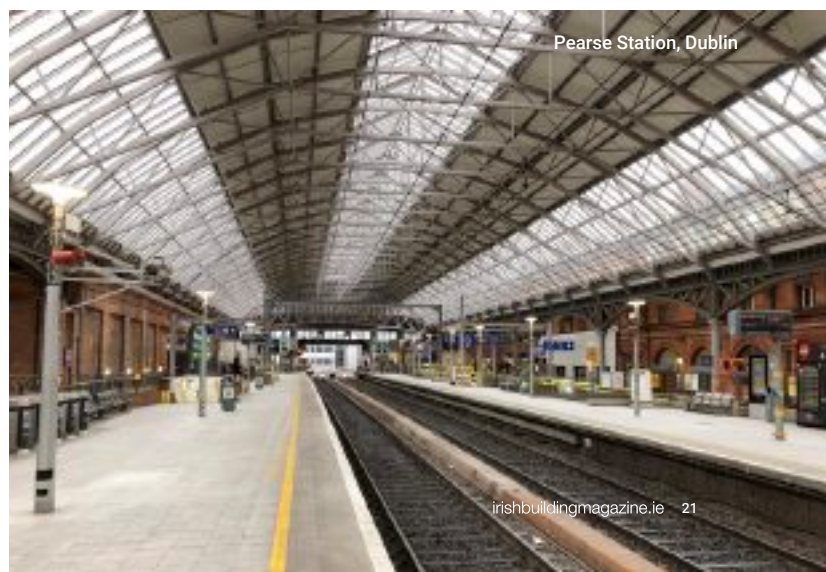
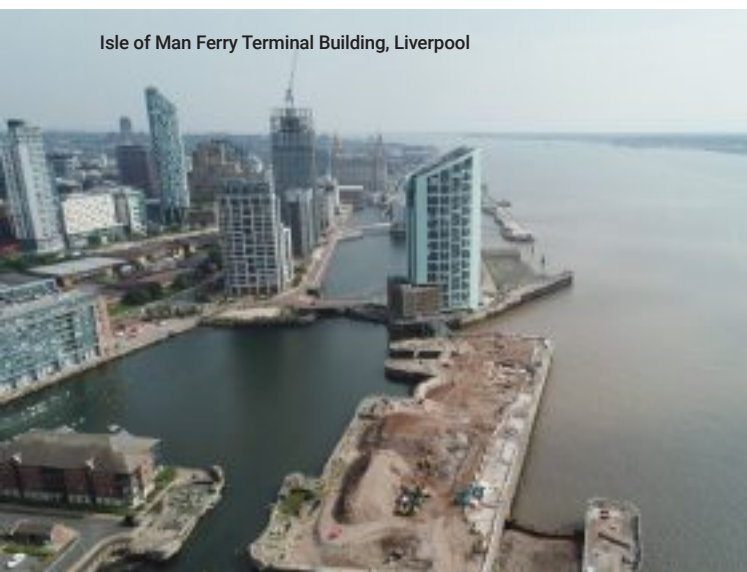
Other new projects during 2019 included a mixed development for Rockwell at Canary Wharf, the new Isle of Man Ferry Terminal Building in Liverpool, civils work at York Central, and the tram extension project in Blackpool.

#### STRATEGIC CHANGES

As the company's management gets together over online workshops and conference calls to ensure its three-year rolling strategy is signed, sealed and delivered by the end of October, this year's events will impact how that looks. "We are concerned about 2022, so our strategy will reflect two things: one, the consistent revenue as of today and secondly, a step back strategy for when we plan, if necessary, for a recession in 2022. So we'll have both strategies in play."

"We changed our strategy quite dramatically in 2016. We decided to do what we call 'three legs on the stool'; Ireland is clearly our backbone, then we needed to grow profitably in the UK and two years ago invested quite heavily in growing Europe."

Last November the company introduced the reorganisation of the business into three primary operating divisions: Ireland & Europe, UK & Civils and Construction Services. The new management structure saw them face into this year with three separate Chief Operating Officers. When asked how this new structure worked out when facing into a crisis, Bowcott says: "I suspect you'd call it lucky!"





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Of the three new COOs he says, “They’re all working very closely together, they not only share customers but they actually drive their business.” Donal McCarthy is Chief Operating Officer for Ireland and for all business sectors in Europe. Mark McGreevy is Chief Operating Officer for the Construction Services business, including Sisk Living, Sensori FM, Vision Built and Strategic Projects, and has retained his role as Commercial Director for the Group. Paul Brown is Chief Operating Officer for the UK business and for Civils across the company. “There are so many learning experiences between UK and Ireland from a Civils point of view that they can help each other massively,” Bowcott points out.

## SECTORAL SPREAD

“There has been a change in the sectoral spread of the business since 2015. When we looked at the business back then we saw that we needed to expand into other sectors. Our biggest sector in 2019 was high and low rise residential. Now we have 2,400 units under construction in Ireland, with a further 2,800 units underway in the UK. That’s a massive change from 2015. We are now strong in data centres, life sciences and in commercial and residential as well. That profit and revenue

***“Our biggest sector in 2019 was high and low rise residential. Now we have 2,400 units under construction in Ireland, with a further 2,800 units underway in the UK.”***

growth will be vitally important as we are heading into a more challenging economic environment,” says Bowcott. “Our approach has always been to look to grow business in key sectors outside Ireland where we can build on existing client relationships or sector expertise.”

The decision was made to consolidate the Ireland and Europe business together as a construction unit because so much is transferable in the life sciences and data business, as well as for Primark, a major client that is consistently expanding, opening new stores across the continent. “Our Irish teams are more than prepared to travel,” he notes. “We have worked across Europe for example for Primark for many years and are now working on a number of data centres in Sweden for clients we have worked for in Ireland. We need to broaden our base and now we are focused on key growth sectors such as data and life sciences across all our geographical markets but in particular in Scandinavia, Benelux, Austria and Switzerland.”

Ireland is still the biggest part of the business (55%), with about 30% in UK and 15% in Europe. “Our European and Northern European business is going quite nicely in data and life sciences which are both growing



worldwide,” says Bowcott. “We’ve managed to balance what we think could be a downturn in Ireland by a stable revenue in the UK and a growing revenue in Europe.”

## PRODUCTIVITY & TECHNOLOGY

Productivity is something that has long been a concern of Bowcott’s and he still feels Ireland is not at the level it needs to be. However, the fears of social distancing on sites causing a massive blow to productivity seem to be dissolving, as he notes most sites are back up at 90-95% of their previous levels, with all safety measures in place.

“We are working very differently,” he allows. “The way we deliver materials for example; we normally deliver materials three or four times a day from our stores. Now we do it once a day. And that’s incredibly efficient by the way.”

Efficiencies have been helped along with technology such as a 360-degree camera system which surveys every room and can measure and predict time needed on builds and when materials will be needed. The automated surveying device is already being trialled on the project in Cherrywood, Dublin. “In just five hours, it can do a 300-room project,” says Bowcott. “It spits out the data and tells what’s missing and where you are on the programme.”

Drone technology has already been a game-changer, and Bowcott describes a recent survey on a listed building where a drone took 2 billion data points in 4 days. “If we had done that in the past, it would have taken us months.”

Cognitive buildings is another development he is enthused about. Sensori FM, the 50:50 JV with Designer Group, delivers both planned and responsive facilities management and uses the latest technology to help clients manage and operate buildings effectively. Cognitive building technology in offices can

offer customised solutions for clients to ensure energy consumption is minimised and the building is operating as efficiently as possible.

## A SUSTAINABLE FUTURE

A sustainable future for society encompasses a number of areas in which Sisk is making inroads – in its own supply chain, in its involvement in social housing building and in encouraging a sustainable pipeline of talent by encouraging young people and in particular women to join the industry.

“Sustainability is a key issue for Sisk and we will publish our vision for the next ten years in the coming months. We will show leadership in this area and demonstrate to clients we can reduce our carbon footprint and deliver projects more sustainably, using modern methods of construction that are most appropriate to each project and that improve the quality and reduce the impacts of what we build,” says Bowcott.

The company is changing its fleet to all-electric vehicles and installing chargers on all offices and sites, as well as installing LED lighting across sites and offices. “At site level one of the biggest consumers of diesel is tower cranes. We have been working with UCD on designing battery packs for them,” he says.

“We are also embracing biodiversity, encouraging bee colonies and ant farms on our projects where we can. This will all be important in encouraging young people into the industry. They are asking about issues such as diversity, sustainability and environmental policies before they will work for a company.”

While we face into a lot of unknowns over the coming months and years, Bowcott is keen to keep an eye on the issues that are important, as well as the bottom line. “The industry as a whole needs to understand and embrace this approach. Clients, architects, designers, engineers and contractors need to have a common understanding of how we can all work to improve productivity while delivering better buildings and places to live and work that meet the needs of society.” ■





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# Building & Supporting Communities

BAM Ireland Chief Executive Officer Theo Cullinane speaks about how he sees the Irish construction industry in 2020, the contractor's activity across the sectors, working safely with COVID guidelines, and its support of communities.

**BAM IRELAND** has been operating in Ireland for over 60 years and has delivered many of the country's flagship infrastructure projects and landmark buildings. As an operating company of Royal BAM Group of the Netherlands, BAM is one of the largest multinational businesses in Ireland.

BAM Ireland currently employs over 2,700 people directly and indirectly across a wide variety of disciplines within the construction sector. With turnover for 2019 at €603m, BAM has grown its workforce significantly in the past number of years, demonstrating the growth that comes from sustainable practices and environmentally responsible construction. Theo speaks to Irish building magazine about the past year.

## PANDEMIC

COVID-19 was an unknown a year ago and the cost to the companies in the Irish construction industry is still unknown. BAM Ireland has put a priority on the safety of people working on sites across Ireland and abroad says the CEO. "The impact of COVID-19 is the most immediate concern for all businesses and we are working hard to meet this head on. The outlook is extremely challenging. The pandemic put every non-essential project in the State on hold and now we are coming out the other side of it with a great deal of uncertainty. The full cost of reopening sites is still unknown to us, as is the ultimate loss of productivity. Health and safety of our staff must be our top priority."

COVID-19 has had a significant impact on BAM Ireland's operations. BAM followed all official guidelines and closed its non-essential sites as soon as these were clarified, including the National Children's Hospital. Theo tells us about essential works that continued across some sectors. "We continued to undertake separate COVID-19 related work on the main St James's Hospital Campus at the request of the hospital management as well as some essential motorway maintenance and facilities management work around the country."

Following the lifting of restrictions, teams have returned to work on all BAM Ireland sites across the country, with full implementation of the Government's mandatory COVID-19 restrictions as a minimum. "In many cases we have exceeded these where local conditions required," he adds. "The safety of anyone who comes to a BAM site is always our top priority."

*"The full cost of reopening sites is still unknown to us, as is the ultimate loss of productivity. Health and safety of our staff must be our top priority."*

## SECTORS

Looking at the year past, Theo says 2019 was another strong year for BAM, with several major public and private infrastructure projects delivered across Ireland. "The M11 Gorey to Enniscorthy Motorway PPP Scheme opened in July 2019 and has reduced travel times from Dublin to Wexford by up to half an hour. BAM also completed the Rose Fitzgerald Kennedy Bridge as part of the N25 New Ross Bypass PPP Scheme – one of the largest and most challenging civil engineering projects in the State's history – which was opened to the public by An Taoiseach in January 2020. The extradosed bridge crossing the River Barrow connecting Kilkenny to Wexford is now the longest bridge of its kind in the world. Both projects have significantly improved connectivity and eased traffic congestion in the region."

In Dublin, the new National Children's Hospital (NCH), the largest healthcare infrastructure project in the history of the State is well underway he tells us. "Works are complete at the NCH Satellite Centre at Blanchardstown, while works on the Tallaght Satellite are progressing well. Once complete these facilities will provide state-of-the-





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art care facilities for future generations.” BAM recently unveiled a new €500,000 Community Benefit Fund for the National Children’s Hospital, which has been established to provide education bursaries and apprenticeship support, aid various community projects and develop cultural, arts and sports initiatives in the locality of the NCH during 2020, 2021 and 2022.

Work on the much-anticipated Boland’s Quay development in the heart of Dublin’s South Docklands is also progressing well he says. “The site boasts three new landmark buildings comprising of approximately 36,800m2 of office, residential, retail and cultural space.”

***“The extradosed bridge crossing the River Barrow connecting Kilkenny to Wexford is now the longest bridge of its kind in the world.”***

Elsewhere in Dublin, BAM was recently appointed by Marlet as the main contractor for Lime Street Residential – an exciting new development comprising of 216 apartments, an onsite gym, retail space and some 13,000 sq ft of communal space with a completion date set for Q2 2022. In Cork, BAM is overseeing the ambitious Horgan’s Quay development, uniquely situated on former railway lands. “It will completely transform and rejuvenate the face of Cork’s docklands,” Theo says. “When complete, it will include a 136-bed hotel, more than 230 apartments, retail facilities and three office blocks. The office blocks have been designed to the LEED v4 Gold Standard, the newest version of the LEED green building standard, for a better user experience, while adopting the latest in efficient and sustainable technology.”

In the North, the 17,000m2 New Maternity Unit at the Royal Victoria Hospital (RVH) which takes care of 6,000 women and their babies annually is due for completion in Q4

2021. The 10,000m2 single-storey Acute Mental Health Inpatient Centre at Belfast City Hospital was completed in June 2019.

BAM Ireland has won a number of awards over the past year for major projects and safety culture. “Being awarded the prestigious Project of the Year Award at the 2019 Irish Construction Excellence Awards for our work on One Microsoft Place was another significant moment, as well as the CMG Irish Building Design Awards 2019, where we won four awards, including Engineering Project of the Year 2019 for the Visual Control Tower at Dublin Airport. We also received the Health and Safety Award. I was particularly pleased

that we were recognised in this area as at BAM, health and safety is our number one priority and something we put a lot of emphasis on.”

#### **BUILDING THE PRESENT, CREATING THE FUTURE**

Theo explains the company’s comprehensive mission statement and how BAM is making changes here and abroad to achieve goals. “Sustainability is at the heart of everything we do. When we talk about sustainability at BAM, we think of three things – Climate Change, People and Resources. Globally, BAM is committed to having what we call a Net Positive Impact in these three areas by 2050.

“We are making a positive impact on climate change and resources by converting as much of our fleet and staff vehicles to electric as possible and employing energy from environmentally friendly sources on site and in our head office. We are also upscaling our use of more environmentally

friendly cements and other materials in the construction process, while working to counterbalance what we cannot offset through proactive initiatives, including our planting of 9,000 trees in Cork, Fermanagh, Antrim and Wicklow last year.

“In January, we were pleased with the announcement that we once again achieved a leadership place on the ‘A List’ with CDP (Carbon Disclosure Project) Global for Climate Change. This ranks us in the top 2% of thousands of companies worldwide which disclosed their environmental impact through the Project. We also know that through our work we can positively influence the lives of both our staff and the communities in which we operate. We believe in looking after our people by providing a holistic approach to improve the safety, health and wellbeing of our colleagues.”

Aside from the Community Benefit Fund for the National Children’s Hospital, BAM Ireland has been involved in many charity events and sponsorships, giving generously





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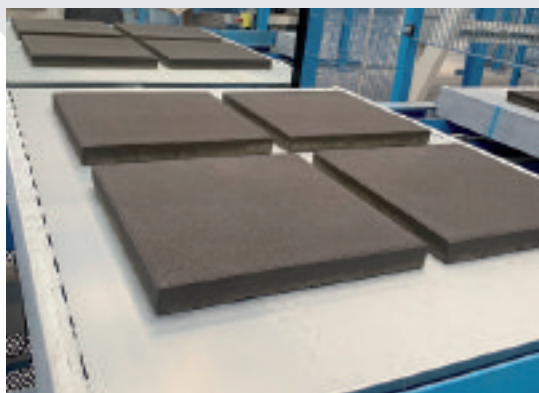


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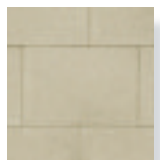
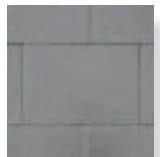
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to the communities around Ireland in which the company's teams work. BAM Ireland's 'Enhancing Lives' programme aims to add value to communities through partnership and has been developed to deliver real change in the local community.

BAM Ireland was a headline sponsor of the Chambers Ireland CSR Awards in 2019 and has a long association with the awards. For 2020 the awards have been enhanced and are now the Sustainable Business Impact Awards. These Awards offer the business community a fantastic platform to promote and highlight the best practice for sustainable business in Ireland.

BAM staff regularly host various events to raise funds for charity. Examples of these from the past two years include Coffee Mornings in support of St Brigid's Hospice, and Temple Street; Hope Christmas Shoebox Appeal and charity cycles in support of Aoibheann's Pink Tie and Barrettstown Children's Charity.

#### DIGITAL & OFFSITE

At Autodesk University London in 2019, BAM Ireland were one of the most popular teams presenting at the event at Tobacco Dock. The BAM Ireland BIM team are known for their expertise at home and abroad, Dubai's Museum of the Future being their most famous project.

BAM Ireland was an early adopter of BIM in Ireland and won a number of awards with the contractor's teams regularly presenting at CitA conferences and regional events. The contractor's work with BIM has been praised by Autodesk and the international construction community. BAM Ireland's Head of Digital Construction Paul Brennan was interviewed for Issue 2 of Irish building magazine this year and gave great insight into the projects the company works on and the in-house training and knowledge development.

BAM Ireland's adoption of BIM, AI and machine learning has led to great benefits for clients, workers and project stakeholders. Theo speaks about the contractor's partnership with Autodesk and the adoption of Autodesk BIM 360 Insight and Construction IQ. Construction IQ applies machine-learning algorithms to the construction data in BIM 360 to automatically identify quality and safety risks.

BAM Ireland acquired a stake in leading modular homes provider Modern Homes Ireland (MHI) early last year. MHI builds quality assured steel-framed homes and commercial buildings within a precision-controlled factory environment, and has worked on many developments over the past year.

There have been great digital tool innovations in recent years and the industry has embraced working with BIM and other tools. However, construction procurement, specifically public procurement, has been slow to change.

#### PUBLIC PROCUREMENT

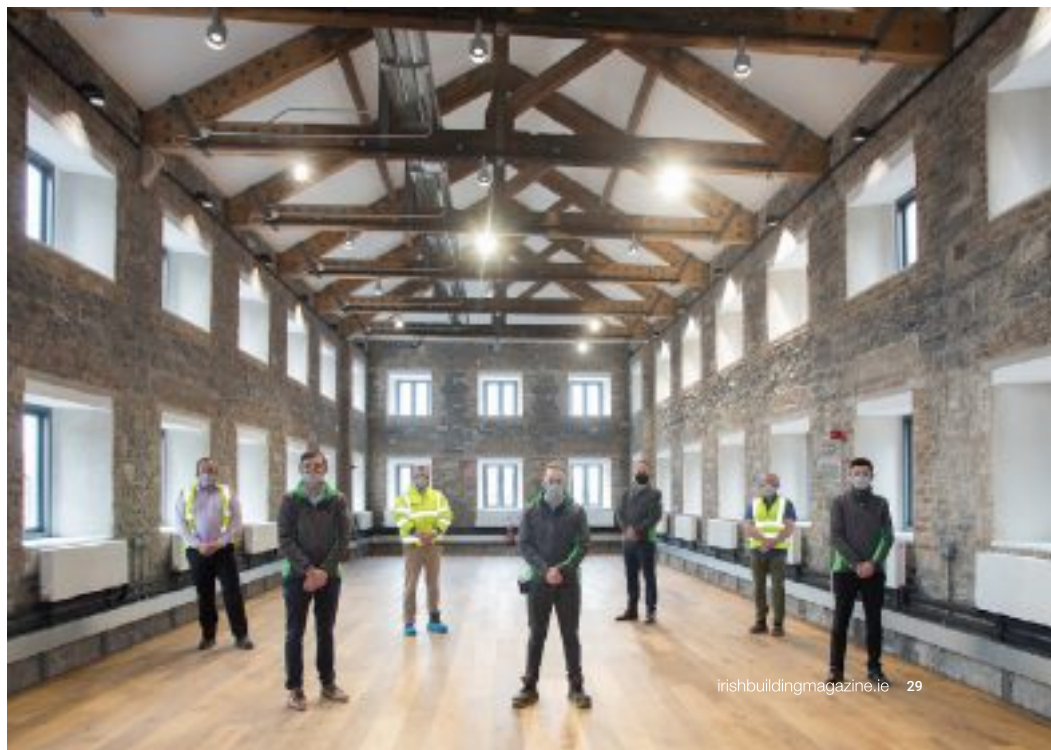
The public works contracts are said to deliver value for money for the taxpayer and fairly distribute risk, but Theo refutes this saying that the contracts ask too much of the contractor. "There are serious issues with the current structure and framing of public works contracts. The process places too much risk on the side of the contractors and procurement teams are often not able to manage their own risk allocation, thus leading to conflict. This adversarial model delivers for no one – least of all the taxpayer."

***"A framework recognising the huge additional costs and productivity issues for all construction companies who have had to absorb the cost of reopening sites with the COVID-19 restrictions in place needs to be introduced."***

Contractors have suffered economic losses due to COVID and private clients have generally been accommodating. However, the BAM Ireland CEO says that there has not been the same level of collaboration with public clients. "A framework recognising the huge additional costs and productivity issues for all construction companies who have had to absorb the cost of reopening sites with the COVID-19 restrictions in place needs to be introduced. We have seen great dialogue and mutual solutions achieved with private sector clients, but we cannot say the same for the public sector." Theo says the guidelines are going to be changing all the time as the situation develops so clear lines of communication between all stakeholders will be critical.



From industry experience, Theo believes using alternative methods of procurement where risk is given to the project partner better able to carry it would be best; he gives the example of Public Private Partnership (PPP), which he believes should be considered for major projects over the coming years. "Using the PPP approach, the collaboration and co-operation provides certainty for both client and contractor. We must now ensure that appropriate risk sharing is embedded in all procurement models going forward as the Irish construction industry must strengthen to enable future planning and attract international partners. We need continued priority and requisite investment in Project Ireland 2040." ■





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# Clients' Choice Contractor



Liam Kenny, Managing Director of John Paul Construction describes the company's impressive range of projects across the sectors and markets, working in the pandemic and what the company is doing for employees and communities.

**THE PAST** 12 months have been especially busy for John Paul Construction. 2019 saw the company scaling new heights in terms of workload with turnover reaching €438m, of which €369m was generated in the Irish market, and the remainder through operations in the UK and the Middle East.

## PROJECTS

John Paul Construction's sectoral and regional diversification strategy in Ireland gained further momentum with major project wins in the industrial, civils, data centre, technology and life sciences sectors across the country.

The Ireland South team returned to Limerick in early 2019 to commence works for Regeneron in Raheen, where they have since completed a multi-storey carpark. "We continue to work there with PM Group delivering additional Administration and Research buildings," Liam says. "In the second half of the year we were delighted to be awarded a further contract in Limerick by Jacobs on the Edwards Lifesciences project in Plassey."

After completing a substantial project for Bausch & Lomb in Waterford in 2017, it was a massive boost for the Ireland South team to win the next major capital investment project on their facility late last year. "This proved to us that safely delivering a quality product through collaborative engagement is key to winning repeat business with world-class clients."

Working in a region where substantial construction projects are thin on the ground, Liam says it was great to see the Ireland West team completing projects for Abbott in Longford last year and more recently in Donegal. In the past few weeks, the team has built on these successes after being awarded the new Radiation Oncology Centre at University Hospital Galway, a much-needed facility in the region.

Other projects underway outside of Dublin include a major technology manufacturing facility for Exyte where the building and civils teams have joined forces to deliver a fast-track infrastructure project. "This is an example of where the technical and operational capability of our civils division has brought unique value to a major building project. This was also evidenced late last year when our civils division worked closely with their building colleagues to deliver a unique geotechnical solution to Lidl's latest logistics hub in Newbridge, a 58,000m<sup>2</sup> building and associated infrastructure."

The Greater Dublin Area continued to contribute the major part of the contractor's turnover. "During this period we handed over the new National Rehabilitation Hospital in Dún Laoghaire, the SCAPE Student Accommodation Scheme on Aungier Street, and The Hard Rock Hotel on Parliament Street. We also completed the final phase of The Shelbourne Hotel Refurbishment and the Clancy Quay Residential Scheme, both for Kennedy Wilson, who continue to be a valued client for the company.

As well as the more traditional type of project, we also completed a major data centre for one of the world's leading cloud storage providers in South Dublin."

Liam says whilst successful project delivery for clients is the public facing result of the company's efforts, none of it could happen without all the support services and innovation that are brought to bear behind the scenes from all of the departments that make up the company. "In 2019 we won several National Awards, which reflect the high performance of our people across several areas, including the KMPG/Irish Independent 'Contractor of the Year', the ROSPA Gold Medal Award for safety and a number of Irish Construction Excellence Awards."

However, the standout achievement for Liam outside of project delivery in the past 12 months was the company becoming the first main contractor in Ireland to achieve ISO 19650 accreditation for BIM Management. "This has been hugely beneficial as the uptake of BIM across all our projects increased significantly in the last 12 months."

