Redefining The Minster Building

Landmark project revamps historic New South Wales State Library

Dublin’s history restored at Clerys Quarter

Jersey’s Horizon brings exclusive waters-edge homes to St Helier’s waterfront
Welcome to the latest edition of Waterman Times.

It’s Rugby World Cup time in Japan and I hope that your home teams are doing well. At Waterman we recently produced a light-hearted video on YouTube passing a rugby ball between our offices in England, Wales, Scotland, Ireland, Australia and Japan to celebrate the joining together of our multicultural teams around the world. The video can be seen by visiting Waterman’s YouTube channel.

Next year it’s the Olympics in Japan and we are sponsoring the UK 100 metre sprinter, Ojie Edoburun, who recently won the British Championships. It is amazing to realise that he travels 10 metres every second.

One of our engineering apprentices has been selected to be one of the faces of the Department for Education’s nation-wide ‘Fire It Up’ apprenticeships campaign and her image will be displayed around the country during 2019; please see the extract on the back page.

To align with worldwide events, this edition of Waterman Times has articles about our projects in Australia, Ireland and Jersey as well as interesting developments and environmental issues affecting us all in the UK.

I hope that you enjoy reading this latest issue from our communications team.

Nick Taylor
Chief Executive

Redefining The Minster Building

Fully remodelled and reshaped following a major overhaul, The Minster Building brings a new lease of life to London’s thriving insurance district, offering 292,000 ft² of Grade A office space in an iconic building.

Dublin’s history restored at Clerys Quarter

Dublin’s O’Connell Street has been home to the historic Clerys department store since the 1850’s. Now, after several years of careful planning, the store is set for a major refurbishment under the Clerys Quarter redevelopment, which will redefine the heart of Dublin’s city centre.

Jersey’s Horizon brings exclusive waters-edge homes to St Helier’s waterfront

An exclusive collection of 280 one, two and three-bedroom apartments and penthouses, setting a new standard in luxury waterfront living for Jersey’s capital.

Landmark project revamps historic New South Wales State Library

The $15m renovation of Australia’s oldest library is the first major project to take place at the Mitchell Building in over 50 years, creating a stunning facility befitting the library’s heritage status.
intu Lakeside’s leisure facility opens its doors

£72m has been invested for intu Properties’ £4 million F1 transformation of the shopping centre, providing hundreds of new jobs and revamping one of the country’s most popular retail and leisure destinations.

As one of the developments first milestones, Hollywood Bowl, Britain’s largest ten pin bowling company, has opened its largest centre to date with the new 24-lane bowling alley, American-style diner, bar and arcade. A further £15m has been invested into the centre’s new food court which has been designed to create a vibrant dining experience for its customers.

In addition to the significant overhaul to the main experience for its customers, further £9m has been invested into the centre’s new food court. This includes enhancements ranging from its lighting, via the use of long span timber beams, alterations to balustrades to increase height for adjacent seating and new floor finishes.

Karen Telling, Director of Waterman Structures, said of this milestone: “We are delighted to have been involved in such an interesting development which looks to boost the local economy and provide a unique leisure experience, ensuring that Lakeside continues to choose as a mixed-use asset.”

Major Soho Estates project

We have been appointed by Soho Estates to act as client monitoring consultant for the prestigious Ilona Rose House mixed-use project. The scheme, managed by DML Group and designed by award-winning architectural practices MATT Architecture and SODA, will create 31,000 m² of office and retail space.

The 13-storey building includes four subterranean levels which will be the new home for Warner Brother’s European Post Production Studios, complete with a bespoke 60-seat sound editing theatre. In addition, there will be new purpose-built offices and studios, providing high-quality space for the creative industries.

Externally, the public realm will be much-improved to create a new hub for the area increasing number of workers, visitors and residents. This new public space will transform the streetscape along Maunette Street, lined by outstanding new shops, cafes, restaurants and a new night club. The building will be topped by rooftop gardens and terraces, offering panoramic views over bustling Soho.

The development, delivered by construction manager, Sir Robert McAlpine, has now commenced on site and is due to complete in 2021.

Mark Tendrup, Director for Waterman Building Services, said: “Having provided strategic guidance on the building services design, we will now be closely monitoring the delivery of the scheme. We look forward to supporting Soho Estates, DML and the design and construction teams in the delivery and realisation of this project.”

New Civils Lead in Scotland

We are delighted to welcome Paul Robertson as our new Civil Engineering Lead for our team in Scotland.

Based in our Glasgow office, Paul joins us from WSP where he managed the technical and commercial delivery of multidisciplinary projects across a range of sectors including industrial, leisure and residential.

He has been involved in a variety of development and infrastructure projects across the UK as well as in the Middle East. Notably, he led the infrastructure design for the 2014 Glasgow Commonwealth Games Athletics Village and a multidiscipline team delivering Service Centres for central belt local authorities. Paul’s experience extends to supporting major planning applications (such as for Pentland Film Studios, Midlothian & WaveGarden, Ratho) and managing public sector frameworks including Scotland Excel’s Engineering & Technical Services Framework.

Daryl Fossett, Regional Director for Scotland, commented; “We are delighted to welcome Paul to Waterman at an exciting time for us as a business. His refreshing attitude and immense practical and technical experience will be a great asset to his team, the Scottish business and the national service line alike.”

Paul Moore strengthens team as new Regional Director

We are pleased that Paul Moore has joined our infrastructure & environment team as Regional Director, focusing on London & Southern Counties.

Paul joins from Ridge and Partners, having previously worked at WSP|PB, bringing over 20 years’ experience of development infrastructure, highways, flood risk, and drainage, principally with multidisciplinary consultancies.

His experience extends across every stage of the planning and design process, from transactional due diligence, initial feasibility studies, and conceptual masterplanning through to detailed design. He brings considerable experience in leading multidisciplinary teams, providing environmental risk assessments and associated professional and commercial advice to investors, developers, contractors, landowners, and local authorities.

Neil Humphrey, COO for Waterman Infrastructure & Environment, commented, “We’re delighted to welcome Paul to the business to support our continuing growth in the UK. Paul has an impressive track record in delivering complex development infrastructure projects and is a very client-focused, ensuring that the commercial needs of the client are central to the design development.”
Design team appointed to Lead National Manufacturing Institute Scotland

Scotland’s international centre of manufacturing expertise is a step closer to being realised following the appointment of the design team.

Glasgow-based HLM Architects has been appointed to lead a design team including Waterman as civil and structural engineers, Davie + McCalloch as building services engineers, Robinson Low Francis LLP as cost managers and Turner and Townsend as project managers.

The National Manufacturing Institute Scotland (NMIS), hosted by the University of Strathclyde, aims to make Scotland a global leader in advanced manufacturing. By bringing industry, research and the wider public sector together it will drive productivity and skills development. NMIS, adjacent to Glasgow International Airport, will include a Digital Factory, 2050 Manufacturing Skills Academy and collaborative working spaces - complementing the existing University of Strathclyde’s Advanced Forming Research Centre (AFRIC).

It will offer Scottish businesses access to expert services, advanced demonstrator facilities and training programmes focused on innovative manufacturing, enabling them to be more globally competitive. NMIS will be the anchor for the Advanced Manufacturing Innovation District Scotland, which will benefit from a £1bn investment to provide the enabling infrastructure, funded through the Glasgow City Region Deal.

