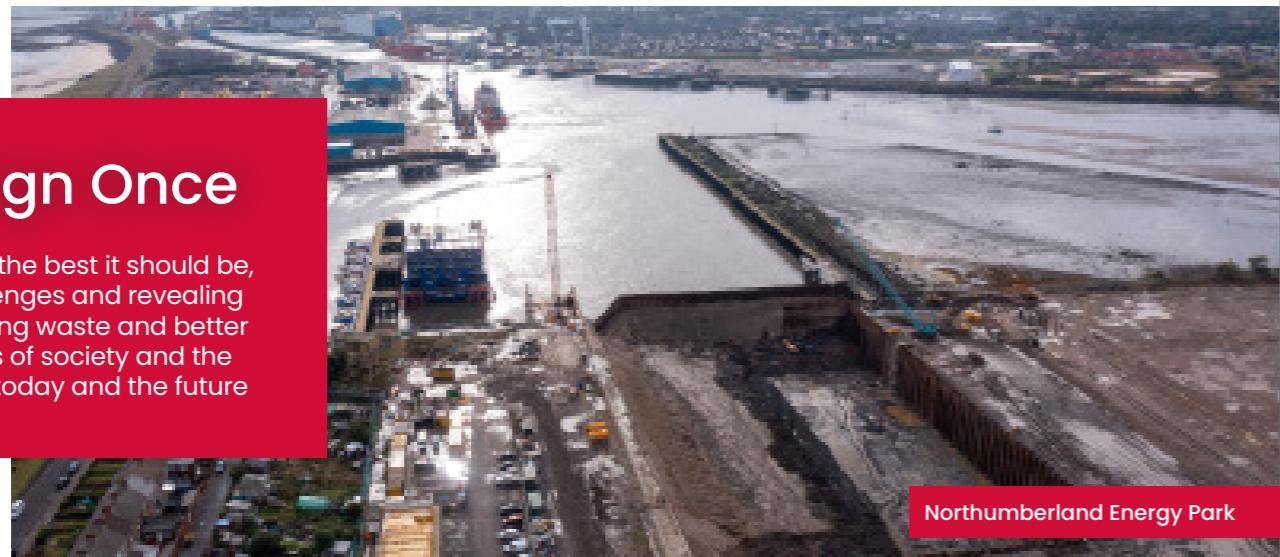


# Design once, engineer right

Marine Brochure



Tony Gee



## We Design Once

Our work is always the best it should be, anticipating challenges and revealing possibilities, avoiding waste and better serving the needs of society and the environment - for today and the future

Northumberland Energy Park

"A firm which has carved out a strong reputation as a provider of technical maestros who can sort out any complex construction challenge"

New Civil Engineer Magazine

## Tony Gee and Partners

Tony Gee and Partners is an owner-managed business which focuses on civil, structural and geotechnical engineering and infrastructure design services. Founded in 1974, we are a multi-award winning firm which has a reputation for providing high-calibre, complex and innovative engineering solutions, with a particular flair for the unique and challenging.

We have offices throughout UK and overseas locations, and have established, world-leading capabilities that can deliver solutions at an international level whilst recognising the needs of local clients and communities.

### Sectors



Marine



Highways



Aviation



Industrial



Rail



Power and Energy



Commercial



Education



Health

### We deliver value

Tony Gee has been adding value to design and infrastructure solutions for over 45 years. Our reputation has been built through the delivery of innovative and alternative designs that have embraced the employment of construction methods, modern and innovative techniques as well as the effective use of materials. Our approach is always to work alongside our clients to consider robust, combined solutions, designing both permanent and temporary works together, focussing in particular on integration of design with construction that deliver cost, time and material resource savings.

### Our key differentiators and USPs:



**Collaborative** - Experience in working with clients and contractors on complex projects for many years



**Flexible** - Flexibility and responsiveness in service delivery



**Experienced** - Expertise and experience in infrastructure design including, value engineering, construction methodology and design integration



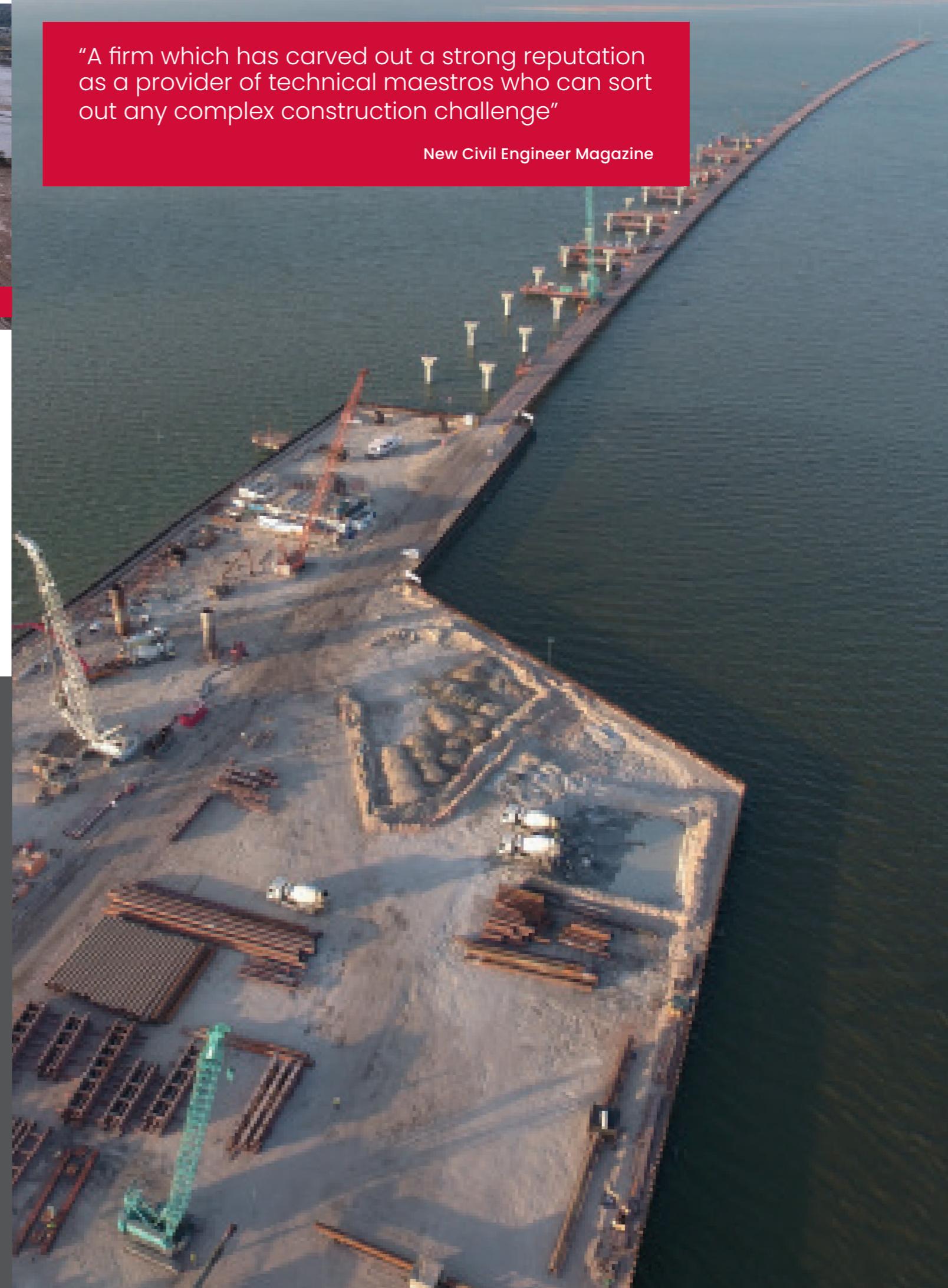
**Sustainable** - Substantial design and technological resource