In July, the company won the contract to construct a major project for one of the world's leading cloud storage providers in County Meath. "Our civils division has just completed a 220kV substation with Gaeltec Utilities on the Dublin/Meath border and are undertaking the design and construction of a turnkey 110kV substation in South Dublin. Both of these projects are facilitating hyper-scale data centre projects."

The Private Rented Sector (PRS), which was extremely busy prior to the COVID-19 crisis, remains strong. "We are currently constructing a 374-unit scheme for Tribal Developments in Finglas, and are in







Clancy Quay Phase 3



Regeneron Multi-storey Carpark

negotiation on two other PRS projects, which we expect will go to site within the next few months. In all cases, the developer's success in getting these projects to construction stage is related to good locations with links to public transport, access to infrastructure and availability of local amenities."

Liam says management remain confident of delivering a consistent level of turnover in the South and West of Ireland regions. "We can point to a number of recent successes outside of Dublin to support that view, such as a new

organisations, such as Aramco in Saudi Arabia. Some of our key projects ongoing are Bahrain International Airport – New Terminal Fitout, and the €70m refurbishment of the Saudi Arabian Central Bank in Riyadh. Our involvement in the business there has proved to us how small a place the world has become, given that we have delivered for several of the same clients both here in Ireland and the Middle East. We are currently delivering data centre projects for the same client in Ireland, Bahrain and Abu Dhabi."

***"In February we were delighted to be awarded the contract to construct the new Garda Security and Crime Operations Centre, a 10,000m2 office building located in Kilmainham, scheduled for completion in Q3 2022."***

student accommodation scheme for Roundhill in Cork, the Radiation Oncology Centre in Galway, Kildare Village Phase 3, and our alliance with Gray Construction (USA) to deliver a new beverage concentrate plant in Newbridge."

Whilst most of the company's revenues traditionally come from the private sector, public work has always been central to the company's strategic plan, contributing a significant percentage of turnover across the healthcare, civil engineering and public building sectors Liam says. "In February we were delighted to be awarded the contract to construct the new Garda Security and Crime Operations Centre, a 10,000m2 office building located in Kilmainham, scheduled for completion in Q3 2022."

## INTERNATIONAL

John Paul Construction has been active in the Middle East for the past nine years through sister company Absal Paul in Saudi Arabia, Bahrain and more recently the UAE. As Operations Director for John Paul Construction in the Middle East, Liam was responsible for establishing the company's presence in the region and he tells us about the projects out there. "We have successfully constructed projects for an array of 'Fortune 500' companies, as well as blue-chip local

Providing delivery excellence for clients in different markets to the same exacting standards is a key part of the company's strategic plan he says. "Aligning with that plan the company has identified Northern Europe as our next area of focus. A significant number of our existing clients have operations in the region, as well as several of our supply chain partners. We feel that our experience of delivering data centres, electrical substations, logistics and life sciences projects aligns with the current requirements of this marketplace, and we look forward to commencing operations there in 2021."

## COVID-19 PANDEMIC

"It certainly has been a baptism of fire," Liam says speaking of COVID-19. "From a very stable position, when I assumed the Managing Director role in January, to one of crisis management in March, COVID-19 has been a major challenge for the company, but it has been much more so for our staff, and of course society at large. From the beginning, we decided that the only way to get through the situation was to keep everyone we interact with, but most importantly our staff, informed, in an honest and open style."

John Paul Construction's management team consistently kept staff up-to-date on the company's plans and the procedures

that needed to be implemented, in an ever-evolving situation. "The dynamic changed considerably when lockdown was introduced at the end of March, and we entered what was new territory for everyone. With only a small number of essential projects remaining operational, putting plans in place to ensure a significant portion of our staff could work productively from home at short notice was a challenge that was admirably met."

A good example of this was the tendering and estimating department. During lockdown, the team tendered and won over €100m worth of work. Another positive outcome was virtual meetings Liam tells us. "If anything, our ability to communicate with staff has improved hugely as a result of this crisis. Bringing people from all over the country to Dublin for regular meetings is a thing of the past as is non-essential travel abroad. While the dynamic of meeting face to face can never be replaced, virtual meetings are highly effective for a lot of what we do."

Liam says a lot of credit must go to the CIF for ensuring that construction was one of the first sectors reopened on 18 May. The contributions of safety professionals from member organisations to the CIF C-19 Pandemic Standard Operating Procedure document was a great example of the safety culture and flexibility in dealing with challenges that exist within the industry.

As a company, John Paul Construction had specific challenges to deal with he explains. "In July, we had an outbreak on our Townsend Street project in Dublin. When the initial case was identified, our number one concern was to ensure the health and safety of everyone working on the project, which we did through the guidance of the HSE."

"In line with our strategy in March, we communicated the situation openly and honestly," he says. "While not a situation that we wanted, it proved to me, beyond any doubt, the loyalty, support and resilience of staff across the company by their overwhelmingly positive response. The outbreak led to us facilitating discussions between the CIF and the HSE personnel involved which resulted in the publication of sector-specific guidance in the event of

an outbreak. This guidance continues to be used in managing COVID-19 cases on construction projects.”

Although this crisis is far from over, Liam firmly believes that there are many lessons learned particularly around communication and applying company safety management processes to different challenges which will serve the industry well into the future.

## PEOPLE

Liam states the increased focus on diversity and inclusion across the construction industry is one the company wholeheartedly welcomes. “The industry must strive to drive real progress in this area. There is no doubt in my mind that a workplace where people with varying skill sets across different cultures, genders and backgrounds can work together effectively, is one which drives the greatest benefit for our company, our industry and our clients. We are signed up to the CIF Diversity and Inclusion charter and are on the journey to achieving ‘Investors in Diversity’ accreditation with the Irish Centre for Diversity.”

With the continued growth in the business and resulting workforce over the past number of years, there is a real multi-cultural feel across the company’s projects and head office, as staff members have welcomed colleagues from around the world to the business. “This is great to see,” Liam adds.

“We are working hard to increase the gender balance in the organisation and have seen the number of women working across the organisation grow consistently over the past three years, it is now close to 20%. We hosted an event to celebrate International Women’s Day on Friday 6 March last, where over 50 of the John Paul Construction women, supported by many of their male colleagues, celebrated the contribution of women from across the organisation to the business.

“Notwithstanding all of this, we must do more to attract women into the sector as a whole and are looking at how we can do more in support of this.”

Attracting, developing and retaining the best people is critical to the success of the company. John Paul Construction continues to invest heavily in training and development in support of staff and Liam was delighted with the feedback from the engineering graduate programme and site manager development programme, which launched last year.

***“There is no doubt in my mind that a workplace where people with varying skill sets across different cultures, genders and backgrounds can work together effectively, is one which drives the greatest benefit for our company, our industry and our clients.”***

In the current environment, wellbeing has never been more in focus, and John Paul Construction has been working in conjunction with Laya to develop and roll out a number of initiatives to provide better awareness and a range of support measures to address the challenges and stresses that many are feeling at this time.

## CORPORATE RESPONSIBILITY

The John Paul Construction ethos measures success not solely in financial results, but by how the contractor conducts business, aligned with the values and culture of the organisation that have stood the test of time over the last 71 years. “We are committed to maintaining the highest standards of responsible corporate behaviour and improving the quality of life of local communities and society in general. We are acutely aware that our business activities

bring us into close contact with many communities and business groups, and we are committed to minimising this impact. It also provides us with opportunities to give back to the communities we work in.”

John Paul Construction has a sustainability agenda, which is driven around three key areas Liam explains. “We are focused on a sustainable economic environment for our business and our supply chain. We are committed to minimising the impact of our operations on the environment and we wish to enhance the communities in which we work.”

Last year the contractor completed a new kitchen for the pupils at Saint Audoen’s National School in the Liberties, which was most rewarding and a very clear example of the positive impact that the company can have in the communities in which it works.

## OUTLOOK

Although cautiously optimistic on the outlook for the industry in the short to medium term, based on secured work and visibility on pipeline, it is still tough to read too far into the future Liam tells us. “The hospitality sector has, for the past five years, been a very important sector for the company. Aside from projects underway pre-crisis, COVID-19 has effectively halted a lot of new project starts in this sector. Commercial office buildings are another sector where there is uncertainty, although this should become clearer as companies develop their return to work policies in the coming months. In the interim, tenders in these sectors will be significantly reduced.”

Liam says the Government has yet to demonstrate whether its strategy is investment or austerity when it comes to the construction and civil engineering sectors. “The decision they make here – as well as their approach to Brexit – will have a huge impact. A stable and decisive Government is crucial to bringing some level of certainty back to the economy.

“With nobody knowing for sure what the short to medium term impact of COVID-19 will be on the construction and property industries, the only way we can assess the short term is by looking at our secured workload and opportunities pipeline. At the moment, this is reasonably positive. We see our regional and sectoral diversification strategy specifically as being central to mitigating some of the impacts that COVID-19 will ultimately have on the business.

“The impact on public spending is still the great unknown, and we will have to wait until budget publication to really understand if the Government strategy is to invest in much-needed public infrastructure, housing and healthcare, or return to an era of austerity.” ■





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# Safe and Efficient



Velvaere Spa at the  
Radisson Blu Royal Hotel, Dublin

JJ Rhatigan's Managing Director Padraic Rhatigan tells Irish building magazine about the company's work over the past year, operating safely and efficiently with COVID-19 guidelines, and plans for the years ahead in residential, education and other sectors.

**JJ RHATIGAN'S** turnover for 2019 from across Ireland and the UK was €364m reflecting a significant growth on the previous year, and it is on track for similar success in 2020. The company employs almost 500 people working on high-profile projects across its operations in Ireland and the UK.

## PROJECTS

The new state-of-the-art National Forensic Mental Health Services Hospital in Portrane, St Patrick's Hospital in Waterford and an extension to Dublin's Radisson Blu Royal Hotel are some of the major projects that were completed in the past year. Gardens International, Limerick, Trinity Business School at TCD, Dublin and Carolyn House, London are all finalists in the Irish Construction Excellence Awards 2020. Padraic reflects on this "As a testament to the great teamwork within our own project teams and the strong collaboration with our clients and design teams."

In the next six months the company will hand over major projects such as, Phase 1 of the UCD Student Residences Masterplan project on the University's campus and the additional phases of the prestigious Lansdowne Place Residential Development in Ballsbridge.

Other ongoing projects include Charlemont Square on Dublin's Charlemont Street. "This project for the McGarrell Reilly Group is almost 38,000m<sup>2</sup> of office space and 300 residences in the heart of Dublin city." JJ Rhatigan is substantially advanced on the project which will be delivered in phases over the next two years. On Ship Street, adjacent to

Dublin Castle, the contractor is working on a convention centre and office development, One Le Pole Square, valued at over €70m.

JJ Rhatigan is very active in the residential sector, responsible for the design and construction of the second bundle of the Government's Social Housing Public Private Partnership programme. "We are working as part of the Torc Housing Partnership consortium to deliver 465 new homes in eight different communities nationwide by the middle of 2021." Padraic adds that "JJ Rhatigan is proud to be involved in the delivery of the second phase of this significant social housing initiative and setting the standard for the subsequent phases of the programme. As an indigenous Irish main contractor, we link local experience and expertise with the best of international practice. We are a national player in the regions making this partnership an excellent fit for us."

JJ Rhatigan is working on the Crown Square development, the first modern mixed-use campus of its scale in Galway City. This development integrates 39,480m<sup>2</sup> of office space, 288 residences, with a 180-bedroom hotel and ancillary retail. Work is progressing well on the state-of-the-art, €31m, Maynooth University Academic Building – a four-storey facility in the heart of the University campus in Kildare. Current projects also include residential and hospitality projects in Galway city, a 4,465m<sup>2</sup> development for the IDA in Sligo, laboratory facilities for PPD in Athlone as well as a major mixed-use development underway in Luton, UK.

"Our pipeline is strong for the coming two years and our objective is for steady sustainable growth over the next five years strengthening our position as a competitive, innovative, safe



and sustainable Tier 1 construction services company," Padraic adds.

JJ Rhatigan strategically works across the private and public sectors. "We have a balanced order book, working for a range of public clients and private developers. It's advantageous for our business to work across the sectors. If the private sector slows down, we find that the public sector usually picks up and vice versa." In recent years, the company has grown in Ireland's office and the residential sectors, especially in the Private Rental Sector (PRS).

## MANAGEMENT

Construction is a business built on collaborative relationships. JJ Rhatigan grew steadily as Ireland came out of recession, building its management structure and copper fastening its relationships with clients. "The amount of repeat business and strong client referrals has been satisfying and a great symbol of clients' satisfaction with the work





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we have completed.” JJ Rhatigan continues to develop management expertise ensuring delivery of its projects efficiently and safely.

Padraic says having strong management means being able to adapt to changes. “The industry is affected by factors outside our control; COVID-19 is a good example. Other factors include access to funding, political priorities, skills shortages and market changes. The market was heating up considerably before COVID-19. In order to manage a construction business, you have to be able to work with fluctuating conditions.”

National Forensic Mental Health Services Hospital, Portrane, Dublin



## SAFETY CULTURE

JJ Rhatigan has in-house initiatives for developing Health & Safety expertise and prioritising it within the company. “It is the first topic on the agenda at site meetings. We have a moral duty of care to our staff, clients and project stakeholders. There has been a major investment in this area which has proved to be very effective. A safe site is an efficient and productive site and this is embedded in our company’s culture,” adds Padraic. “Our experience has shown that investment in safety on site is self-financing in the safety and efficiency it delivers.”

Adapting and reacting to the challenge of COVID-19 was not difficult due to the safety structure and personnel to administer guidelines. “People working on construction sites are in environments where it is difficult to social distance; but we work within the guidelines. We introduced additional hygiene facilities and cleaning processes, implemented strict protocols and provided additional PPE. This is critical in construction and in society to stop the spread of the disease in our communities.”

There has been great engagement between the CIF and its members he says. “Collaboration between the industry and the Government was impressive, keeping the industry active on critical projects. The vast majority of sites are back up and operational whereas some industries are still closed due to COVID-19.”

“Clients find our response to COVID-19 impressive,” Padraic informs us speaking of his contact with the demand side of the

industry. “Safety is a core factor in clients’ confidence in our business together with our dedication to innovation and technology and our focus on industry standards in BIM, green building and prefabrication.”

## STANDARDS

Prefabrication and offsite construction processes are in greater demand Padraic tells us, providing efficiencies that could not be achieved otherwise. “Each building should be unique and created in a manner that shows its uniqueness and this is possible with prefabricated components.”

A large portion of JJ Rhatigan’s social housing projects use timber frame panels. For schools, the contractor has been using precast concrete structures. Bathroom pods are used on many commercial developments. “Utilising the most modern methods of construction available to us within the industry will be critical to future projects.”

JJ Rhatigan is at the cutting-edge of BIM and is verified by the British Standards Institution (BSI) as a Tier 1 Lead Contractor which includes Design Management, Construction Management and Project Management complying with Building Information Modelling (BIM) Level 2. “BIM is a tool to help us deliver projects safely, more efficiently and to higher standards to the business benefit of both our client and our construction partners.”

Achieving delivery standards such as LEED, BREEAM and nZEB demonstrate the quality of the buildings’ construction. “Clients recognise that we work to these high standards and so have confidence in our delivery for them,” he adds.

On procurement standards, he says the private sector has flexibility to procure as they see fit. Public sector procurement is a double-edged sword he explains; saying distribution of risk can be problematic for contractors. “There is a lot of work and cost in the procurement of projects. But the public organisations are spending taxpayers’ money and must ensure that work is undertaken to high standards of transparency. Public procurement is always evolving and it is important that reason should prevail with the fairest distribution of risk.”

## HOUSING

Housing has been a critical concern in recent years. There is no immediate quick fix Padraic says. “There has to be a number of initiatives. Fast track housing is often spoken about but the Government needs to move ahead with the process to deliver housing and break ground on sites. Housing is a four-year



process, from purchasing sites, getting planning, funding, building with BC(A) R compliance. All these issues taken into consideration require time.”

Padraic tells us the company has worked with national housing agencies, several local authorities, and the NDFA on the PPP contracts. “I have been impressed by the people in these organisations. They are striving to provide a critical public need.” For housing providers who want to deliver housing, Padraic insists planning ahead is critical, having an efficient delivery process overall. “Teamwork is also critical, ensuring that all parties are fairly treated. A steady consistent flow of work is best instead of this consistent boom and bust cycle.”

*“Our experience has shown that investment in safety on site is self-financing in the safety and efficiency it delivers.”*

## THE FUTURE

The contractor’s goal for the year ahead is to minimise the influence of COVID-19 on employees, clients and project stakeholders and continue to grow the business. “We plan to be ready to move out of the COVID-19 period and develop the business further. In construction, plans need to be flexible, we aim to sustain our level of business and expand across the sectors. We aim to continue to recruit and attain top-class professionals and adopt innovative building technologies.”

“The past nine months have been difficult worldwide but Ireland has shown resilience,” he says. “The Irish Government and the public have reacted positively overall, showing that we can deal with unpredictable issues when we work together.” Investment is now key. Padraic hopes to see the regions get more investment from FDI companies and the Government in the coming years. “Project Ireland 2040 will be critical in developing the regions outside of the Greater Dublin Area.” JJ Rhatigan is in construction for the long-term, to nurture relationships with existing and new clients and to strengthen partnerships across its supply chain. ■



# Collaborative relationships are key to long-term growth



Whether it's with key stakeholders and clients to secure continued business, or educational institutions to encourage the next generation into the industry, a collaborative approach has provided a secure foundation for Walls.

**FIVE YEARS** on from an investor backed MBO in 2015, the goals in Walls' five-year business plan have been met and exceeded. However, as the industry faces its biggest challenge since the economic downturn of a decade ago, Managing Director Eugene O'Shea retains a positive outlook for Walls. "While the numbers are important, our focus will always be on the sustainable, long-term viability of the business. To that end, the development of collaborative relationships with key stakeholders, enhancements to corporate governance and a focus on management development and succession planning, remain the cornerstones for long-term growth and success."

Up until this year, those numbers have been on an upward trajectory, with employee headcount doubling over the past three years, so that total staff now exceeds 330 people. Turnover in 2019 was €292m, up from €190m in 2018, an increase of over 50%. "We are expecting turnover to be €270m in 2020, below our targeted €300m," notes O'Shea, "the reduction in turnover reflecting the effects of the COVID-19 pandemic. However, our booked turnover for next year is €325m, and we have remaining capacity up to €375m."

## PORTFOLIO PROJECTS

Recent projects of note include sites in Ballymore's Dublin Landings development on North Wall Quay, Dublin 1, a mixed-use development with over 1 million sq ft of offices, apartments and shops, and the Sorting Office for the Marlet Property Group at Cardiff Lane in Dublin 2, a seven-storey mixed-use building, with 202,000 sq ft of office space and 6,000 sq ft of prime retail floor space.



Moving further around the capital city, the company has also developed The Termini Building for Aldgate Developments in Sandyford, Dublin 18; and four student accommodation projects – two on Cork Street, Dublin 8, one on the North Circular Road and one in Ballymun – are due for completion before the end of the year. "We are also making good progress on major private rented sector (PRS) projects for clients such as Royalton/Tristan Capital Partners and Park Developments, in locations such as Carnlough Road in Dublin 7 and Woodward Square and Clay Farm in Dublin 18," adds O'Shea.

## SECTORS AND MARKETS

Cognisant of the importance of having a diversified portfolio, Walls operates across several industry sectors. "In the past five years we have been very busy in the residential sector, such as student accommodation, having completed more than ten discrete projects in Dublin," says O'Shea. "PRS schemes are a big part of what we do and will continue to be in the medium term, addressing the immediate short-term national housing need."

While the company has historically been strong in the industrial and pharma sectors, it is currently devoting extra focus into strengthening this business unit, along with publicly funded projects, such as third level and healthcare, in line with Government spending plans.

"In residential, we have excellent partnerships with established, professional housing and apartment developers," adds O'Shea. "Also, we look forward to a newly energised Land Development Agency providing affordable accommodation and we intend to be involved in this area."

Commercial office projects, often in city centre locations providing complex engineering challenges, have been a core competency of Walls for many decades, and with contracts like the Cadenza Building for Irish Life on Earlsfort Terrace, this continues to be the case.

During the economic downturn, the company's ability to win and execute fit-out contracts was a critical part of its survival, and it continues to win major projects, such as the Central Bank of Ireland extension works at North Wall Quay and the fit-out of the new ESB development on Fitzwilliam Street. "Our fit-out and interiors division is a vital component of our business and a significant contributor to financial performance," O'Shea emphasises. "For example, 30% of our booked turnover for 2021 is in fit-out and refurbishment projects."

A mixture of caution and strategy means that unlike some of its competitors, Walls has not moved into any overseas markets. Looking towards 2021, this is still not something that is on the cards, as O'Shea

points towards upping their market share in high value sectors such as data centre construction as a top priority over the coming years. “Likewise, we have a regional office in Cork for more than 20 years and we intend to develop activity in Munster and other locations nationwide in 2021,” he adds.

#### SAFE SITES

Having successfully returned to sites after the COVID-19 restrictions were eased, O’Shea sounds a note of caution still: “Obviously, the situation remains challenging and is evolving so that no one can rest on their laurels.”

On top of all the procedures and systems that have been implemented, O’Shea strives to encourage ongoing vigilance to ensure the safety of employees, subcontractor partners and the communities that Walls operate in. “I am proud at the energy and commitment shown by everyone and pleased that we have proactively implemented initiatives for site-based staff and others,” he says. “Also noteworthy is our client input, in that there were no project cancellations and proactive approaches to resolve issues to mutual satisfaction were shown throughout.

“Finally, what was inspiring was the collaborative approach amongst competitor firms, pooling resources and sharing information and together with the commitment and expertise shown by the CIF, the construction industry could rightly regard itself as a torch-bearer for a safe return to work last May.”

Walls was in the lucky position of being well-prepared, in terms of technology and systems, and had quickly initiated a remote working policy for all non-site activities. “Because we had recently digitised certain systems such as subcontractor certs, invoicing and other workflows, we knew this would be possible and it has worked perfectly, protecting our core processes, our data and our people,” he notes.

This year, many events for Construction Safety Week (CSW) will also be moving online, and as a Gold Level sponsor of CSW 2020, Walls has a full programme of events across its projects, ranging from a focus on mental health and wellbeing in construction, to occupational health and emergency preparedness. “It is an excellent medium for increasing the focus on occupational health and safety on our projects, and in the industry in general,” says O’Shea.

#### EMPLOYEE ENGAGEMENT

The values of Walls’ company culture are encapsulated in the ‘Walls Way’. These values span across health and safety to employee wellbeing and work-life balance. This year



saw the introduction of Aspire, a new professional development programme. The blended modular based programme provides a range of practical skills and experiences. The first cohort to undertake it, at the start of

at second level. “Research has shown that diversity and gender equality positively affect a company’s productivity, innovation and decision making – and this is important as we look towards the future,” O’Shea says.

***“What was inspiring was the collaborative approach amongst competitor firms, pooling resources and sharing information and together with the commitment and expertise shown by the CIF”***

the year, was made up of a multidisciplinary group of 20 participants from all parts of the business. The programme is designed to equip individuals with the skills and behaviours to operate effectively in their roles and as their careers develop with the company.

The company has a track record of providing long-term career development opportunities for its staff, from graduate recruitment to senior management, such as the group of site managers and a senior planner who successfully completed the Chartered Institute of Building (CIOB) Chartered Members Programme (CMP), finishing the demanding course online, due to COVID-19.

#### DIVERSITY AND INCLUSIVITY

O’Shea feels that it is important for construction companies to recognise the value of diversity and inclusivity.

For example, he believes that by being more proactive and working earlier, the industry in general can take more steps in order to recruit and retain more women in construction. Such initiatives would include developing linkages with education

O’Shea also believes that the apprenticeship system needs an overhaul, “with third level institutions like TU Dublin being more actively involved from the outset.”

Walls currently engages with secondary schools through its Generation Apprenticeship competition which has been running since 2018, providing participating schools with a toolbox and resources to build a creative project. “Second level students should feel proud to pursue an apprenticeship, structured in such a way so as to provide a defined four-year relationship with a recognised college and a main contractor,” O’Shea states.

Finally, O’Shea notes that the industry is seeing the consequences of the fall-off in students entering construction related college courses for a period after the economic downturn of a decade ago. To ensure that a supply chain of talented third level students is available to Walls, the firm has a number of partnerships with third level colleges, including a recent agreement with Dundalk Institute of Technology (DkIT), forming a strategic partnership for the purposes of research, innovation, graduate employment and education. ■







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# Winning at Home and Abroad

Roadbridge Managing Director Conor Gilligan speaks of his company's impressive project portfolio, including High Speed 2 and the new runway at Dublin Airport, the industry's challenges and the critical need for public and private investment.

**ROADBRIDGE'S** turnover for 2019 was €271m with a projection of €300m for 2020. The company currently employs over 1,300 people across the business here and abroad. Presently Roadbridge is constructing the new runway at Dublin Airport and the N4 Motorway in Sligo as well as carrying out significant civil works for Dublin Port Company as part of an extensive rebuilding programme. Conor says maintenance is also a significant part of the business. "Our motorway maintenance division continues to provide essential services in its management of Ireland's motorway network."

