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The IESF British Section's 2026 President, John Beck



John Beck was installed as the IESF President at the meeting held at the Institution of Civil Engineers at their meeting held on 9th March 2026. The photograph shows outgoing President, Roger Venables congratulating John.

Highlights of John's busy professional career include his being International Director of the Institution of Civil Engineers, Director General of the International Cotton Association and Chief Executive of the Church of England Diocese of Manchester.

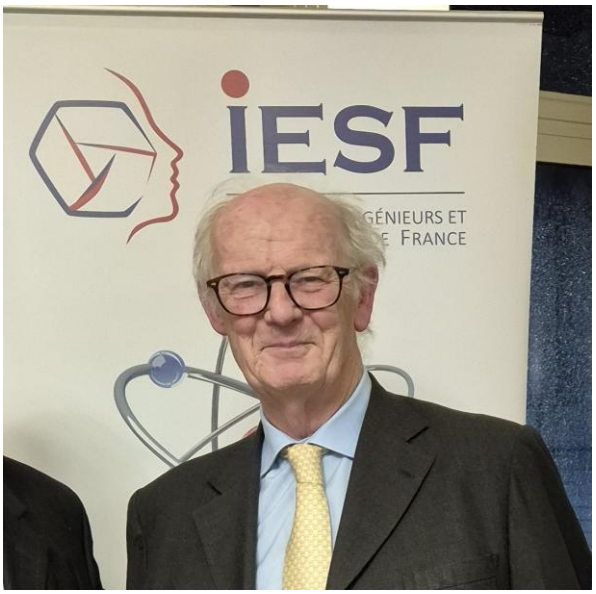
John has a long association with the IESF (British Section), serving as its 79th President in 2011 and having acted as its Honorary Secretary for more than twenty years.

John has always been keen to ensure the maintenance of good working links with the British Section's parent body in Paris, attending its Assemblée Nationale in 2011 and in developing good relationship with the officers at the French Embassy in London.

The Section looks forward to another successful year under his guidance.

What is the Truth? Do Engineers/Scientists and Lawyers answer that question the same way? by Roger ter Haar KC

Roger ter Haar started his lecture by stating that his dealings with our Hon Sec Chris Foster made him realise that engineers and scientists do view the world differently from lawyers, and that included what was the truth. That is not to say that one is wrong or one is telling a lie, it is just that they generally view it from a different angle. Engineers and scientists endeavour to express what they believe to be the basic facts; the truth. Unfortunately, in the past, this has sometimes been wrong. Before Copernicus theorised to the contrary, the perceived truth was that the Sun circled the Earth. That was a stated fact, that was the truth. We all now know that is not correct; it is not the truth.



Roger ter Haar KC

From a lawyer's viewpoint, it is not necessary for all the information to be correct, rather that the facts matter. He gave the example of himself and a friend watching a car running a red light at a crossroad and crashing into an innocent motorist who was driving across the junction. In their witness statements, he saw a blue Ford drive through the red light, his friend saw a red Volvo. They both couldn't be right. What was the truth? From a lawyer's perspective, it didn't matter what colour or make of the offending car was, what mattered was that it illegally drove through a red light and caused the crash.

Time Lines

An important part of the difference between the lawyer's answer as to what is the truth is that the lawyer requires the answer within a defined time frame, whilst the scientist, generally, has all the time in the world. In a court case, a decision is final (subject to the rights of appeal etc). Similarly, an engineer's decision on the design of a structure for example is very final (that is what is built). However, a scientist can revisit earlier beliefs as to the truth as more information becomes available which corrects or enhances previous knowledge.

Testing and Proving Hypotheses

In science, discovery of the truth may start with a known phenomenon but of which the causes are unknown. A hypothesis as to its cause may be developed which is then tested by experiment or further observations. A prime example was the observation of a cholera outbreak in the area around a local water pump which pinpointed the source of the disease.