Alun Rae, Director of Waterman Structures, said, “This is an exciting and challenging project and we are proud to be a part of the team behind this major development.”

New head of heritage in Bristol

We are pleased to welcome Ian Barnes as an Associate Director to lead our heritage team in Bristol.

Ian joins us from Cotswold Archaeology. He has over 20 years’ experience advising a wide range of clients on the potential archaeological and built heritage issues of proposed new residential, industrial, commercial, communication and recreational developments. Ian has spent seven years specifically working as an archaeological consultant with WSP advising on projects both within the UK and worldwide. He brings a thorough understanding of all aspects of heritage consultancy from Desk Based Assessments, EN chapters and written scheme of investigation, through to management and implementation of fieldwork. Ian has extensive experience of having worked with national consultancies such as English Heritage, Historic Scotland and Cadw, alongside archaeological advisors within local authorities. Ian has also consulted with local interest groups such as the Battlements Trust.

Richard Stockwell, Regional Director for Infrastructure & Environment in the South West, commented; “Ian is delighted that Ian is joining the team. With his technical skills and experience, his focus will be to maintain and grow our national heritage offer to meet the needs of our clients.”

Major Canada Water regeneration plans approved

We are delighted that Southwark Council Planning Committee have resolved to grant planning permission for the 33-acre redevelopment of Canada Water, south London. The mixed-use scheme encompasses the sites of the former Daily Mail print works, the Surrey Quays Shopping and Leisure Centre, the Dock Offices and the former Rotherhithe Police Station.

The masterplan will completely rejuvenate the area, creating 20,000 jobs in two million ft² of new workspace, also adding one million ft² of retail, leisure, entertainment, education and community space. The development will also create 3,000 new homes of which 32% will be affordable, with 70% of these to be social rental properties. Residents will enjoy 12 acres of new public open space – including a 3.5-acre park and a new town square.

We have been integral to the planning application process, from reviewing the initial parameter plans and advising on the physical and environmental constraints and design of the Masterplan, to corresponding to post-submission feedback. Our team provided a range of multidisciplinary services in support of the scheme, including infrastructure and structural engineering, flood and civil engineering design, environmental impact assessment, air quality, noise and vibration, ecology, ground conditions, contamination and arboricultural assessments.

Neil Humphrey, COO for Waterman Infrastructure & Environment, said: “This is a major milestone for a challenging project and we are proud to be a part of the team behind this major development.”

1,950-unit development up for planning at Clongriffin

Planning consent is being sought for a 1,950-apartment development at Gerard Gannon Properties’ Clongriffin site in Dublin. The scheme consists of three separate but interrelated planning applications, including 22,700 m² of commercial and retail space in addition to the residential element. The prestigious development will, if approved, see the completion of the ambitious Clongriffin New Town masterplan, first mooted some 20 years ago.

The thorough planning applications have been developed over 18 months and required close collaboration by all involved. The multidiscipline design team, assembled by Gannon, includes Downey Planning and Architecture, Conroy Crowe Kelly Architects, Wilson Architecture OMMW, DK Partnership (Mechanical & Electrical), MMP (Cost Consultants) and Ronan MacDiarmaid & Assoc (Landscape). Waterman is proud to have provided all civil, structural and traffic services required to support the planning applications.

Mark Duggan, Associate in Dublin, said; “This is one of the largest and most challenging mixed-use developments that our team has been involved in. We look forward to moving forward into detailed design for the development once the scheme receives planning approval.”

A decision on the planning is due by the end of the year.

Waterman appointed for East of England highways improvement schemes

Waterman has been selected as strategic partners supporting Atkins on Highways England’s asset improvement schemes for the East of England. Working with principal designer, Atkins, we will support the delivery of detailed design and associated consulting services.

Together, we will work closely with contractors across the East of England, ensuring the construction, maintenance and operation of the future road network is designed with safety in mind. The scheme, due to commence in January 2020, incorporates strategic routes in Norfolk, Suffolk, Essex, Cambridgeshire, Bedfordshire, Buckinghamshire and Hertfordshire.

Neil Humphrey, COO for Waterman Infrastructure & Environment, said: “This appointment builds on the collaborative partnership we have developed with Atkins over the last 5 years, and we look forward to working in partnership with Atkins and Highways England to improve the road network across the region.”
Planning green light for £1bn Purfleet regeneration

We are delighted that the £1bn Purfleet Centre Regeneration scheme has secured planning approval from Thurrock Council.

Located on the north shore of the River Thames in Essex, the major project will bring 2,850 new homes and a new town centre to Purfleet, complete with retail and restaurant units and a 93,000 sq ft film and TV studio complex. The community will also benefit from two new schools, a medical centre and other key community facilities.

To maximise accessibility, the Purfleet Centre Regeneration Ltd (PCRL) scheme, a joint venture between Urban Catalyst and Swan Housing Association, will improve local infrastructure with an upgraded railway station and transport linkages with the neighbouring M25 motorway.

Our team supported the outline planning application with a variety of specialist reports and strategies, including flood risk assessment and drainage strategy, transport assessment, land quality and remediation strategy, landscape and visual impact study, historic environment assessment, arboriculture survey, civil engineering and highway design, also completing the study, historic environment assessment, arboriculture survey, quality and remediation strategy, landscape and visual impact assessment and drainage strategy, transport assessment, land.

The four-year framework is run by LHC, a central purchasing body working with public sector organisations to pre-approve suppliers, and can be accessed by Housing Associations, Registered Social Landlords, local authorities, schools and colleges across the region.

We are providing civil, structural and building services engineering as well as acting as a health & safety advisor. The framework also covers additional specialist environmental services such as ecology, geotechnical surveys, highway & drainage design, acoustic consultancy, landscape and archaeological advice.

Peter Begley, Director for Waterman Infrastructure & Environment, said, “We are delighted to see this major regeneration scheme successfully progress from concept design to secure planning consent. We look forward to continuing our work with PCRL as construction commences in the coming months.”

Housing Framework win in the south west and Wales

We are pleased to have been appointed on the H1 ‘Housing Consultancy Services’ framework to deliver multidisciplinary consultancy services in the south west and Wales.

The Irish Minister for Housing, Eoghan Murphy, got Dublin’s new Enniskerry Road housing project under way by turning the first sod at the site on 10 September.

Enniskerry Road, a social and affordable housing scheme in south Dublin, comprises 155 units across three five-storey apartment blocks with single-level basements, two blocks of terraced housing and a community amenity facility. The new homes will be offered at below-market rents, with 50 units rented to low and middle-income workers, at prices up to 30% below market rents for the area, under a pilot cost-rental scheme. The remaining 105 homes will provide a welcome boost to Dublin’s social housing stock.

Eoghan Murphy, Irish Minister for Housing, Planning and Local Government, said: “Affordable home ownership is important but so is affordability for renters. The Government is taking the lead in helping those facing high rents.”

The ABK Architects-designed scheme, funded by the Housing Finance Agency, will be operated by Tuath and Respond Housing Agency upon completion. Our team in Dublin are providing structural, civil, mechanical and electrical services for the scheme which will be constructed by Duggan Brothers.

Project completion is forecast for 2021.