The UK market forms a significant part of Roadbridge's business with offices in London, Birmingham, Glasgow and Cardiff. "We are currently delivering two major marine projects in Scotland at Cromarty and Greenock Ports as well as a windfarm in Western Scotland. In England, we are heavily invested in the construction of the High Speed 2 rail network. This is a significant UK project with an expected outturn cost in excess of £100bn. We will be returning to the Welsh market this month having been awarded the £600m A465 PPP Motorway Project in JV with FCC." Roadbridge is currently breaking ground on a major windfarm in northern Sweden having had a presence in the Nordics for the last four years through the company's Oslo office.

## PORTFOLIO

Roadbridge is very active in the marine, aviation and rail sectors whilst renewable energy projects have been ever-present for the last twenty years.

Conor says working across sectors and markets is key to growth as unforeseen circumstances can change the industry environment. "It's imperative to have exposure to as many different industry sectors as possible as they all experience market highs and lows at various times. For example, who could have predicted the current pandemic and its negative impact on the aviation sector allied to its positive impact on the pharma sector. Brexit has demanded a further requirement for increased spending on infrastructure at both Irish and British ports whilst the ascendancy of the Green Party in Irish politics will call for increased spending in different types of infrastructure."

Roadbridge was founded in 1967 and operated as a sole trader up to 1999 when the company was incorporated. Over the past decade Roadbridge has been establishing its brand around the globe, while leading from Ireland. "We are headquartered in Limerick with all our subsidiary companies operating from their various offices at various locations globally. In 2008 we embarked on a process of internationalising the business which led us to establish businesses in Qatar, the UAE, Oman, Libya, Australia and New Caledonia. We currently have our operations confined to Ireland, the United Kingdom, Sweden, Norway and Qatar."

The name 'Roadbridge' probably undersells the business Conor explains. "We not only construct roads and bridges, but we have a vast array of multi-discipline projects on our CV ranging from renewable energy and oil & gas projects to sporting facilities such as golf courses, two of which have

hosted European Tour events, to water and waste water infrastructure, landfills, marine works, rail, tunnelling and deep excavations all fall within our scope of ability."

All of this is backed up by Roadbridge's extensive in-house teams of skilled professionals in environmental and quality management, temporary design, health & safety and project management. "Having our own in-house extensive plant fleet means we can offer a full project solution to clients in all areas of civil engineering," he adds.

***"It's imperative to have exposure to as many different industry sectors as possible as they all experience market highs and lows at various times."***





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## HEALTH, SAFETY AND WELLBEING

Having spent years working in the oil & gas industry for companies including Shell and Total, Roadbridge's health & safety systems and culture have always been to the forefront of everything. "The same standards have applied companywide," Conor says. "It is not only the physical wellbeing of employees that we cater for but the mental health of every employee is just as critical. We work closely with the Lighthouse Club in this regard." With expertise like this, the contractor was prepared for working within COVID-19 guidelines.

Conor says changes have been made to practices and all of the teams have returned to sites after the break. "COVID-19 has certainly demanded changes to work practices. There is no escaping the reality of this threat therefore we have made every effort to be fully compliant with all the best medical advice. Whilst some parts of our business were deemed to be essential services such as our motorway maintenance division, the majority of our operations were shut down for the seven-week period. We are delighted that once the lockdown was lifted everyone was able to return to work in a safe fashion. Some of our teams such as our tendering and admin teams did work from home and whilst it was unusual at first it did not negatively impact their performance in any way." COVID is an additional challenge for construction, adding to productivity, skills shortages, among other issues.

## CHALLENGES

Much has been said in recent years about what can be done to improve efficiency, productivity and profitability in construction. Conor believes better prices for construction work will lead to greater efficiency and productivity. "This will lead to better profitability which will produce a sustainable industry. There have been too many casualties

in the past in our industry. Ultimately it is the contractor who makes the decision to take a contract below cost; however, it should also be the responsibility of the client to ensure that below cost tendering does not prevail. Sadly we have a long way to go to rectify this matter."

Addressing the skills shortage needs to start in the schools Conor says. "There is too much of an emphasis placed on getting into third level education as not all students are suited to this. Early identification, education and mentoring of potential candidates is important if we are to solve this problem." There are now more opportunities in construction.

The demands now made on contractors means there is a huge diversity of roles. There are opportunities for various skill sets throughout the building lifecycle, from concept and pre-construction to handover and FM. Conor talks of the various entry roles to construction saying there are greater

***"It is positive for our industry that the Government has a stimulus plan, however given the new make-up of our current Government I am sure the contents of the plan are subject to change so its best to adopt a wait and see approach before commenting further."***

opportunities, further encouraging women to enter. "From civil engineering, planning and programming, quality management, BIM, Lean, environmental management, health & safety, IT, admin and accountancy, machinery operators, the list goes on but this huge range of requirements means that there is a role for everyone. We have always encouraged women to enter construction. 10% of our current permanent workforce are female and we hope to improve upon this. During March we celebrated women in construction by profiling some of our female employees on our website. This was a further effort to sell the industry to potential entrants who may not have considered a construction career."

There is always room for improvement within any industry. With regards to construction, Conor believes it is too easy to

establish a business. "Regulation is too light. I favour a licencing system whereby every contractor would have to hold a licence to trade within the industry. Procuring and renewing such a licence would take into account your record with health & safety, environmental management, payment of staff and creditors and your status with the Revenue Commissioners, Trade Unions etc. This system would bring far more regulation and accountability to the industry." Aside from standards and skills, investment is also critical.

## INVESTMENT

Foreign Direct Investment (FDI) is critical to Ireland. With Brexit looming it has never been more important for us. One of the big obstacles to FDI as Conor sees it is our planning laws. "The fiasco that happened

with the Athenry Apple Data Centre can never be allowed to happen again. It was a serious black mark for the nation. The latest development by Clare County Council in procuring planning permission themselves for a data centre in advance of going to the market to attract an investor has to be commended. It makes Ireland a much easier sell to the multi-nationals and is a very clever and innovative way of attracting FDI."

Conor praises the Government's stimulus plan but reserves judgement until he sees what unfolds. "It is positive for our industry that the Government has a stimulus plan, however given the new make-up of our current Government I am sure the contents of the plan are subject to change so its best to adopt a wait and see approach before commenting further." ■



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# Building Better

Ardmac Chief Operations Officer Alan Coakley talks about the company's recent work, management changes, safety during the COVID crisis, and partnerships with Cental and Germfree Laboratories and their move towards building offsite.

**ARDMAC** delivers high-value workspaces and technical environments in Ireland, the UK and mainland Europe. Headquartered in Dublin with regional offices in Cork, the UK and Belgium, Ardmac believes in setting new industry standards, exceeding customer expectations and driving innovation.

The company provides trade contracting and main contracting solutions. Sectors served include data centres, micro-electronics, pharmaceuticals, med-tech and commercial offices. Employing 320 people Ardmac's turnover in 2019 was €160m, 2020 is forecast to be slightly down on 2019 due to the affects of the COVID pandemic.

Ardmac has worked for over 80% of the global FDI pharma and technology companies present in Ireland. Recent projects include office fit-outs for Ellucian, Genesis Aviation and the NTA in Dublin. Internationally, the company is working on pharma and hyper-scale data centre projects in the Netherlands, Denmark and Belgium. Alan Coakley says that technology sector accounts for approximately two-thirds of annual revenues. "We have recently completed a pharma project in Switzerland and data centres in Denmark and Holland. We see strong growth opportunities for all parts of our business across existing and new geographies."

## INNOVATING FOR THE FUTURE

Ardmac has made some key strategic investments this year. The company acquired a significant equity investment in Cental, a leading provider of advanced modular buildings to the data centre, utilities and telecoms industries.

Ardmac has also entered into a partnership agreement with US-based Germfree Laboratories, a specialist in the design, engineering and manufacture of advanced biological containment laboratories.

Ardmac made some senior appointments recently: Enda Murphy was appointed Managing Director of the Cleanrooms Division, Jason Casey as Deputy Managing Director of the Data Centre Division, Phil Chadwick as Managing Director of UK Operations and an incoming new Head of Sales and Marketing.

The formation of the centrally led Cleanrooms Division within Ardmac will ensure the company continues developing its cleanroom capabilities and service offerings in a coordinated manner to customers across an increasingly diverse market. Alan says, "Jason's move into data centres will greatly assist in the continued development and growth of this important business over the next 12 to 36 months. The Head of Sales and Marketing role is to bring together all business development, sales and marketing functions across the group."

## SAFETY FIRST

Ardmac has been proactive in the management of the COVID crisis. "We have updated our safe systems of work to reflect the dynamic nature of COVID-19 and continue to do so with the ever-changing approaches required to reflect new medical advice from the WHO and jurisdictional bodies. We have amended our Safety Policy and our management roles and responsibilities to include the role of COVID Manager and the appointment of COVID Champions in each workplace, whose sole responsibility is to monitor and manage the implementation of our COVID protocols. Our Project Managers have been appointed as COVID Managers on their projects." To mitigate





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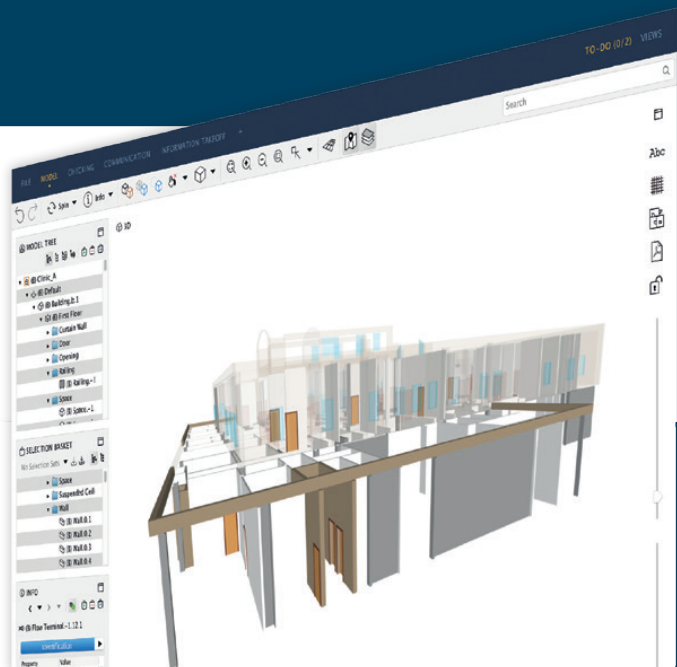
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the COVID-19 risk, management developed and implemented a very specific and detailed policy in the manufacturing facilities and on the construction sites.

Ardmac's dedicated 'Safety First' programme is a significant contributor to the company's excellent safety performance. The programme is designed to embed a safety-conscious mindset with continuous improvement around four cornerstones – Demonstrating Ownership & Leadership; Engagement & Participation; Coordination & Management and Task Planning & Training.

Ardmac continues to innovate ways of delivering the Safety First message, launching the new Seasons of Safety initiative. "We believe, through our Safety First programme we can eliminate injuries and enhance people's lives by embedding positive attitudes and beliefs to safety, enabling them to think and about safety positively and in a different way."

Ardmac's safety culture emanates from their first guiding principle of Safety First Alan says. "We constantly strive to ensure that safety in Ardmac remains much more than an organisational priority but is embedded among all who work for Ardmac. For us, safety is viewed not as a priority but a value, while our priorities may change, our values will stay the same, our goal is to eliminate injuries at our workplaces and to enhance people's lives, both at work and at home, through embedding positive attitudes to safety."

***"We're not just about chasing turnover. We're about doing the right jobs that lead us somewhere and developing relationships that lead to repeat business. Delivering quality projects for clients has served us well over the years."***

Ardmac continuously seeks to improve, to innovate and to foster ownership and the leadership of safety at all levels within the organisation, from the CEO to the operatives on the company's sites. Alan believes a real benefit and testament to the success of the Safety First initiative has been the development of people at all levels of the organisation. "There is a much more visibly engaged workforce, who are keen to become involved and talk about safety, happy to make suggestions, secure in the knowledge that their opinion counts and will be heard. We can and will never say we have safety cracked but our safety statistics record has improved over the last 24 months following the implementation of our Safety First programme across all our sites throughout Ireland, Europe and the UK."

#### MODERN METHODS OF CONSTRUCTION

Designing and constructing projects using modular assemblies has been a large part of Ardmac's core business for 30 years. Alan explains how the team have deep-rooted



know-how of all things modular. "We have been part of the Buildoffsite community, early adopters of BIM, Lean Construction and the digitalisation of our industry. Over the years we have completed a number of modular building projects for the healthcare and pharmaceutical markets, the most recent being the impressive 2,700m<sup>2</sup> QC Laboratory building for MSD in Swords."

In recent years the Ardmac team have seen the demand for modular solutions increase as customers demand shorter, more predictable construction schedules. "Our strategic partnership with Germfree Laboratories was in response to this demand from our pharma customers to provide process ready turnkey cleanroom solutions." Ardmac needed factory space so started to seek modular manufacturers that had high levels of engineering skills

laboratories to the biopharma and healthcare sectors throughout Europe. It also provides a manufacturing base for all other Ardmac modular solutions under one roof. One such product is the recently launched MediPod.

MediPods, Alan explains, are stand-alone modular buildings that are manufactured and fitted out in a controlled factory environment. "MediPods have been designed for healthcare applications including intensive care and isolation units and are part of a suite of offerings Ardmac is now providing for high-value workspaces and technical environments across the healthcare, pharma, research and IT sectors. The self-contained pods are designed for ease of delivery by road and ready for rapid installation on site. The MediPods can be sited and ready for use within days, minimising disruption to the site location. They are designed to operate as complete functioning units and include HVAC systems, plumbing, electrics, medical gases and primary containment equipment."

Alan says Ardmac is all about building the right jobs for the right clients. "We're not just about chasing turnover. We're about doing the right jobs that lead us somewhere and developing relationships that lead to repeat business. Delivering quality projects for clients has served us well over the years. If we can continue that, it will give us sustainable growth in our sectors. In turn, that growth will create opportunities for our staff and our people."

'Building Better' in all aspects of the business is Ardmac's aim. "It's important to us that we continually improve in every aspect of our business. We have to make sure that we consistently deliver the project critical areas of safety, design, quality, cost, scheduling and coordination without compromise every single time." ■







National Train Control Centre at Heuston Station

# Delivering Excellence with Integrity

Purcell Construction Managing Director Michael Bane speaks of the company's recent completions and upcoming projects, valuing clients and safety culture, and delivering quality housing to great demand during challenging times.

**FOUNDED** in 1988, Purcell is one of Ireland's leading building contractors with offices in Galway and Dublin and a nationwide reach. The company currently has over 100 people directly employed. In 2019 Purcell's turnover was €52.5m up from €35.5m in 2018. Pre-COVID the company had projected a 2020 turnover of €55.0m, but this is now expected to fall short. Speaking of the company's recent growth, Michael says it is built on demonstrating capabilities. "Our reputation is built around what we do not what we say, and our proud history shows we deliver projects of superior quality and craftsmanship."

## STRATEGIC PLAN

Purcell made several positive moves in recent years. New appointments of both a BIM Manager and CPD Manager have added to an already strong structure Michael informs us. With a focus on BIM and Lean, the contractor is dedicated to delivering value to clients.

Communication with clients is at the core of Purcell projects. "Looking after clients is the cornerstone of our company. We have no surprises in our final accounts as we always ensure that clients are fully informed of how their projects are progressing from financial and delivery perspectives. This way of working creates a great level of trust with our clients and ultimately leads to repeat business."

***"Our reputation is built around what we do not what we say, and our proud history shows we deliver projects of superior quality and craftsmanship."***

Purcell continues to strive towards a growth model that is both sustainable and planned, and whilst the 2020 turnover figure will reflect a contraction, Michael anticipates that 2021 will see Purcell back on track in line with the company's five-year strategic plan. Purcell is currently in year three of the five-year plan and the Managing Director and senior management are satisfied that they are progressing despite a drop in planned turnover in 2018 when they decided to remain patient during a period of very competitive tendering. "Chasing turnover is a risky ploy when costs are escalating, with many of the projects having long construction durations, leaving your tender price hugely exposed to inflation."

## MILESTONE BUILDS

Purcell's recently completed milestone projects include the Museum of Literature Ireland (MoLI), which entailed the restoration and extension of Newman House located on St Stephen's Green, and a major refurbishment of Broadstone Bus Station which accommodates a modern bus servicing facility. Purcell also completed two projects at UCD, the restoration and extension of Ardmore House and refurbishment and extension of the NovaUCD research centre. Another highlight for the contractor in 2019 was the completion of Four Ferns nursing home in Foxrock consisting of 140 beds with a value of €21m.

Purcell currently has exciting projects on site, including the National Train Control Centre at Heuston Station. "Funded by the National Transport Authority the new centre will manage 250,000 train movements annually and will be the Iarnród Éireann centre for management and regulation of train movements on the rail network. With a contract value of €40m, the building will be constructed to comply with nZEB standards. It is planned that the construction and fit out will be completed in early 2022."

Other projects underway are the refurbishment of the Lower House in Grangegorman for TU Dublin, and the provision of a new six-storey extension to the Royal Irish Academy of Music in Westland Row, Dublin 2 at a cost of €15m. Construction is nearing completion on the €19m Saint Theresa's Gardens Regeneration project.

Purcell operates in all the sectors, with commercial and residential buoyant for the company in the Dublin region, whilst much of its activity in the pharma and life sciences sector, though not exclusively so, is in the western region. Michael was beginning to see more activity in the commercial and residential sectors in the regions prior to COVID-19; however, this is now difficult to predict. "We continue to see significant enquiries with respect to both private and public residential projects, and sense that this sector will play a key part in our company's activities in the short to medium term," he adds.

Purcell continues to perform well in public works, be it third-level education, social and affordable residential schemes, conservation and restoration projects etc. The contractor is also continuing to experience growth in the residential care sector, as well as the life sciences sector.

## HOUSING

The quality and standards of local authority housing have increased significantly in the last twenty years. Michael says today one cannot visually distinguish between local authority housing and private housing, which was not always the case. If used, he believes modern construction methods including offsite construction need to be considered by local authorities and designers at the planning stage. "It is often too late when projects go to tender to look at alternative methods of construction."

Purcell offers housing providers construction excellence Michael says. "Our company has a reputation for producing award-winning projects over the last twenty years. We apply the same high standards to all our housing projects whether it be private, public or housing associations."

Speaking of housing delivery, he says it may come as a surprise to some commentators that the cost to build a house is less than half of the overall cost to provide the house. "This was highlighted in a SCSI report in 2016. This report highlighted cost reduction options including reduction of VAT, reduction of development levies, reduction of finance costs, increase supply of land. There has been little movement by the Government on these options which would have a substantial impact."

## CSW 2019

The contractor has high safety standards. During Construction Safety Week 2019, Purcell held daily stand-downs on all sites. Management launched the week with a talk on mental health and in the days that followed covered electrical safety, work at height, vehicle risk, plant safety with site demonstrations of blind spots in the operation of plant, working safely with chemicals, including proper storage of chemicals on site, and the use of PPE when

dealing with chemicals. The company safety culture helped deal with COVID-19.

COVID-19 has obviously been a big challenge for construction safety. But in the past year, the Purcell Health & Safety Team introduced a range of new health, safety and wellbeing measures and encouraged more open communication across the company. "Safety has always been to the forefront and achieving ISO 45001 accreditation in October 2019 was a milestone for us," he says. "But we are now shifting more of the focus to raising awareness and improving the health and wellbeing of our staff and supply chain. Some examples of this are our current steps challenge for charity and a prostate cancer awareness programme in November."

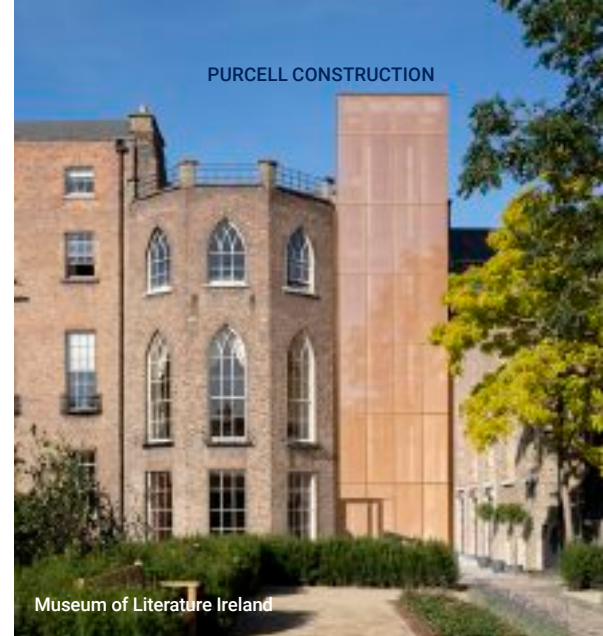
## CHALLENGING TIMES

Michael's takeaway from 2020 is that we can never predict unknowns. "You never know what is around the corner, with the effects of COVID-19 dragging the entire global economy into the mire. We consider ourselves relatively fortunate to have a healthy order book taking us deep into 2021. Once again, the construction industry has demonstrated its resilience and the reaction of our industry to the current crisis has been commendable."

***"At Purcell success is seeing people working to their natural best and creating a momentum towards a vision that will last beyond ourselves."***

There are serious economic challenges facing our industry at present he says. "After coming out of a global recession we thought our only challenge was Brexit but the COVID-19 pandemic has had a devastating effect on our economy and it is a dangerous time for our industry. The pandemic has seen a number of planned projects mothballed until investors see some stabilisation in the global economy and the hope is that a vaccine will emerge this year."

## PURCELL CONSTRUCTION



Construction productivity is also a problem. There is still a considerable amount of waste in construction, which comes in many forms Michael says, as he explains his company's move to eliminate it. "We believe our industry needs to continue to strive to become 'Lean', which in turn brings greater efficiencies to the construction process and therefore greater value to the client. Purcell put in place Lean Certificate training for staff as part of their CPD. The aim is to put in place best practices and ensure the handover of projects are problem-free, whilst preserving best value for our clients."

Even with the challenges the industry faces, Michael is looking forward to the year ahead. "While there are so many challenges facing our company at present, we are excited about future opportunities. The dedication and energy of our team will ensure that we will prevail even during the toughest and most difficult times, together is better."

Considering the range of projects, especially large local authority housing projects like the Dolphins Barn and Saint Theresa's Gardens Regenerations, the company's leader has a noteworthy view on what success means for Purcell. "At Purcell success is seeing people working to their natural best and creating a momentum towards a vision that will last beyond ourselves." ■

## Dolphins Barn Regeneration





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# Designing, Manufacturing & Assembling Excellence

Jones Engineering CEO Jim Curley describes to Irish building magazine his company's work across geographies, the innovations in his company, care for staff and the launch of a new division, Jones Engineering Manufacturing Ltd.

**OVER THE** last five years Jim Curley CEO of Jones Engineering and his senior management team have overseen the successful completion of over €2bn worth of projects from the medical, life sciences, building services, industrial, semi-conductor, data centre, and power and energy sectors; almost half of which was overseas.

Jones Engineering currently employs over 3,000 people working throughout Ireland, Europe and the Middle East in 14 different countries. They come from 25 countries, as far apart as Brazil and India.

Jim tells Irish building magazine what it is like coping with COVID-19 restrictions. "Like every other industry, the current COVID-19 pandemic has impacted all levels of our company and presented a range of challenges both on site and in our offices worldwide. Our teams have worked tirelessly to implement the guidance provided by the HSE, medical experts and World Health Organisation to ensure all our employees have a safe working environment and to reduce the spread of the virus to our workforce."

## HEALTH AND WELLBEING

Jones Engineering established a dedicated company COVID-19 website to provide information and guidance to employees as the company adapted to new working conditions. This included a compulsory training module to be completed by all employees returning to work following lockdown. Jim says it has been a steep learning curve adapting to new work practices but teams have risen to the challenge by overcoming obstacles safely in accordance with current guidelines. "We are

enforcing strict protocols and have dedicated COVID-19 Compliance Officers on all our sites and offices," he adds.

Hand in hand with the focus on the physical safety of employees is the company's focus on their mental health and wellbeing Jim says. "Historically, construction health and safety has always prioritised the more immediately obvious physical hazards and their impact on site safety. But attitudes are thankfully changing, as people realise that the silent issue of mental health is just as dangerous and potentially fatal. In fact, recent statistics suggest that one of the most dangerous things on a construction site is the human mind. Mental health and the wellbeing of all our staff is of upmost importance and we have engaged with Pieta House on how best we can support our employees in this regard."

## INNOVATION AND MODULARISATION

The COVID-19 pandemic is changing the way construction companies work he says. Jim believes productivity and innovation need to be a huge focus, to make the Irish construction industry the most productive, highest in quality, safest and competitive in Europe and beyond. "One of the ways we are looking to the future of productivity is with the movement of the construction process away from the site into controlled manufacturing and assembly environments by providing modular and offsite construction solutions."

With the backdrop of increasing demand for life sciences, data centre and microelectronic manufacturing campuses – the timescale between Basis of Design (BOD) to Facility Ready (FR) is under increasing pressure to reduce.



In an effort to increase efficiency and predictability, improve safety, minimise the level of disruption to site, client and the environment, and reduce the time frame of BOD to FR, Jones Engineering has invested heavily, in not just leaner ways of working but in challenging how the industry approaches project delivery. These efforts have culminated in the launch of a new division, Jones Engineering Manufacturing Ltd.