Similarly, in a criminal case, the police know a crime has been committed. As the evidence is gathered, hypotheses may form in the investigators' minds. Eventually a single hypothesis hopefully emerges to be able to convince the court that the case is proven beyond a reasonable doubt. But often the hypothesis is flawed because the evidence is not complete which is often due to the Law's desire for finality. Also, in court, the defence's position is not to seek the absolute truth – who committed the crime – but to show that their client didn't. In Civil cases, both sides will present favourable evidence and ignore that which is not favourable to their client. Although not telling lies, they are only presenting limited truth.

When faced with a problem, the scientist starts with a hypothesis and then tests the options until it is proven or otherwise. However, a scientist will aim to present all the evidence – the truth – even if this could be counter to their hypothesis. Whilst this might suggest that they are more honest than lawyers, the reason is that eventually any undisclosed evidence will emerge as there is no time limit on scientific research, unlike the legal system's desire for closure.

Roger concluded his lecture by stating that lawyers desire an answer, the truth, within a defined time frame – "justice delayed is

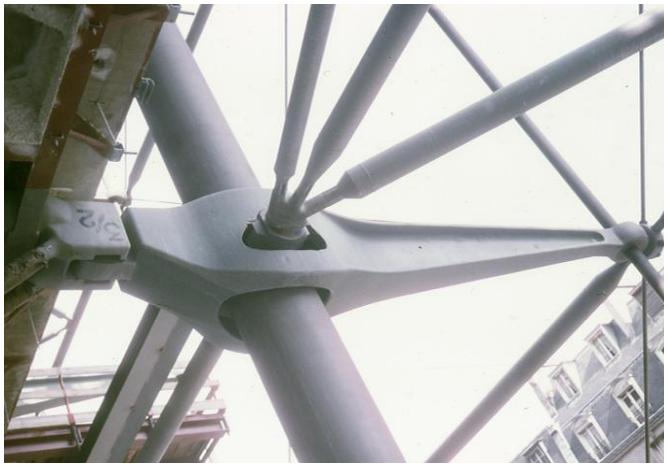
justice denied" - and once a decision is made that is final.
In science and engineering, the process is to produce an answer, the truth, that works until a better solution is formulated.
Both sides aim for the truth, although viewed from a different perspective!

Paul Gerrard

A Metallurgist's Role in Structural Engineering by Alan Denney

This lecture was drawn from Alan Denney's work at Arup in the early 1970s where he was employed as the first metallurgist working in their R & D department. The dominant thread was his work on innovations in steel structures but the talk started with Alan talking about the 'doctor's surgery' provided by the Arup R&D and the extensive variety of metallurgical issues which emerged from the 'consultations'. The talk then focussed on the interlinked themes of the use of castings in structural engineering, fire engineering of steel structures, and the introduction of steel castings for offshore structures, together with Centre Pompidou (1971 - 1977) and Bush Lane House (1973 - 1976) as notable projects for presentation. Alan weaved the importance of welding as a topic throughout the lecture, how he found it to be a critical element in his work which resulted in him taking leave of absence from Arup to go and do an MSc in Welding Engineering at Cranfield University.