**Understanding** - Understanding of construction risk in the design process/methodology and design integration



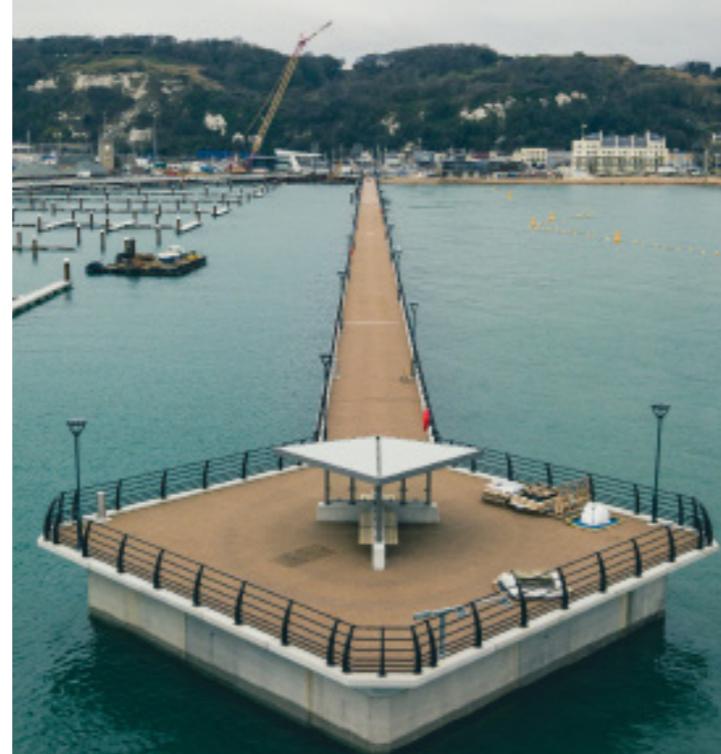
**Technical** - Highly experienced technical teams exercising regular peer review



# Our Culture

## Designing for the future

Sustainability has become a cornerstone to our work. We embrace all the services that are now demanded by client organisations and projects and retain in-house capabilities in sustainability, digital delivery, carbon, social value and whole life costing. Our size allows us to be flexible and adaptive to our clients changing needs and this combination of skills enables efficient, innovative and economical designs to be produced – a fact recognised by our involvement in major UK and international projects. We are an accredited carbon neutral organisation.



## Giving something back

At Tony Gee we take pride in giving back to communities. Whether this is for the contributions we make to charity and good causes or for the engagement in wider industry and local activity that we support our staff to make. We empower them to make a difference. For many years we have been a major supporter of RedR both financially and in staff time offered in support of their work. We have participated in the Bridges to Prosperity programme on several occasions, leaving a legacy for communities around the world. We also regularly participate in project initiatives that support engagement with schools and businesses.



## Simply Safe

Simply Safe is our cultural approach to safety and the well-being of people and is woven throughout everything that we do. We value technical excellence – inviting and tackling the hardest engineering challenge but always with a deep commitment to our civic duty to protect our people, our industry colleagues, and the wider public from harm. We know that 'design it once' and 'design it well' means working so it can be designed and built safely and without risk to anyone's health. We can make safety simple by planning ahead, designing right first time, and considering the whole life-cycle of every project. We value our people and our industry colleagues, their physical and mental health and their wellbeing and always look to continuously learn and improve.



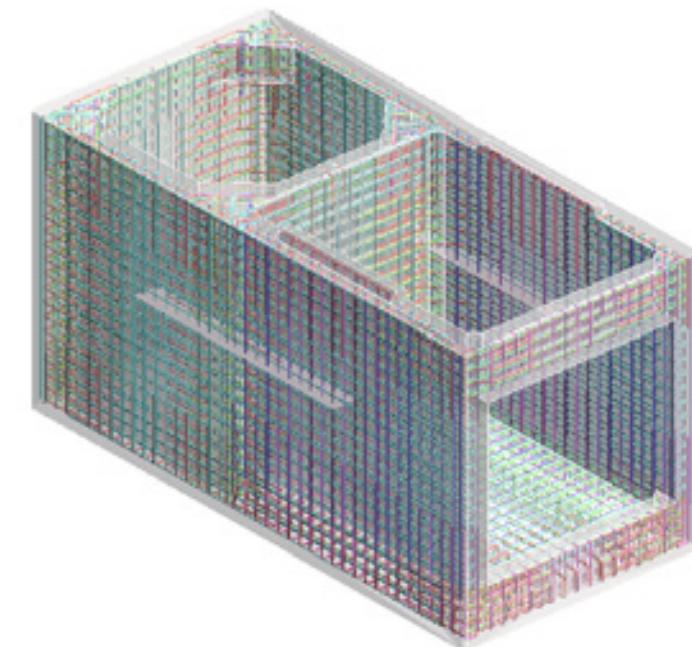
## Our people make us

We are a business of people. Our size allows us to maintain our values and culture through simple lines of communication and to be able to remain flexible and responsive to changing demands. We employ highly qualified and experienced staff and develop them through progressive training programmes to develop the broad range of skills across all disciplines that we have built our reputation on. Our highly experienced senior staff all work at the front line of design work ensuring that clients always get the benefit of their knowledge and that this is passed on through the business. Our "design once, engineer right" approach is part of our culture that our staff embrace, always looking to get it right, first time.

# Tony Gee Marine

## Digital Marine

Apart from our unique ability to integrate temporary and permanent works design, Tony Gee can provide a full spectrum of visual information aids; from early concept stage using 3D schematic representation tools such as SolidWorks to BIM information management and collaborative working on common data environments. We can also employ Design for Manufacture and Assembly to reduce construction costs and deliver high quality solutions and information where it is needed.



## Our Team

Our engineers are highly capable in the latest analysis techniques and industry best practice. We undertake high quality, relevant training to ensure they are suitably qualified and equipped to work on marine projects of any complexity.