Irish Minister for Housing turns the sod at Enniskerry Road

Recent Awards

- CIBSE Awards, East Midlands ‘John Holme Award’
- Alejandro Justin, Apprentice for Waterman Building Services
- Southwark Business Excellence Awards ‘Apprentice Employer of the Year’
- RICS Awards, South East ‘Project of the Year’
- Foster + Partners
- East Midlands Bricks Awards “Sustainable Development of the Year”
- Construx Institute of Creative Technologies
- Irish Construction Excellence Awards
- Best Third Level / Postgraduate course: Technological University Dublin’s MSc in applied Building Information Modelling & Management Suite ‘Commercial over £10m’
- Capital Dock Blocks A & B
- RIBA Awards
- London: The Tower, Buckingham Green & Selfridge Duke Street
- South: Westgate Oxford
- LABC Building Excellence Awards, North & East Yorkshire ‘Best Public Service Building’ & ‘Supreme Winner’
- Harrogate Civic Centre
- New London Awards (NLA) ‘Retail’, Quadrant Arcade
- ‘Education’; Royal College of Pathologists
- Constructing Excellence Yorkshire and Humber (CEYH) Awards ‘Preservation & Rejuvenation’ St Vincent’s Place
- Architect A+ Awards ‘Architecture + Learning’ Royal College of Pathologists
- AJ Retrofit Awards ‘Hotel, Retail and Leisure £5 million and over’
- Confetti Institute of Creative Technologies
- RIBA Awards ‘Retail’, Quadrant Arcade
- ‘Education’; Royal College of Pathologists
- East Midlands Property Award ‘Design Excellence Award’
- Construx Institute of Creative Technologies

Recent Awards

- CIBSE Awards, East Midlands ‘John Holme Award’
- Alejandro Justin, Apprentice for Waterman Building Services
- Southwark Business Excellence Awards ‘Apprentice Employer of the Year’
- RICS Awards, South East ‘Project of the Year’
- Foster + Partners
- East Midlands Bricks Awards “Sustainable Development of the Year”
- Construx Institute of Creative Technologies
- Irish Construction Excellence Awards
- Best Third Level / Postgraduate course: Technological University Dublin’s MSc in applied Building Information Modelling & Management Suite ‘Commercial over £10m’
- Capital Dock Blocks A & B
- RIBA Awards
- London: The Tower, Buckingham Green & Selfridge Duke Street
- South: Westgate Oxford
- LABC Building Excellence Awards, North & East Yorkshire ‘Best Public Service Building’ & ‘Supreme Winner’
- Harrogate Civic Centre
- New London Awards (NLA) ‘Retail’, Quadrant Arcade
- ‘Education’; Royal College of Pathologists
- Constructing Excellence Yorkshire and Humber (CEYH) Awards ‘Preservation & Rejuvenation’ St Vincent’s Place
- Architect A+ Awards ‘Architecture + Learning’ Royal College of Pathologists
- AJ Retrofit Awards ‘Hotel, Retail and Leisure £5 million and over’
- Confetti Institute of Creative Technologies
- RIBA Awards ‘Retail’, Quadrant Arcade
- ‘Education’; Royal College of Pathologists
- East Midlands Property Award ‘Design Excellence Award’
- Construx Institute of Creative Technologies
Following a devastating fire during the Easter Rising in 1916, Clerys was totally re-built, with the new store opening its doors in 1922, quickly becoming a landmark destination for shoppers in Ireland's capital city.

Featuring a colonnaded façade similar to London’s luxurious 1909-built Selfridges building, Clerys was widely admired for its opulent full-height central atrium, open galleries, grand staircases and famous Tea Rooms. Now, after several years of careful planning, the store is set for a major refurbishment as part of the Clerys Quarter mixed-use development, which will redefine the heart of Dublin’s city centre.

Dublin’s history restored at Clerys Quarter

Dublin’s bustling main thoroughfare, O’Connell Street, has been home to Clerys since the 1850’s when it became the world’s first purpose-built retail department store.

Delivering Clerys Quarter will require major redevelopment, including the demolition of the existing 1970’s Earl Building, which will be replaced with a new steel framed building to offer retail and café space at ground floor level with Grade A office space in the four floors above.
Delivering Clerys Quarter will require major redevelopment, including the demolition of the existing 1970s Earl Building, which will be replaced with a steel framed building to offer retail and café space at ground floor level with Grade A office space in the four floors above. At Clerys department store, the existing 2nd and 3rd floors will be removed and replaced with a steel framed structure, supported independently from the 1920’s frame and designed to provide two new floors of modern clear span office space, with new Clerys rooftop bar above.

Clerys new floors will be supported on additional columns placed within the original atrium perimeter and behind the original building façade, maintaining the architectural integrity of the building and delivering the space required for the new office floors. New cores will be positioned in both the atrium and at the building’s perimeter, providing stability for the retained and new structures. This will all be carried out around a temporary frame which supports the existing façade and internal structures, preventing detrimental movements and offering lateral stability to the existing frontage and lower levels throughout the construction phase. Once the new structure and cores are in place, the temporary support system will be removed to reveal the restored and redeveloped building.

The sympathetic rejuvenation of the department store also includes the full refurbishment of the Tea Rooms and ornate two-faced Clerys Clock hanging above the main entrance. Above this, an additional rooftop storey will be added to the main building, including a new domed roof and terrace. The building was extended in several phases over the last 60 years, including the addition of two floors to the rear portion of the building and a two-storey extension to one side. These will all be stripped back, with the original structure, façade and internal features retained, restored and brought back to their former glory.

Constructed from an early type of reinforced concrete frame, the original 1920’s structure is an early example of what was known as ‘ferro concrete’ and was designed and built using the ‘Hennebique’ system. Developed by French engineer Francois Hennebique in 1892, it was considered a desirable alternative to an iron or steel frame structure due to its fire-resistant properties.

Waterman were appointed by Oakmount to provide civil and structural engineering design services, working closely alongside the architect, Henry J. Lyons, to maximise the potential of the redevelopment whilst preserving the historic building for future generations to enjoy. Our design carefully stripped back the layers of historic shop fit-out and modifications to allow the original structure to be revealed. Working closely with the demolition contractor, we helped develop a demolition phasing and temporary works scheme which ensured the stability and structure of the historic building will be maintained and protected throughout the development.

Richard Osborne, Waterman’s Director in Dublin, said; “We are delighted to be working on Clerys Quarter and to be centrally involved in the restoration of this iconic and much-loved historic building. We are relishing the opportunity to address the complex engineering challenges the scheme presents and are proud to be helping Oakmount deliver their vision for a new destination at Dublin’s heart.”

The highly-anticipated scheme is due to reach completion in the third quarter of 2021.
The Tower

Having previously been used as a telephone exchange for British Telecom, The Tower’s original 1960’s heavy cladding and screeded floors were removed from the existing 14 storeys to help balance loads. This permitted three additional floors to be included at roof level with minimal strengthening required to the retained structure.

Staggered side extensions were installed to create dramatic double-height ‘living room’ spaces for the tenants on each side, designed with the ability to incorporate staircases and link adjacent floors to create a much sought-after flexible working environment. Columns were embedded into the façade cladding with stainless steel diagonal rods at each corner to give a column-free illusion.

Given the development’s central location, a hole was punched through the lower levels of The Tower to create a walkthrough from Old Street to Baldwin Street, maximising accessibility, whilst the cores were reconfigured to enable new lifts and risers to meet current BCO standards.