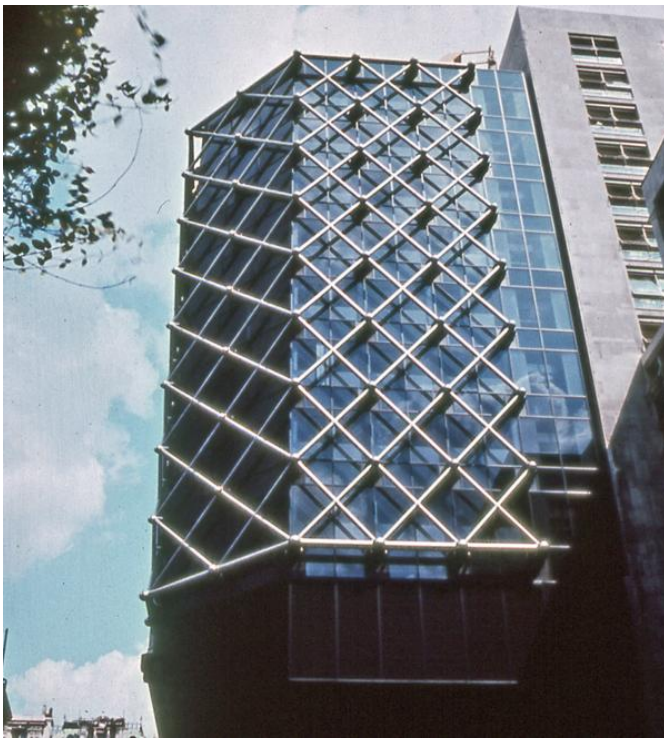
Centre Pompidou in Paris (currently closed for renovation until 2030) was a remarkable concept in 1971. The design concept was to achieve exceptionally wide span, flexible clear exhibition spaces, with all services and access on the building's facades. Peter Rice, the structural engineer wanted the steel structure to show 'the cast steel aesthetic' which presented challenges of material, manufacturing and fire protection. Alan outlined the role of Larry Seigel of US Steel in 'tutoring' him on the use of internal water filling as a means of fire protection (actually a solution of potassium carbonate with potassium nitrite as corrosion inhibitor) and he touched on the programme of work performed at the Atomic Energy Research Establishment at Harwell to demonstrate its viability. The progressive development of the project was well illustrated with a collection of progress photographs.



A gerberette - a major structural element on Centre Pompidou.
1976 image illustrating 'the cast steel aesthetic'.

Bush Lane House, a much smaller but highly innovative building in the City of London, was designed by Arup Associates as architects and engineers which presented structural, materials, fire protection and fabrication challenges. Arup's R&D department drew on what had been learnt in the development of Centre Pompidou with the added dimension that the exposed structural steel frame had to be a high strength stainless steel. The solution was found to be to use duplex stainless-steel castings for the exposed steel structure, which the architect within Arup Associates, Richard Raines used to advantage to create

an exceptional clean aesthetic. The tubes were manufactured by centrifugal casting and the 'nodes' by sand castings. Castings and the lattice fabrication were by companies in the APV Group in the UK.



Bush Lane House, as visible from Cannon Street in 1977 (now part obscured by newer development).

Alan expanded on the constraints on the site which necessitated a lattice structure. He explained the extensive programme of studies into candidate materials and their properties and fire protection, which included qualification testing of materials and welds, and exposure and strength tests on full-size trial structures. He presented a fascinating series of images of component manufacturing, the clever fabrication methods used to produce lattice frames within tight tolerances and their careful finishing and protection to give an impeccable exposed stainless steel lattice structure when assembled.

Alan talked about the means of overcoming the low slip factor which was found with stainless steel surfaces in contact, which was a serious design constraint on the bolted interfaces for the structure.



Cast node on the Conoco Victor platform, avoiding a complex X configuration fabrication

Alan then outlined how fire engineering developed within Arup as a specialist area in the period following the Summerland fire in 1973. He finished by outlining how the offshore industry picked up on the use of steel castings, with work at River Don works of British Steel (now Sheffield Forgemasters) and their adoption for the Conoco Victor platform in 1982 and the subsequent development including the 96 Tonne launch leg nodes for the Ekofisk 2/4J platform.

Andrew Graham & Alan Denney

Spring Voyage to the North West of England ~ 13-17 May 2026

Our trip began with an illustrated talk by a local guide, Roy, in our hotel in the centre of Liverpool, which was the base for our Spring Voyage to the NW of England. Roy gave us an entertaining potted history of the city of Liverpool and his biased support for Everton football club! (which was not appreciated by your editor). Roy was with us for the whole of our voyage, providing an

insight to all the areas we visited in the NW.

Thursday 14th May

On the first morning of the tour the coach party was driven up Duke Street passing the entrance into China Town with the Gateway Arch and 200 dragons dating from 1834, before going into Rodney Street, the Liverpool equivalent of Harley Street. We saw the blue plaque on the wall outside No 4 where Brian Epstein was born and Hardman's House, former residence and studio of photographer Edward Hardman.