## Capability

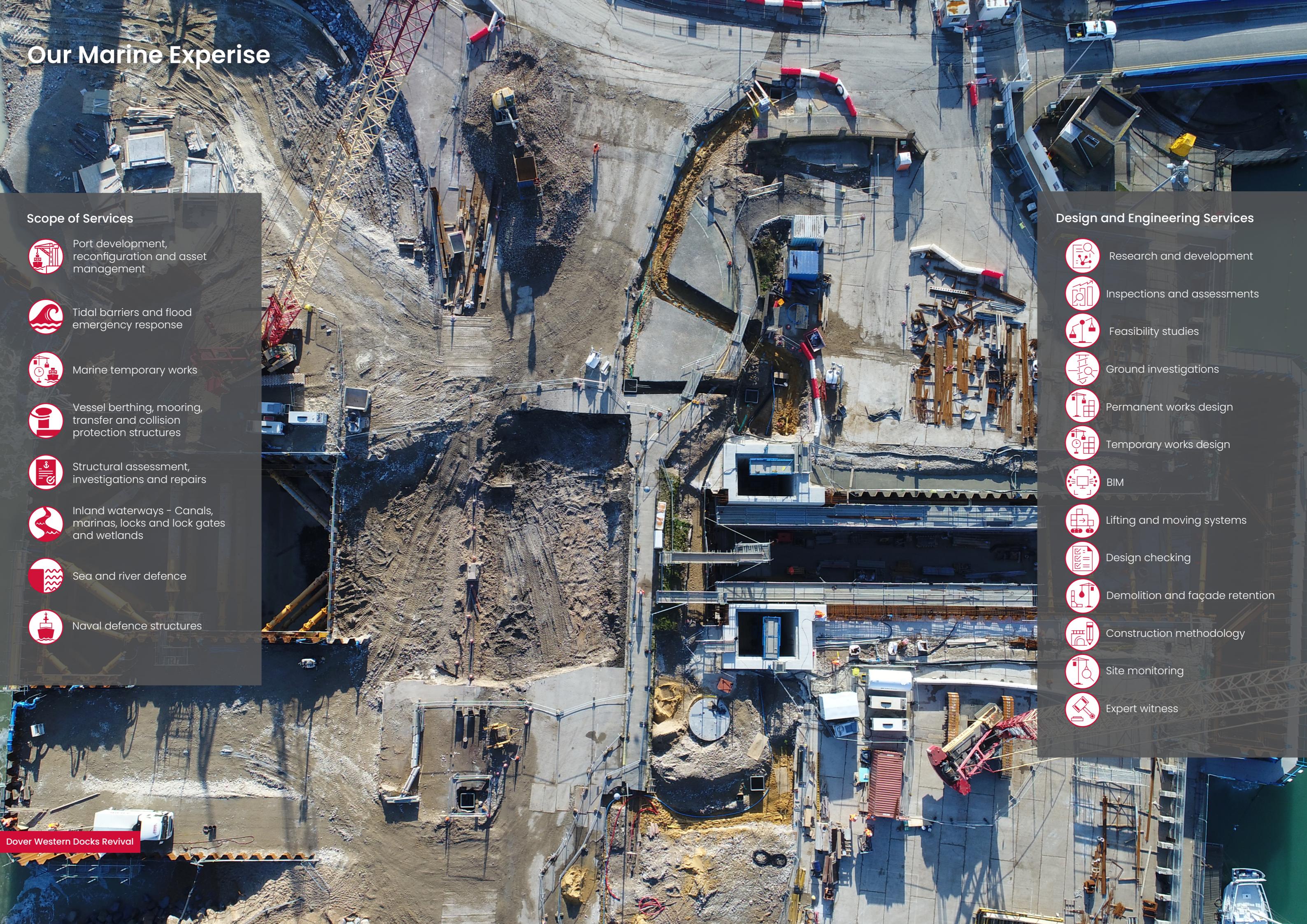
We are able to tackle a diverse range of projects in terms of both size and complexity. Our wide ranging capabilities and flexible approach allow us to meet the requirements of our clients and produce innovative and deliverable design solutions.



# Our Marine Expertise

## Scope of Services

-  Port development, reconfiguration and asset management
-  Tidal barriers and flood emergency response
-  Marine temporary works
-  Vessel berthing, mooring, transfer and collision protection structures
-  Structural assessment, investigations and repairs
-  Inland waterways - Canals, marinas, locks and lock gates and wetlands
-  Sea and river defence
-  Naval defence structures



## Design and Engineering Services

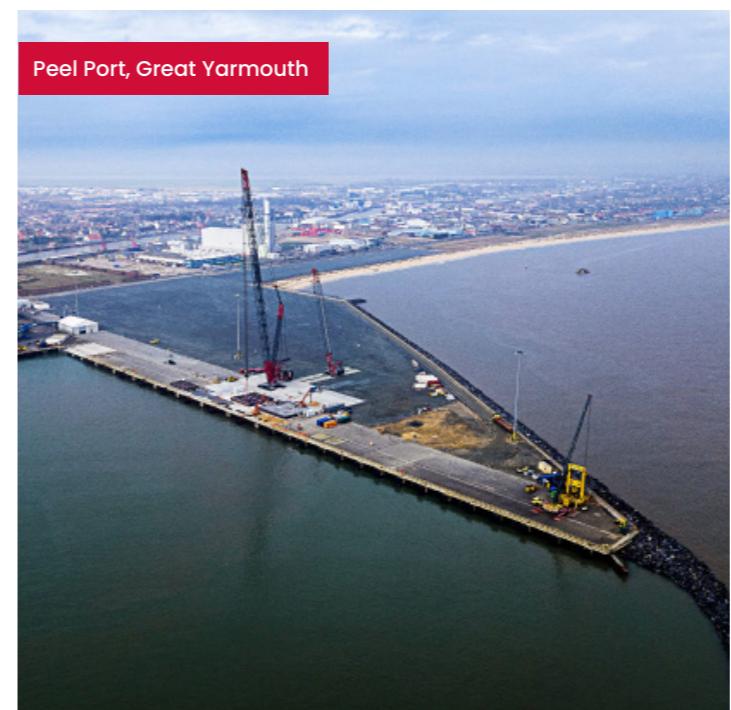
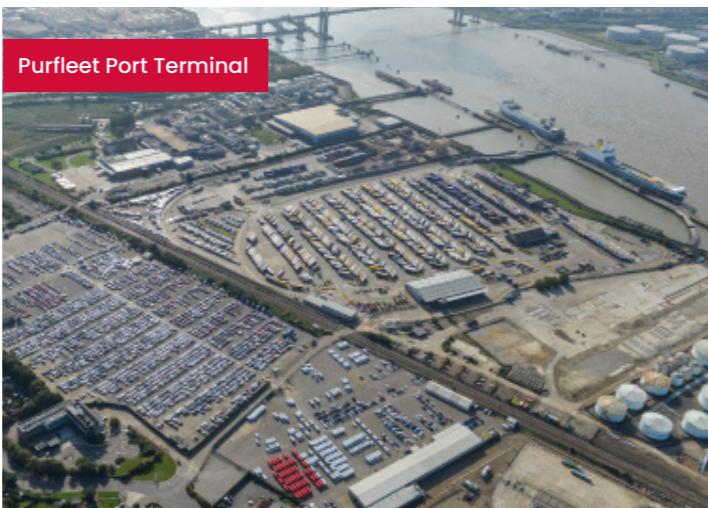
-  Research and development
-  Inspections and assessments
-  Feasibility studies
-  Ground investigations
-  Permanent works design
-  Temporary works design
-  BIM
-  Lifting and moving systems
-  Design checking
-  Demolition and façade retention
-  Construction methodology
-  Site monitoring
-  Expert witness

# Port Development, Reconfiguration and Asset Management



From greenfield to brownfield port development, reconfiguration and asset management works, Tony Gee offers engineering infrastructure services to our clients across all phases of the asset's lifecycle. From various forms of quay structures for berthing, mooring and ship-to-shore structures to landside infrastructure such as drainage systems with pumping stations, port access road and rail transport links, heavy duty port pavements, to roro-linskpan structures, Tony Gee offers buildable value engineered solutions to port operators with their contractors alike.

Our port projects include engineering services at Port of Dover, Westport Container Terminal Malaysia, Peel Ports Great Yarmouth and Peel Ports Liverpool, Northumberland Energy Park at Port of Blyth, PD Teesport, Pembroke Dock and Port of Milford Haven, Kings Wharf Bermuda.