Jones Engineering Manufacturing is based in a recently constructed 9,000m<sup>2</sup> centre of Design for Manufacturing & Assembly (DFMA) excellence. Jim describes the facility, saying it is multidisciplinary, bringing the company's expertise together. "This state-of-the-art facility brings our core competencies in mechanical, electrical & instrumentation and fire protection and the added competencies of civil, structural & architectural under one roof. This allows our teams to design, manufacture, install and deliver modules from small to large scale projects."

Jones Engineering's multidisciplinary team, having a core understanding of traditional stick-build construction, have delivered on several 'Product Modules' for clients based on the



# PURCELL



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simple ideal of 'plug and play'; whereby they have taken a client BOD to fully tested and commissioned CE Marked products ready for site infrastructure integration.

The journey from BOD to CE Marked product progresses in parallel with the client and architectural/engineering teams striving for the design to be 100% complete prior to any physical manufacture or assembly Jim tells us. "This ensures the end product is fit for purpose with the end-user always in mind. This collaborative and open approach has allowed us to transform how we deliver on projects providing for: improved design compliance, improved quality control, upfront efficient design processes and reduced manufacturing, assembly, integration (site) and operational risks. This results in improved predictable costs and allows for offsite commissioning and testing along the way while focusing on the speed of delivery of the overall project."

***"We have successfully transported modules from our manufacturing facility to Holland, Belgium, Finland, Denmark and beyond."***

Using fast track modular design processes also takes a large percentage of the project work off sites which improves site congestion. This is of even more importance now due to the current COVID-19 pandemic. Reducing the number of people on site at any one time increases the safety of everyone.

This has been working well for the contractor's current clients Jim tells us. "We have successfully transported modules from our manufacturing facility to Holland, Belgium, Finland, Denmark and beyond."

#### COLLABORATION

Jones Engineering's focus on the collaborative ethos of planning and cooperation has benefited the company. "We came to the decision that we needed a structural shift away from the rigid and inefficient silo approach to project management and we needed to adopt a new inter-departmental cooperation and reliance." With reduced timelines from design packages being released to construction starts and a trend of increasingly fast-track project durations, the sheer volume of live information that needed to be managed dictated that departments operating in isolation were no longer viable.

The company invested in a comprehensive cloud-based project management solution which has become integral to how Jones Engineering approaches enhancing efficiencies and ultimately maximising the span of control in managing largescale projects. From initial document control functions through to the project planning, quality and quantity surveying, all members of the project team play their role in inputting into specific steps in the process. As a result, the increased emphasis on collaboration is critical to successful project delivery.

Initially, the buy-in of Jones Engineering's frontline staff was vital if this was to be a success Jim says. "To facilitate this, we developed an installation workpack monitoring and tracking module in order to improve the planning function at a micro level where the supervisor utilises these tools in order to assist in pre-planning tasks and maximise the productive output of their crews. We believe accurate measurement is a critical instrument in ensuring optimal performance. With the implementation of scanning, we have succeeded in minimising legacy issues where we now rely on built-in weightings to calculate the earned value progress."

As this journey in innovation continues, Jones Engineering staff are increasingly enabling data exchange between their technologies and applying that information directly to BIM. Project personnel can now utilise the data to view actual progress in the model.

BIM is critical to prefabrication and modular construction he explains. "BIM enables integrated architecture and engineering workflows. Firstly, we had multiple toolbox talks with staff and construction teams focusing on getting things 'Right First Time'. It's



important to link this mindset directly to digitalisation. 'Build' before you 'Build'. Develop the design model to the level that is required and use it fully. Walk all systems and quality-check all elements within the virtual model prior to construction. Let 'as-built' drawings be just a tolerance verification exercise. Something has gone amiss if your as-built or redline drawings are vastly different to your original 'construction set' issued at pre-construction stage."

#### LOOKING AHEAD

Jim says there has been a major shift in how the company views projects with a new focus on any opportunities for modularisation and prefabrication. "Looking to the future, we are committed to enhancing these tools to drive efficiencies and as we extract key learnings from every project, it will continue to evolve to service our project management needs into the future."



Although depending on public and private sector clients for work and the decisions of governments regarding COVID, Jim says Jones Engineering is moving ahead, embracing technology, diversity, innovation, working internationally and dealing head-on with the challenges of COVID, not just in Ireland but across Europe and beyond. "We are now focused on the short to medium term. Remaining fit and adaptable to deal with whatever comes next while holding onto the original values of our firm." ■







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# Personal touch



As he prepares to take the reins at Dornan Group next year, Micheál O'Connor sets out some of his priorities for the future.

**MICHEÁL** O'Connor's first day in his new role as Deputy Managing Director of Dornan Group wasn't quite the induction experience he might usually have expected. But timing is everything and O'Connor joined the Cork-headquartered mechanical and electrical engineering company on 31 March of this year, just four days after the country went into lockdown.

"I spent my first six weeks working from home, as did everyone else in the company," he says. "All of my initial meetings were entirely virtual. Since then, I've had the opportunity to meet people face-to-face in the Irish business, but I haven't yet travelled to our UK and European offices. So I still have a lot of people to meet – both our own employees internationally and our supply chain and clients in these geographies."

Next year, O'Connor – who was most recently Vice President and General Manager for Ireland and Northern Europe at Jacobs Engineering – will take over as Managing Director from Oliver Lonergan, who has been in the role for the last 22 years. He has arrived at a time when the company is in very good shape: turnover is expected to hit €500m this year, up from €332m in 2019.

Focused particularly on the life sciences, data centre and commercial sectors, Dornan operates in Ireland, the UK and mainland Europe and directly employs 980 people. In addition to its Cork headquarters, Dornan has offices in Dublin and London,

together with project offices in Amsterdam, Copenhagen, Stockholm, Duesseldorf and Antwerp. Europe accounts for around 50% of the business, with the UK and Ireland bringing in around 25% each.

***"One of the things that has really impressed me is the level of personal contact in the company. There's a family culture and the relationships are strong."***

"Olly has done a fantastic job and they're big shoes to fill," says O'Connor. "One of the things that has really impressed me is the level of personal contact in the company. There's a family culture and the relationships are strong."

That culture has been evident in Dornan's response to the pandemic, O'Connor says. "They have really treated employees very well and have looked after them, both personally and financially."

"I knew Dornan from my previous role and my work in the industry, so I knew it was a good company. But I don't think you get a true sense of something until you look under the bonnet, so to speak, and really engage with it. What I've seen has been very encouraging."

It's something he hopes to build on. "I want to reinforce the culture of caring within the business and make sure it's more tangible across the group."

That caring culture, particularly as it relates to mental health, is hugely important to O'Connor. "There has been a tendency in the industry to get on with things and not speak about problems. We're keen to instil a very open attitude in Dornan. We want to recognise mental ill health and take away any stigma associated with it. The aim is to create an environment where people feel comfortable talking about issues openly and know they can get help and that the company will support them."

"That's really close to my heart and delivering a strong culture around that is a priority. It is already there in the company, but we need to communicate it more openly across the entire group and ensure people feel comfortable engaging with it."





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O'Connor notes that the group has grown extensively and organically across its geographies in recent years. "Part of my job will be to instil stronger group policies and processes and make it a more consolidated group structure."

There's plenty more on the to-do list. "I also want to put a lot of emphasis on our strategies around technology, as well as driving excellence across the business."

He's excited about disruption within the industry, but believes sectors need to embrace the prospect of technology and technological advancement for this to be fully realised. "We need to see greater consistency across various industry sectors to make sure all clients and sectors are giving technology a chance and embracing it and structuring their projects to optimise its use."

***"We already have a pretty solid supply chain but we are committed to investing more time into developing it, engaging suppliers in our training and quality programmes, and passing on our expertise, knowledge and assistance to try improve everyone's performance."***

"I think the pandemic will drive advancements to reduce numbers on construction sites through modularisation and offsite assembly. But to enable that, the constituents and design of projects have to be structured in the right way."

#### UNCERTAIN TIMES

While there are huge uncertainties around the global economy, O'Connor says Dornan is fortunate in that two of its key sectors – data centres and life sciences – are in a relatively strong position. "We're seeing a global trend of people working more from home. That's driving an increased need for data and data centres, as are technologies developing around artificial intelligence. In life sciences we anticipate further investment in vaccines and continued growth."

The commercial sector – particularly office development – is less certain, he says. "It's going to be interesting to see how that sector responds."

As regards safety – always the industry's biggest concern – the pandemic has had a twofold impact, he says. "New work practices are in place to try to prevent people contracting or spreading the virus and these can be a distraction and cause people to forget about the inherent risks that are always there."



Brexit, meanwhile, is a concern for both Dornan and the industry in terms of movement of people and goods, as well as harmonisation of standards and quality. "We fear the prospect of a hard Brexit is becoming more real and that's something we're preparing ourselves for."

Attracting talent remains an ongoing job. "Really, the lifeblood of our industry is around getting young people and young talent in. We see pretty good throughput of young talent in the professions but maintaining the right supply of talent in the trades is a challenge."

The propensity for tiers of subcontractors within supply chains is also a cause for concern. "Companies like Dornan are very invested in quality, safety, training and bringing in the right talent, but if you go down through the supply chain into lower tiers of contractors, the businesses get smaller and smaller, remuneration levels change and so too do priorities."

"We already have a pretty solid supply chain but we are committed to investing more time into developing it, engaging suppliers in our training and quality programmes, and passing on our expertise, knowledge and assistance to try improve everyone's performance."

Originally from Asdee in County Kerry, O'Connor says GAA – and football in particular – is part of who he is. And he attributes his own style of leadership – creating an environment

where people can be the very best versions of themselves – to what he learnt from playing, as well as coaching and managing children's and adult football teams, both male and female.

"I get a strong sense of satisfaction from helping people do as well as they can. In business, I really try to create a strong team culture and instil a sense of excellence and the environment to support them. That's something I'm certainly hoping to bring to Dornan."

A Chartered Quantity Surveyor, O'Connor has also been heavily involved in his profession and was President of the Society of Chartered Surveyors of Ireland (SCSI) in 2013/14.

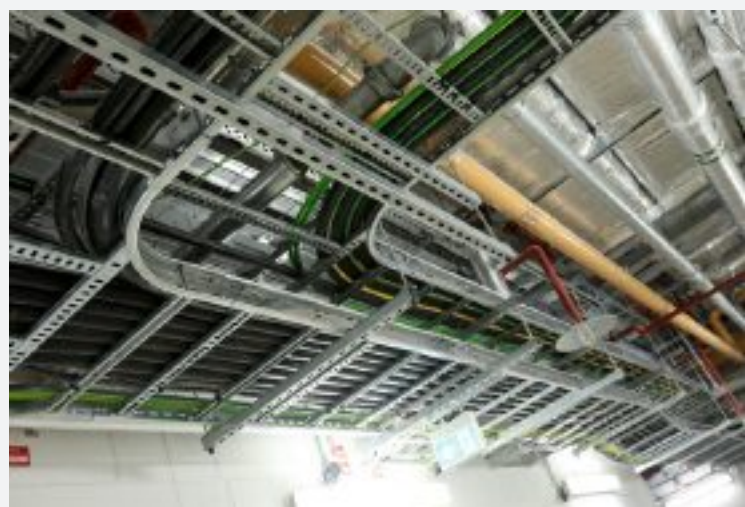
He started his career in Sisk's Cork office and also worked in McNerney before joining Jacobs, where he spent eight years. "My last role at Jacobs gave me fantastic exposure to FDI and working internationally and very much paved the way for coming into a company like Dornan."

The McNerney and Jacobs roles were both primarily based in Dublin. O'Connor says the move to Dornan was particularly attractive from a personal point of view because it is headquartered in Cork, where he has been living since 1992. "My career with Jacobs was professionally very rewarding but the prospect of a move to the US did not align with family life," he says. "Dornan's business footprint is workable from a family perspective. I will be travelling once the pandemic eases but, because our business is located in Ireland, the UK and Europe, it will be very manageable."

Based on what he's seen to date, O'Connor is excited about the future of the business. "I think there are great opportunities and we really have top talent in the company."

"The company has been forward thinking in terms of establishing various departments – engineering, BIM modelling, quality – and we have an offsite manufacturing facility. I think we're going to see further growth and expansion in those departments."

"Also, I think we'll have further growth in Europe and we'll be working in more countries with our clients. So there are a lot of exciting prospects and an exciting future ahead." ■







# People power

Promoted to Managing Director of Kirby Group Engineering in January of this year, Mark Flanagan believes being values-driven is the key to sustainable growth and caring about and investing in people are paramount.

**AROUND** six years ago when he was Kirby Group Operations Director, Mark Flanagan sat with the management team when a tough question arose: “We knew we had a very saleable product and could deliver it well. We had the secret sauce it takes to succeed, but the question was asked, ‘How do we bottle it?’” he recalls.

It took 18 months of discussions, what he describes as “thinking pain,” to find the answer. “We mapped all of our processes from start to finish to gain an in-depth understanding of successful project delivery, focusing greatly on operational and engineering excellence. This provided a clear map of how to hand over an optimum project to meet client requirements. We then wanted to propagate this and teach it to our people so we would have a highly trained team offering all-round balanced and consistent delivery to clients,” he explains.

Founded in 1964 in Limerick, Kirby is a mechanical and electrical engineering and construction solutions provider focused on the data centre, life sciences, industrial manufacturing and substations and renewables sectors. In the space of ten years it has quadrupled annual turnover and employment to reach over a quarter of a billion euros and 1,000 people, respectively.

***“We expect steady, yet ambitious growth of 10% a year in the next three years based on our track record so far.”***

The management team’s re-evaluation of the business which Flanagan refers to led to the development of the Kirby Way, which is essentially the company’s cultural, process and systems approach to doing business, and the Kirby Academy, which trains all key site staff to deliver its projects as a collaborative team with a world-class process. The detailed development and implementation of the Kirby Way was led by Henry McCann, the new Group Operations Director. In developing it, the company has adopted an open mindset to identifying and using world-class software to ensure it is applying the best processes in each function and aspect of how it operates.

With the Kirby Way and Kirby Academy at the heart of its culture, Kirby has made major strides in the past five years, significantly developing its international business in Northern and Central Europe in tandem with growing its data centre and life sciences project delivery capability and capacity. It recently completed two milestone hyper-scale data centre projects in the Dublin area, and is working on major hyper-scale data centre projects in Finland and Sweden. In the life sciences sector, it has completed major projects in Dublin, Galway, Mayo, Athlone, Limerick and the Netherlands.

“What I am most pleased about is that we have sought to be ambidextrous in our growth over recent years – we focused on delivering our growth targets while also developing capability,” says Flanagan. “We expect steady, yet ambitious growth of 10% a year in the next three years based on our track record so far.”



Data Centre project, Slough, England

## DATA CENTRES DRIVE

While Kirby has been performing well in all of its sectors, the greatest growth has been in data centres where it has invested heavily to build its specialist data centre engineering and commissioning expertise.

“We started working on data centres ten years ago, but really made a breakthrough with hyper-scale data centres in the past three to four years and are now working with the largest companies in the world to deliver such projects,” explains Flanagan. “They like our honesty, integrity and values-based approach. Our success with key clients and winning repeat business has been driven by consistent delivery and ensuring there are no surprises.”

With any data centre project, Kirby engages early from receipt of concept design with a focus on value creation and engineering excellence. It works with the client’s design team to develop optimum design constructability. Kirby’s digital construction modellers and engineering team identify opportunities for modularisation and off-site fabrication to optimise construction effectiveness and efficiency.

“We deliver innovation through synchronising world-class engineering and operational excellence. From the start, we think of and plan for an expert and efficient commissioning. We have invested in building a truly world-class commissioning team and always start with the end in mind,” notes Flanagan. “At the moment, we are one of only a handful of Irish companies involved in building data centres in Europe, but we will never be complacent, always ensuring we remain highly innovative and mobile.”



Hyper-scale Data Centre project, Ireland

## A VALUES-DRIVEN BUSINESS

As Managing Director, one of the main things Flanagan is focused on at the moment is on Kirby being a values-driven business, both internally and externally, as he firmly believes this makes good business sense. The underlying premise of the company's culture is that it will always be ethical, honest and fair with its customers and its core values are: People, Safety, Quality, Delivery and Value.

A values driven business is a high bar to achieve. Central to this is leadership. An example of this is that Kirby's senior leaders worked on during this COVID-19 lockdown period, but they also sacrificed 50% of their salaries. This was to support the business but also in solidarity with our colleagues who were prevented from working due to the Government lockdown and the cessation of all non-essential projects.

"We put people first in everything that we do. In management meetings one of our core issues is, 'Are we minding our people?', as our workforce that walks off sites every evening is the real value of the business. This goes hand-in-hand with our core value of Safety – we have to be forever vigilant and ask all of our leaders to live in 'chronic unease' as regards safety in the workplace. Complacency is what catches people out. Chronic unease is about asking the difficult questions every day when walking a project and seeing problems before they arise," Flanagan explains.

In July, Kirby insisted that masks be mandatory for all employees on-site and in its offices. It also highlighted a key safety risk that, with COVID-19 foremost in everyone's

mind, the emphasis must not be taken away from other workplace electrical, height and even driving safety.

"Regarding our core value of Quality, we have to be proud of the quality of everything we do so that clients continue to come back to us. With Delivery the bar is very high – not only do we have to have an excellent product, but deliver on time, every time. Creating and sharing Value is key. We must be honourable and reasonable in all transactions, whether with our own people, clients or the supply chain. Markets will come and go, but I believe if we can stick to these core values, we will have a sustainable business model into the future."

## THE RIGHT PEOPLE

Flanagan is keen to emphasise that good people are central to Kirby's success. Kirby has made several key senior appointments in recent years, which have brought greater depth and breadth of experience to the senior management team, enabling the company to

***"A values driven business is a high bar to achieve. Central to this is leadership. An example of this is that Kirby's senior leaders worked on during this COVID-19 lockdown period, but they also sacrificed 50% of their salaries."***

continue its international expansion while providing clients in Ireland with a premium service. In the past 12 months, Kirby has recruited a total of 300 new people from Ireland and across the world, including project engineers, BIM engineers and site managers.

"We believe in developing our people and hiring the best. One thing we have seen is that good people attract good people. Once a new recruit gets inside the tent, they see that it isn't just talk or buzzwords when we say we genuinely care for our people and invest heavily in them, and they tell other good people they know about this," he says.

"Another important thing for us has been to internalise the whole human resources and talent management function. We appointed

Fergus Barry as Group Head of Human Resources in 2015 and built a dedicated talent acquisition team around him. As part of our efforts to have a sustainable business, we have placed a lot of emphasis on succession planning."

Kirby supports and challenges its employees to have an open mindset and grow, helping them to achieve this through a structured approach to career development. The Kirby Academy and Kirby Academy Learning Management System provide access and management of learning across the business. "We support educational development at all levels (craft apprentices to engineer, craft to engineering, commercial apprenticeships and leadership/management development to masters level)," says Flanagan.

Having originally trained as an apprentice with ESB, Flanagan has first-hand experience of how this route into the industry is important and can lead to a strong career path. He joined Kirby as an electrician, then progressed quickly to being a supervisor and project manager, then on to Business Unit Manager, Group Operations Director and

then to Managing Director. Kirby currently has 170 apprentices and Flanagan hopes to take on 40 to 60 more this year.

"I fully believe in apprenticeships. They offer people a great opportunity, especially in mechanical and electrical engineering, to develop through a business and become the best they can be. We are very mindful of taking on the right people for apprenticeships as these will be some of our leaders of the future," he says.

"We invest heavily in our apprenticeship programme and have added a new internal career development process to further develop our apprentices. In addition, we have been pioneers in supporting apprentices in progressing on Level 7 and Level 8 engineering programmes." ■



Pictured L to R: Sean Meagher, Associate Director – Commercial, Giedre Visockaite, Associate Director – Strategy and Marketing, Henry McCann, Group Operations Director, Mark Flanagan, Group Managing Director, Brian Burke, Operations Manager – Connacht, Ruairi Ryan, Associate Director – Operations and Mikey Ryan, Associate Director – Business Unit Leader – Operations Connacht





# Proactive and Productive

Liam Linehan, STS Group's Director of Business Development describes to Irish building magazine how the company's staff proactively responded to the COVID crisis, overcoming challenges and responsibly maintaining productivity with restrictions in place.

**STS GROUP** was acquired by the German facilities management giant Dussmann Group in July 2019. The Dussmann Group made this acquisition to strengthen its technical services pillar DTS (Dussmann Technical Services). STS Group still operates under the same management team and structures. STS Group's turnover for the year 2019 was €155m and it is expected that all projected targets for 2020 will be achieved.

The company has in excess of 1,400 directly employed staff involved in executing projects across Ireland, mainland Europe and the Middle East. There are approximately 450 employees that are currently working in Ireland. STS Group has offices in Europe and the Middle East with the company HQ located in Waterford and an office in Dublin.

## SECTORS

STS Group carries out works in all sectors, with pharmaceutical, data centres, and utilities being the primary focus. STS Group is currently working on a number of pharmaceutical projects and confidential projects across Europe for a large number of blue-chip clients. Johnson & Johnson, Pfizer, Merck, AbbVie, Teva and CSL are some of the household names that STS Group partners with.

***"It is amazing to see the Impressive examples of collaboration and the continuous efforts made by all to strive for excellence."***

The pharmaceutical sector is a distinctive sector for STS Group Liam tells us. "Clients in the pharmaceutical sector set extremely high prequalification standards. Technical expertise is critical through all phases of the project lifecycle from early design concept to qualification. We are delighted to be working in this sector and with large multinational clients."

The data centre sector is another very important sector to STS Group. "We have many different confidential clients that we partner with across all the regions we are active in. A great number of the utilities projects we carry out are directly related to data centre expansions." The company is also involved in food & beverage, transport and in the commercial and fit out sectors. STS

Group has completed projects related to these sectors across Europe over the past year.

STS Group entered the market in the Netherlands in 2019 and has already experienced major growth. The company followed an existing client to this region and management are currently planning to expand. Liam says it is also within their growth strategy to enter more new markets in the coming years. "We will continue to increase our international profile from our Irish base."

## PROACTIVE

The ongoing pandemic has created issues for all businesses across the globe. The government stances on the pandemic were different in every region and constantly changing. Liam says there was a lot of coordination from the movement of staff and regulatory changes that affected work practices. "We had many different challenges to overcome." Liam and the STS Group management are proud of the diligence, ingenuity and continued hard work of their staff across all of their departments in servicing all of their clients' requirements. "There was clearly no prior experience of a crisis like this for the industry. The Construction Industry Federation and the Mechanical and Electrical Contractors Association have provided invaluable guidance throughout this difficult time and continue to do so."

Even with restrictions and difficulties, all the staff members were flexible. There was a mix of staff working from home and staff



that continued to work on essential services projects. “It is amazing to see the impressive examples of collaboration and the continuous efforts made by all to strive for excellence.”

## DATA CENTRES DRIVE

STS Group over the past number of years has been increasing its offsite fabrication ability. It is now an integral part of the business and is most effective when clients can engage with the design teams early to assist with detailing and planning what systems can be fabricated offsite. “We currently have workshops in Dublin, Germany, Belgium and Bahrain. These workshops service all of the current projects and regions where work is carried out. Our construction teams and our modelling department works with the workshops on a daily basis ensuring quality of product and improving the technology transfers between all parties. We will continue to strive to fabricate as much as we can offsite and to continuously improve our facilities keeping up to date with current technologies that are constantly improving.

“Every site is different and has different requirements for offsite fabrication. We have made great strides in 2020 and will continue to improve this element of our works into the future.”

## RESPONSIBLE

Health, Safety & Wellbeing is central to the company culture. STS Group has a diverse staff, across the age ranges, from young people entering trades to the people at senior management level with four decades of experience. “At STS we run a ‘Mission Zero’ safety programme based around our 12 life rules and our number one life rule is ‘Healthy Body and Mind’. At STS we understand the relationship and importance of mental and physical health and the correlation they have for everybody being safe and healthy at work and at home. We give mind and body health issues equal importance to traditional safety matters.”

For Construction Safety Week over the past few years there has been a broad range of events for all STS Group staff. Liam explains how different groups face different challenges. “Older people have suffered stress from COVID-19 and mental health is a problem among young people, so this year the company will focus on more mental health activities and how people can better care for their wellbeing. I believe if you are taking care of wellbeing, everything else will fall into place.

“For the past four years we have been running campaigns promoting positive mental health within STS and it is linked to



our ‘Mind Matters’ campaign. We have linked up with our partners in Pieta House and VHI to provide awareness talks across our sites and offices, with a view to getting the message out there that help is available and that it is ok to not feel ok. Back four years ago when we increased the effort on wellbeing and mental health we knew it was important to have access to professional help and resources so we decided to set up an employee assistance programme with the VHI. Over the past number of years it has been reassuring to hear that when our people need professional help it is accessible.”

***“Older people have suffered stress from COVID-19 and mental health is a problem among young people, so this year the company will focus on more mental health activities and how people can better care for their wellbeing. I believe if you are taking care of wellbeing, everything else will fall into place.”***

STS Group keeps the wellbeing programme active right throughout the year, with events scheduled on a regular basis Liam says. “This month, on 10 September, we have a focus on World Suicide Prevention Day and then in October for Construction Safety Week Day 1 we will focus on ‘Mental Health, Welfare and Wellbeing in Construction.’ Health and wellbeing is an area that all companies need to stay active in he explains. “The modern challenging world with all of its pressures can be overwhelming at times and at STS we recognise that we must keep pushing the wellbeing programme and supporting our people.”