The Warehouse

The Warehouse was completely refurbished and stripped back to expose the existing structure. Its overall floorplan was increased from to 89,000 ft² to 122,000 ft² across 11 storeys with the addition of both side and rooftop extensions while private roof terraces were inserted on the fourth, eighth and ninth floors to complement the dynamic working spaces.

Designed from a steel frame and hollow-core precast planks to minimise the building’s weight, an exposed concrete finish was chosen to match the existing frame and multiple new risers were formed using plate strengthening of the slabs. This prevented the need for new trimming beams and further enhanced the structure’s industrial aesthetic.

A shared double-height reception directly links each office block to The Bower’s shared communal facilities; including lounge, café, shower rooms and 400 bicycle storage units.

The Studio

As the only new build within the development, The Studio’s more simplistic 18,500 ft² consists of just four storeys and a rooftop terrace that seamlessly merge in with the scheme’s authentic regeneration. With a desire to break up the previously impenetrable block, this smaller counterpart is separated from its towering neighbours by a ramped pedestrian walkway that portrays Old Street’s urban history with a dramatic ‘art wall’.

Charlie Scott, Director for Waterman Structures, commented, “The Bower is a celebration of exemplar refurbishment and new build techniques. By combining the exposed existing and historic structures, the project teams have been able to deliver three vibrant and successful office spaces in the heart of Old Street which are now home to some of the UK’s leading creative businesses.”

The multiple-award nominated development recently won an RIBA London Award.

Charlie Scott
Director, Structures
charles.scott@watermangroup.com

Old Street reinvigorated with exemplary triple refurbishment

The Bower

Located next to London’s Old Street roundabout, the redevelopment of The Bower by Allford Hall Monaghan Morris (AHMM) Architects is an exceptional landmark development within the heart of the creative quarter of Shoreditch and Tech City.

Our team were appointed by Helical Plc to carry out civil and structural engineering design services within the 320,000 ft² site, offering vibrant retail and restaurant amenities at street level whilst three unique office buildings, The Tower, The Warehouse and The Studio, frame the beautifully landscaped mews.

12

Image courtesy of Timothy Soar

13

Image courtesy of Timothy Soar
The report offers a stark appraisal of progress to date, making suggestions for future action across all sectors and outlining the key areas a coherent national policy package would need to address. Recommendations for surface transport and its infrastructure focus on banning the sale of fossil fuel-powered vehicles, whilst rolling-out plans for zero emission HGV’s and making vast improvements to public transport, walking and cycling networks across the UK. Elsewhere the report suggests the construction sector needs to phase out fossil fuel-consuming systems in all types of building, focusing instead on delivering energy efficient, low-carbon buildings which are adequately designed to cope with the anticipated temperature rises.

Neil believes significant investment in new technology and supporting infrastructure will be essential in delivering wide spread reductions. The practicalities and impact of existing technologies such as hydrogen fuel, carbon capture and storage and direct air capture could be explored through sustained trials. Together with the increased roll out of bio-energy with carbon capture and storage, this will trigger the development of associated distribution and infrastructure networks, building major opportunities in our sector.”

Neil continues; “How effectively individual companies - especially those outside of the key sectors aligned with climate change - adapt to help meet the target is perhaps the most significant challenge for the government’s appetites. Industry, surface transport, agriculture and buildings will all need to massively reduce emissions by 2050 and this will drive innovation in materials and processes. The impact on built environment design and operation will trigger a major shift towards the use of new materials, technologies and techniques likely to deliver a period of rapid advancement across our industry.”

The challenge for our industry will be how we respond to the new emission targets at a project level, Neil believes. “Great advances in carbon emission reducing technologies and techniques have been made in the past decade and the development industry has responded very well to step changes in planning legislation.” Aside from the need for continual client take up of cutting-edge tech, reductions in carbon emissions will need to become fundamental to every design decision taken. If this strategy is adopted across whole project teams, we have the opportunity to deliver the level of savings required to meet the reduction targets.”

“Increasingly, existing building structures are being re-used, generating substantial carbon savings. Off-site manufacture also reduces embodied carbon of building components. Using this technique, quality can be vastly improved, reducing materials waste and labour costs. Completed elements are delivered to project sites ready to install, offering reductions in carbon emissions that would have resulted from labour, plant and materials transportation.”

On an operational level, the new targets also mean that companies throughout the UK economy will need to reduce their carbon emissions from day to day activities. Neil’s team supports businesses as they incorporate sustainability and reduce carbon emissions across their investment decisions, embedding these changes in their business models and management of their operations. With tools such as Greenspace and the Biodiversity Toolkit, this is orientating companies across their investment decisions, embedding these changes in their business models and management of their operations.

We spoke to Neil Humphrey (COO for Waterman Infrastructure & Environment) to get his insight into how this target could be met, the opportunities it offers and what this means for our industry.

Neil says: “Whilst questions remain in some quarters about the ability of a net zero carbon UK economy, delivery of the transition offers a host of opportunities across the board. With the Government now committed, they will require fundamental and wide-ranging policy reforms to meet the target and inspire the nation to commit to the sort of behavioural changes needed to deliver significant results.”

Considering action to date on climate change, Neil continues; “Government action on the threat of climate change has steadily become more focused in recent months, resulting in the new carbon emission targets. This strong policy leadership is all need to continue if we are to see the sweeping changes required to deliver the latest proposals. These are promising signs that associated policy and regulatory reforms, as suggested in the Committee on Climate Change’s 2019 Progress Report, could prioritise the type of innovation needed to deliver the new target.”

June the UK became the first G7 country to legislate for net zero carbon emissions by 2050. More ambitious than the 80% reduction commitment set out in the 2008 Climate Change Act, the new target is based largely on the Committee on Climate Change’s 2019 Progress Report.

Using pre-cast concrete for the structural elements of 7 Clarges Street and Two Fifty One. This generated an estimated 80% less waste and construction traffic, when compared to traditional site-poured concrete construction techniques.

The award-winning Royal College of Pathologists new HQ retained existing concrete raft foundations, contributing towards an overall 51% carbon emission saving. This technique was also utilised at 6 Bevis Marks, Angel Place, Watermark Place and 20 Farringdon Street.

“In 2019, Waterman undertook the construction of 7 Clarges Street. The project was completed using the pre-cast elements of the building’s concrete raft foundation, allowing the building to be completed in 19 months, resulting in the new carbon emission targets.”
Owned by Ivanhoé Cambridge, the iconic 292,000 ft² Grade A office building is a prominent feature in the heart of London’s insurance district.

The extensive refurbishment, led by Greycoat and designed by architect BuckleyGrayYeoman (BGY), has brought new life to the building's original 1990's design, providing a vibrant work place for its occupants with its impressive 65,000 ft² of café, restaurant, bar and retail amenities.

Redefining THE MINSTER BUILDING
**Redefining elegance**

As part of the site’s architectural transformation, the original escalator rising through the central atrium, which was once the largest in Europe, was removed and the remaining balcony space repurposed as additional office space, increasing the lettable area from 275,000 ft² to 292,000 ft². The dramatic 21 m wide, eight-storey atrium optimises the use of natural light in the reception and office areas through the carefully considered use of curved glass, whilst textured jesmonite panels, marble and bronze materials give a feeling of opulence.