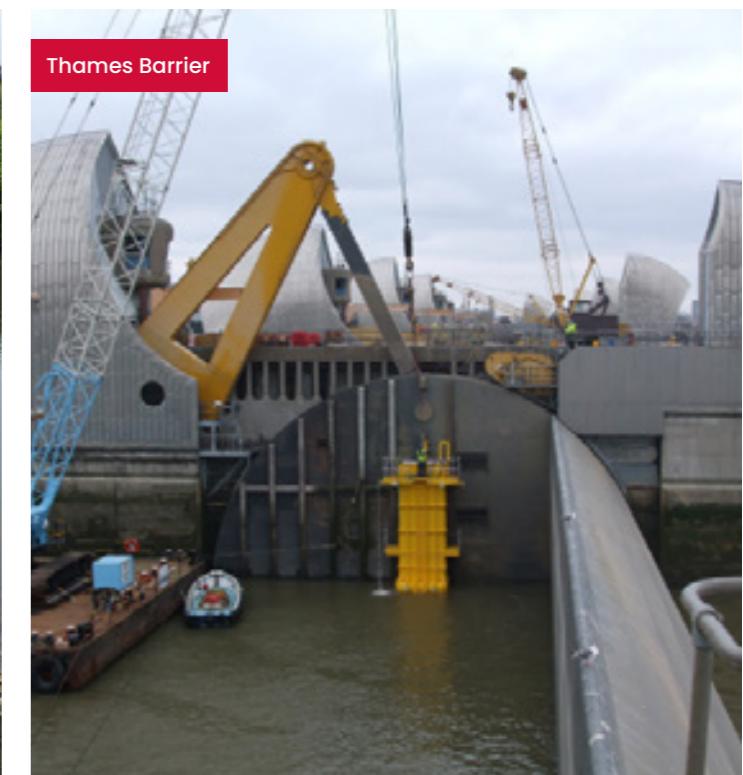
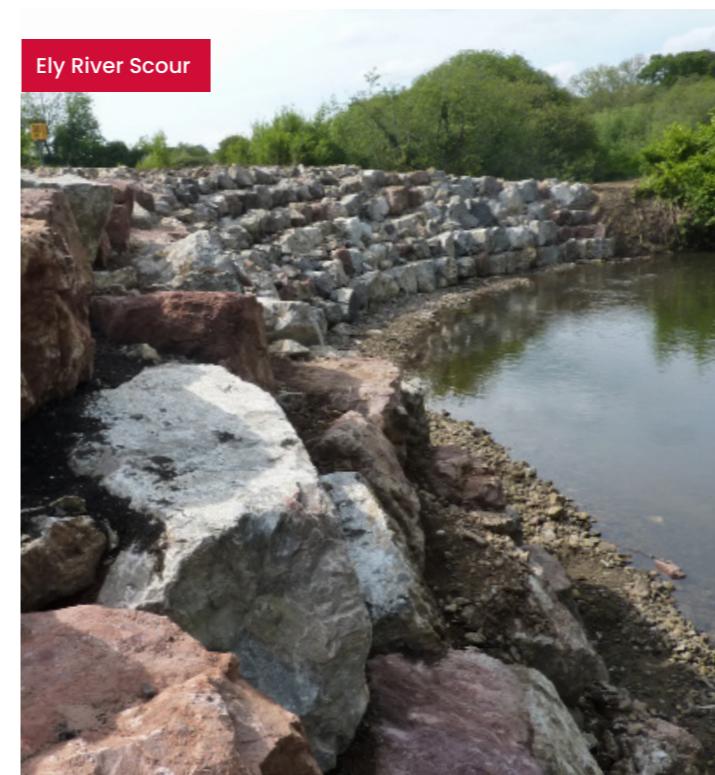
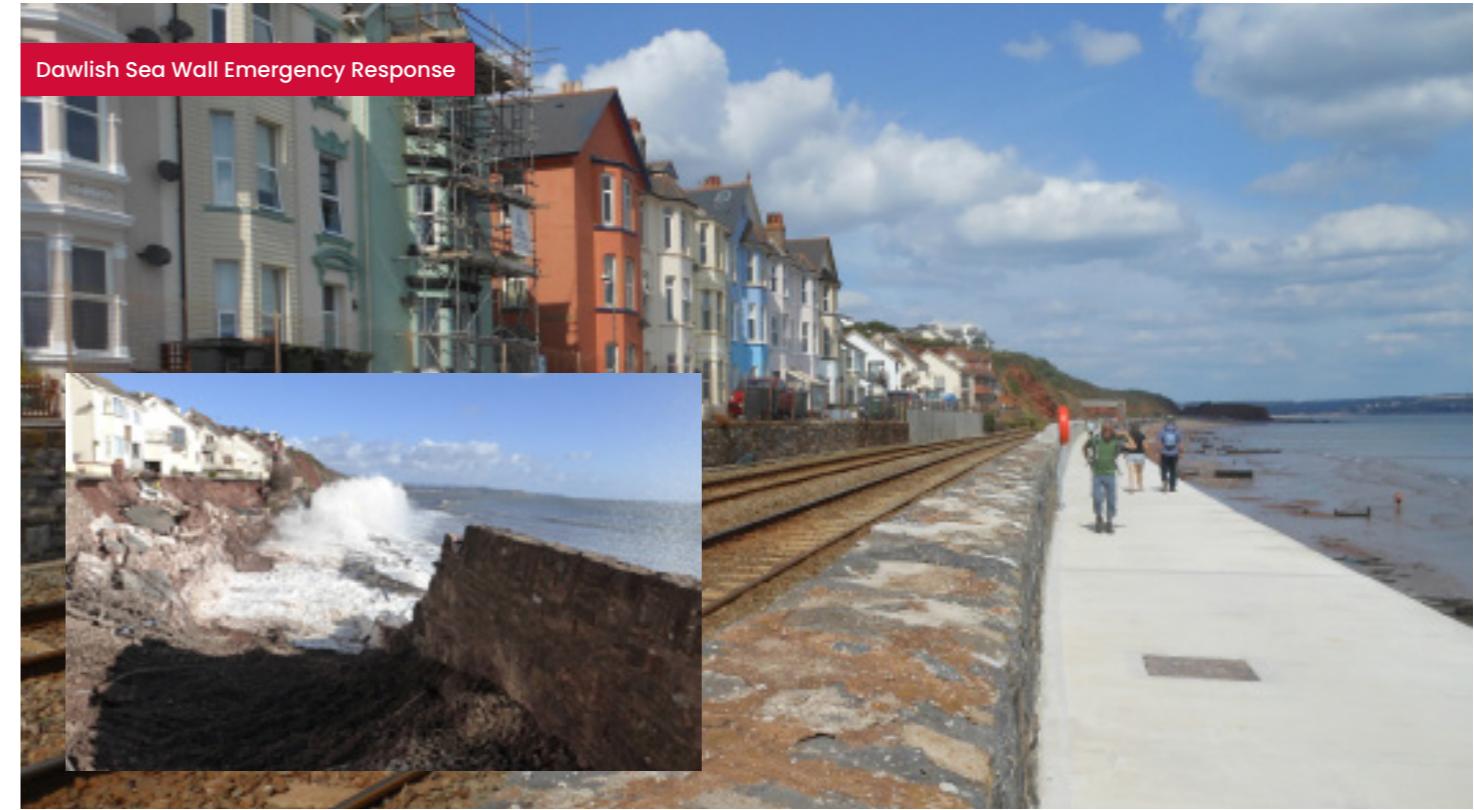


# Tidal Barriers and Flood Emergency Response



With climate change taking centre stage in the development of future infrastructure and management of existing assets, Tony Gee provides a comprehensive service in providing emergency response to flood damaged assets from breached flood defence walls at Dawlish and Dover Shakespeare including follow on flood adaptation and resilience engineering solutions.