Corporate Social Responsibility is important to the company. “We believe in giving back to the people in the communities we work in. STS

Group sponsors sports teams and regularly support charity events. We have worked on housing projects here and abroad also.”

In the past year, STS Group held events for the Irish Heart Foundation and Pieta House. Staff took part in the Darkness Into Light Walk in Waterford back in May 2019. STS Group HQ volunteered at the Waterford Food Bank. Volunteers travelled to Belarus with Chernobyl Aid Ireland and provided aid to the Grozovo Residential Home in the Minsk Region. STS Group has built homes with The Haven Partnership in Haiti.

Aside from charity events and sponsorship,

the company sponsors sports teams in Cork and Waterford. “In Waterford STS Group sponsors the Ballygunner Senior Hurling Team and in Cork the company sponsors Highfield RFC.”

One of the company’s goals for the year ahead is to expand into new regions. “STS Group aims to continue growing in the countries we are active in and to enter the sectors in those countries that we are not currently working in.” Liam’s takeaway from the year gone by is that “you can never be prepared enough for what can happen in business, it is everybody in STS’s responsibility to ensure that we keep delivering to the highest levels we can. Once that is achieved everything else in the business will look after itself.” ■







Ireland

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Center Parcs, Longford



Alexander Stadium, Birmingham



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DO & CO, Heathrow

# The Future is Connected

**PAT KING** has seen huge changes in over 40 years at the helm of King & Moffatt, the Carrick-on-Shannon headquartered provider of mechanical, electrical, plumbing (MEP) design, install and maintenance services. Now employing around 330 people, the company has recently developed two new enterprises to emphasise and develop its commitment to innovation and the most efficient work methods.

King & Moffatt Connected is focused on the design of the majority of the group's projects in a 3D Building Information Modelling (BIM) environment, as well as the maintenance of all MEP systems, and electrical controls and automation services for industrial and manufacturing clients.

"We started the Connected arm of the business in order to make best use of new technology in the industry and to give more focus to the energy division and the green element that needs to be incorporated into all manufacturing and building construction," explains King.

"We hired people who have a clear focus on energy and environment to instil that into the parent company from a dedicated source. Our design team sits in there, so it creates a clear line in the sand between design and install teams. We feel that proper design is critical and early engagement with the client will ensure they get the product they need."

The other new division, King & Moffatt Offsite, develops offsite MEP solutions

to improve speed of delivery, safety and quality, and operates from a purpose-built prefabrication facility in Carrick-on-Shannon. The advantages of offsite include efficiency, a safer more controlled work environment and less waste.

"Our Offsite division has been in place for about a year-and-a-half at this stage, but COVID-19 has accelerated its growth, due to travel restrictions—we are building a lot more offsite and shipping it out to each job."

## EXPANSION ABROAD

King & Moffatt expanded its international presence during the last year, opening an office near Frankfurt airport in Germany, and commencing a first project in the Netherlands, adding to its presence in the UK and Poland.

"One of the strengths of the company is the flexibility of the staff. We were never afraid to take on work anywhere in Europe or the UK; with the staff we have and the mentality they have, they will travel anywhere to execute the projects," says King.

Recent and current projects for the company include the Lidl Regional Distribution Centre, Newbridge; Center Parcs, Longford; Cherrywood TC2, Dublin; Bonham Quay Offices, Galway; BMW Manufacturing Facility, Swindon; 22 Hanover Square Hotel, London; DO & CO, Heathrow; Data Centre, Frankfurt and Logistics Centre, Lengede.

Pat King, Co-Founder and Group Managing Director of King & Moffatt, is looking to build on a combination of great staff and cutting-edge technology.





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HVAC Commissioning services have extensive experience in all types of Commissioning and due to greater demand are now offering a specific service aimed at third party validation and commissioning of domestic ventilation systems.



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- Certification of Ventilation system for BCAR

For costings please contact:

**Gerard Quirke**  
**M. 087 653 3965**  
**E. gerard@hvcs.ie**

## CORE COMMUNITY

Despite its international outlook, King & Moffatt is committed to its Carrick-on-Shannon base and creating employment in the local community. Its long-running apprenticeship scheme has seen participants move up through the company over the years. There are over 80 apprentices training with the company at present, who each spend four weeks in the Offsite division before going out on site.

“We train them on all the computer skills as well as the hands-on stuff. We really work very hard with them to make sure that they are market leaders when they are qualified. We don’t send anybody to site now without them having a good basic knowledge of how to make the most of all the tools that they might be using, and know how to manage all the health and safety aspects of doing their job,” says King.

“The strength of our company is our employees and the retention of our employees. All of our key people on our management team, except for one, have come through the whole company structure right from the start to where they are now, sitting on the board. Most of them are over 20 years with the company.”

The company does its own promotions with local schools in addition to the work being done by the Construction Industry Federation (CIF) on promoting the sector and addressing the skills shortage. King’s son Ciaran sits on the Skills Boards and the Industry Steering Committee.

“There is more awareness and when we advertise looking for apprentices, we get a better response than we did a few years ago,” King adds. “We have doubled the number of women in the company over the last 12 months. I would like to see more in engineering and on site, but we’ve made a good start. We are getting female engineers applying for jobs, but we still aren’t at the point where we are getting interest in apprenticeships.”

According to King, the diversity agenda is being led by public sector projects. “One of the reasons that BIM Level 2 got a real push in the industry is because it became an absolute requirement on public contracts over a certain size. That was a real impetus for operators in the industry to bring up their BIM standards.”

He describes the Alexander Stadium redevelopment project they are working on in the UK at the moment where it is a requirement to measure and record the diversity of the people working on the site. “The public sector is in a position to draw attention to issues like this that may not always get the same contemplation from the private sector, where the focus can be on delivery and bottom line.”



Lidl Peterborough Internal

*“The strength of our company is our employees and the retention of our employees. All of our key people on our management team, except for one, have come through the whole company structure right from the start to where they are now, sitting on the board. Most of them are over 20 years with the company.”*

## FUTURE OUTLOOK

Getting back on site has involved a full update on Risk Assessment Method Statements (RAMS) and altering working methods allowing for social distancing—such as splitting shifts into day and night. “We’re lucky that we have very strong HR and Health & Safety divisions, who have actively engaged with the CIF from a very early stage, in ensuring that the policies that we needed were put in place for safe working practices,” says King. “We are continuously updating those to change with the latest developments and advice. We have a policy that employees must be tested if they return to Ireland from abroad. Needs must and business must go on, so we need to find ways to do business.”

The company has fully embraced BIM and for King, the last piece of the jigsaw is to get clients totally engaged with the process from the beginning. “There are less problems and they are solved quicker but the single biggest issue that still needs to be addressed is to get the client to understand the true value of it, and to have a clear understanding of what they want. Spending more time on the design element saves time on the build phase.”

“Everything we do now down to the smallest project has a full BIM or Revit model on it. It’s all out on site, viewable on a big screen. All our foremen and key people have iPads out on site to log any changes, and it’s automatically updated in the cloud so we have live information in our office at all times. Everything we are doing now is totally driven by the live system. This wouldn’t be possible unless we had embraced BIM and Lean and installed very up-to-date software management systems. That’s all been taken

on board by our Connected company and this in turn ties into our cost base, our design base and all the other facets of the company, down even to cash flow.”

The company is now focusing on its R&D, capturing the new innovations that are taking place on projects, and hopes to increase its investment in R&D from 2.5% of project costs to 3.5% in the next year.

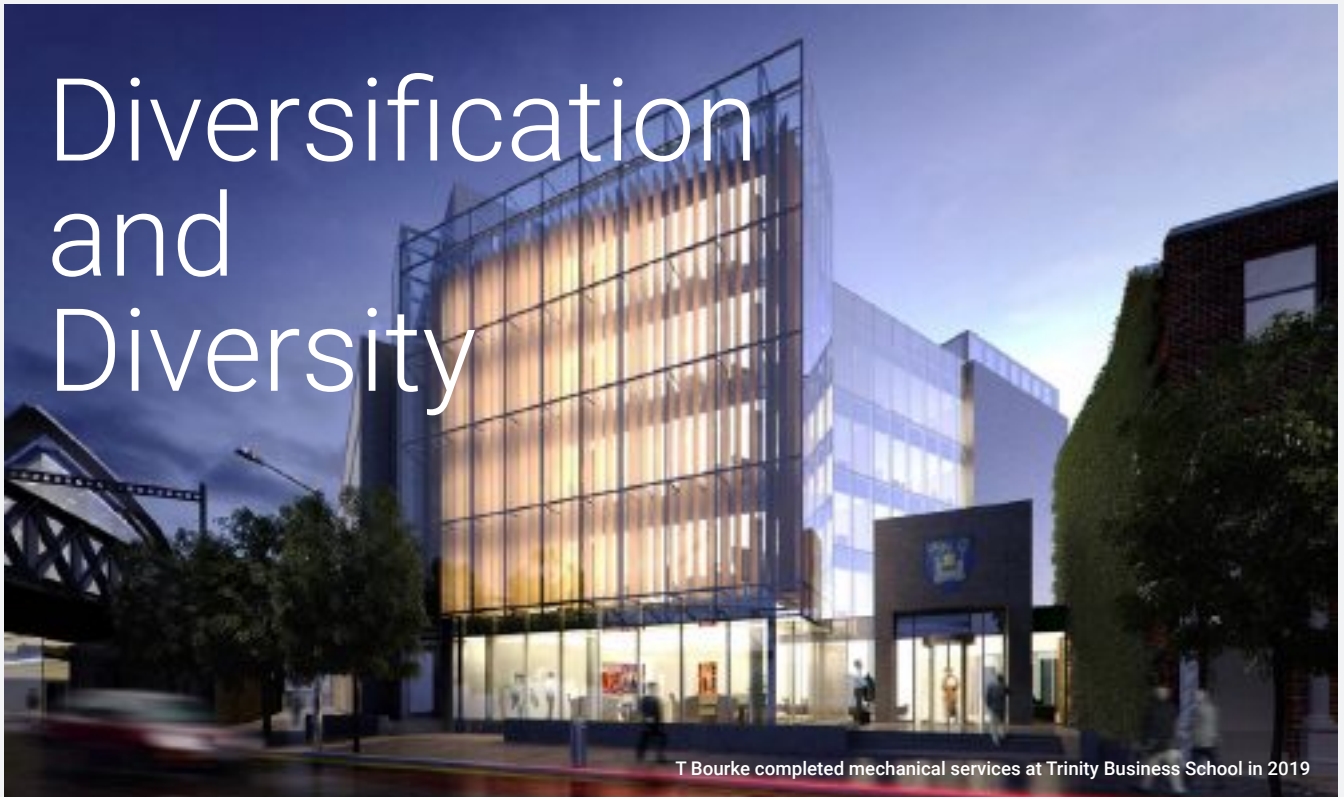
“It’s taking the solutions that our engineers and project managers are designing and sharing this information across the company to bring up the standard all around. We were probably doing this R&D all the time, but we weren’t disseminating it and sharing it as well as we should have been. There’s a great learning curve for everybody if we share all this information. Without question we have put a lot more clarity into our R&D work and hopefully over the next few years we will see more and more of the advantages of doing that.” ■



Offsite Prefabrication



# Diversification and Diversity



T Bourke completed mechanical services at Trinity Business School in 2019

T Bourke looks to the future, after over 50 years in business, as David Doherty, Business Development Director, talks diversification, diversity and more.

*“During the lockdown, while construction sites were closing, our service personnel were teaming up across disciplines to deliver emergency gases and mechanical services to hospitals and healthcare facilities throughout the country.”*



**T BOURKE** is one of Ireland's leading mechanical and electrical contractors, and has retained its ranking in the Top 20 of Irish Specialist Services Subcontractors for the last two years running. Established in 1968 to undertake mechanical engineering services within the Irish construction sectors, the company has a reputation for top quality installations and experience across industrial, commercial and residential sectors through to process and pharma.

In 2006 the company purchased a Limerick-based electrical contracting company, and now runs its electrical division. More recently, in 2017 the company further increased its service offering by acquiring medical gases company, Hospital Technical Systems Ltd.

“We employ in excess of 50 people across two offices in Dublin and Limerick, and operate on sites and projects nationwide,” says David Doherty, Business Development Director. “We have a mechanical and electrical offering out of the Limerick office, but they would geographically take care of everything on the western seaboard right the way down to Cork and Kerry so we have the ability to deliver a full service offering there. We have also used it as a regional base for our medical gases division.”

In 2019, the fully Irish-owned second generation family business celebrated 50 years. One of its first flagship projects was Kerry General Hospital in 1979 a new build on

a greenfield site with full mechanical services including associated medical gases. Doherty notes that the company has recently returned to the hospital to do some refurbishment and is proud to say the original mechanical plant and equipment is still operating, speaking to the quality and longevity of their work.

Since its inception the company has built up an impressive portfolio of projects including working on Croke Park Stadium, and the mechanical installation on the Department of Agricultural Laboratories at Backweston in Celbridge. Some of the group's recent projects include services for clients such as the luxury Adare Manor hotel, An Teagasc, BD Medical and St. Vincent's Hospital.

## DIVERSIFYING OFFERINGS

“T Bourke have always focused their service offering on the Irish market, and would have a very strong position mechanically in commercial, public and pharma sectors. However, our electrical division is our fastest growing discipline and we now have experience in delivering large scale commercial electrical projects alongside expanding our presence in the residential sector,” says Doherty.

While the group's main work is in mechanical and electrical contracting, in 2017, the acquisition of Hospital Technical

Services (HTS) Ltd, brought a new medical gases businesses into the fold. HTS, established in 1990, is a leader in the supply, installation, and maintenance of medical and process gases for Ireland's Hospitals, pharma, food and process industries.

"HTS offer design, installation and maintenance of medical and process gases. The addition of this third service is unique within the MEP contractor's service offering and during recent emergency works the strength of the group really shown. During the lockdown, while construction sites were closing, our service personnel were teaming up across disciplines to deliver emergency gases and mechanical services to hospitals and healthcare facilities throughout the country."

The company is now offering a complete solution to hospitals and care homes, up to package plant rooms, which is a complete turnkey solution. "It's a plug and play installation," says Doherty. "One service complements the other and we are winning business on the diversified offering."

#### QUALITY AND INNOVATION

To enhance the effectiveness of its quality systems and ensure better service to clients, the company is certified to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. HTS Ltd is also ISO-accredited and integrated into one company-wide system.

"It's something that clients are looking for nowadays," says Doherty. "It gives us recognition for the processes we have in place to deliver jobs. Being independently audited, it adds credit to the award. When we're pitching for projects, it's a great accreditation to have in your arsenal, if clients don't have prior experience of the company but would recognise that marker."

The company's commitment to quality is backed up by the use of Building Information Modelling (BIM), the transformative and powerful design tool. "T Bourke have always been open to new technology and processes for working. Our projects are now delivered in BIM. We coordinate and calibrate across

our project teams in house. All projects are coordinated through BIM with a lead BIM manager reporting to the project manager."

BIM allows for flexibility and adaptation taking site conditions into account and Doherty says, "We do prefabricate for large plant rooms, however the majority of sites are delivered through onsite fab shops which allows for flexibility and is still efficient for project delivery."

#### GETTING BACK TO WORK

After the lockdown, getting back to work has involved new models and modes of operation too. "Following the Government lockdown we instructed all staff to work remotely where possible. As construction sites began to reopen we phased the return of staff. Fortunately, our office space has allowed us to maintain social distance. We have repurposed meeting rooms and redundant offices into working spaces. New office operations include limited numbers in areas, one way systems and weekly COVID-19 declaration."

Industry standards have been useful to create clear cohesive guidelines across the business. Doherty says, "All our team are CIF COVID-19 inducted, which was a great initiative on getting the construction sector back to work. Onsite additional hand washing stations, temperature check and limited numbers in rooms is now the norm."

#### PREDICTING THE FUTURE

Looking to the future, the landscape is changing and the group is looking at a mix of secure public sector work, and predicting what sectors will be active as businesses and consumers change the way they operate.

"At present we have projects across several sectors from medical to process. We have secured some public sector work for 2021 which already has a project team fully engaged on procurement, technical specification and coordination. The leisure and hospitality sector appears to have stalled on new projects while commercial office space needs consideration while multinationals and companies decide their long-term plan for the likes of European headquarters in Dublin."

He notes post-COVID-19, the future of retail may look



very different from the model that has been embedded in society over the last few decades.

"The face of retail has now completely changed. The online sales have escalated so it remains to be seen where the large retail shopping centres focus will be. As large brands close their high street stores the focus will be back on the customer experience. We have already seen this change with the likes of our clients Dunnes Stores, where stores are revamped into a market stall experience."

#### SKILLS AND DIVERSITY

Pre-COVID-19, Ireland's construction industry was fully engaged in delivering construction projects in all sectors, highlighting a skills shortage of the essential workers needed to keep working at pace. "At present we are still in a state of flux as the various markets find their levels and construction requirements," says Doherty. "The skills shortage may now ease as the sectors activity retracts slightly. There has been a curtailment in new apprenticeship applications and until there is some clarity on how both the construction sector and the country will operate, with COVID-19 in the background it remains to be seen how much of a shortage actually exists. We also have Brexit on the horizon which will add another level of uncertainty into mix."

"Unfortunately, construction is still a very male-biased industry. Our shortage at various skill levels could be solved if we could just tap into the other 51% of our population," he suggests. "I am involved with CIF and the Chartered Institution of Building Services Engineers (CIBSE) and both have and continue to run programmes to encourage women to join the industry and focus a spotlight on the achievements and success of our female colleagues. Programmes such as CIF's #BuildingEquality Campaign and Women in Building Services Engineering (WIBSE) all help to increase awareness and should be commended for their efforts." ■







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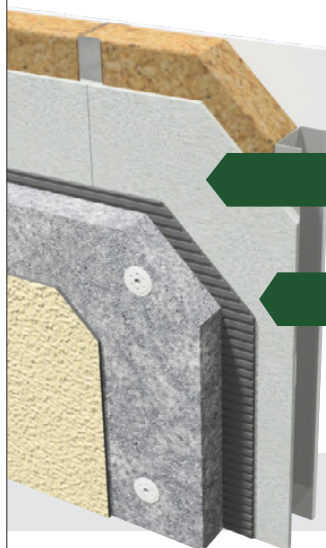
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# Construction's Choice for PPE and M&E



Modular Fabrication Bridge

Etag Group Sales Director Shaun Bonner and Business Development Manager Barry Kilbride describe the PPE and safety technologies in demand to combat COVID-19 and the increased orders for Etag's M&E fabrications.

**ETAG** is a specialist building supplies company that was established in 2004. The company provides the widest product selection for the fixing, construction and industrial markets and offers next day delivery as standard. Etag has dedicated product divisions for Fixings, M&E, Insulation, Drywall, and General Building Supplies. Between the UK and Ireland, Etag employs over 100 people. Even with the lockdown this year, Etag is still on course to hit 2020 targets. This indicates the demand for the company's products and industry-leading expertise and customer service.

## DEMANDING TIMES

Shaun Bonner, Etag Group Sales Director leads two sales teams in Ireland and the UK. Since February, Etag has increased its PPE offering and safety technologies stock and intensified its M&E support, containment and modular fabrication to meet the demands of the industry working with COVID-19 restrictions on site.

Shaun tells Irish building magazine about how Etag met customers' demands, in a time of great need, through collaboration and communication with the customers and product companies. "COVID-19 came as a shock to the industry. There was a shortage nationally of basic PPE such as dust masks and overalls. Customers came to Etag with their concerns for equipment

supplies. With our contacts in our supply chain, we were able to meet customers' needs. There was a lot of work done coordinating with suppliers and customers. We were proactive and worked on increasing products supplies early in the pandemic."

"Staff safety was the focus from day one," Shaun tells us recalling the announcement of lockdown and then the announcement of teams returning to sites nationwide. "The industry had to work to ensure that social distancing was maintained on sites. Etag worked with supplier companies to ensure customers got what they wanted." Shaun says it was great to see the collaboration between the Etag staff and suppliers. "We had to look at getting products faster from suppliers. Products from Gripple, Xtreme Signs and Unitrust; these companies were great to work with and their products helped people with following COVID safety guidelines on jobs."

## COVID-19 SUPPLIES

Etag is a leader in supplying PPE on projects in Ireland and abroad. However, over the past six months the required PPE and safety equipment has changed a lot. Now sites need products such as face shields, thermometers, hand sanitisers and disinfectants. Sanitising units are in great demand. Shaun says Etag has sold vast volumes of hand sanitiser since March.



Shaun Bonner



Barry Kilbride





Speaking of Etag's new offerings he says they are selling a range of COVID-related site signage, thermometers, and foggers for sites. "These foggers are used for sites, canteens, site offices and delivery vans, etc. The spray in these kills 99.99% of viruses and bacteria. There are alcohol and non-alcohol options. These tools are safe and quick to use."

Etag stocks other safety products including, electrostatic fogger mist sprayers and fog nebuliser mist sprayers which are useful for the disinfection of large areas. There are also handheld fogger gun sanitisers, which are most effective in small consigned spaces like site offices, canteens and toilets, etc. Greenspan's walk-in disinfection and temperature control channels, temperature control and hand disinfection stands and infrared non-contact thermometers are also stocked by Etag.

Etag can provide safety signs with your company's logo on them. "The general offering is flying off the shelves; we can also do bespoke signs given an order." Xtreme Signs manufacture much of Etag's signage Shaun says. "They are a flexible company like us; they are proactive and innovative and are very aware of site safety requirements. They are ahead of the game with regards to what is needed."

***"We treat every customer like a colleague as we view what we do as a collaboration between our customers and ourselves. Communication is vital between our team and our client at all stages of the project."***

**Barry Kilbride**

Etag management used their knowledge and expertise to protect their staff. "Etag stocks thermometers, sanitisers and PPE but is also using the products at the company. People entering the offices and facilities have their temperature taken. You are not allowed entry if you don't have a dust mask. Everything has to be safe for staff and customers. We have done a good job since March, but our work is not finished."

#### **M&E FABRICATION**

"Offsite is going to be the future," Shaun states. "Enquiries from customers are coming in daily for M&E fabrications. Etag fabricate support systems for the M&E industry at our Finglas facility, these then can be easily fitted together on site. Prefabricated M&E components make sites safer."

Speaking of the range of products he tells us Gripple products used for hanging M&E units and ducting are very popular at present. Gripple's wide range of building services suspension solutions, including HVAC solutions, pipe supports, brackets & hanging systems and clamps have a great reputation for quality. Unistrut is a market leader in cable management solutions and metal framing systems and its products are in great demand.

M&E products have been purchased primarily for the commercial, data centre, and life sciences sectors over the past year. Etag employs engineers that worked with M&E design and installation in these sectors and others. Etag offer a safe controlled environment at their

facility and Shaun explains the general work. "When designs are signed off and sent to the Finglas facility, the M&E team know what materials are required, what has to be cut and fabricated, what is needed to get fabrications to site and the requirements on site for installation." The quality assurance and quality control standards are very high.

Etag is a one-stop-shop for companies. "We work with the main M&E suppliers, known brands. Etag stocks over 10,000 products. If you are ordering M&E components with us, you can order other supplies, like PPE, plasterboard, tools from our other divisions on one invoice, one delivery. We save time for the contractors on site."

Etag has unique M&E in-house expertise. Barry Kilbride leads the M&E team. Shaun tells us it took a lot of work to assemble the team, while describing the in-house capabilities. "We have always ensured that our team can provide our customers with the right product knowledge and this value had to be brought through to our M&E team. The team were brought together because of their expertise and hands-on experience with the products."

Barry Kilbride, Business Development Manager for M&E in the UK and Ireland says, "Our Etag Support Systems team supply detailed fabrication, logistics and onsite technical support for the M&E industries. The team have a wide range of experience with site background and have worked on data centres, pharma sites, industrial and commercial sites. Due to this experience, we are able to get hands-on in assisting with the design and manufacturing modular supports to our client's detailed specifications. Our experience sets us apart as we understand the type of work involved on mission-critical projects and are able to mobilise our workforce to suit our client's needs. We treat every customer like a colleague as we view what we do as a collaboration between our customers and ourselves. Communication is vital between our team and our client at all stages of the project."

#### **CUSTOMER NEEDS**

Customers are under pressure to deliver on sites Shaun says. "They know if they come to us, that we will help get them over the line. We will do early deliveries, later deliveries; whatever is required to ensure they get their project done on time. We are a flexible and approachable company. The customers are the most important to us. They are on site at 7am. They may have questions, and we are there to deliver information. Customers know their call will be answered."

Etag has developed its people, promoting people from within as well as recruiting talent from the industry. "In-house there is a great established team with people rising through the ranks to become managers. Since establishing in 2004 we have continued to build our reputation. Whatever the customer requires, we have an experienced team that knows the industry, we will work with companies to meet their needs."

Shaun believes this is a time for collaboration throughout the industry. "This is one time that the industry needs to work together to get through, whether it's clients, designers, main contractors, subcontractors or suppliers. We all have to work together to ensure we provide a safe environment to complete work in and reduce the threat of COVID-19 to the public." ■



Center Parcs

# Chain reaction

Thanks to its strong relationship with subcontractors and suppliers, Sisk has navigated its way through the COVID-19 pandemic well and faced all of the supply chain challenges head on.