Proceeding along Hope Street we passed the Philharmonic Hotel and Dining Rooms, frequented by musicians from the Philharmonic Orchestra before passing the Philharmonic Hall. Continuing along Huskisson Street to Falkner Square we saw its Georgian Houses with evidence of windows which had been bricked up to avoid Window Tax. A famous resident of the square was William Huskisson MP for Liverpool who was killed by the Rocket steam engine in an accident on the opening day of the Liverpool to Manchester railway in 1830. Proceeding along Canning Street named after George Canning PM, we returned to towards central Liverpool passing the site of the Rialto Cinema destroyed during the Toxteth Riots, the first School for the Blind and St Luke's church, bombed during WWII, before passing up Copperas Hill alongside the Adelphi Hotel, where passengers for trans-Atlantic voyages would stay and on to the Metropolitan Cathedral.

Liverpool Metropolitan Cathedral (known locally as Paddy's Wigwam) is the largest Catholic cathedral in England. The Lutyen's Crypt is the only part of the original design for the cathedral to be built.



A small section of the Lutyen's Crypt

Work started in 1933 but progress was severely delayed during WWII and was halted in 1958 upon completion of the Crypt as a result of rising costs. The present design, the result of a competition held in 1959 was awarded to Fredrick Gibberd. Construction took place between 1962 and 1967, and Taylor Woodrow was the contractor.

Initially, there was an opportunity to view the outside the southern entrance which faces Hope Street with a view of the Anglican Cathedral and study the form of the building with its buttresses which support the deep concrete cylindrical ring holding up the 2cm thick stained-glass windows under the Crown of Thorns.



Interior view of the stained-glass windows

The party was split into guided groups to visit the Cathedral and Crypt. There were several Lady Chapels in the Crypt and a display of ecclesiastical artifacts and memorabilia including items from Pope John Paul's visit to Liverpool in 1992.
In the main body of the 2000 capacity Cathedral, it was possible to see the central altar, the Lady Chapels and the Walker organ with its 4565 pipes and trumpets and the stained-glass windows surrounding the whole building.

Tony Barber

After visiting Liverpool Metropolitan Cathedral and observing our coach driver, Dean, successfully executing, a very challenging 110deg turn into the narrow entrance to the Quayside in Worsley, we boarded the "Countess of Bridgewater".



Taking orders for lunch

Whilst eating our lunch, we were taken for a 2-hour cruise along part of the 39-mile, 250-year-old Bridgewater Canal, enjoying the scenery, occasional wildlife, and the history of the Canal.
In 1759, 23-year-old Francis Egerton, 6th Earl and 3rd Duke of Bridgewater, realised that canals, like those that he had seen in Europe, could move coal from his colliery in Worsley. He presented a bill for what became the Bridgewater Canal. By following contours, he avoided needing locks on the main canal, from Runcorn (connecting to the Mersey Tideway and access to Liverpool) to Leigh (connecting to the national network). It is claimed to be the first true canal in England and has one of the Seven Wonders of the Waterways, the "Barton Swing Aqueduct" near the Trafford Centre [not seen on our short trip]. At its peak, his canal carried 3 million tonnes of cargo.
Today, the canal is owned by the Bridgewater Canal Company Ltd in conjunction with the Bridgewater Canal Trust.



Disembarkation from "Countess of Bridgewater" as the rain arrived

Manchester Museum of Science and Industry

Escaping the rain after our canal voyage, our coach took us the short distance to the Manchester Museum of Science and Industry.https://www.scienceandindustrymuseum.org.uk/
The Museum is undergoing considerable renovation so not everything is accessible, but there is still a lot to interest engineers, non-engineers and especially school children.

This is where we could explore 250 years of innovations and ideas that started in Manchester that went on to change the world.

Revolution Manchester includes artefacts of Stephen Hawking's life and work, and of Mary Berners-Lee, mother of Tim, inventor of the World Wide Web. She was a mathematician in 1951, working as a programmer of the Ferranti Mark 1 computer.



Ribbon Loom with Jacquard cards

Another form of digital computing on show, albeit from an earlier age, was a 1900 Ribbon Loom controlled by Jacquard punched card system (invented in 1804 by Joseph Marie Jacquard) enabling patterned cloth to made more efficiently.