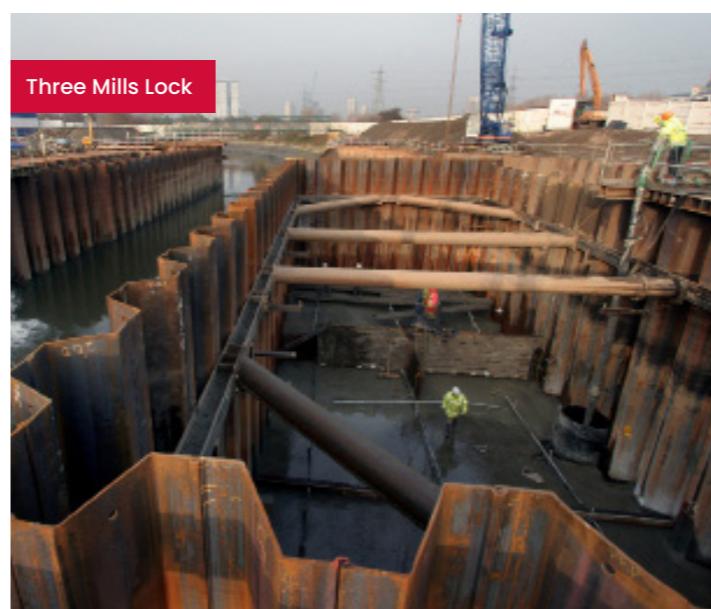
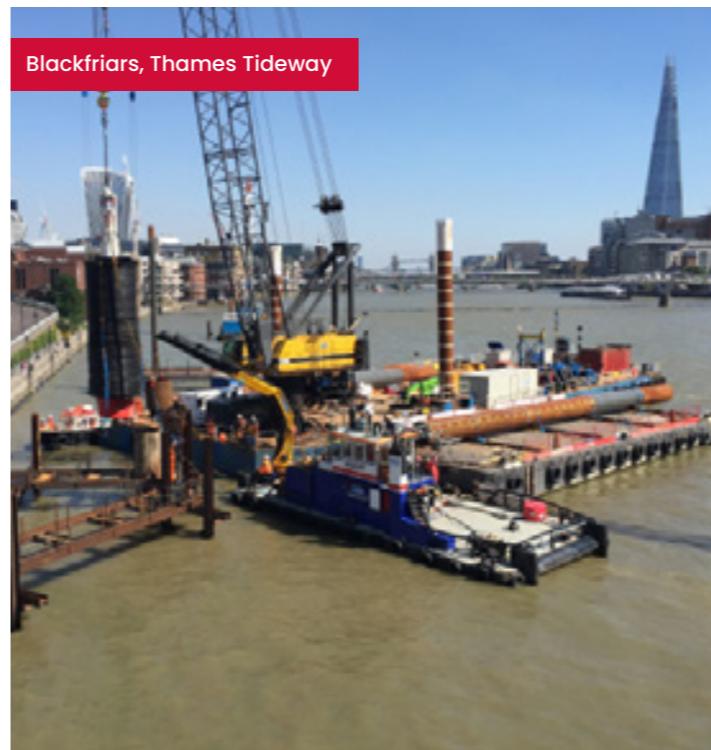
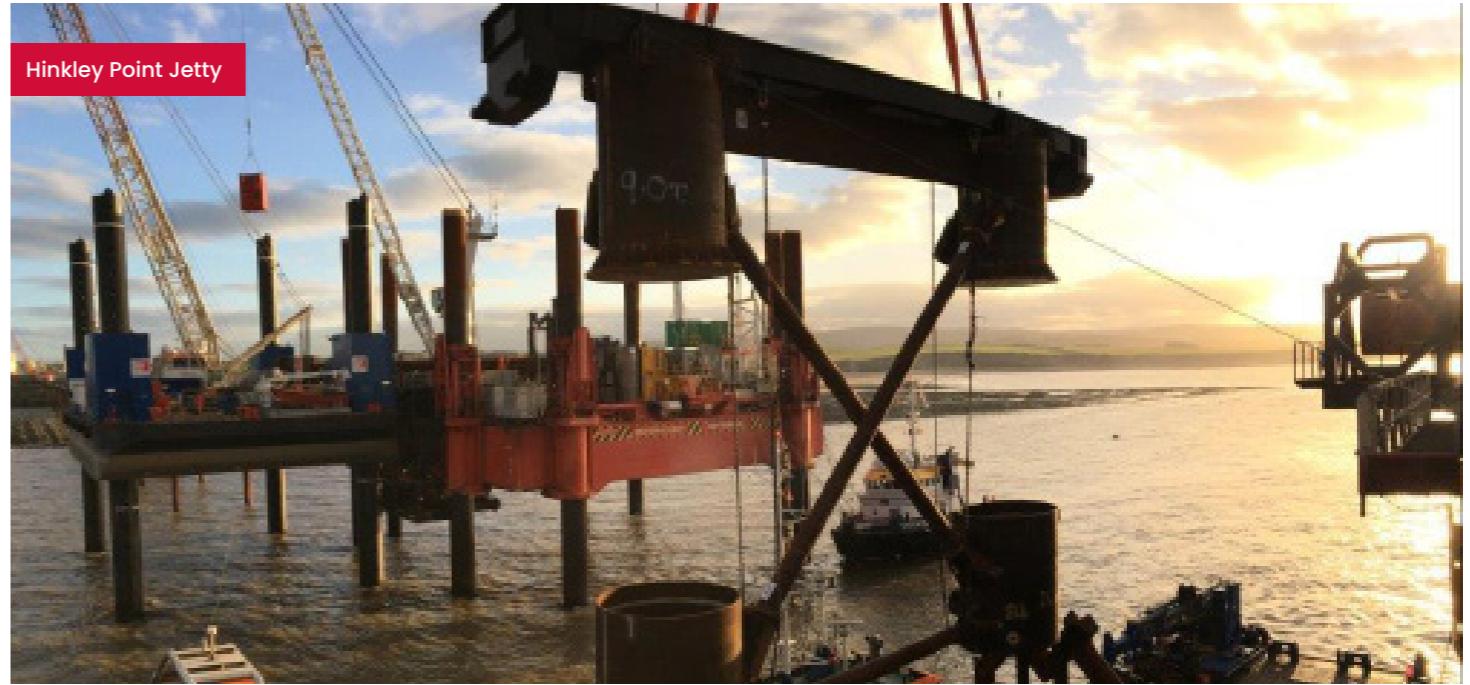
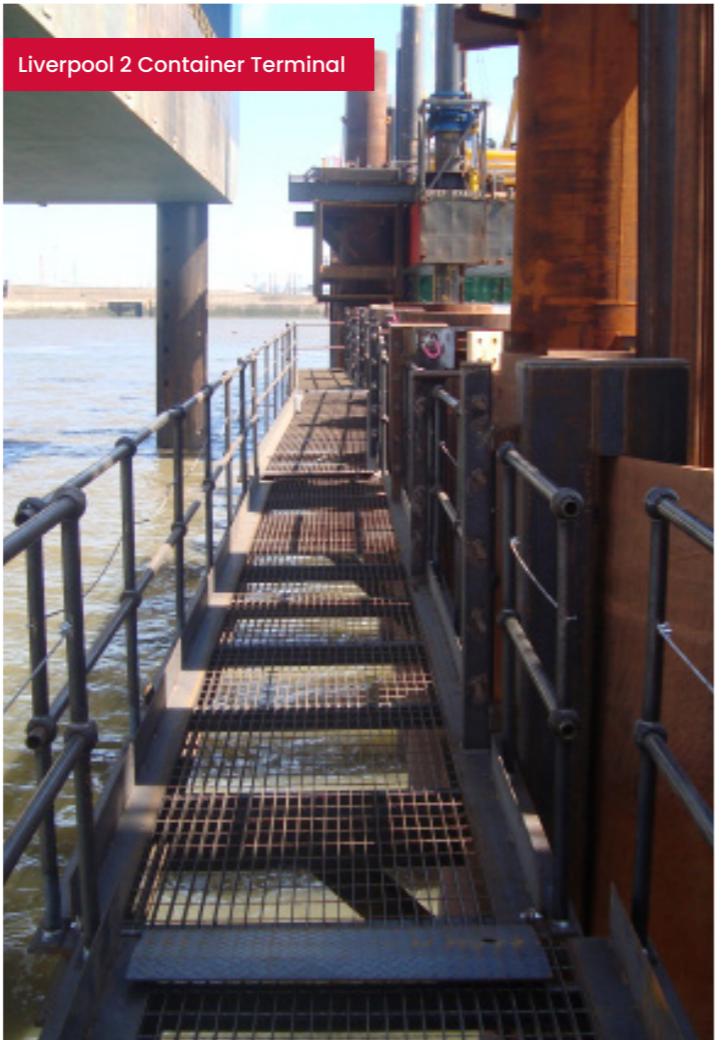
When climate change threatens the socio-economic prosperity of thousands of homes and businesses through unusual tidal storm events, Tony Gee works with its clients to develop buildable tidal barrier solutions and maintenance of existing barriers. Our tidal barrier services include projects such as River Thames Barrier, Dartford Barrier, Ipswich Tidal Barrier and Lowestoft Tidal Barrier.