**THE OUTBREAK** of COVID-19 pushed the supply chain and procurement team at Sisk out of its comfort zone and away from its usual supply chain as the world scrambled for COVID-19-related personal protective equipment (PPE) during Ireland's lockdown.

***“A huge amount of planning and coordinating work went on behind the scenes so that things happened seamlessly. Subcontractors are also continuing to manage the cash-flow challenge brought by a six-week shutdown.”***

With Sisk having been involved in the creation of the Construction Industry Federation's Standard Operating Procedure (SOP) for re-opening of the sector, Supply Chain Director John Devereaux and his team wanted to make sure they procured enough PPE for everyone on its sites. So far Sisk's additional PPE costs because of COVID-19 total €1m across the business.

“We had to find new suppliers and supply-chain routes. Various sourcing companies

ended up doing really good work in finding suppliers of PPE for us in Asia. This has opened our eyes to a broader supply chain in certain areas,” says Devereaux.

In the early stages of the pandemic prices for PPE and hand sanitiser went through the roof, although this has settled down now to lower levels. For example, a litre of sanitiser was costing €19 a litre, but this has dropped to below €5 a litre, Devereaux notes.

Normally Sisk suppliers deliver materials and equipment directly to sites. COVID-19 led to the company doing something out of the ordinary – setting up a centralised warehouse operation for PPE for distribution out to projects in Ireland and the rest of Europe. “We did this so we could buy in bulk to ensure supply and take advantage of the reduced prices of doing that. This meant having to spend a lot upfront, but Sisk was fortunate to be able to do this. While



COVID-19 continues to be around we will stick with this approach for certain items of PPE,” Devereaux explains.

When it came to materials, there were some factory shutdowns and certain products were put on allocation, which meant big manufacturers were only able to allocate certain volumes to their customers. There





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were elements of this to deal with, but generally materials supply wasn't really affected, as manufacturers have played catch-up since, says Devereaux. However, there have been some price increases. "Some insulation product suppliers increased prices by 12-15% due to their own supply chain having issues meeting demand due to COVID-19. The delay on felling licences not being renewed is having a major impact on native timber shortages and certain plywoods – although this isn't directly related to the pandemic."

#### LABOUR SUPPLY

The remobilisation of people after the site shutdowns was a major challenge for everyone in the construction industry. Sisk's subcontractors performed exceptionally well in dealing with this, according to Devereaux. "A huge amount of planning and coordinating work went on behind the scenes so that things happened seamlessly. Subcontractors are also continuing to manage the cash-flow challenge brought by a six-week shutdown," he notes.

"A lot of their workforce was returning from other countries in the EU. One of the difficult aspects of this was the return-to-work date moving from mid-April, then to 5 May then on again by another two weeks to 18 May. There was so much uncertainty that people didn't want to make the decision to return to Ireland until they knew projects were definitely open."

On the ground, this meant a slow build-up of people on sites in the first couple of weeks, but this aligned with the medical advice and also the company's desire to ramp projects up slowly and safely anyway. The number of people on sites was back to close to normal levels by June with the majority of office staff still working from home. Within a couple of months, productivity had improved to forecasted levels under the new normal.

***"Latest events have highlighted the importance of the profession and put the spotlight on us. I'd like to think that COVID-19 has proven that supply chain management is an invaluable asset to ours and every business in the sector."***

Sisk took the lead on all of its projects in terms of the SOP, developing its own remobilisation plan for each site first; then communicating back and forth with all subcontractors during the lockdown period to coordinate the anticipated re-start.

"We brought in trades such as scaffolders first and made sure everything was safe; then rolled out the rest of the trades. We made sure all materials suppliers were aware of the SOP and knew that delivery drivers coming on-site shouldn't get out of their cabs and should minimise any contact in relation to signing paperwork. No-one resisted the measures and throughout our supply chain people looked out for each other, which made a massive difference," says Devereaux.

The fact that Sisk has always had a strong relationship with its 5,000 or so supply chain partners has been really important. In the past three to four years, the company became more strategic about this, by introducing its own supply chain awards and rolling out formal B2B meetings. "We try to keep these meetings non-operational and focus on sharing strategies and challenges so we can see if there are ways we can help each other out," says Devereaux.

"We really put a lot of effort into our relationships with supply chain partners as we are nothing without them. COVID-19 has brought us closer as everyone was striving towards the same goal in getting back to work and keeping sites going – and recognising that collaboration was key to achieving it."



#### BREXIT CHALLENGE

With a no-deal Brexit looking more likely as each week passes, concern is mounting about what this will mean for construction in Ireland.

"Unless a deal is put in place, World Trade Organisation tariffs are going to kick in. This will force us to look at other EU countries for products and equipment. This is something we will have to weigh up, but so far we haven't made any drastic changes to the supply chain and we are monitoring things really closely," says John Devereaux, Supply Chain Director at Sisk.

"One of the big risks for us is in relation to products that we currently buy from the EU that come through the UK. That UK land-bridge has to be used effectively or we could get hit with double tariffs. Some of the big manufacturers in mainland Europe see the UK and Ireland as one market in their heads and have warehouses, sales and technical support serving both in the UK. We have reached out to a lot of them. Some have plans for direct shipping routes into Ireland; others don't at this point but we expect them to address that."

He adds: "Manufacturers of building materials that require CE certification to be compliant with building regulations will have to ensure that this certification is obtained from an EU 27 notified body. This is another challenge that Brexit is bringing, however, I believe most manufacturers are on top of this and I don't see it being a major issue post Brexit."

#### THE SUPPLY CHAIN/PROCUREMENT PROFESSION

Having worked in supply chain management for 15 years in Ireland, Australia and the UK, John Devereaux has observed that it has become more of a strategic function.

"Certainly within Sisk, it has shifted in the past four to five years from simply being a procurement and buying operation for materials and products to a strategic function that adds value. The Sisk board is committed to continuing to invest in the supply chain function," he says.

"Latest events have highlighted the importance of the profession and put the spotlight on us. I'd like to think that COVID-19 has proven that supply chain management is an invaluable asset to ours and every business in the sector." ■





Aerial view of the Cherrywood lands

# Scale model

Less than a year since setting up in Ireland, Quintain has its sights firmly set on being one of the top new home developers in the country.



*“Lone Star sees a role here in the long term with the development of our existing landbanks and future additions to our portfolio as well.”*

**QUINTAIN** may only be in business in Ireland since last November but, with development schemes at Cherrywood, Portmarnock, Adamstown and Clonburris and a potential 9,000 units on its books, its ambition to become one of the top three homebuilders in the country is far from being a pipedream.

Scale and ambition are in Quintain’s DNA. The development company was set up in the UK in 1992 and is probably best known for its ongoing work on the 85-acre Wembley Park in north London, one of the largest urban regeneration projects in Europe. So far, £2bn has been invested in the scheme, while a further £1bn is expected to be put into it over the next two years.

Quintain was floated on the London Stock Exchange in 1996 before going private again in 2015, when it was bought by Lone Star.

The Irish office was set up to develop Lone Star’s 460-acre portfolio of assets. Assembled between 2015 and 2019, the landbanks at Adamstown, Clonburris, Portmarnock and Cherrywood have capacity for over 9,000 new homes, as well as 600,000 sq ft of commercial space.

Michael Hynes, Joint Managing Partner of Quintain Ireland, says Lone Star’s belief in the long-term sustainability of the new homes market in Ireland was the driving force behind setting up the Dublin office.

“Like everybody else, they can see that there are supply issues,” Hynes says. “It’s clear that the market is still not perfect from

a funding perspective and that there isn’t a huge number of developers with their own capital following the global financial crisis.

“Lone Star sees a role here in the long term with the development of our existing landbanks and future additions to our portfolio as well.”

Launched with a seven-person team, which has since grown to 25, the Irish business is led by Hynes along with Joint Managing Partner, Eddie Byrne.

Hynes had been with Lone Star-owned Hudson Advisors from 2013 to 2019 as Director and Head of Real Estate. A qualified surveyor, he has over 20 years’ experience in the industry and also previously worked for Nama, Grattan Property and HOK (now Savills). At Quintain Ireland, he oversees construction operations and land and planning procurement.

Byrne also spent six years at Hudson Advisors, where he was Managing Director and responsible for Lone Star’s Irish commercial real estate portfolio, which had transaction volumes of over €5bn. His 33-year career to date includes corporate, project finance and real estate lending experience in Ireland and the US with Ulster Bank, ING Group, Investec and IBRC. As well as being Joint Managing Partner at Quintain Ireland, Byrne has responsibility for corporate operations, investor and stakeholder relationships, human resources and public relations for the Quintain Group.

As Lone Star's asset management wing, Hudson had been focused on the real estate investment side of operations until 2015. "Then a lot of private equity firms started coming to Ireland and it became a lot more competitive in terms of pricing," says Hynes. "We started turning our attention to other areas that weren't as certain and maybe needed more equity than just investment. That was land."

Lone Star teamed with Cairn Homes to bid for the Ulster Bank portfolio, Project Clear, which included over 30 sites. From this, Lone Star got ownership of almost 310 acres of development land at Adamstown and Portmarnock.

The Adamstown landbank in west Dublin comprises 220 acres of development land with capacity for around 5,000 homes, as well as over 500,000 sq ft of commercial space.

***"We completed 800 homes between purchasing Project Clear and becoming Quintain. There's still a huge way to go on those landbanks and, in the meantime, we have also added to our portfolio with the purchase of Cherrywood."***

The St Helen's and Somerton schemes are already under construction in Adamstown. Quintain also recently received planning permission for a further 245 new homes at Tandy's Lane, where it plans to begin construction before the end of the year with the first units becoming available in the middle of 2021.

The company has 87 acres at Portmarnock, where it is planning to develop 1,000 new homes. The 150-home Dún Sí development at St Marnock's Bay is already underway while a second scheme – Skylark – received planning permission for 150 homes in March.

From 2015 to the launch of Quintain in Ireland, Hynes and Byrne were focused on the Adamstown and Portmarnock landbanks, working with contracting partners Ballymore, Castlethorne and DRES.

During this time, Lone Star also acquired a 30-acre site at the Clonburris SDZ, which is located between Lucan, Clondalkin and Liffey Valley. The site has capacity for over 350 homes.

"We started acquiring more experts from a housebuilding perspective into the company," says Hynes. "We completed 800 homes between purchasing Project Clear and becoming Quintain. There's still a huge way to go on those landbanks and, in the meantime, we have also added to our portfolio with the purchase of Cherrywood."

Lone Star had been closely following Cherrywood for about a year before completing its acquisition of 118 acres, around 30% of the overall development site from Hines in July 2019.

Hines has retained ownership of the Cherrywood Town Centre, a 720,000 sq ft retail-led, mixed-use development that will include up to 1,300 apartments. Cairn Homes also owns a site in Cherrywood where it is planning to build around 300 houses and apartments.

Hynes describes the site, which has capacity for 3,000 residential units, as 'plug and play'. Over €50m of infrastructure – including 4.5km of roads with full services and three parks – was in place before the acquisition.

Quintain's initial focus is on Cherrywood Village, which makes up around half of its available land and will eventually comprise over 1,300 homes, two public parks and more than 50,000 sq ft of retail and civic amenities. According to Hynes, this area will be one of the lower density parts of the SDZ and primarily be made up of family houses. Subsequent phases will include apartments.

The first two planning applications were submitted during the summer – one for 134 three- and four-bed houses and the second for a further 163 units.

"We hope to go to tender in September and to select a preferred contractor for the initial phase in October," Hynes says. "The plan is to get on site sometime in October with a view to launching next April.

All going well, we hope people will be occupying our homes by the middle of next year."

The company will be submitting four further applications for 800 homes – a mix of houses, apartments and duplexes – by the end of this year. It is also in the process of finalising a masterplan for Cherrywood Village, which is due to be launched in the coming weeks.

The ambition is to have the entire scheme delivered within a five or six year time horizon. "We're obviously hoping we have no more surprises like COVID-19 in terms of delays to construction," Hynes says.

A key aspect of the development, Hynes says, will be its 'green lung' of parks, walk ways and cycle paths running through the heart of the scheme. "It's not quite The High Line in New York, but it will be somewhere for people to gravitate to and enjoy green spaces. We'll have areas where people can sit down, small kiosks, places to get coffee and even a cycle shop."

He stresses the importance of creating the right amenities as part of the new district. "But it's also important to have the right mix of commercial and residential, and to have units that are affordable at every level. By having a good product mix and a varied degree of specification, we want to try to make sure we have a full mix of people within our community."

#### LONG-TERM GOAL

Hynes says Quintain's medium to long-term goal is to become one of the leading housebuilders in Ireland. "Our ambition is to be similar to peers like Cairn and Glenveagh Homes in terms of number of units being delivered."

The plan at the start of 2020 was to complete 500 units this year, 900 in 2021 and to be up to 1,500 by 2022. "We're probably 30% behind because of COVID-19. Our ambition is still the same for years two and three. We have been set back slightly but the demand is still there from occupiers."

As well as already having one of the largest landbanks in the country, the company is looking to add to it and is in negotiations on three or four potential acquisitions.

Dún Sí development in Portmarnock







Joint Managing Directors Eddie Byrne and Michael Hynes

“There aren’t too many scale builders looking for opportunities at the moment so we believe we’re well placed to secure one, hopefully over the next six to 12 months. That said, we have a lot to be getting on with so it’s not a problem if we don’t add to what we have in the short term.”

The company is also in the process of creating two construction frameworks for potential contractors. The first is for lower density housebuilders and is expected to include DRES and similar contractors. “We have pre-qualifications out at the moment with several contractors and they are very excited about being in a strategic partnership with a developer like Quintain.”

The second framework is for higher density, taller buildings and is aimed at contractors like Sisk, John Paul, Walls, JJ Rhatigan and Bennett. “Again, we’ve been in contact with these companies and they’re excited about partnering with us and helping us deliver of our goal of 1,500 units a year.”

Quintain already has a relationship with DRES, which is currently the main contractor on its Adamstown and Portmarnock schemes. “We’re only at the start of our journey and are live on site for 500 units. If we’re delivering 1,500 a year, we probably need to be live on 2,000 so we have to broaden the network.”

In Wembley, Quintain UK has pre-qualified five or six tier one and tier two contractors. “We believe setting up a strategic relationship framework here, whereby we’ll have a pool of pre-qualified contractors is the best approach for getting to where we want to be. We can’t have one contractor across such a large number of units.

“We’re advanced on the framework now and will be using it in Cherrywood to go to two or three contractors for the first job.”

Another focus for the company at the moment is building up its own team. An important recent addition was the

appointment in June of Norman Higgins as Head of Construction. Higgins, who’s a Fellow of the SCSi and RICS, joined Quintain after 25 years at Sisk, where he was most recently Managing Director of the builder’s housing division, Sisk Living.

“In three and a half years, he brought Sisk Living from zero to 900 units under construction and to 94 employees when he left,” says Hynes. “We definitely think we have the right Head of Construction to move our operations forward to a scale level.”

***“We believe developers are a hugely important part of helping the Government meet the targets they need to so we hope they collaborate with us.”***

Quintain has grown from an initial 12 to 25 people and has plans to expand to 40 over the next year. Interestingly, the gender split is 50/50.

“We think that’s a very good thing,” says Hynes. “When we advertise for jobs, we’re seeing an equal number of male and female applicants, regardless of the department. We’ve obviously been picking who we think is the best person for each job and, so far, that’s been an even split. It’s interesting and welcome and has brought a good atmosphere to the office.”

## THE FINANCE CHALLENGE

Hynes says that while access to finance is a challenge in the current climate, Quintain is at an advantage with Lone Star as its equity partner. Along with Lone Star, Royal Bank of Canada is Quintain’s financing partner on the Cherrywood scheme. “Royal Bank of Canada hadn’t been in the development market in Ireland before so Lone Star’s strategic relationships across the world helped us secure our financier for Cherrywood.”

AIB, meanwhile, has been providing finance for the Adamstown and Portmarnock schemes for the last three years. “Our sites are all located in Dublin, in SDZ and on good transport lines, have proof of demand from sales and proof in construction costs over the last three years. So the level of certainty in our landbanks is probably lower risk than many others.

“AIB is very comfortable working with us on Adamstown and Portmarnock. And Royal Bank of Canada is very comfortable and excited to work with us on Cherrywood going forward. We’re lucky we have strong relationships built up for the sites we have.”

## COLLABORATIVE APPROACH

Hynes is hoping for a collaborative approach on the housing issue from the new Government. “I know they are looking at putting together a group of stakeholders so I hope all sectors and people working to deliver housing are listened to. We need to do it together or it’ll just never happen.

“We believe developers are a hugely important part of helping the Government meet the targets they need to so we hope they collaborate with us. The new Minister for Housing Darragh O’Brien seems to be very committed to delivering so let’s see how that goes over the next year or two.”

Quintain, meanwhile, will be concentrating on its job at hand. “We have a big job ahead,” Hynes says. “We’re very focused on growing our team and just making sure we can get up to scale and reach our goals.” ■



Dún Sí development in Portmarnock

# Head first



A new CIF survey and report identifies just how the industry is doing in terms of managing mental wellbeing among employees, and makes some suggestions on how things can be improved.

**MENTAL** health is a huge concern to companies of all sizes in the construction industry, but managing it – and creating a culture where employees feel they can discuss any issues they may have in this area – continues to be a challenge for many.

A new survey and report commissioned by the Construction Industry Federation has revealed the key issues for companies in managing mental wellbeing among staff. It has also come up with a series of recommendations – many of them relatively simple to implement – for better supporting employees in this regard.

Top-line findings of the survey, which involved a sample of 301 CIF member interviews, include the following:

- 98% of companies acknowledge that staff mental health has important safety implications
- 94% believe it's critical for the industry to improve the management of employees' mental health
- 85% say employers have a responsibility for looking after their workers' mental health
- 79% say their company manages mental health issues on an ad hoc basis
- 24% have a formal policy to manage the mental health of employees; this falls to 13% among micro enterprises
- 34% have assigned a specific person to manage employee/subcontractor mental health issues
- 49% believe mental health issues are a key cause of absenteeism in the sector
- And 68% of companies think the construction sector has a serious issue with staff under reporting mental wellbeing issues in the workplace.

CIF President Pat Lucey says many companies in the sector are already engaged in the topic of mental health and are putting a lot of effort into supporting staff as much as possible. "It's probably easier for larger companies to do that but we are seeing it across all sizes of organisation," he says.



Pat Lucey

In many cases, this engagement has not converted into formal policies. Barry Egan, Managing Director of Accuracy Research and the author of the report, is not too surprised at that, noting that many of the firms without policies in place are quite small in size. "It might be unfair to expect that they would have formal policies at this point," he says.

One of the key objectives of the survey and the report was to raise awareness among all companies about the importance of mental health, Egan says. "Once there's a recognition of the importance of this issue, the next step is to demonstrate a commitment to good mental health and developing a collaborative company culture whereby staff feel that teamwork and

support are encouraged and rewarded."

Recognising why this is important rather than starting off with policies and procedures is paramount, he says. "The danger would be that the procedures would just remain in print and would not be embedded in terms of helping the employee and employer find the right pathway to care."

Enabling frank and open discussions about mental health is one of the most impactful things companies can do, says Lucey. "It's around raising awareness and getting to a point where people are comfortable discussing issues in a way that's safe and confidential."

***"It's around raising awareness and getting to a point where people are comfortable discussing issues in a way that's safe and confidential."***

The report and survey will also serve to help raise awareness, he says. "They create an opportunity to discuss mental health and that will filter out in organisations."

With 81% of employers reporting that employees' mental health is a very sensitive issue and difficult to address, Grainne O'Reilly, Marketing Manager at Spectrum Life, also stresses the importance of creating a culture of open dialogue, understanding and empathy. "Sometimes this can start with a senior manager sharing some of their challenges," she says.

Getting involved in mental health initiatives is another way of starting conversations. Lucey says the mental health



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Grainne O'Reilly

element of Construction Safety Week 2020 is really registering with members. "It's surprising just how much engagement it creates amongst colleagues in the workplace and between the workforce and management and that can only be a good thing," he says.

***"Every company should have an Employee Assistance Programme in place as a basic requirement. An EAP is a small investment to enable employees get access to unique care pathways not specific to their work."*** Grainne O'Reilly

The first day of this year's safety week (19-23 October) is dedicated to Mental Health, Welfare and Wellbeing in Construction. It's just part of a year-long initiative being undertaken by the CIF to support mental wellbeing among its members and the wider industry.

Sinéad Proos, Head of Health and Wellbeing at Laya Healthcare, says that while it's very encouraging to see that most leaders in this sector acknowledge the importance of mental health and wellbeing as a health and safety consideration, it is concerning that over half of companies believe that staff under report mental health issues.



Sinéad Proos

"Our partnership with CIF, 'Build Health' is something that can support both employers and employees in the sector," she says. "The mental health and wellbeing support programme offers resources to leaders in the sector and the 24/7 Mental Health Support Programme offers invaluable and confidential help and advice to those who need it."

O'Reilly, meanwhile, says every company should have an Employee Assistance Programme in place as a basic requirement. "An EAP is a small investment to enable employees get access to unique care pathways not specific to their work," she says. The Spectrum EAP provides multiple employee access points, including 24/7 freephone number, WhatsApp, SMS, live chat and request call back forms so construction workers can get support anytime and anywhere.

Companies and employees that don't have an EAP can access the free and confidential 24/7 helpline – 1800 939 122 – and wellbeing app launched earlier this year by the Lighthouse Construction Industry Charity. In recent weeks, the charity also committed to delivering €20,000 of free mental health and wellbeing training to the industry for the remainder of 2020.

Lucey says the CIF is also very grateful to the Construction Workers Sick Pay Trust (CWSPT) for supporting its work in this area. "The CWSPT is helping us promote health and safety amongst our members and I would encourage all construction companies to sign up as it's a tangible signal to employees that their wellbeing is important."

The CIF is already hugely committed to helping companies and employees around mental wellbeing and will continue to prioritise this, he adds. "We're working on a lot of initiatives in this area and we'll be working through the recommendations from the report as well," he says. "It's an ongoing effort."

And Egan stresses that employers should not look at the recommendations as being overly onerous or irrelevant to their business. "Small companies in particular should not feel that this is something that doesn't apply to them or won't be possible because it's going to require reams of paperwork. You can have effective policies that are robust but are also relatively concise and succinct."

Committing to mental wellbeing is obviously the right thing to do, but it also makes good business sense, Egan says. "For companies that have employees with poor mental health, there are big impacts in terms of productivity and increases in absenteeism, human error and accidents."

#### THE RECOMMENDATIONS

An important outcome of the report is a series of recommendations – for companies, the industry and Government – that are intended as initial actions that can be addressed in the short term.

From a company's perspective, recommendations include engaging staff in discussions on mental health; developing jargon-free policies and procedures around mental health; introducing a process where employees can report an issue; and looking at talks, work-



Barry Egan

shops and activities to inform and promote good mental health in the workplace.

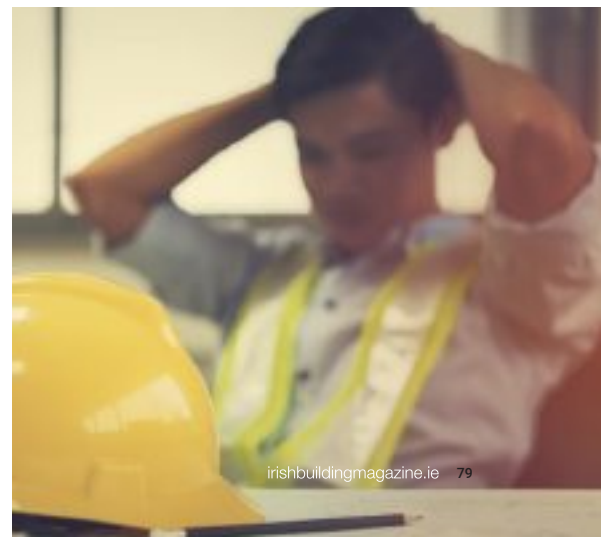
It's also recommended that companies assign a senior person with responsibility for mental health.

The pressure of challenging deadlines is identified as a key source of stress for employees. To help counteract this, the report stresses the importance of prioritising project management and supervision of jobs to ensure realistic deadlines, clear communications between management and staff, and healthy work hours and work periods.

Developing a collaborative company culture where teamwork and support are encouraged and rewarded is also advised. The report says senior management need to "demonstrate and not just articulate that teamwork matters."

Recommendations for industry include establishing a CIF working group to measure the impact of mental health on absenteeism, loss of productivity, etc; facilitating free access for construction workers to employment assistance programmes; developing best practice policies, guidelines and procedures that can be adapted for large and small companies; promoting training courses in this area; and setting work schedules and project management practices.

Some of the recommendations for Government include providing grants to companies to embed a culture within their organisations; launching a targeted campaign to promote mental health and wellbeing on construction sites; and working with industry to develop tendering processes, procurement guidelines and contractual frameworks to ensure timelines are realistic. ■







# Euro Executive Recruitment Celebrates Five Years in Business

Cork-based recruitment consultancy, Euro Executive celebrates five successful years in business, the company reflects on its foundation in 2015 and anticipates a period of growth over the coming years, despite the current economic climate.