Experimental Loco "*Novelty*"

The **Power Hall** includes Steam Locomotive SPS 3157, made in 1911 on Merseyside. Its working life in India included its famously pictured journey when overloaded with refugees escaping from Delhi to Pakistan in 1947 at the time of Partition.

For comparison, and slightly older, originally from 1829, reconstructed in 1988 is Experimental Locomotive "*Novelty*" which competed in the Rainhill Trials. It lost to *Rocket* but is still impressive.

Barry Brooks

Friday 15th May

West Bank Widnes

A beautiful morning welcomed us to West Bank Widnes. We were introduced to its history on the north bank of the River Mersey by Ray Jefferson.

In 1847 it was the first town in the country to be based on chemicals. Strategically located at the "Runcorn Gap", it is the lowest potential crossing point of the Mersey, exploiting the natural narrowing of the estuary where canal, rail and river links prospered. John Hutchinson built his factory based on the Le Blanc process to produce the alkalis needed to manufacture soap, glass, paper and textiles. John Brunner and Ludwig Mond both worked there. The origin of what ultimately became the company, ICI.



Voyagers at the Silver Jubilee Road Bridge

Thomas Telford proposed a chain suspension bridge here in 1817. In front of us were two railway and road crossings.

The Ethelfleda railway bridge, designed by William Baker and constructed by Thomas Brassey & Ogilvie in 1868, created a short cut between Crewe and Liverpool.

Ray then explained the history behind the Silver Jubilee Road Bridge, the largest steel arch span in Europe, when constructed, at 1082 ft. Constructed in 1961 it replaced the now long-gone Transporter Bridge, the first in Britain and the longest of its kind in the world. Completed in 1905 road traffic and passengers could cross the Mersey and new Manchester Ship Canal and maintain the Admiralty's 75ft minimum headroom clearance for shipping without disruptive and costly approach engineering.

As we climbed back onto the coach, we were fortunate to experience the River Mersey incoming rip tide through the "Gap".

We made our way over the most recent Mersey Gateway Bridge, opened by the Queen in 2017. An elegant harp-style cable stayed deck suspended from three towers.

Anderton Boat Lift

The Anderton Boat Lift opened in 1875, close to Northwich, to move coal into and salt out of the area. It uses two massive water-filled caissons that act as counterweights, efficiently raising and lowering vessels 50ft, using minimal power. Situated between the River Weaver Navigation and the Trent and Mersey Canal the concept was to make both waterways more profitable.

Severe corrosion and misguided solutions meant the hydraulics had to be removed and replaced with a new lifting mechanism of pulleys, ropes and an electric drive.



The Anderton Boat Lift

Since its closure in 1983 it has been brought back to its former glory with the support of English Heritage as a Grade 1 listed structure.

Two enjoyable visits in helping us understand the inventions, achievements and unfailing optimism of Victorian engineers in creating the Industrial Revolution.

Richard Coackley;

Jodrell Bank

On our arrival at the Jodrell Bank Observatory we were struck by the sign that advised us to turn off our mobile phones to avoid interference with the radio telescopes – perhaps an appeal to impress visitors more than a strict scientific requirement, especially since our guide received a mobile phone call from the observatory to organise our visit as we arrived.

Although we could have benefitted from a presentation, the information around the site was well presented, and the large Lovell telescope certainly impressive. When built in 1957 it was the largest steerable radio telescope in the world (even now still the third). The combination of its large physical structure, the need for great precision in its operation and the leading-edge astronomical science involved gives pause for thought.