# Marine Temporary Works



Temporary works are the parts of a construction project that are needed to enable the permanent works to be built. These include shoring and propping works, cofferdams to facilitate excavation and other falsework and formwork. Temporary works are typically removed but at Tony Gee, we create additional project value by seeking opportunities for temporary works to be integrated into permanent work. Our expertise in construction methods and design for stability of construction works in the temporary state allows us to deliver buildable, optimised and cost-effective designs to our Clients. Indeed, Tony Gee has carved out a strong reputation as provider of technical maestros who can sort out any complex construction challenge making us the first port of call for Contractors.

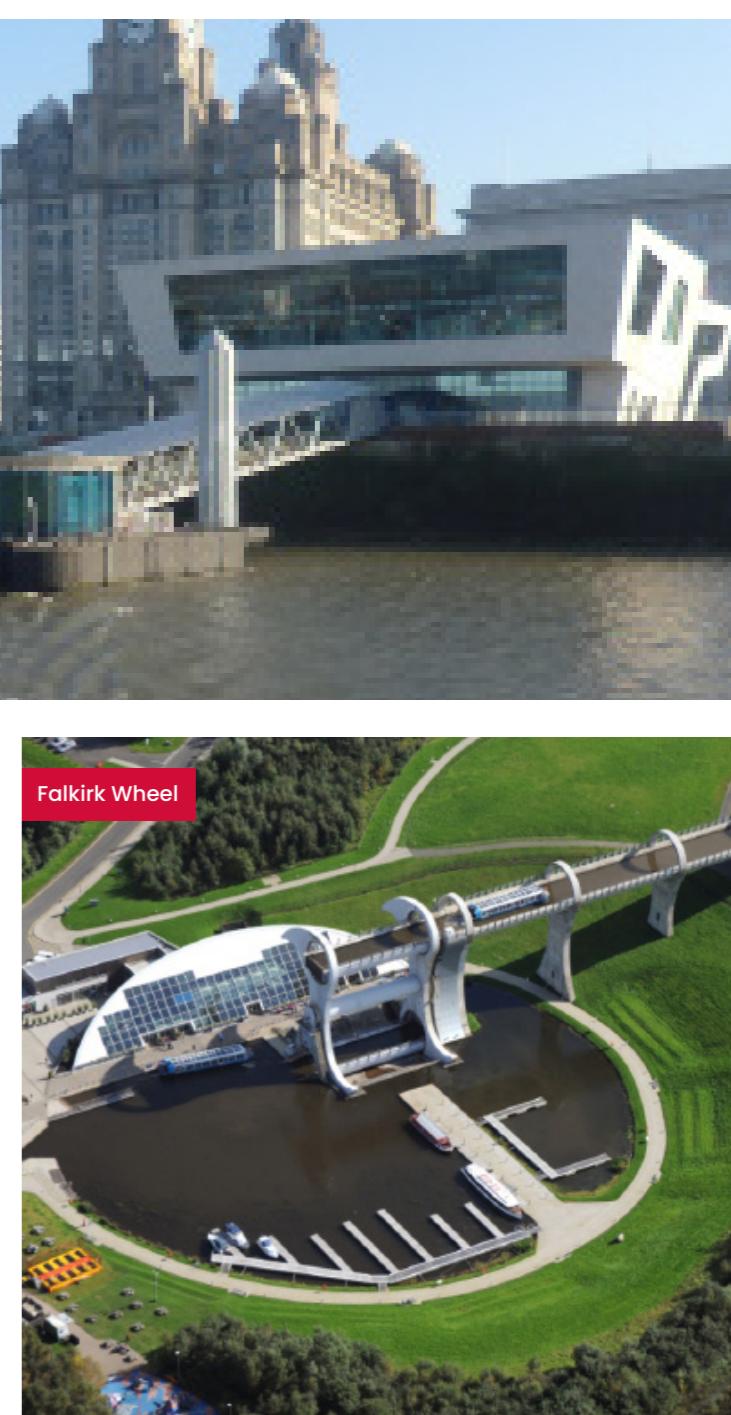
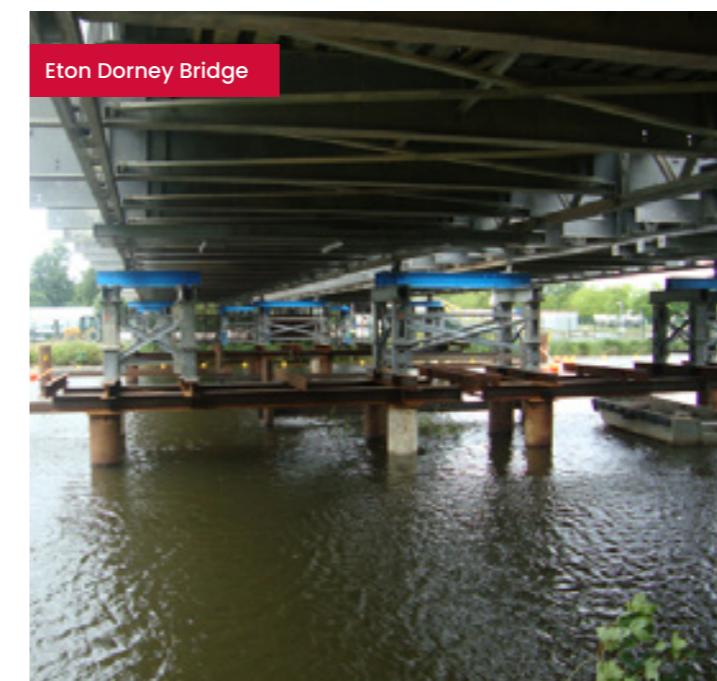
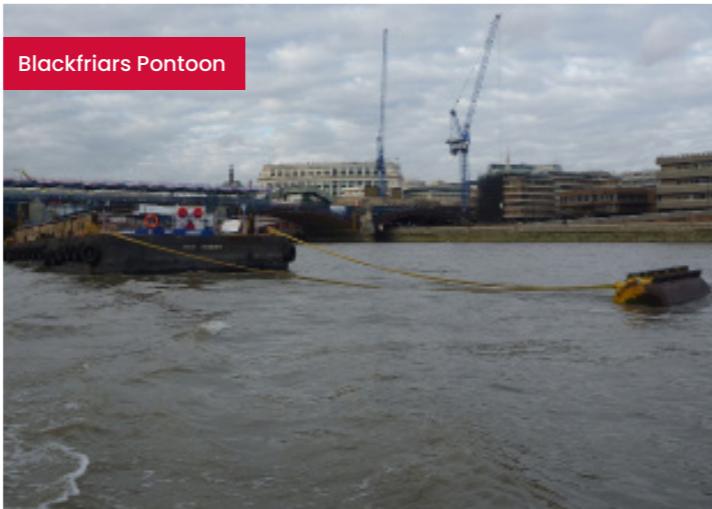


# Vessel Berthing, Mooring, Transfer and Collision Protection Structures



Various marine civil engineering structures facilitate the safe transit of vessels in rivers, canals and ship-to-shore locations. Locks and lock gates for example are a system of channel(s) and gates which help with allowing vessels to travel up hill or downhill in a controlled safe process or alternatively create an access to an impounded water body protected from challenging sea wave conditions. More innovative solutions include Falkirk Wheel, a Tony Gee project awarded FIDIC project of the century. Other structures protect other assets such as bridge piers from the impact of errant vessels, facilitate berthing of passenger or Ro-Ro vessels where there is a notable variation in sea tidal range.