Communal facilities within the building have been designed to meet the client’s vision of boosting its tenant’s productivity and promoting a better work / life balance. These include a contemporary Wi-Fi enabled lounge in partnership with Crussh Fit Food & Juice Bar, 250 bicycle spaces, spa-like lockers and shower facilities at basement level.

With a second reception facing Minster Court’s central courtyard to the north of the building, the 35,000 ft² floorplates benefit from exceptional views across the Thames and Tower of London.

In order to redefine the building’s presence within the local area, the façade at ground level was enhanced with high-performance glazing and architectural detailing to modernise the retail frontage whilst a dynamic new entrance was also created on the corner of Great Tower Street and Mincing Lane.

**Modern design solutions**

Waterman were appointed to provided multidisciplinary design services throughout this ambitious project.

Working closely alongside BGY, our structures team developed a solution that allowed complex cantilevering transfer beams to be installed within the first floor of the atrium so four columns could be removed from the upper ground floor, forming a double-height reception and premier breakout facilities. This involved a multi-phased sequence of temporary and permanent column jacking works to pre-deflect the transfer structures prior to removing the columns between the floors. The installation of a concrete floor supported on void former created a new grade level main entrance on the corner of Great Tower Street and Mincing Lane, dramatically improving the connectivity with the internal atrium hub.

Our M&E team designed the new building services strategy, replacing the existing plant with a more energy efficient system that reduced carbon emissions by 42%, helping the client to achieve a BREEAM ‘Very Good’ rating.

Each office unit has been fitted out to Cat A standard and is adaptable to the tenant’s specific preferences for their own final fit-out, on-floor break out and kitchen areas. A carefully integrated climate control system was installed within the atrium, hiding the cooling and ventilation system in the sculptured wall shadow gap.

To cater for the demands of modern occupiers and increased occupation within the building, the existing passenger lifts were replaced to incorporate eight new 21-person lifts with destination control, improving performance and allowing flexibility for a variety of tenants.

Mark Terndrup, Director of Building Services, commented; “The Minster Building represents one of the best in class commercial refurbishments of 2018. It has been a delight for Waterman to be a part of the team that has so successfully transformed this once outdated building into an exciting new workplace.”

Julian Traxler, Director, Structures
julian.traxler@watermangroup.com

Mark Terndrup, Director, Building Services
mark.terndrup@watermangroup.com
Jersey’s Horizon
brings exclusive waters-edge homes to St Helier’s waterfront

Jersey’s capital, St Helier, has experienced sustained growth in residential and commercial development over recent years. With increasing numbers of residents and visitors enjoying the town’s thriving high-end retail and fine-dining offering, balmy weather and panoramic sea views, this historic coastal location looks set to remain popular for many years to come.

With the global financial industry hub – including the International Finance Centre (IFC) buildings – at its heart, the environs of St Helier’s harbour and waterfront have become a sought-after place to live, work and play. Making the most of this bustling location, stunning new residential development, Horizon offers residents spectacular sea views and an enviable range of retail, leisure and dining amenities on their doorstep.

An exclusive collection of 280 one, two and three-bedroom apartments and penthouses, the Skidmore, Owings and Merrill LLP (SOM International) designed Horizon sets a new standard in luxury waterfront living for Jersey. Each apartment is framed by floor-to-ceiling glazing with a private balcony, providing even greater access to the incredible views of the sea, coast and nearby 16th-century Elizabeth Castle situated in St Aubin’s Bay. Featuring individually designed, hand crafted Italian kitchens, the units offer residents a luxurious, light and bright open-plan space focused on functionality and style.

Externally the blocks are designed to connect the waterfront with an urban lifestyle, complementing the location with a sleek design whilst respecting the historic setting. Horizon maximises public space with avenues, terraces and squares, furthering the connection between the building and its marina location.

Continuing Waterman’s longstanding relationship working with the Government of Jersey’s property development arm – Jersey Development Company (JDC) on the Waterfront site, this project sees us work with JDC once more, alongside their joint-venture partner, Groupe Legendre.

Comprising three buildings of nine, eight and seven storeys incorporating 20,000 ft² retail and restaurant space, above a one and a half-storey development-wide basement, the scheme is located on an area of reclaimed land with a large tidal range and below-ground water. Our specialists provided design consultancy services for the challenging basement-level, covering contamination, hydrogeology and geotechnical aspects, in addition to the structure and highways on the site.

Our structures and civils teams provided detailed design input to set the site’s geometry and spatial arrangement, whilst our building services team are providing client-side compliance monitoring for the MEP services and lift installation. With triangular buildings sitting in a fan arrangement to maximise the incredible views from apartments, the blocks required careful structural design at first floor and podium level, whilst giving consideration for the building transfers at ground floor level and accommodating the maximum number of parking bays.

Construction began in August 2018, and will be completed in three phases, phase one in Autumn 2021 and the final phase by Spring 2022.

Lee Henry, Jersey Development Company’s Managing Director, said; “Not only will Horizon create a new standard of waterside living in St Helier, the scheme will also greatly improve the connectivity between the historic town and thriving waterfront.”

Richard Whitehead, Director for Waterman Structures, said; “The Horizon development will create a vibrant new destination for St Helier as we continue our successful decade-long working relationship with JDC. We are delighted to be playing a part in creating premium homes, retail and leisure space at the heart of one of Jersey’s most sought-after locations.”

Lee Henry, Managing Director, Jersey Development Company
richard.whitehead@watermangroup.com

Mark Terndrup
Director, Building Services
mark.terndrup@watermangroup.com
The major renovation of Australia's oldest library, located in Sydney, New South Wales.

The State Library of New South Wales (NSW), Australia's oldest library established in 1826, began as a modest book subscription service for colonials. Purchased in 1869 by NSW Government, the original library was expanded to form the Sydney Free Public Library with a stock of 20,000 volumes, becoming the first truly public library for the people of NSW.
ver the next 100 years the facilities were gradually expanded to incorporate growing collections, with the Mitchell Library and the Dixon Wing added to the historic Mitchell Building, followed later by the Macquarie Street wing to form the State Library of NSW.

In the first major building project for the Mitchell Building in over 50 years, the State Library has undergone significant $15m redevelopment to deliver a stunning facility befitting its heritage status. The scheme comprised a series of upgrades to the Mitchell Building, including new exhibition spaces and a learning centre, involving careful planning to ensure the heritage fabric of the building was respected and protected. The exhibition spaces were designed by HASSELL architects, with BVN Architecture providing the concept design for the learning centre.

The vision was to activate heritage spaces while improving access in and around the Library's historic Mitchell Building and adjoining contemporary Macquarie Street building, facilitating greater engagement with the Library's renowned collection.

Due to the age of the two existing buildings, this presented significant challenges since the life safety services were no longer compliant, making a full re-design of the fire engineering strategy a necessity. The new design, incorporating high-end amenities, was also required to accommodate high occupancies for functions, whilst offering tight humidity control and adherence to strict acoustic requirements.

Our team was engaged by the State Library of NSW to upgrade life safety services and to create new exhibition and learning areas. We worked alongside HASSELL architects and BVN Architecture through all stages of the project, from master planning of both the Macquarie and Mitchell Building upgrades, through to design and construction.

