

About Dublin Port



Dublin Port is Ireland's largest port, with a throughput of some 1.8mn passengers and 35.2m tonnes - including 80% of unitised freight volumes in the Republic of Ireland. The Port is a Tier 1 Port of National Significance under National Ports Policy and a 'Core Port' on the North Sea Mediterranean and Atlantic core network TEN-T corridors. Dublin Port is operated and developed by Dublin Port Company, a State-owned commercial company, with all cargo handling activities carried out by private sector companies operating in intensely competitive markets within the Port. The mandate of Dublin Port is to provide national port capacity ahead of demand, within a self-financing environment.

The Berth 53 project at Dublin Port represents a landmark investment in sustainable maritime infrastructure, combining innovation, environmental stewardship, and operational resilience. As a central component of Dublin Port's Masterplan 2040, this Masterplan 2 (MP2) project demonstrates how large-scale port expansion can be delivered in harmony with ecological protection while supporting national and European economic connectivity.

Of particular significance is that Dublin is the only capital city in the world located within a UNESCO-designated Biosphere, and the Berth 53 is designed and delivered with this in mind.

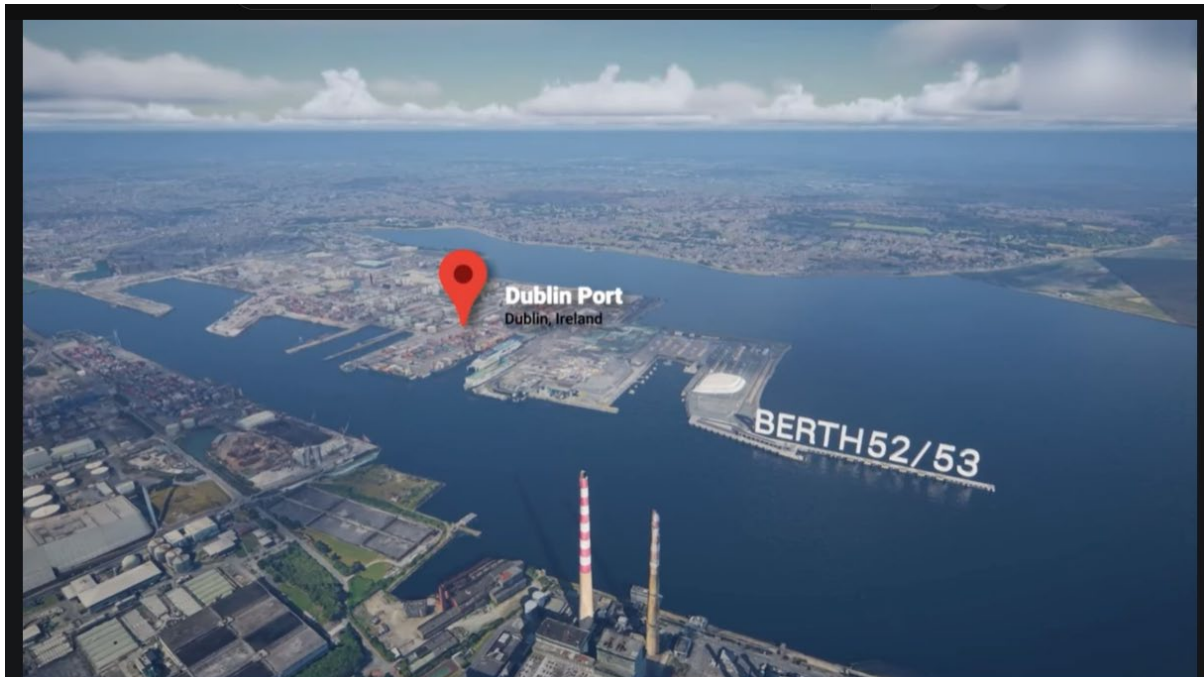
Dublin Port's Berth 53 – sustainably increasing capacity and resilience at Ireland's largest port

MP2 is Ireland's largest marine construction project and, once completed, it will provide additional RoRo and LoLo capacity and resilience at Ireland's largest port. The project also introduces new technologies for the safer berthing of ever-larger vessels and provisions to protect the sensitive UNESCO biosphere.

The MP2 Project includes:

- Two new ferry berths with advanced auto-mooring systems
- Associated marshalling infrastructure
- A new unified passenger terminal
- A new MV substation

1. Original and innovative character of the project



Watch here <https://www.youtube.com/watch?v=uEv7gwAHPWE>

The Berth 53 project represents a step-change in how port infrastructure can be conceived within environmentally constrained and operationally complex environments. Its originality lies in the seamless integration of ecological sensitivity, advanced engineering design, and operational innovation into a single, cohesive solution. Rather than relying on conventional quay wall construction, the project adopts an open piled jetty approach—fundamentally rethinking how ports can expand while preserving natural tidal regimes and protecting sensitive habitats such as the Tolka Estuary SPA.

Innovation is further demonstrated through the incorporation of Ireland's first Auto Mooring System (AMS), redefining vessel berthing by enhancing safety, reducing turnaround time, and lowering emissions. This combination of digital technology and physical infrastructure delivers both immediate operational benefits and long-term sustainability outcomes.