Tony Gee provides engineering services to analyse a berthing, moored or transient vessel and design all associated structures for same. Such structures include linkspans, pontoons, mooring and berthing dolphins, suspended decks and quay walls including bollard requirements.

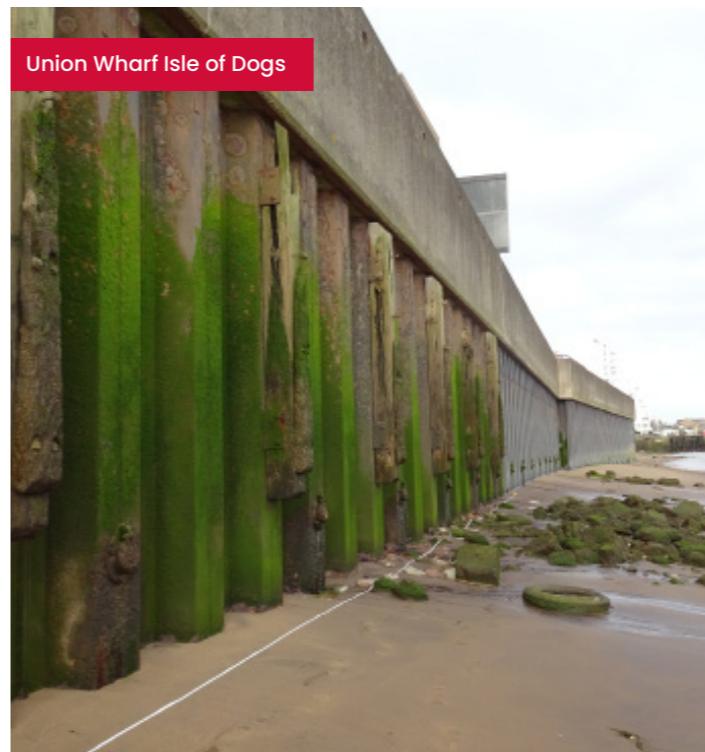


# Structural Assessments, Investigations and Repairs

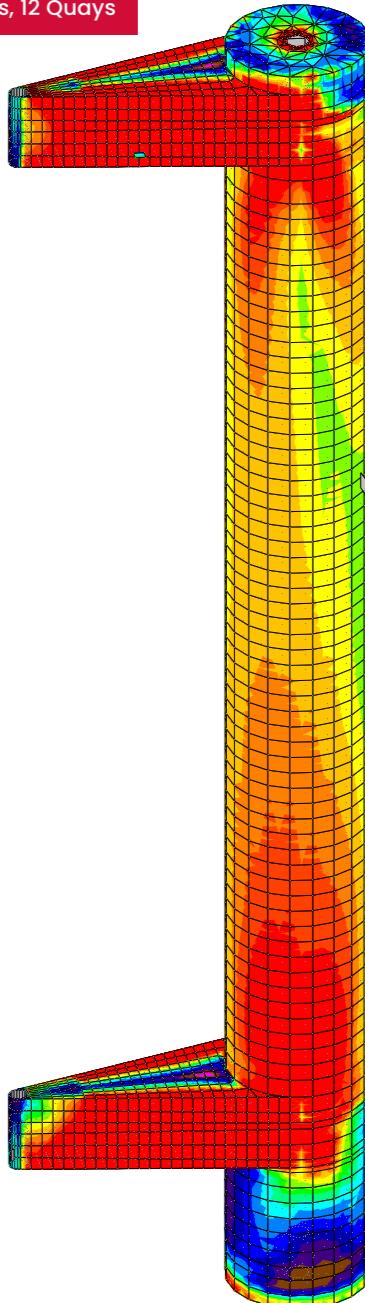


As part of the asset whole lifecycle management, structures are often subject to a change of use during their design life. This could be due to asset exposure to conditions outside of their design assumptions such as higher than predicted corrosion rate, load exposure, accidental loading or simply general deterioration. As clients seek to optimise the economic value of their existing assets, an assessment of an assets residual life or residual capacity is often required.

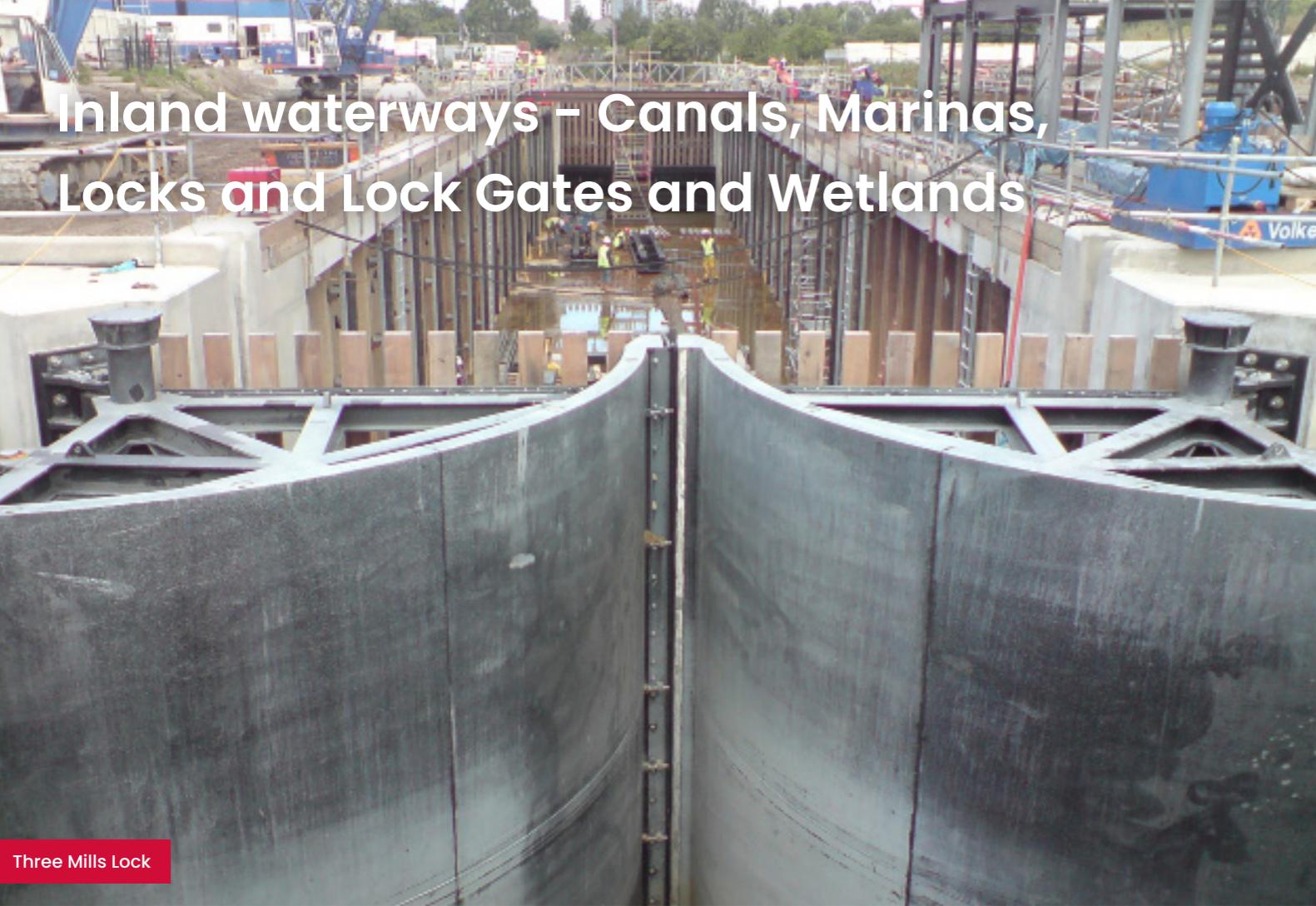
Tony Gee provides its clients with a comprehensive service in this respect including specification of investigations including special investigations, procurement of same, interpretation of test results, structural analysis including fatigue assessments, and design of remedial or strengthening works as appropriate.