**WITH ITS** flagship office on Pouladuff Road, Euro Executive recruits permanent, temporary and contract solutions for domestic and international clients across many sectors including Engineering, Manufacturing, Construction, IT, Finance, Life Sciences and Business Support.

The specialist recruiter's unique business model means that it has access to a large talent pool of highly skilled candidates from across the entire continent of Europe, with offices in Ireland, the United Kingdom, Poland, Romania, Croatia, and Holland.

and total client satisfaction. We have also placed thousands of highly talented candidates in roles which suit their skillsets and role requirements throughout Europe," he adds.

Despite the economic challenges that have presented themselves in the wake of the global COVID-19 crisis, Euro Executive Recruitment has persevered and is anticipating steady growth throughout the next five years as a shift in the worldwide job market occurs.

"Many of the industries which we recruit for are experiencing surges in labour

client, requiring niche technical skills.

The vacancy was with the client's internal talent acquisition for over nine months due to its specificity. Once released to Euro Executive, four candidates were sourced within five days.

The successful candidate, who met the role requirements and had a suitable technical skillset, was a Spanish national who had engaged with Euro Executive's Croatian office.

Euro Executive's clients in Munster and Ireland have been very receptive to its talent sourcing model, which can sometimes include streamlining logistics and assisting with the relocation of successful candidates to Ireland.

"We are extremely proud of our successes throughout our five years in business, and look forward to the next five years and beyond, where we will continue to provide exceptional recruitment solutions to both client and candidate alike."

Established in 2015, Euro Executive Recruitment is a specialist recruitment consultancy operating across all sectors within Europe, with eleven offices across Ireland, the United Kingdom, Poland, Croatia, Romania and Holland. The company's key USP to clients is its level of reach with talent pools throughout Europe, providing permanent, temporary and contract recruitment solutions. Euro Executive Recruitment has worked with large multinational clients across sectors such as Engineering, Manufacturing, Construction, IT, Finance, Life Sciences and Business Support. ■

***"With this increased demand comes labour shortages within Ireland, which is why Euro Executive is playing a pivotal role in retaining talent both locally and internationally for Irish businesses in these sectors. We have the resources to recruit talent Europe-wide."***

Since its beginnings, Euro Executive has expanded its diverse client base and increased its office base throughout Europe, now with eleven offices. The company's success has been attributed to its high-level European reach, along with the calibre of its own staff.

Denis Casey, Operations Director for Euro Executive Recruitment says, "Today marks a key milestone in our company's history. Through the hard work and dedication of our team, we are a leading recruiter for the sourcing and recruitment of highly skilled European talent.

"Over the last five years, we have developed a great client base based on trust

demand, some of which include data storage services, eCommerce, pharmaceuticals and manufacturing, so we are operating business as normal. Many of our clients are still hiring consistently," Denis Casey says.

"With this increased demand comes professional and labour shortages within Ireland and across Europe, which is why Euro Executive is playing a pivotal role in retaining talent both locally and internationally for Irish businesses in these sectors. We have the resources to recruit talent Europe-wide."

One recent example of the recruiter's vast European reach saw Euro Executive retained to recruit for a large-scale multinational



Limerick Institute of Technology



Paul Vesey

# Online from Limerick and Cork

Limerick Institute of Technology and Cork Institute of Technology representatives tell Irish building magazine about their colleges' online offerings and the influence of COVID-19 on online learning.

**THERE** are great construction-related online courses delivered by Ireland's colleges, making it easy for busy professionals to engage in further learning in their chosen fields. Online courses have become popular in recent years and interest is rising during the COVID-19 pandemic. Paul Vesey and Dr Joe Harrington talk about their colleges' online offerings.

## LIMERICK INSTITUTE OF TECHNOLOGY

Limerick Institute of Technology's (LIT) Department of Built Environment offers a number of online courses through the Flexible Learning Department. Currently, LIT offers special-purpose awards in Building Information Modelling (BIM), Construction Project Management, and Health & Safety. Paul Vesey Lecturer in BIM, Project Management, Information Technology says, "We are very proud of the fact that these courses are offered fully online and utilise the best technologies available to deliver a unique and rewarding experience for learners."

The decision to deliver these courses online was an easy one he explains. "The reason that we chose to deliver courses online was primarily down to the needs of the industry. We know that there are highly capable individuals operating at all levels of the construction sector that in many instances do not have formal qualifications in their chosen field. We also know that the industry is in a period of change, and there are many who want to learn and understand the latest developments in the technology and management of construction. For many people, it is simply not possible to return to formal education. Our mission at LIT has always been to support the people and industry of the region by providing relevant and high-quality education." In going online LIT can reach more people who would not otherwise have been able to access third-level education.

When LIT explored delivering online training they focused attention on the learner experience and what was required to gain the knowledge and qualifications that they needed. "Most people own several devices that can be used to participate in online education: laptops, desktops and smartphones. In designing courses we did our best to ensure that there would be little or no need to acquire additional hardware. The technologies that people have and interact with on a daily basis are more than capable of meeting the needs."

Paul says technologies have not changed that much in the last decade. The primary difference between now and 2010 is the choices available and the speed at which these technologies work. Also, technologies are used by people in both their professional and private lives and on the delivery side providers have worked to deliver a good user experience. "People are now far more comfortable and capable of using these technologies for education. That is not to say that the only developments are in the areas of video communications. Most providers of online education will utilise some form of learning management system. Early implementations of these systems tended to be repositories of learning materials such as lecture notes. The past decade has seen the development of these systems into a far more interactive and engaging experience."

***"As educators, we are aware that there are limitations to what we can do online, particularly for those traditional learners who enter third-level through the CAO. Third-level is more than just an education; it is also about gaining life experience."***

To date, Paul says the feedback from LIT's online course participants has been overwhelmingly positive. "Learners enjoy the flexibility that online course provision offers. Learners have also expressed the importance of continuous engagement." LIT's experience of online delivery will be critical in the future.

COVID-19 has had a devastating impact on people's lives and the economy. The changes and protocols introduced in response to COVID-19 will be with us for some time to come. LIT, like many other institutions, will be providing a blended model of teaching this academic year Paul tells us. "In practice, we expect that lectures will predominantly be delivered online, but that students will generally do their practical work on campus.

"As educators, we are aware that there are limitations to what we can do online, particularly for those traditional learners who enter third-level through the CAO. Third-level is more than just an education; it is also about gaining life experience. It is, for this reason, that we will continue the blended form of teaching once it remains





Dr Joe Harrington

safe to do so and in line with the advice of the CMO, NPHET, the HSE, the Department of Education and Skills and the HSA.”

Many of the systems and tools which have been brought to bear in response to this crisis, such as lecture recordings and interactive content will continue to be used when normal operations resume. LIT will be providing an increasing number of postgraduate and flexible learning programmes online. “We believe that this meets the challenges of this crisis, as well as providing a long-term response to the needs of our region and community.”

This year construction adapted to remotely working in teams. This was a challenge; collaboration is also essential in construction education. Paul believes the next big challenge for online learning is in the area of collaborative learning. “Collaborative learning, or group work, has long been a challenge within education. The last few months have seen a dramatic growth in teleworking. It follows that the experiences and knowledge gained will find its way into the provision of online education.”

#### CORK INSTITUTE OF TECHNOLOGY

Dr Joe Harrington, Head of the School of Building & Civil Engineering at Cork Institute of Technology (CIT) says his school has been very active in online. “Our first venture was over a decade ago when the final two years of the BEng (Hons) in Structural Engineering programme were very successfully delivered primarily remotely, with some on-campus laboratory work. This activity allowed a cohort of part-time students, who had originally completed a part-time Level 7 BEng in Civil Engineering, the flexibility to complete the programme while continuing in employment in Ireland and overseas in countries such as the UK and Canada.” The feedback received was very positive; an online offering was deemed necessary.

Annually, the Department of Civil, Structural and Environmental Engineering within the School offers a suite of online CPD modules in Engineering Practice in the disciplines of Fire Engineering, Fire Safety and Building Regulatory Engineering. The programmes meet key industry demands while also addressing professional bodies’ CPD requirements. Online modules in Bridge Engineering and other specialist topics are also available.

The Department also offers special-purpose award programmes, as well as a BSc (Hons) add-on programme (available to holders of a Level 7 in AEC disciplines), in the area of Building Information Modelling & Management. “The programmes are delivered in conjunction with industry professionals providing a cutting edge experience in the discipline for students.”

***“From a CIT perspective our commitment in delivering online courses is to provide the learner with high academic quality professional programmes in a learner-centred environment utilising the optimum Learning Management System and Tools.”***

Joe says the response to the COVID-19 pandemic involved a rapid transition of courses from a primarily traditional physical delivery to remote delivery. “It was remarkable that such a transition could be achieved so rapidly and so effectively by professional and committed staff and supported by CIT’s Department of Technology Enhanced Learning. Current plans for the School for the upcoming semester of the new academic year envisage a blended delivery model with lectures primarily delivered remotely and with a range of delivery approaches for more hands-on laboratory and practical activity.”

Online course delivery has been gaining popularity, with content quality and tech-

nology improving. “From a CIT perspective our commitment in delivering online courses is to provide the learner with high academic quality professional programmes in a learner-centred environment utilising the optimum Learning Management System and Tools.” CIT and similarly, other colleges across the Higher Education Sector, have rapidly transitioned to online delivery for full-time programmes in the context of maintaining their full and comprehensive programme provision in the COVID-19 era.

Joe says the feedback received has been very positive. “This programme delivery approach has allowed busy professionals to learn in a flexible manner where they are not ‘tied’ to a tradition time-bound approach with the students having the facility to progress their learning at their own pace and to ‘dip in and out’ of the learning activity in a way

that meets their own specific requirements, whether it be juggling a very busy working life with study or juggling with a range of different personal and family commitments.”

The School through its Departments of Construction and Civil, Structural & Environmental Engineering was awarded funding for a new suite of courses this year under the National Human Capital Initiative and Springboard+ Programmes, including courses in Mechanical & Electrical Quantity Surveying, Building Information Modelling & Management and Construction Project Management. These courses are targeted at industry professionals to allow them to progress and upskill and develop careers whilst continuing to work. ■



# Fingal Housing Excellence

Aerial view, Racecourse Commons, Lusk

County Architect Fionnuala May talks to Irish building magazine about Fingal County Council's recent and upcoming housing schemes and how the local authority is delivering quality homes through design and construction excellence.

**FINGAL** County Council has an experienced Architects Department with a team that includes architects, architectural technologists, quantity surveyors, clerks of works and inspectors who work on a range of projects from large scale schemes of 500 plus houses to pilot deep retrofit of terraced housing. The Public Buildings team, Housing Construction team, Housing Maintenance team and Quantity Surveying team all operate from the Architects Department. This concentration of expertise gives a whole-life view of the housing stock.

External consultants are employed, but much work is done in-house, from the preparation of Part 8 planning applications to maintenance management. Of all the services provided, 60% of the work is done in-house, while consultants undertake about 40%. Speaking of the work culture within the Council Fionnuala says there is a good relationship between the County Architects and the County Councillors and trust and understanding has been built up over the years, and this is evident when a new project is proposed. "The Architects Department are a service department for the Council and our commissioning client is our housing department with whom we work very closely and collaboratively."

## HOUSING STOCK

Fingal County Council has a housing stock of approximately 5,500 units. Over the past two years, Fingal County Council built 260 houses

on 11 sites. It has big plans for the next two years, including a major development planned for ChurchFields in Mullhuddart in Dublin 15.

The Council has had a number of standout projects in recent years. Fionnuala says 70 units in Racecourse Commons in Lusk was a notable project for design and quality standards. "The Lusk scheme was designed by the Architects Department using BIM.

***"The Lusk scheme was designed by the Architects Department using BIM. This was a new design with mixed house sizes and quality finishes that made it distinctive. New heating technologies were used to deliver energy-efficient A3 homes."***

This was a new design with mixed house sizes and quality finishes that made it distinctive. New heating technologies were used to deliver energy-efficient A3 homes." Curragh Developments Limited was appointed on this project by public tender. Paul Keogh Architects assisted with the construction stage inspection of works and sign-off.

Louth-headquartered contractor Curragh also completed a small village scheme of 26 units in Rolestown and Fionnuala speaks very positively about the work. "This was in an existing rural village. The scheme incorporated a large open public space. The contractor has done excellent work on Council projects, and the team were great to work with due to their dedication to quality workmanship and communication with the Council."

Fingal County Council is employing landscape architects on all schemes she

explains identifying the benefits. "New families entering these schemes are pleased by the open public spaces. The Rolestown project featured in RTE's Super Garden series. The series had never covered a social housing scheme before. We wanted to show that social housing can have beautiful gardens and well designed public open space that is delivered at the same time as the housing scheme."

On another project, Cunningham Contracts Group built 24 units on Rathbeale Road, Swords. The contractor completed the scheme to a high standard and it was occupied last summer. "This was a difficult site due to site topography and there was an adjoining private estate. There was a mix of apartments and houses. This was mixed-tenure with homes suitable for people living with physical disabilities." Fionnuala is proud of the finished developments. "There is a great neighbourhood feel on all of these three projects."

The Council has schemes all over the county with some big land banks, especially in Cappagh and Mullhuddart in Dublin 15. The planned development in ChurchFields, Mullhuddart which is in master planning stage proposes over 500 units of social and affordable houses, with a large linear park. "This scheme will be developed in phases. There will be a





Rathbeale Road, Swords

separate tender for the project's design. To enable the development of this project there will need to be a link road constructed."

Fingal tends to plan for mixed-tenure developments. However, the Council's first straight affordable scheme will be going to site in Dun Emer, Lusk. This was done through a developer competition. This shows Fingal County Council's innovation in procurement.

These will be the major Council projects over the coming years. There are many small schemes also. For example, in Lusk village there is a scheme with five houses underway.

## EXCELLENCE

Regardless of project size, the quality of housing units is consistently excellent. The Council's planning and design is a great example of lifecycle thinking. All houses on new schemes are built to nZEB standard. Fionnuala explains some of the considerations that have to be made when planning and designing. "There are provisions in the County Climate Action Plan that relate to housing developments, such as sustainable drainage solutions. We work with colleagues from Planning and Strategic Infrastructure on this to integrate solutions into our designs. We also put electric car charging points in our developments. Also, to support wildlife, we have swift boxes on our houses' gables to encourage the birds."

All new schemes follow the Age Friendly Ireland guidelines to develop elderly-friendly homes. Universal design principles

are incorporated and County Development Plan standards and the Department of Housing guidelines are followed she explains. "Sustainable living and integration with existing communities is always considered. Because we maintain our own housing we are concerned with the lifecycle and the maintenance cost of properties. The quality and robustness of materials is key and ensuring that they are not high maintenance. The designers specify cost-effective materials that will endure the use of the properties over the lifecycle."

For mechanical heating and ventilation technology operation and maintenance, there is a tenants induction undertaken using easy to follow videos. Housing design to operation is considered by the Architects Department.

## METHODS

The Council is exploring modular systems for future large developments, which will have 75 plus units. Fingal's projects to date have primarily been built using masonry and timber frame construction. The Council is satisfied with traditional construction because the management know what to expect when maintaining the properties, materials suffering wear and tear etc. However, if modern methods offer a system that can be easily maintained over the lifecycle and is flexible for refurbishment then the County Architect is interested in reviewing.

***"The contractors we work with have been excellent. A good contractor who strives for excellence is a joy to work with and the subsequent results demonstrates the benefits to the Council as property owner and to the occupier."***

Fingal is under pressure for programme delivery. Some modern methods can help with programme delivery, and provide units that are cost-effective and to high-quality finishes. "We have cost limits that are applied by the Department of Housing and we have to adhere to these. For a three-

bedroom house our build cost is €205,000 excluding the site cost. The skills shortage will be another influence on the chosen method in future builds."

Fingal County Council is well thought of by contractors Fionnuala says. "We provide good levels of information. All project architects are practitioners. They design, procure and inspect and sign-off on work

on site. Contractors enjoy working with us regardless of the challenges they face with the public works contracts, and this is testament to our professionalism."

## PLANNING AHEAD

Fingal County Council is evaluating using Design & Build contracts for future works. "These were used on rapid build projects by the Council in the past. We are open to evaluating accelerated delivery methods from all of our contractors."

Over the next 18 months the Architects Department has a lot of work. 200 units are planned to be built in 2021. "Some of the small projects coming up include the Cappafinn scheme which has 69 units, a small area of ChurchFields, in advance of the major project, will see 70 units built. There will be a few infill developments in Lusk, Swords and Howth. We are doing apartments on the hill of Howth on a tricky urban site.

"These show that social housing is diverse and can be situated anywhere; not just a traditional estate of three-bedroom semi's. These small projects are critical to bringing life back to towns. If sites come available we will examine them from design, cost and procurement viewpoints."

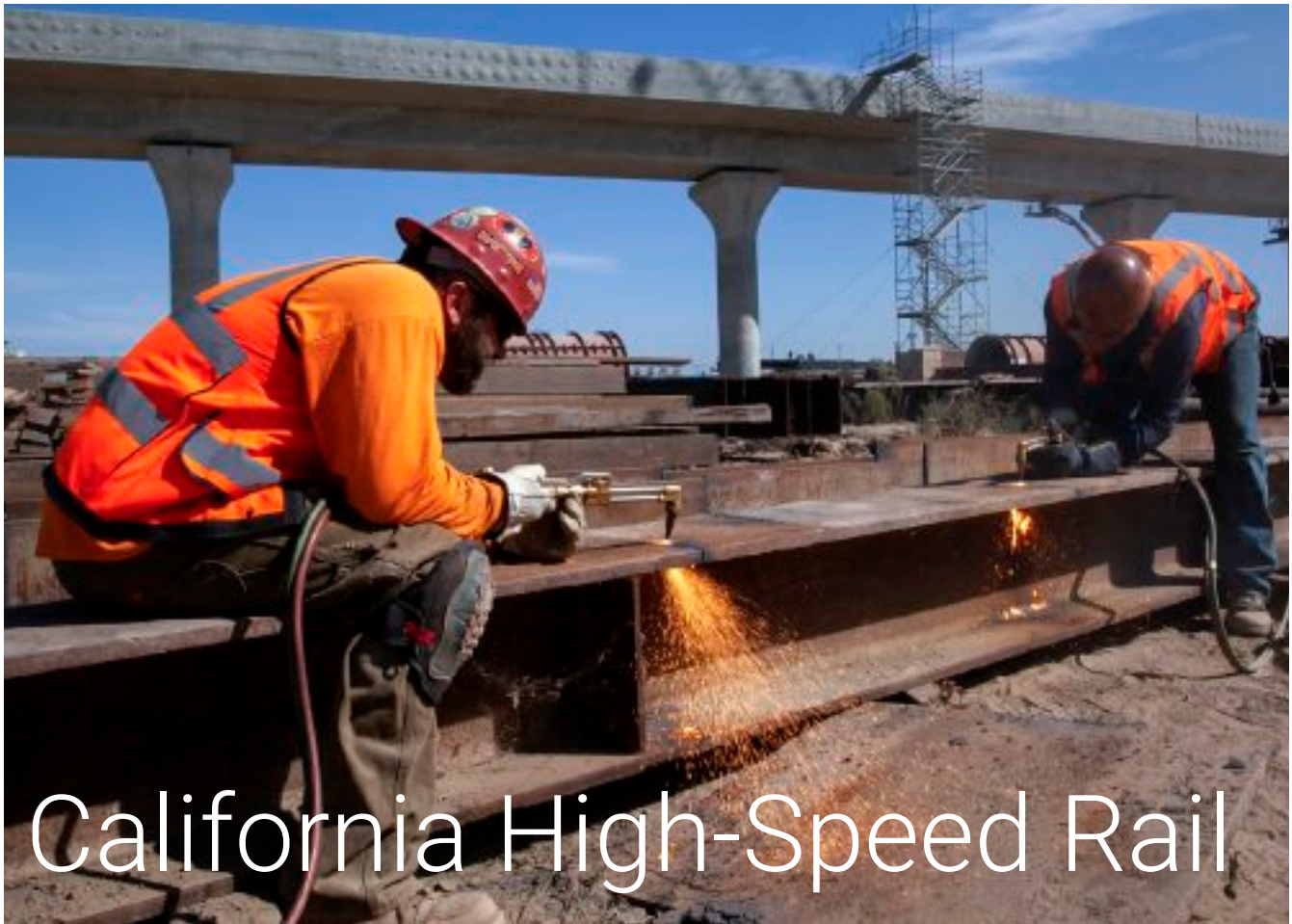
New-build aside, there are deep retrofits planned for older estates. "A pilot will take place on a terrace over the next year. Currently, research is being undertaken on this and a document will be prepared for the Department to seek funding."

For companies considering bidding for work, Fionnuala says an excellent track record in the delivery of quality housing is essential. "The ability to keep to programme and an approved budget is important. Our Councillors and the Rebuilding Ireland programme have high demands in these areas. Council budgets are constrained. Companies need to be able to show the ability to plan a project and the quality of their resources. People with the ability to plan projects with talented and experienced people will usually deliver a good result."

Fionnuala says professionalism and standards in construction have improved greatly over the past decade. "The contractors we work with have been excellent. A good contractor who strives for excellence is a joy to work with and the subsequent results demonstrates the benefits to the Council as property owner and to the occupier." ■

Racecourse Commons, Lusk





# California High-Speed Rail

Brian P. Kelly, CEO of the California High-Speed Rail Authority talks to Irish building magazine about the mega rail project that is estimated to cost approximately \$80bn when complete in 2033.

**CALIFORNIA** High-Speed Rail trains will travel at speeds of up to 220mph between San Francisco and Los Angeles once built, reaching the final destination in under 3 hours we are told. Unfortunately for Californians this mega rail project has had challenges stalling its progress since the beginning: lack of stable funding and environmental clearances struggles, and now COVID. However, as work is currently ongoing on the first 119-mile stretch in the Central Valley, Brian P. Kelly says challenges are being overcome and progress is being made to achieve the vision of high-speed green transport in the State of California. By 2022, the federally mandated American Recovery and Reinvestment Act deadline, the Authority plans to have environmentally cleared the entire 520-mile Phase 1 system.

Brian has spent his career in the public sector. He was 18 years in one of the chambers of the State Legislature, working in Transportation Policy, covering financing deals. His most notable project there was the rebuilding of the East Span of the San Francisco-Oakland Bay Bridge, a challenging mega project, built with advanced technology to deal with earthquakes, completed to praise from Bay Area citizens.

Brian went from this role to work for Governor Jerry Brown as the first Secretary of Transportation for the State of California, heading the agency that managed all the transport departments. He oversaw the largest State funding package in California in this time. At the end of 2017 Governor Brown asked Brian to take the role of California High-Speed Rail Authority CEO. In February 2018 Brian began leading one of the most challenging infrastructure projects in the world, overseeing the planning, design, building and operation of the United States' first high-speed rail system.

## ESTABLISHING

Back in the 1980s Californians were discussing what high-speed rail could offer travellers going between San Francisco and Los Angeles. A commission was formed in the 1990s and developed a plan to be put forward for citizens to vote on. This was put to vote in 2008 and was approved, with a Bond Bill of €9bn to get the project started. Funding was expected to come from the Federal Government, private sector and the State, Brian tells us. “\$9bn was just to begin



the programme.” The Californian State Legislature established the Authority. The Central Valley segment was scheduled for completion on 31 December 2022. \$3bn in Federal stimulus funding during the Great Recession and additional money from the State came in to establish the project he explains telling us of the current budget. “We have a total budget of \$23bn in funding at present. We get a lot of funding from Cap & Trade auctions, these are benefits made





available for green projects and we are one of the greenest projects in the world. We get 25% of the auctions every year.”

The cost of building the infrastructure from San Francisco to Los Angeles is predicted to be between \$80bn and \$98bn he says, describing the current work and progress. “This mega project we are proposing to build in block sections. These sections of work, the whole distance, must have environmental clearance. Before I was appointed the Authority had started construction back in 2015 in the Central Valley area. This is mainly going through agricultural land. There is 119 miles under construction in the Central Valley today. The prime goals now are to get the Central Valley section constructed, get environmental clearance for the other remaining sections and get the additional funding to build the remainder of the project.”

#### CONTRACTS

Before Brian was appointed CEO the Authority contracted then Parsons Brinckerhoff, Inc. (now WSP) through a Rail Delivery Partner contract. WSP assists with statutory requirements, with programme and project management with the State team. This is the largest contractor involved on

the programme. On the construction side there are three Design & Build contracts at present that make up the 119 miles in the Central Valley which is estimated to cost \$10.6bn in total. The Tutor Perini/Zachry/Parsons Joint Venture is doing 32 miles in the northern Central Valley, ‘Construction Package 1’ valued at \$2.2bn. This distance goes from Avenue 19 in Madera County to East American Avenue in Fresno County, includes 12 grade separations, two viaducts, a tunnel, a San Joaquin River crossing, and the realignment of State Route 99. Then

***“The number of workers dispatched to the job sites has increased fourfold. We have gone from 215 to nearly 1,100 workers per week being dispatched to sites.”***

there is 65 miles in the middle of the Valley, ‘Construction Package 2&3’ which is being undertaken by a Joint Venture between Dragados USA, Inc. and Flatiron West, Inc., valued at \$1.8bn. This segment starts from East American Avenue in Fresno to one mile north of the Tulare-Kern County line, including 36 grade separations across counties, viaducts, underpasses and overpasses. At the bottom

of the Valley, California Rail Builders, LLC a Joint Venture of Ferrovial-Agroman West, LLC and Griffith Company is working on 22 miles of infrastructure, valued at \$576m. This segment, ‘Construction Package 4’, goes from terminus of the central segment to Poplar Avenue to the south. This package will include construction of embankments, retained fill overcrossings and viaducts, aerial sections of rail alignment, relocation of four miles of existing Burlington Northern Santa Fe tracks.