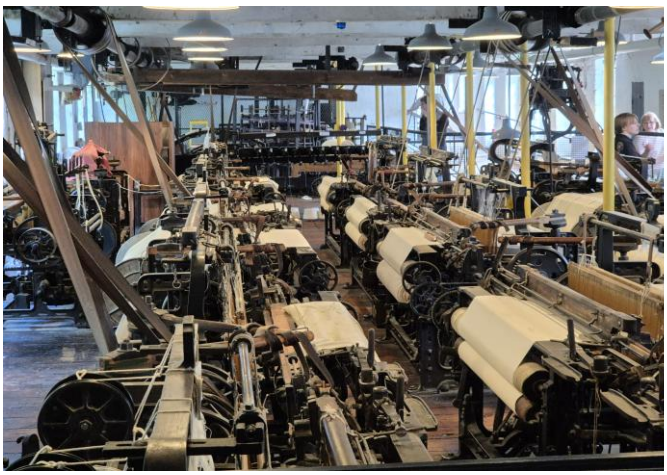


The Jodrell Bank Radio Telescope

There were straightforward treats to be enjoyed as well, whether that was throwing voices via parabolic dishes or cranking the large orrery to see the planets in motion. Enjoyable as it was, there was so much more to see than our brief visit permitted. Had we had more time, no doubt an exploration of the adjoining arboretum would also have paid dividends.

Quarry Bank Mill, Styal

The splendid time-capsule of Quarry Bank mill was our last visit of the day. The mill building itself displays the history of the complete journey of raw cotton to become finished textile. The intricate workings of the various machines in active use were well exhibited and explained by the volunteers minding them – much appreciated by members of our party.



Quarry Bank Weaving Shed

But the displays are more than just about the mechanics. The social and economic aspects of the rise and fall of the textile industry are also covered, including the stories of the young apprentices engaged by the owner, Samuel Greg.

Outside the mill itself there was lots to see – the apprentice house where the youngsters lodged, the nearby village where many workers lived, the beautiful grounds (attractive in the sunshine when we visited), and the fascinating self-cleaning weir on the entrance to the mill race leading to the large water wheel powering the mill.



The Mill Race behind the factory

Instead of a couple of hours, a full visit could happily occupy the best part of a day. Some members may consider it worthy of a return visit at some point.

Ferry across the Mersey

To help work up an appetite for dinner, we returned to Liverpool by ferry across the Mersey from Seacombe, on the Wirral.

The Snowdrop was decked out in its colourful dazzle colour scheme, but we were thankfully spared 'Ferry Cross the Mersey' by Gerry and the Pacemakers. The Liverpool waterfront is impressive, notwithstanding its loss of World Heritage status because of recent development, including the new Everton football stadium.



Ray Jefferson

Saturday 16th May

The Hill Dickinson Stadium and Liverpool Anglican Cathedral

Following our very full day visiting sites in the wider region, our Saturday itinerary was concentrated on features in the city of Liverpool itself. Travelling north along the dockside road we viewed the Hill Dickinson stadium, the new home ground of Everton Football Club, built on the site of the former Bramley-Moore Dock. With a capacity of over 52,000, the stadium is a bowl design constructed of steel and glass, and is the eighth largest football stadium in England. The name "Hill Dickinson Stadium" results from a naming rights partnership with the long-established law firm Hill Dickinson, whose headquarters is in Liverpool. The building of the new stadium was not without controversy: the Bramley-Moore Dock was within the Liverpool Maritime Mercantile City, which was a UNESCO World Heritage Site. The Bramley-Moore development, together with the general development of the waterfront, contributed to UNESCO's recommendation that the city lose its World Heritage status.

Liverpool Anglican Cathedral, constructed of local sandstone between 1904 and 1978, is a fine example of Gothic Revival. It is the work of the architect Sir Giles Gilbert Scott, who also designed many other notable buildings, as well as the ubiquitous red telephone box.



Model in the Cathedral of the iconic Red Telephone Box

It is the largest cathedral in Britain and the fifth largest cathedral in the world. With a total external length of 189 metres (621 feet) including the Lady Chapel, it is also the longest cathedral in the world. The superlatives do not stop there: the bells are the highest and heaviest ringing peal in the world, and the organ is the largest pipe organ in the UK.



Liverpool Cathedral, Rainer Ebert, CC BY-SA 2.0, via Wikimedia Commons.