Peel Ports, 12 Quays



## Inland waterways – Canals, Marinas, Locks and Lock Gates and Wetlands



Three Mills Lock

Britain's canals and rivers are a unique heritage with 5,000 miles of canals and rivers that are navigable in Britain. 2,700 miles of UK canals and rivers are connected up to form a waterways network. Tony Gee has been providing engineering services to the Environment Agency, Canal and River Trust (British Waterways) in maintaining and adapting the network to meet changing socio-environmental community conditions. From designing new embankments, river walls with mooring points and marina's for river boats to improving river sustainability through designs for wetlands, eel passes with flow control structures such as weirs, Tony Gee continues to preserve UK waterway networks for transportation and leisure use.



Shakespeare Marina

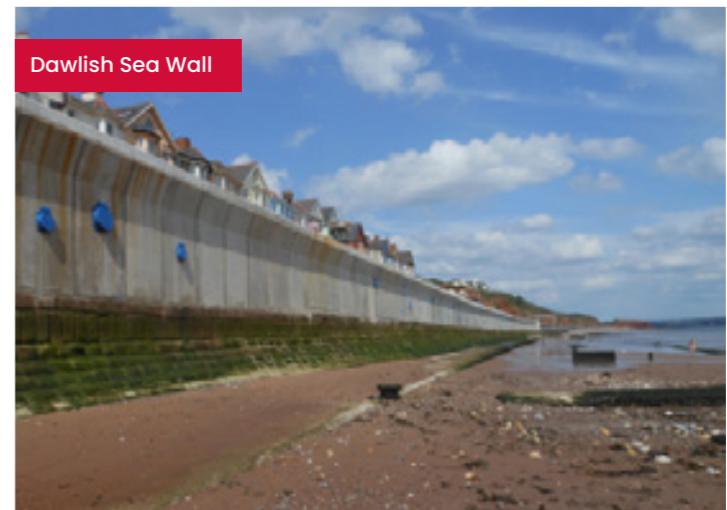
## Sea and River Defence



Littlehampton

With 1500 discrete river systems, comprising over 200,000 km of watercourses in the UK and the coastline of Great Britain exceeding 30,000km, many UK towns and cities have developed in and around waterbodies. With population growth and the continued expansion of our communities around these waterbodies, our communities and river crossings are often threatened by uncharacteristic pluvial and fluvial flood events. These are more recently exacerbated by climate change which has increased the intensity and frequency of weather events.

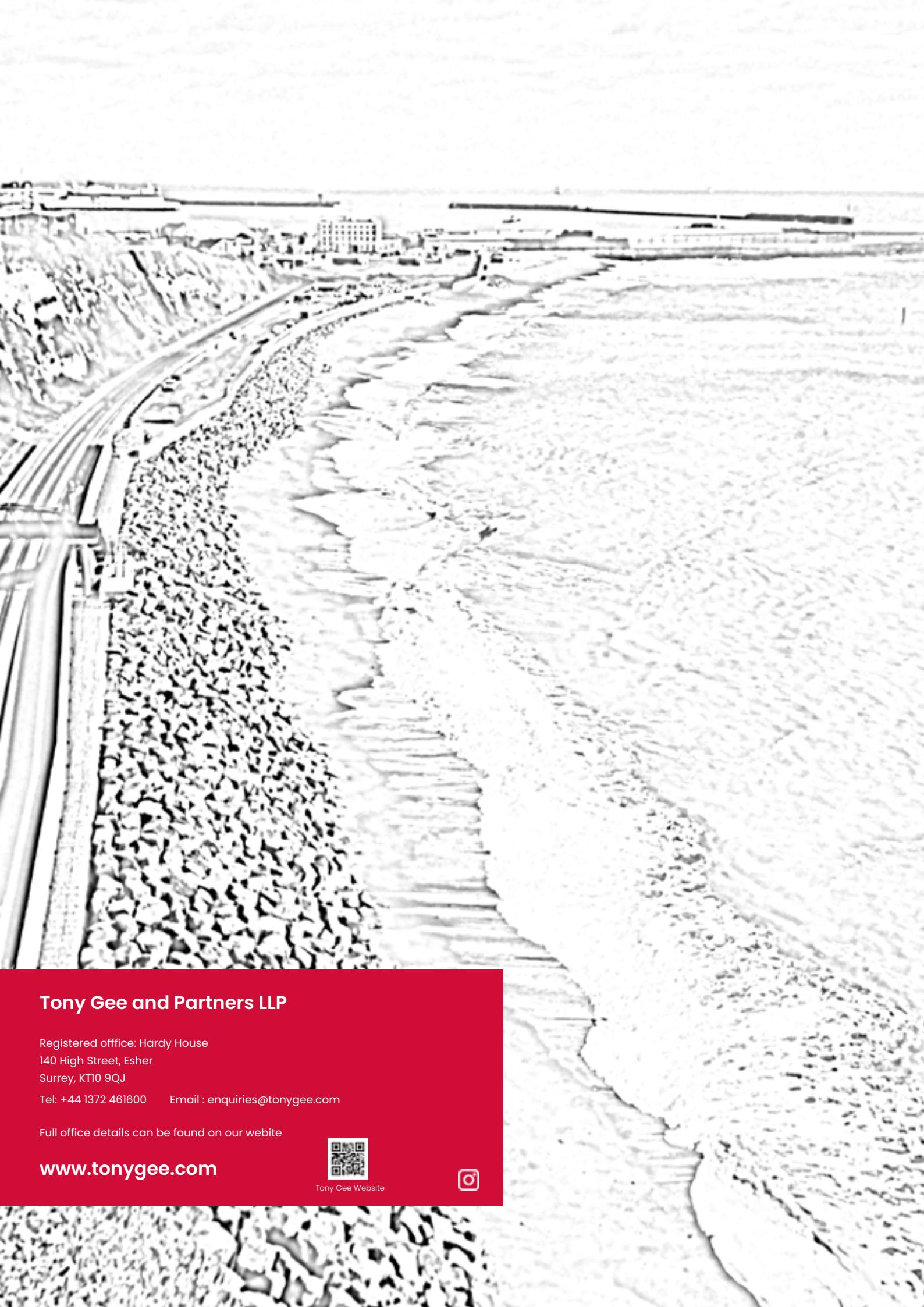
Tony Gee continues to work with regulatory bodies such as the Environment Agency, Network Rail, Canal and River Trust including local authorities to adapt our communities to their changing environment and make of civil engineering structures more resilient though engineering services such as scour assessments and the design of new sea and flood defence schemes.



Dawlish Sea Wall



Caol and Lochside Flood Protection Scheme



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Tony Gee Website