Aside from these Design & Build contracts PGH Wong Engineering, Inc., and Harris & Associates (Wong+Harris) provide construction management duties on the north Central Valley. Arcadis provide project and construction management services for the Central Valley works also. These are the companies at the top. There are over 550 companies in the supply chain Brian tells us. “We have an aggressive 30% small business goal for their participation and regularly profile the work of these firms. There is an integrated structure.”

Of the works in the Valley, 40% has been complete. These contracts were in place prior to Brian joining. “The contracts were awarded on best value, with criteria for expertise, price and technical skill, knowledge of high-speed rail.” Lessons are learned every day on the project. Because of the deadline to spend the Federal money, construction started early, before right of way parcels were all in hand and utilities were relocated, leading to delays and associated costs. Brian aims to be more strategic in future sections’ construction works, undertaking pre-planning with greater consideration for challenges.

Brian says procurement methods will be explored to see which option allows for better pre-construction planning and to ensure the design is developed to settle final details before going to site. “We will be more strategic, we have a range of procurement options to choose from, whether the construction work is Design & Build or Construction Management General Contractor. We will execute more strategically next time using the lessons that have been learned.” Brian has no specific preferences for procurement routes but does favour early contractor involvement.

#### CHALLENGES

Planning and logistics are critical. Because of the urban elements there is a lot of communication with cities and freight rail. “Third party negotiation takes time on some elements. These cities’ experience of right of way procurement has been troublesome, but the Authority has learned from this and the remaining work seems favourable.”

There was an exuberance to get to site. The Authority was not as mature as it should



have been at the start but in the past few years Brian says there has been an evolution, developing expertise in-house. “I brought in a chief operating officer who is a project engineer with 27 years’ experience in the United States Navy. Since retiring from the Navy he has worked on major infrastructure projects. Hiring expertise at the executive level has been a success with improved expertise in project management and project approvals.”

Over the past 18 months there has been significant construction growth with construction expenditure tripling since the beginning of 2019. “The number of workers dispatched to the job sites has increased fourfold. We have gone from 215 to nearly 1,100 workers per week being dispatched to sites.” No segment of the project had been environmentally cleared in 5 years; and now two segments have been cleared since autumn 2019, Brian says. This has been one of his major milestones since taking charge – he hopes to clear four more next year.



Aerial view, Cedar Viaduct

***“If you want to go from San Francisco to Los Angeles you can do that by driving for 7 to 8 hours, or a diesel train takes 12 hours. High-speed rail will take you there in under 3 hours. This is key to California’s future.”***

COVID-19 has hit the project in a couple of ways and the Authority is undertaking a detailed risk analysis. “We have been able to expand the sites through the pandemic. At times, there have been delays on the arrival of equipment but this has not influenced the programme. Cities and counties have looked for the extension of time for public comment for environmental documents. This has led to some scheduling issues. Revenue has been impacted. Cap & Trade auctions were hit hard in California. The financial markets were affected and the auctions only netted approximately \$6m, considerably less than February’s \$153m. Revenues improved with an auction in August, up to \$99m. The next one is in November and Brian is hopeful that this will be more favourable for the project. There are about 600 State staff on the project working on management and overseeing environmental clearances etc. On the construction side, there have been about 4,300 workers dispatched to the construction sites since the project began. It is projected that these numbers will be going up in the coming months and years.

Of the obstacles encountered, skills have not been a major challenge on the project. The civil works are common works within the State, working on overpasses, as well as the elements such as pre-systems work etc. As the construction sites continue to expand, there may be a challenge with labour. Brian explains that during the COVID-19 pandemic the Authority is in a position to offer jobs to workers who may have projects stalled or cancelled. “The next pending contract is for the tracking systems element and it will be international consortiums bidding on this so there will be a more international flavour. However, there will be a lot of Californians employed also. We will have more and more opportunities for U.S. and international workers as the project expands”

The primary challenge for the project going forward will be the availability of stabilised funding to expand the work. In the next 24 months all the environmental clearances will be achieved he says. The Authority will be working with the Federal Government and private capital to ensure funding continues.

Having an educated workforce is necessary, with adequate training. The Authority ensures that there is investment in the trades so that projects will be supplied with skilled workers in the future. “We are doing more and more work virtually, using a range of technologies. Building Information Modelling is used on the project and we are considering using more technologies on the inspection of works.”

#### FUTURE

Investing in infrastructure is critical throughout the United States. Infrastructure is good for providing stable income to provide for families and it is one of the things Brian is proud of in leading this project. “We will monitor COVID closely as the project moves forward and hope to employ thousands of people in a safe environment.”

The key learnings on this project will be of benefit to future American mega projects. High-speed rail is coming to America later than it did to other countries. In European and Asian countries where rail transit has been accepted, utilised for a longer period of time, the evolution to high-speed rail happened earlier. Passenger rail has not been utilised in the United States for long journeys Brian says. “Culturally, California has been known as a car centric State with vast highways. Costs and emissions, and congestion in a state with 40 million people has led to reasons to move to something that is convenient, fast, clean and sustainable, and cheap to use.” Brian says this project has three main goals: expand the economy, increase mobility, and be more environmentally sustainable. “If you want to go from San Francisco to Los Angeles you can do that by driving for 7 to 8 hours, or a diesel train takes 12 hours. High-speed rail will take you there in under 3 hours. This is key to California’s future.”

A lot has been learned on this project in dealing with challenges. “You have to be transparent, and speak of the challenges. We have had challenges, and we understand these challenges now as we move to achieve our vision of connecting the State of California. The value in looking at the past on this project is to look at the lessons learned and to apply those going forward. We are advancing this project in a way it has not advanced in years. We can’t lose sight of the vision.”

If Brian was advising another American State on a similar project, his message would be clear and concise. “I would say it is important to have an initial segment where you connect two major urban centres as end points. The State must have buy-in and the project cannot be used as a political football. You must have the institutions to carry out the project successfully and have guaranteed funding in place from the start. Otherwise you have additional challenges.”

For contractors looking to bid on future sections, Brian says this project will be a major employer for thousands of people; with great opportunities ahead. ■





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# GagaMuller

## Digital Project Managers

GagaMuller's Timmy Falvey tells Irish building magazine about the company's specialist approach to project management bringing together digital construction and DFMA to deliver the best possible value for clients.

**GAGAMULLER** Group was established in 2018 by Paddy Ryan and Thomas Gillen after they identified a gap to address the disjointed adoption of digital construction in the industry. It has impressively grown to cater for 40 staff working on property development and data centre projects across EMEA and South East Asia.



### OFFERING

GagaMuller Operations Manager, Timmy Falvey gives us an insight into the company and its unique offering. "What we do is completely different than most of the industry. There is an acceptance in the industry of 'playing the game' with teams leveraging digital construction to protect themselves and deflect blame. All the while this is overseen by consultancies that don't utilise digital construction principles, allowing this issue to develop. At the core of it, is a client faced with finger-pointing and delayed work.

"At GagaMuller, we debunk this. We are a project management consultancy utilising digital construction principles from the earliest inception of a project, creating an environment of integrated engagement across all tiers. Subsequently, this eliminates a large bulk of time attributed to 'playing the game', which can then be focused on delivering the project on time and budget for the client."

GagaMuller had implemented these

*"There is an acceptance in the industry of 'playing the game' with teams leveraging digital construction to protect themselves and deflect blame."*

principles on a project in Europe when COVID hit and travel restrictions were enforced. Timmy explains how companies' labour resources were now having to operate at 50% - 60% capacity and thus expecting a dip in activity completion on site. In contrast, activity completion trended higher at 75% which proved as an industry, that with the correct environment and use of digitalisation supplemented with GagaMuller's early engagement, they could achieve more productivity with less resources.

### UNDERSTANDING

Timmy has been at the forefront of BIM implementation with several industry-leading companies. "BIM was supposed to change the way we built in the construction industry; but we still use the same old processes and old contract scopes that haven't adapted to new technology. Everything is disjointed and it's important to realise there is more to digital construction than Revit models, Navisworks clash tests and BIM 360; for me, these are just the basic tools in a much bigger process."

It was this rationale that led to Timmy joining GagaMuller, assisting with expanding the company's profile and reach. "Too many times the client has been led by instruction rather than understanding. We use digital construction to take data centre investors, property developers or even open-minded contractors on a journey from inception to completion, providing customised live dashboards, insights and rationales that demonstrate the substantial ROI in using digital construction correctly."

Timmy explains it is not just project

management that GagaMuller is involved in. "We are big advocates for DFMA (Design for Manufacture and Assembly) and have a catalogue of different DFMA options developed for the data centre sector. We get involved in managing the entire Modern Methods of Construction (MMC) process, recording savings through risk mitigation of up to €12.7m to the client and safeguard their project schedule – without the correct management, a lot of DFMA and MMC options never get off the drawing board."

### INTEGRATORS

In-house software & hardware development for the construction industry is another area GagaMuller is active in, with two apps launching in Q4 2020. GagaMuller believes that if the construction industry planned projects like other industries over 50% of waste could be prevented. Timmy informs us, "Now more than ever we must plan projects and utilise the power of digital to protect the risk to project schedule and budget." The founders are responsible for PlanLoader, a location-based activity tracker allowing complete project management oversight using Last Planner principles which launches in November. "Our COVID-19 wearable sensors & app was developed as a response to the pandemic, a wearable solution for contact source tracing, warning construction staff of breaches in social distancing. This will also allow for rapid response in the event of a positive COVID case on site."

The company is unique in digital construction. "We have often been christened as 'disruptors', but I truly believe we are integrators. We challenge the status quo and provide metrics for businesses that demonstrate our restless passion and need to deliver. We want to take the industry on the journey with us – continually improving digital construction so that what we are currently doing, will one day be the norm for everyone else." ■



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# Improved Collaboration and €400,000 in Cost Savings

Copenhagen Airport has around 100 projects ongoing every year. Utilising BIM and Solibri in particular, the quality of the projects has improved along with impressive cost savings. This is an example of an owner operator taking the initiative initially to develop their own checks to guarantee quality and to save money and then passing those rulesets on to the design supply chain to run checks before models are submitted, this way they then only have to run sanity checks themselves.

**COPENHAGEN** Airport currently serves around 30 million people annually. It is the biggest airport in the Nordic countries in Europe. “Our strategy is to have one airport that has all the terminals and piers under one roof. We are increasing the capacity of the existing buildings and areas to accommodate the rise in the number of passengers and improve the passenger experience. Due to this, we have around 100 different projects every year,” explains Michael Ørsted, the Head of Department Technical Knowledge at Copenhagen Airport.

## TURNING QUALITY ASSURANCE STANDARDS INTO RULES

Michael and his team are handling all data and BIM models, offering a link between asset management, operations and ongoing projects at the airport. One challenge Michael and team have faced with the Asset Managers on the projects is ensuring the quality especially, as they have been getting large quantities of 2D drawings. It is harder to see the big picture and how different designs are linked without using 3D models.

“We are trying to offer a better tool for our Asset Managers to ensure improved quality for all the building projects we have here at Copenhagen Airport. We were used to using Solibri in our projects for clash detection and consistency checks, so it was a natural choice for us to start using it more and benefit from the powerful rules. Now we are automating quality checks in Solibri by creating the Asset Managers’ quality assurance standards into rules and use them to check all the models,” Michael elaborates. “We are handing out

these rulesets through our website to all the participants in the projects. It allows our Asset Managers to demand that these rules are being used by all the stakeholders.

“This means that the errors should be found by the construction and engineering teams at an early stage, instead of the Asset Managers discovering them later. This has also improved collaboration between all the different teams and given us a way to make sure every demand from the operations is considered early on.”

***“We were used to using Solibri in our projects for clash detection and consistency checks, so it was a natural choice for us to start using it more and benefit from the powerful rules.”***

## FINDING ISSUES EARLY LEADS TO SIGNIFICANT COST SAVINGS

Michael is already seeing some concrete benefits of using Solibri in their projects.

“There was a baggage handling project where we needed to make sure that large equipment could fit into a technical room and elevator system. When we did the checking in this project, we could see that the access to the technical room was okay, the access to the elevator was also okay, but on the way from the elevator to the technical room, we noticed that the path was actually too narrow in one corner. Our Asset Managers just wouldn’t have been able to find this problem without

Solibri. It would have cost us a lot of money to fix that afterwards, if we hadn’t found it so early in the design stage.

“Another example is a project where we found that one of the accessible toilets was not the right size. By using Solibri we then noticed that actually every accessible toilet had the same problem, not just that one instance which the Asset Manager could find from the 2D drawings.

“Our engineering team has calculated that we have saved more than €400,000 in this project by finding issues that we wouldn’t have recognised or identified before. The external contractors are motivated to use the system, because after all they want to handover projects that are compliant with our needs and have the discussions about whether or not to take actions on findings that they have.”

## OPEN RULESETS FOR DENMARK’S WHOLE CONSTRUCTION INDUSTRY

Besides his work at Copenhagen Airport, Michael also strives to develop the whole industry in Denmark by acting as the chairman of the Digitalisation Group within the Danish Building Owners’ organisation. “We share our Solibri knowledge to other building owners. We have just recently started collaboration with some of the largest building owners here in Denmark in order to convert some of our national building requirements into rulesets. The idea is to have an open system that is free in Denmark, where we could hand out these rules to every project to make sure that our building regulations are met.” ■





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# Social Housing in Tallaght's Unusual Conditions

In Dublin, the historic town of Tallaght has been undergoing commercial expansion. What was once a small-town village has transformed into a large suburban scheme with a population well over 100,000, an increase to the 20,000 estimated in the 1980s.

**A RECENT** housing project by Seán Harrington Architects exemplifies Tallaght's burgeoning development. The firm's Shane Byrne reports that their aim, as well as the aim of the client and local authorities, was to create an inviting and appealing facility to serve as a best-practice exemplar for similar developments throughout the county.

The Weir's story is one of example-setting, intelligent design which accounts for the unusual conditions in Tallaght, conditions which, without a doubt, can complicate design thinking. To the north sits Tallaght Stadium and a densely arranged urban presence and to the south are a low-scale suburbia, a park, and the visage of the picturesque Dublin Mountains. The striking disparity between The Weir's surroundings led Seán Harrington Architects to consider how to develop a housing complex that feels like a natural mediator between these seemingly at-odds conditions.

## DESIGNING THE WEIR

The scheme is arranged around a series of south-facing courtyards, providing open space for the residents to enjoy suburbia despite the bustling north. The stadium's northern presence offered a good starting point, the architects wanted a "strong edge," Shane says, to minimise exposure for the elderly community. The buildings are set back from this edge to reduce noise disruptions. The northern entrances are defined by a canopy shelter, and each entrance sits close to parking space and dedicated bin storage. The southern boundary varies in height and alignment, leading to an open interface with the external park.

Within the village, the 81 dwellings which exist in small clusters are organised along an east-to-west street. The street fosters a larger sense of community while also allowing smaller communities for the residents to identify with.

As a connected whole, these design elements contribute to a high-quality living environment, one that feels natural despite the varying conditions surrounding it.

*"We recognise the potential of BIM to optimise the delivery of our design services, improving outcomes and realising added value for our clients."*

## AN EXERCISE IN COLLABORATIVE BIM

Seán Harrington Architects looked to BIM to organise the project, reduce file sizes, and effectively collaborate internally and externally.

To Shane, a BIM model is the "digital description of every aspect of the built asset." To use it, the firm took advantage of Vectorworks' Project Sharing capabilities, engaging in an open exchange of data through BIM's common denominator, IFC.

"We recognise the potential of BIM to optimise the delivery of our design services, improving outcomes and realising added value for our clients," Shane says. "We use it as a tool for carrying out analysis, simulation, and communication of project information."

He says that BIM did help reduce file sizes; however, he remains aware of the ways they could've made files even smaller.

"We created a large number of viewports in our main building model file of repeating elements, which resulted in generating a complex road map for the drawing," he says. "In retrospect, perhaps it would've been simpler if we had created fewer viewports, used more symbols for apartment layouts, or drawn more repeating elements."

The most rewarding aspect of BIM for Seán Harrington Architects was the iterative design approach it enabled. As the client and stakeholders requested changes, the architects could quickly and easily update the building information model and have the update reflected across all of their drawings and worksheets.

## ABOUT SEÁN HARRINGTON ARCHITECTS

Seán Harrington Architects is a multi-award-winning Dublin-based architecture firm that specialises in public buildings and residential projects. They operate on three fundamental philosophies: to design sustainably, to make better places, and to celebrate craftsmanship.

Now recognised as a staple in the architecture sector, Seán Harrington Architects has been in business for over 15 years; in this time they've developed a distinctive contemporary design language, based on sound environmental principles and a deep understanding of technical matters. ■





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# DIGITAL QUANTITY SURVEYOR



Dublin City Council's Mary Flynn tells Irish building magazine about the upcoming changes in measurement standards and the digital upskilling in the Quantity Surveying profession which has evolved the profession leading to a more technically skilled Quantity Surveyor.

**IN 2016** Mary joined Dublin City Council's (DCC) Quantity Surveyors Division having previously worked in the private sector in the UK and Ireland. Mary sat on DCC's Corporate Strategic BIM Implementation Working Group and is Co-Founder of Public BIM, an alliance comprising of the major public bodies collaborating on common interests such as BIM, the Public Works Contracts, digital transformations.

Active in her professional organisation, Mary sits on the Society of Chartered Surveyors Ireland (SCSI) QS BIM Working Group, which focuses on the development and use of 5D BIM amongst the Quantity Surveying profession. Mary is also on the ICMS Working Group, is a SCSI APC Assessor/Chair and represents the SCSI with the CEEC (European Council of Construction Economists). A Cita Board Member and Irish Construction Excellence Awards Judge, Mary regularly contributes at conferences on BIM & the QS, Public BIM and BIM & Smart Cities.

## CHANGE

BIM has been used by Irish contractors on many high profile private projects of different scales, large developments to small housing estates. However, adoption on public projects is not as good Mary tells us. "Until the Government mandates BIM, many companies will not adopt BIM on public projects. In the public sector, when awarding contracts you cannot discriminate against those that do not have it. Public clients can work with it if the contractor has the BIM capability. On the large projects, we can require it and do use it, but on the smaller project this is not always available."

Currently a group of Surveyors in Ireland are working on a Model View Definition (MVD); a data exchange for a specific workflow for the QS Mary informs us. "There is no MVD for the Surveyors, there are for architecture, MEP and structural. Software companies need to provide one for surveying. The image of surveying is sometimes unjust. We have made great improvements in adopting digital technologies." A MVD will allow the Surveyor to extract all the information that they specifically need for measurement and costing purposes. "We need different information to that of architects or other designers," she adds.

Involved in many SCSI groups, Mary speaks of the work of the body in BIM. "The SCSI are developing great CPD for Surveyors interested in BIM and digital technologies. In the seminars, academics are providing professionals with information. We are bringing out a lot of documentation as well, including a BIM Pack with changes in standards included."

## MEASUREMENT

Mary knew if surveying was going to change significantly, it would need three things: a Model View Definition, a new Agreed Rules of Measurement (ARM) and International Construction Measurement Standards that would allow global professionals to measure on the same basis.

As part of her SCSI work, Mary is involved in developing measurement standards. There are three main international measurement standards for Surveyors: International Land Measurement Standards (ILMS), International Property Measurement Standards (IPMS), and International Construction Measurement Standards (ICMS). ARM4 is currently under revision she says. "The next ARM will be digitised and coded. The current ARM does not have items such as Modern Methods of Construction." Once updated, ARM4 will link up with the ICMS, the new classification system which will replace the National Building Elements in the future. This will affect not only surveying professionals but civil engineers measuring infrastructure projects.

***"Surveyors have taken to digital construction over the past six years. A decade ago, there was very little interest in BIM. Our training did not set us up for using digital tools. The most technical tool we were using in the 90s were spreadsheets."***

The ICMS is international, not just European and will be the standard followed in Asia, Australia, North America, and Europe. Professionals from all regions have come together to develop this standard, standardising the definitions and methods of measurement. Most countries have bought into the ICMS. January 2021 was the date set by the ICMS Working Group within the SCSI to adopt this standard. Mary hopes COVID-19 will not delay this.

Speaking further on ARM, she says construction has moved on over the last few years. "We have become more digitised and we are looking at modern innovations. ARM needs upgrading to reflect this. ARM must be agreed with the relevant bodies and this is ongoing work at present. ARM must be tied in with ICMS so that when it comes to digitising, it is easily machine-readable."

The SCSI has just completed a document, which Mary was involved in, explaining what the ICMS is about. This is due for release soon. "This is for Surveyors or other professionals involved in measuring. There





is a programme of free events and seminars upcoming which will explain what the changes mean. It is like the naming conventions in BIM, it is logical. It just takes some time to get your head around the new terms. On the high levels, units will remain the same. Hopefully, the ICMS will be rolled out next January and the Government will mandate it with support from the professional bodies.”

## BIM

Mary always thought BIM was the way forward and once the industry digitised it would be great for Surveyors, opening up opportunities. “We can do carbon measuring and costing; we can do things we could never do before. Measurement that was difficult or not possible in Excel or measurement softwares.”

Mary got interested in BIM in 2014 and started studying seriously in 2015. “I knew that this was the way forward. I was busy back then but made time to study as I knew it was beneficial. I would advise professionals that if they are busy, they should still try to find time to keep up with the developments in digital construction.

“Surveyors have taken to digital construction over the past six years. A decade ago, there was very little interest in BIM. Our training did not set us up for using digital tools. The most technical tool we were using in the 90s were spreadsheets.”

When BIM took off, there was minor uptake among Surveyors. When the Government took an interest in BIM for public projects, it was a motivator she says; however, obstacles remain. “PAS 1192 was adapted on projects. We currently have the Surveyor’s problem that BIM does not align with the ARM and the classification system. We will have a new ICMS and a new ARM soon, taking into account lifecycle costing and carbon measurement.”

## COLLABORATION

CitA led BIM innovation in Ireland ahead of the professional bodies she says. “CitA provided great events over the years which showed professionals what was happening abroad. CitA events were great for networking.” In 2018 Mary joined CitA’s Board and likes the mix of expertise. “CitA are forward-looking. Ralph Montague, Paul Brennan, Emma Hayes and colleagues brought great expertise to the table. We have representatives of the public and private sectors and we learn from many perspectives and collaborations.”

***“We continue to remain relevant and hope that we can bring about the CitA BIM Gathering in 2021, understandably under stricter health and safety restrictions.”***

*Dr Alan Hore*

Full standardisation and collaboration within the AEC industry is the only way forward. Mary came from a commercial background, working in development. She has experienced different work cultures. In surveying firms she says there needs to be a change leader. “You need somebody that is innovative to change practices and procedures. COVID-19 has changed the industry, with people working from home so there is not the same level of collaboration that there should be. However, there will be greater collaboration in the industry. Traditionally, the professions worked in silos. This is changing.”

Quantity Surveyors are conservative; their speciality is often in confidential information. “We toil in measurement, costing, and providing advice. Our work on BIM projects is relatively untold.” Mary has brought the Quantity Surveying profession to the fore in

the BIM community. She has provided the greater industry with knowledge of the duties of the QS and what they need from BIM and what they can offer with their expertise.

## THE FUTURE

Mary says industry has to move on, from being ‘digital’ which is simply transforming analog to digital to ‘digitalised’ which is a change of process to incorporate digital technologies to ‘digital transformation’ which is complete business transformation around digital

technologies and processes. “BIM and digital transformations offer key opportunities by championing data analytics for economic benefits, informed decision making and future-proofing the added value to the Quantity Surveying profession.

“Data analytics will enable the 5D BIM QS create data lakes for downstream processes, create data warehouses for specific purposes such as Life Cycle Costing and Life Cycle Analysis. Data mining will allow us to look for new opportunities to enhance QS services and derive business value and benefit. The future lies in data management through infonomics as information is an asset and has an intrinsic value. The future QS will evolve with the use of Artificial Intelligence.”

## CITA UPDATE

Following the successful CitA Tech Live 2020 Virtual Summit held between 21-25 September, the CitA Digital Transition Series 2020 will continue in October and November focusing respectively on: ‘Embedding MMCs into the Company Strategy’, ‘Integrating Building Material Manufacturers into MMC Supply Chains’.

The CitA Tech Trend Series has been very popular this year. The next Tech Trend meeting will take place in November focusing on ‘Supply Chain Management and Site Connectivity Tools’.

CitA Co-Founder Dr Alan Hore says, “We have had a tough year like everyone. We have had to adjust to the new norm of remote working and our CitA Tech Live event provided an opportunity to reach out across the world and hear how other jurisdictions are managing at this difficult time. We continue to remain relevant and hope that we can bring about the CitA BIM Gathering in 2021, understandably under stricter health and safety restrictions.” ■



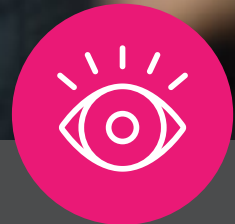
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