Our tour of the cathedral demonstrated the sheer enormity of the edifice, and enabled us to view some of the commemorative and memorial features, including the War Memorial Chapel, housing

the Roll of Honour for over 40,000 men from the Liverpool area who died in World War I, and memorials to the King's Regiment (Liverpool), the RAF, the Battle of the Atlantic and the Burma Star. Other memorials include those to David Sheppard, Test Cricketer and former Bishop of Liverpool as well as the Titanic, which was registered in Liverpool. The cathedral's architect, Sir Giles Gilbert Scott, is commemorated with a tiled memorial in the floor in the centre of the cathedral.
Our tour was followed by a sandwich lunch within the cathedral, which afforded a welcome rest before our afternoon programme.

Edmund Morgan-Warren

The Three Graces and the Mersey Tunnel

Saturday afternoon's events involved a tour of the waterfront in front of the three Graces, the iconic buildings at Liverpool's dockside. It involved significant fitness challenges for the members as we had to attempt hundreds of steps to reach deep under the road tunnels and to the top of the Liver Building itself.
The tunnel guides, Bill and Alison, explained that the Three Graces were built over Victorian docks, on a series of tunnels and piers reaching down to the bedrock, and water still flows under all the buildings as the tide rises and falls. The original tunnel was a railway tunnel built in 1886 and then two road tunnels followed later. Queensway Tunnel was opened in 1934 and was dug entirely by hand. It has a diameter of 40 feet, allowing four full lanes of traffic to flow through the tunnel. Two tramway tracks running underneath the roadway were later abandoned. We were lucky enough to visit alongside the live roadway directly underneath the river.



Four-Lane roadway under the River Mersey

Safety in the tunnel was enhanced following a disastrous fire in a tunnel in Zurich, and we were shown the safety escape rooms located beneath the roadway. The tunnel is actively ventilated with 28-foot diameter fresh air and exhaust fans moving air from each side.under the roadway. The fans and control room are housed in the "fourth Grace", an ornate building designed in the Egyptian style of white granite, black statues and green paintwork.



One of the massive exhaust fans

Additional tunnels were built in the 1970s to cope with extra traffic as a twin-bore design both of 28 feet diameter, and entirely machine-bored.
The Liver Building is the most iconic of the Three Graces at 336 feet high with the 17 ft tall liver birds, Bertie and Bella, mounted on top. Bella looking out over the river, allegedly waiting her sailor to return home

whilst Bertie overlooks the city of Liverpool - looking for a good public house!
It was designed and built in just 3 years by the architect Walter Thomas completing in 1911. It was built using the (then) novel Hennebique technique of steel reinforced concrete beams with white granite cladding. The method was copied from a similar building in Cincinnati. We were taken to the 10th floor by lift, then 130 steps to the viewing platform at the top. The scene of Liverpool was best described as "atmospheric" as the heavy drizzle obscured much of the view.



"Bertie" overlooking the City

We returned to the hotel via a tour of the waterfront in heavy rain, the most notable aspect being the sad memorials to the lost seamen during wars and accidents at sea.

Mike Dyson

Ed note: On the final evening, several members of the party could not miss the opportunity to visit the "Cavern Club" in Matthew St, although sadly not the original one made famous by the Beatles.

New Members

Souzana Meletiadou

David Cornberg

Nigel Ricketts

Philippa Jefferis

Stephanie Wright

John Corcoran

New Associate Members

Margarita Ivanova

Ugur Duru

RIP

Sydney Lenssen died in December 2025. Sydney was an aeronautical engineer by background, but was well known in the construction industry as the editor of Construction News and the founding editor of New Civil Engineer, the magazine of the ICE.

Chris Head died on New Year's Eve 2025. Chris was an independent consulting engineer. He and his wife, Nancy, were founding members of the IESF Ski Group.

Chris Bakken died in April 2026 in North Carolina, USA. Chris was a chartered engineer who spent his career in the nuclear industry, both in Europe and the USA. He was the first recipient of the Sir Alcon Copisarow Medal,

Our thanks are due to those who have contributed to this newsletter. The editor welcomes contributions on matters that relate to the objectives of the Société. Email:paulgerrard24@gmail.com