What sets Berth 53 apart is its "systems thinking" approach: environmental protection measures, safety innovations, and decarbonisation readiness—such as future Onshore Power Supply—are not treated as add-ons, but embedded into the core design from inception. The result is a scalable and replicable model for

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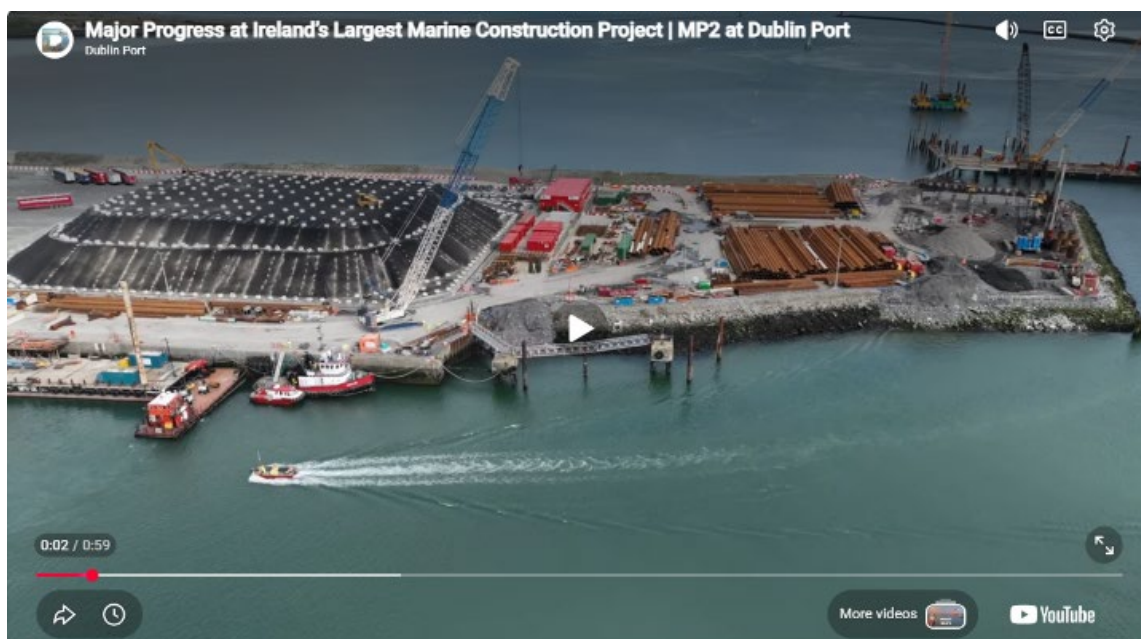


next-generation port development, demonstrating that growth, resilience, and environmental stewardship can be successfully delivered in tandem.

2. Vision and leadership deployed by the port's management

With a total approved project budget of approximately €162 million, Berth 53 is one of the most significant marine infrastructure projects currently underway in Ireland. The development includes a new 270-metre ro-ro berth capable of accommodating the latest generation of large Ro-Pax ferries, along with supporting landside infrastructure and a double-tier linkspan. This investment significantly increases port capacity and enhances operational resilience by providing a third double-tier linkspan in the Unified Passenger Terminal (UPT), reducing the risk of disruption and enabling more efficient vessel turnaround.

3. Overall project impression



Watch here: <https://www.youtube.com/watch?v=0i6VQaoJNeM>

A defining aspect of Berth 53 is its environmentally sensitive design, necessitated by its proximity to the Tolka Estuary Special Protection Area (SPA), a Natura 2000 designated site of international ecological importance. Traditional solid quay wall construction was not feasible, as it would have interfered with tidal flows and impacted the estuary's role as a critical feeding ground for protected bird species. In response, Dublin Port

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adopted an innovative open piled jetty solution consisting of nine discrete marine platforms connected by linking bridges.

This design allows natural tidal exchange to continue beneath the structure, preserving hydrodynamic conditions and protecting the ecological integrity of the SPA. Extensive environmental and hydrodynamic modelling was undertaken during the planning and design phase to ensure no adverse impacts on sediment transport, water quality, or feeding habitats. The project thus demonstrates how engineering innovation can be harnessed to deliver infrastructure in complex environmental settings.

Further environmental safeguards have been integrated into both design and construction. A 9-metre-high subsea propeller wash screen has been incorporated into the jetty to protect the SPA from turbulence generated by vessel thrusters during berthing operations. Additionally, a visual barrier has been installed to minimise disturbance to bird species from operational and construction activity.

Construction activities have been carefully managed to reduce ecological impact. Piling works are restricted to environmentally appropriate seasons to avoid sensitive periods such as fish migration. Marine mammal observers are present during all underwater activities, with strict stop-work protocols in place should any risk to marine life be identified. This proactive and precautionary approach reflects best practice in environmental management.