“"We are delighted to have been involved with this scheme, helping protect and enhance one of Australia's oldest and most important buildings. The development at the State Library of NSW greatly enhances the existing facilities, ready for future generations to explore our nation's history and culture.""

Shannon Hanly-Jones, Associate Director in our Sydney office, said: “"We are delighted to have been involved with this scheme, helping protect and enhance one of Australia’s oldest and most important buildings. The development at the State Library of NSW greatly enhances the existing facilities, ready for future generations to explore our nation’s history and culture.""

The renovation was completed in 2018, with the library now ready to preserve and share its valuable collections for many years to come.

Shannon continues: ""Working with such a historic building is a rare privilege in Australia. We approached the design of the development with a delicate touch to ensure the continued preservation and protection of our cultural and literary heritage, whilst updating safety systems and providing new facilities to ensure the library and its collections are protected and kept in the best condition in the coming years."

Shannon Hanly-Jones, Associate Director, Sydney
shanley-jones@wahw.com.au
Two new schools at the heart of Glasgow’s community

New learning facilities at Blairdardie and Carntyne Primary Schools

The ambitious £19.6m double-construction project saw two new state-of-the-art teaching facilities constructed on Blairdardie Drive and Liberton Street in Glasgow.

Situated 10 miles apart, Blairdardie and Carntyne Primary Schools were delivered for Glasgow City Council by development partner hub West Scotland. Both schools were designed by Holmes Miller and built by main contractor BAM Construction.

During full operation

Located directly adjacent to the existing building, Carntyne Primary School was designed within the existing site boundary at Liberton Street as a new two-storey development with the capacity to accommodate up to 231 pupils within nine classrooms, flexible breakout areas, drama room, cycle shelter, outdoor teaching space and multi-use games area (MUGA).

Incorporating a phased demolition meant the school remained in operation throughout construction, keeping students within one wing whilst the second was demolished.

Incorporating a phased demolition meant the school remained in operation throughout construction, keeping students within one wing whilst the second was demolished.

S

Situated directly adjacent to the existing building, Carntyne Primary School was designed within the existing site boundary at Liberton Street as a new two-storey development with the capacity to accommodate up to 231 pupils within nine classrooms, flexible breakout areas, drama room, cycle shelter, outdoor teaching space and multi-use games area (MUGA).

Incorporating a phased demolition meant the school remained in operation throughout construction, keeping students within one wing whilst the second was demolished. Students and teachers were then transitioned into the newly constructed development, allowing the remaining half to be removed and rebuilt. The transformation was officially completed in October 2018.

Our team in Scotland were appointed by hub West Scotland to carry out structural, civil and geotechnical engineering services along with environmental, ecological, flood, drainage and transportation advice. Works included the provision of a transport statement to access pedestrian, public transport and vehicular transport implications of the proposed school, a coal mining risk assessment, habitat management plan further to flood risk & drainage impact and BREEAM land use & ecology assessments.

Our environmental team were also commissioned to perform a preliminary ecological appraisal to establish any issues likely to arise on the project, preparing for the relevant survey requirements.

Reaching the local community

Each site has been fitted with additional sporting and community facilities, including a full-size synthetic football pitch which is also accessible to local residents as a flexible learning hub and activity space.

According to Alun Rae, Director for Waterman Structures, commented: “We are delighted to have successfully completed Blairdardie and Carntyne Primary Schools and that we were able to offer such a wide range of services. Both new schools bring much needed state-of-the-art facilities to deprived areas of Glasgow, replacing tired and outdated buildings which were no longer fit for purpose.”

Alun Rae  
Director, Structures  
alun.rae@watermangroup.com

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year.

Although the exterior has fibre cement cladding to fit in with the surrounding residential area, the façade has been reconfigured to highlight the primary entrance and points of interest around the perimeter of the building as well as providing shelter for the playground. Vivid accents of colour features throughout the interior to inject bursts of life and character.

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year.

Although the exterior has fibre cement cladding to fit in with the surrounding residential area, the façade has been reconfigured to highlight the primary entrance and points of interest around the perimeter of the building as well as providing shelter for the playground. Vivid accents of colour features throughout the interior to inject bursts of life and character.

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year. 

Although the exterior has fibre cement cladding to fit in with the surrounding residential area, the façade has been reconfigured to highlight the primary entrance and points of interest around the perimeter of the building as well as providing shelter for the playground. Vivid accents of colour features throughout the interior to inject bursts of life and character. 

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year.

Although the exterior has fibre cement cladding to fit in with the surrounding residential area, the façade has been reconfigured to highlight the primary entrance and points of interest around the perimeter of the building as well as providing shelter for the playground. Vivid accents of colour features throughout the interior to inject bursts of life and character. 

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year.

Although the exterior has fibre cement cladding to fit in with the surrounding residential area, the façade has been reconfigured to highlight the primary entrance and points of interest around the perimeter of the building as well as providing shelter for the playground. Vivid accents of colour features throughout the interior to inject bursts of life and character. 

From the outset, our multidisciplinary team considered the need to design within agreed cost metrics with all elements of the design, considering the life span and maintenance for the buildings. The primary structure comprises a combination of braced steel frame construction and where bracing is unavailable over large open spaces, such as the MUGA, portal frames were used. The upper floors are constructed of composite steel decking and concrete construction which reduces the floor depth, maximising the available services void within the floor area.

Carefully considered design

After opening its doors in February 2019, the new Blairdardie Primary School accommodates up to 462 pupils and provides a flexible learning environment with 16 classrooms, drama room, four-court sports hall and changing room facilities across three storeys.

Situated in the existing school’s playing fields, the building remained in use throughout construction before being demolished later in the year.
Enhancing natural processes with Green Infrastructure

The growth in public awareness of our impact on the natural world has increased a desire to make an active difference before it’s too late. Having reached every corner of society, the development sector has heavily focused on improving its environmental impact in recent years, also promoting the sustainability and ecological benefits achievable with careful scheme design.

introducing a network of high-quality green spaces and environmental features, projects can have a positive impact on natural processes and nature. We see this increasingly in new schemes where ‘Green Infrastructure’ (GI) design is integrated into the design principles.

It is common for green initiatives such as SuDs (Sustainable Drainage Systems), green roofs and walls to be included within new developments, however there is now a greater emphasis on providing a more holistic approach to the role of GI. This has progressed to the concept of an ‘Urban Greening Factor’ for both residential and commercial builds being addressed in the current Draft London Plan (latest version published in 2019). This new policy describes the Mayor of London’s strategic approach for GI and how this can be assessed and planned forward-reaching programme which supports any public realm renewal and protection targets. For the first time, this allows the benefits of engineering and environmental input to be calculated relative to their contribution to green infrastructure.”

Due to the multiplicity of London as a city, policies tackling poor air quality and deficiencies in green space need to be approached borough by borough to enable the unique environments of each borough to be recognised. With the effects of climate change causing unpredictable weather conditions, such as floods due to heavier rainfall, our cities must become more adapt at controlling these eventualities. In recent years, SuDs have become an essential part of our scheme designs as the impact of previously uncontrolled urbanisation became apparent.

Tom explains; “It works by mimicking the natural drainage system and provides a method of surface water drainage, taking account of quality, quantity, amenity and ecological uses. These systems manage runoff from developments, therefore reducing the flood risk and improving water quality by managing pollution. However, the demand for a wider GI approach within residential and commercial schemes requires a higher standard to be introduced to all projects, major and minor, across the country.”

An urbanised site may place greater reliance on SuDs, green roofs and street trees, whereas a peri-urban site may need to protect more rare, sensitive green corridors and areas of open water. When accessing the appropriate system for our 187-acre self-building housing scheme at Greenwich GI, our flood & drainage team designed a SuDs drainage swale that provided multiple environmental, engineering and economic benefits. In a similar way, retaining existing mature trees with Tree Preservation Orders (TPOs) at our Acanthus Square project in Birmingham allowed us to include boundary trees that will assist with the management of pollution, climate moderation, rainfall attenuation, increase adjacent land values within the proposed design.”

In addition to government schemes to incorporate more green infrastructure into our cities, the European Union adopted a six-target Biodiversity Strategy in May 2011 in a preventative measure to stop biodiversity loss within Europe by 2020. As part of their ongoing aims, Target 2 focuses on establishing GI in existing ecosystems and restoring 15% of those areas which have already been degraded. To assist developers in placing more green infrastructure and achieving a biodiversity net gain in an accountable and structured manner, our ecology specialists at Waterman have developed a Biodiversity Toolkit in conjunction with Berkeley Homes. This includes a detailed project management and Biodiversity Impact Assessment (BIA) calculator, BREEAM pre-assessment summary, ecology survey calendar, species planting lists, and lists of national and local priority habitats and species to allow for effective ecological design.

We spoke to Tom Hurlstone, a Principal Landscape Architect within Waterman Infrastructure & Environment, who specialises in environmental enhancement, public realm renewal and protection schemes, as well as supporting any forward-reaching programme which will integrate targets into future planning policy and guidance.

Tom says; “It is likely a standardised approach will emerge to allow the selection of green infrastructure elements that are most appropriate to a given scheme. Early integration will reduce abortive design work, provide commercial certainty of developable areas and robust support through the planning process. This flexible Urban Greening Factor will encourage GI delivery to be adaptable to all site contexts, conditions and land values to meet recommended targets. For the first time, this allows the benefits of engineering and environmental input to be calculated relative to their contribution to green infrastructure.”

In addition to government schemes to incorporate more green infrastructure into our cities, the European Union adopted a six-target Biodiversity Strategy in May 2011 in a preventative measure to stop biodiversity loss within Europe by 2020. As part of their ongoing aims, Target 2 focuses on establishing GI in existing ecosystems and restoring 15% of those areas which have already been degraded. To assist developers in placing more green infrastructure and achieving a biodiversity net gain in an accountable and structured manner, our ecology specialists at Waterman have developed a Biodiversity Toolkit in conjunction with Berkeley Homes. This includes a detailed project management and Biodiversity Impact Assessment (BIA) calculator, BREEAM pre-assessment summary, ecology survey calendar, species planting lists, and lists of national and local priority habitats and species to allow for effective ecological design.

Tom says; “Despite ever-increasing pressures on budgets and accessibility of open space developments to create the desired sustainable environments, the snowballing effects of green infrastructure has already begun to be appreciated across the UK and is something we are seeing more and more of within the projects we are working on.”

Although the development industry is now starting to incorporate green infrastructure into scheme designs there is still some way to go in ensuring it is considered at the very forefront of the design process. It will take a concerted effort from everyone involved in the design process to push for the inclusion of green infrastructure within new developments. Waterman are very much up for the challenge.

Tom Hurlstone
Principal Landscape Architect.
Infrastructure & Environment
tom.hurlstone@watermangroup.com
Students get to grips with practical engineering skills at Constructionarium

The week-long initiative, of which we have participated for the last 12 years, saw around 100 second-year civil engineering students experience construction first-hand by planning and building scale models of real projects. This year they took on the Ravenspurn Oil Platform, Kingsgate Bridge, the Milou Vaidart and Brewery Wharf Bridge.

Throughout the week, Charlotte Hitchens, a Graduate Engineer, commented; “We were very impressed with the enthusiastic way the students approached the challenges they encountered. We all shared a feeling of relief at the end of each successful concrete pour, however stressful it was to get there. It was amazing to see the teams and individuals excel in their roles. The smiles on everyone’s faces at the end of the week with their completed projects was the ultimate highlight! The enthusiasm for their work was rewarded as all the projects were completed on time despite some adverse weather and unmapped concrete delivery drivers.”

At the end of each day, the students presented the progress of their respective projects to their ‘client’ and ‘principal contractor’ to assess if they were managing the project successfully, on time and within budget. It also allowed the opportunity to discuss any challenges they may have encountered, such as site constraints, interpretation of the design drawings, material and plant availability, in order to work out alternative practical and design solutions. These changes often had repercussions, altering their budget or programme, which they had to record and present at the end of the week.

Charlotte Hitchens, a Graduate Engineer, commented; “When we contacted the students they were really impressed and asked to help out, as many of them are going to be studying civil engineering in the future.”

Graeme helped the students get started with their initial ideas and provided some basic engineering guidance, before leaving them to develop their solutions over the coming weeks. Five weeks later, he returned as part of a Dragons Den-style judging panel to assess the final designs pitches.

The three groups had five minutes to outline their design’s unique selling points, presenting models and sketches in an attempt to win the judges over. The first group proposed a glass walkway over a road bridge to act as a tourist attraction, with the second group showcasing a hand-made cardboard model of a cable-stayed road bridge, complete with a built-on lifting mechanism that allowed ships to pass underneath. Finally, the third group took their creativity to another level and presented a tropical aquarium-tunnel for pedestrians.

After carefully considering each design, the judges crowned the second group, with their cable-stayed bridge, the overall winner due to their outstanding engineering judgement, commendng their commitment and professionalism to the project as a whole.

Graeme praised those taking part; “It was great to see the creativity on show from the students. It was a really positive experience overall, providing an interesting challenge that will hopefully encourage them to take up a career in engineering. We could definitely use some of those innovative minds in the industry. I am grateful to Boldon School, Zenith Training and South Tyneside Council for asking us to take part in their business enterprise project and I look forward to being involved in the future.”

Revising with students at Eppings St John’s School

Six members of our structures team, Fraser Paris (Design Engineer), Thomas Wright (Trainee Engineer), Sam Wardle (Graduate Engineer), Emily Wingrove (Graduate Engineer), Jack Bennett (Engineer), and Kevin Paldano (Senior Engineer) joined the Year 13 students at Epping St John’s School for three of their BTEC Engineering classes.

Following their growing relationship with the School, our engineers stepped in to support the students for their up-coming exams. Across three lessons, they discussed various engineering theories, went through past papers and covered topics on statics, dynamics and fluid & thermal dynamics.

Fraser Paris commented of the experience; “We value our relationship with Epping St John’s and have assisted them in the past with various work experiences and career fairs. When they asked us to cover their BTEC classes, we didn’t hesitate to pull a team together and were really impressed with how responsive and keen the students were to learn. The school has since informed us that all the students passed the module, with 90% receiving merit grades, which is a fantastic achievement.”

Paddles Up

As part of the Rotary Club of Bristol Breakfast’s annual Dragon Boat Festival (DBF), 14 members of staff from our office in Bristol took to the waters to raise money for Caring in Bristol, a charity which focusses on the many individuals sleeping rough due to homelessness.

With no previous experience necessary, this year’s festival saw 36 teams taking part in a series of heats to reach the final. The Water Boatmen were easy to spot in their colourful costumes, taking home 2nd place in the costume competition as well as 17th place on the race’s leader board despite the torrential rain in the afternoon.

The team raised over £1,100 towards this worthy cause and are looking forward to joining the DBF next year.
UK offices tournament. In addition to supporting such a great cause, we are celebrating another successful year at the Cosgrave Development’s football tournament, which both of whom are engineers with our civils team in Dublin.

Although we all can expect to forget things once in a while, dementia is not a natural part of ageing and is caused by various diseases of the brain, including Alzheimer’s and vascular dementia. With dementia surpassing both cancer and heart disease as the leading cause of death in England and Wales, the money our teams have raised is helping to fund pioneering research, crucial support services and vital care in the fight against the UK’s biggest killer.

Cosgrave’s charity football tournament

The team in Dublin were delighted to take home the cup at the 18th annual Cosgrave Development’s charity five-a-side football tournament.

Held at Railway Union Sports Ground, Sandymount, Dublin, this year’s tournament saw 15 companies from the property sector go head-to-head in aid of the Irish Cancer Society.

With both men’s and women’s teams competing, our Limarca Cahill and Mark Duignan both successfully captained their teams to victory. Additional prizes for Lady and Man of the Match were also awarded to Jana Ulicka and Richard Miles, both of whom are engineers with our civils team in Dublin.

Team Captain, Mark Duignan, said; “We are proud to celebrate another successful year at the Cosgrave Development’s football tournament. In addition to supporting such a great cause, we were delighted to see both our teams win their tournaments. We look forward to defending our titles in 2020.”

Building bridges with Open House Families

Our structures team were excited to return to Open City’s annual two-day architecture festival, Open House Families, which hosts a series of workshops and fun activities across 40 locations in London.

The Open House Families Festival sees approximately 1,000 people in attendance as part of Open City’s aim to inspire the next generation of city-shapers. In cultural venues across London, various stalls are set up to host free family-friendly activities such as model-making, storytelling, drawing and LEGO that aims to encourage the public to take a closer look at their surroundings.

As part of Waterman’s ongoing relationship with Open City, six structural engineers: Paul Haberstadt, Kevin Paldano, Thomas Wright, Martina Famous, Kapsuanth Jeyathas and Charlotte Hitchens, set up a bridge modelling activity outside the Gherkin, allowing children and adults of all ages to construct their own cable stayed bridges out of paper, string and other craft materials.

With over 400 people attending their site throughout the day, Paul said; “As engineers it’s nice to be able to approach engineering solutions with fun and informal activities like this. It’s refreshing to see everyone getting stuck in and making the most of what the festival has to offer. We had a lot of positive feedback and some very impressive models were constructed. We look forward to working with Open City again in the future.”

Defibrillators in all UK offices

With nearly 30,000 out-of-hospital sudden cardiac arrests (SCA) occur each year, we are proud to have installed AED Semi-Automatic Defibrillators within our UK offices to increase our employees’ chances of survival by up to 70% in the event of a SCA.

Although there is currently no legislation in the UK which states it is mandatory for an employer to provide a defibrillator within the office, The Health and Safety (First Aid) Regulations 1981 has deemed it necessary for the provision of equipment which enables first aid to be administered to employees if they are to become ill, at work. In the same way, every working environment has fire extinguishers and blankets for the unlikely event of a fire, AEDs are now considered an important addition to commercial first aid kits thanks to its ability to allow even the most inexperienced person to operate the equipment.

Philip Varney, Group Director for Facilities Management, said, “We put the well-being of our staff at the heart of the business and the introduction of the AED in all our offices enhances our capabilities to ensure we can respond effectively in a medical emergency.”

Baking a difference to support the Alzheimer’s Society

Staff in our London, Nottingham, Birmingham and Glasgow offices raised over £411 by hosting a Cupcake Day in support of The Alzheimer’s Society.

As a chartered flood risk and drainage engineer with many years’ experience of leading complex flood risk and sustainable drainage projects, I’ve always wanted to participate in voluntary work that aligned with my skills and values. In 2016 this opportunity presented itself when I came across WaterAid, a charity which envision a world where everyone, everywhere can benefit from equality, health and an education in clean water.

Over 2 billion people don’t have access to a proper toilet and I think it’s easy for us to take for granted that we have instant access to clean water in our homes. In the UK, all new developments are legally entitled to a connection to a public sewer to take wastewater away from our homes and businesses safely. This should not be a privilege.

WaterAid understand that without water, toilets and basic hygiene, people can’t live dignified and healthy lives. Their mission is about much more than installing taps, boreholes and wells. To make a lasting change on a massive scale, WaterAid speak to government bodies to change laws and link policy makers with people on the ground, helping to connect 27.8 million individuals with clean water.

Since I started volunteering, I’ve been on a variety of roles which focus on providing essential water, sanitation and hygiene services. A job I’ve been happy to revisit for the last five years has been supporting the revellers at Glastonbury’s annual performing arts festival. As the world’s largest ‘green-field’ festival, there are over 150,000 people in attendance every year and it’s our job to support a more environmentally friendly and sustainable experience.

I have supported WaterAid in a few different roles at Glastonbury and took on a new badge as a ‘Water Welcomer’ for this year’s festival on 26th to 30th June. As the name implies, I joined over 600 volunteers to keep festival goers hydrated from the moment they arrived on site, dispensing free water from jetpacks (a backpack with a tank and dispenser) at the pedestrian gates, before then working in shifts at the water kiosks for 24 hours.

As well as providing an element of sanitation, we also took the opportunity to speak to people about the issues that large swathes of the globe have in obtaining these fundamental and basic provisions. Each year, we highlight a specific area of WaterAid’s work, whether that is a petition to the UK government or raising money for a particular project. This year, we were raising awareness for #AccessDenied which is showcasing the marginalised and excluded groups who often have their access to clean water and elementary sanitation denied to them.

My volunteer work with WaterAid is immensely rewarding and exciting. It’s a great opportunity to connect with people, discuss these important issues and gain support through petition signatures. I usually find that people at Glastonbury are much more receptive to our message when they don’t have access to their usual home comforts, meaning they can empathise and understand how difficult it would be for vulnerable groups of people to face these challenges for their entire lives.

Every year I feel like I’ve made a difference and am determined to help WaterAid until they meet their objectives.

Making every drop count with WaterAid

Peter O’Flaherty, Associate Director for Waterman Infrastructure & Environment, started volunteering with WaterAid in 2016 to help their world-wide mission of providing everyone with clean water, adequate sanitation and good hygiene. Here, he tells us why he is proud to support the charity and discusses his latest role as a ‘Water Welcomer’ at Glastonbury.

As engineers it’s nice to be able to approach engineering solutions with fun and informal activities like this. It’s refreshing to see everyone getting stuck in and making the most of what the festival has to offer. We had a lot of positive feedback and some very impressive models were constructed. We look forward to working with Open City again in the future.”

Making a difference • Community • Education • Charity •
Tahirah Tang-Campbell is one of the faces of the Department for Education’s nation-wide ‘Fire It Up’ apprenticeship campaign.