Innovation also plays a central role in enhancing safety and operational efficiency. Early dynamic mooring analysis identified potential navigational risks within the port's constrained channel. To mitigate these risks, Berth 53 incorporates Ireland's first Auto Mooring System (AMS). This system eliminates the need for traditional mooring lines by using automated technology to secure vessels quickly and safely.

The AMS delivers significant safety benefits by removing the risk of snap-back incidents associated with conventional mooring ropes, while also improving operational efficiency through faster and more controlled berthing. Reduced vessel manoeuvring time not only enhances safety but also contributes to lower fuel consumption and emissions.

From a climate and air quality perspective, Berth 53 has been designed to support long-term decarbonisation. Its location at the eastern edge of the

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port reduces vessel transit distances within port waters, lowering emissions during arrival and departure. Operational efficiencies delivered by AMS further reduce idling time and fuel use.

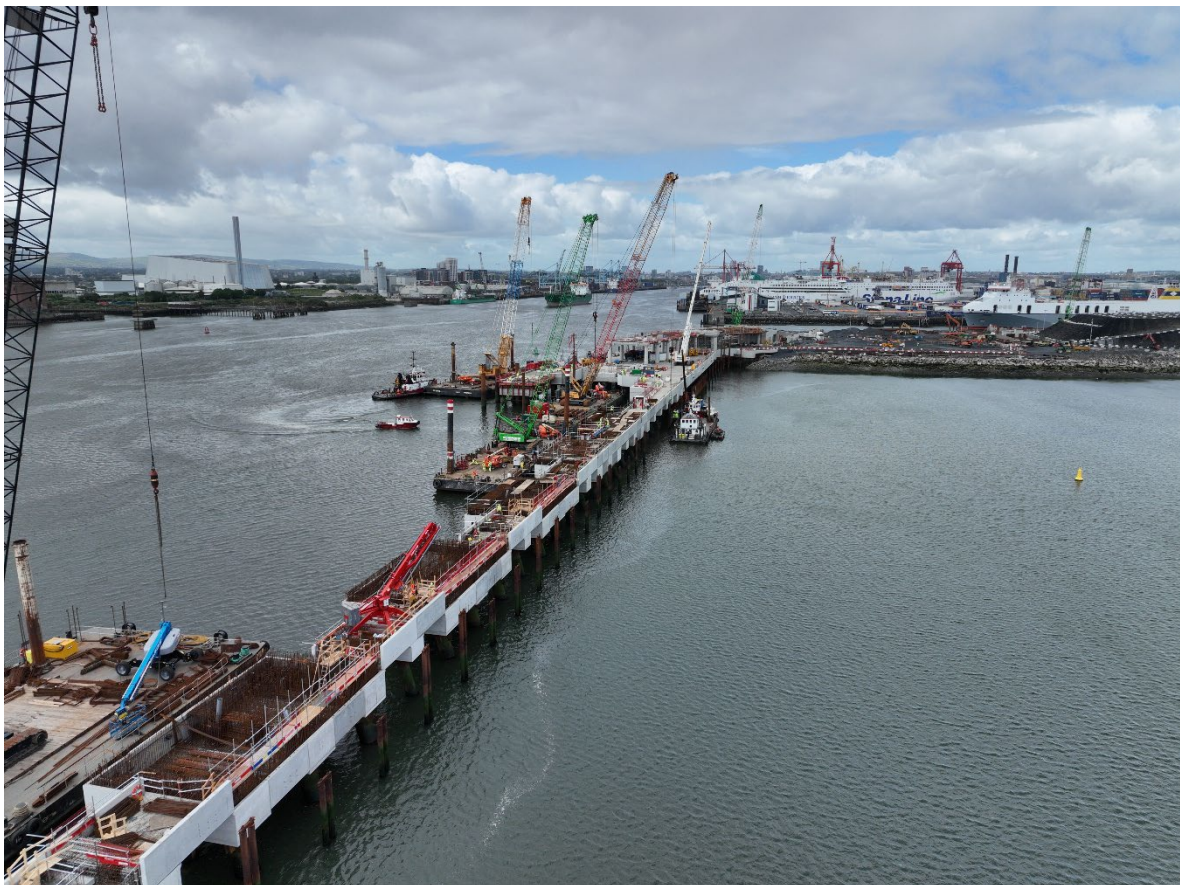
Crucially, the berth is fully enabled for future Onshore Power Supply (OPS), allowing vessels to switch off onboard engines and connect to the electrical grid while at berth. Once operational, OPS will deliver substantial reductions in greenhouse gas emissions and air pollutants such as NOx and particulate matter, contributing to improved air quality in the port area and alignment with EU and international climate targets.

The Berth 53 project has also been supported through European funding mechanisms, reflecting its strategic importance within the Trans-European Transport Network (TEN-T). Funding under the EU's Connecting Europe Facility (CEF) supports projects that enhance sustainable transport, resilience, and cross-border connectivity. The inclusion of Berth 53 within this framework highlights its contribution not only to Ireland's national infrastructure but also to wider European supply chains and climate objectives. This co-funding reinforces the project's alignment with EU priorities on decarbonisation, modal efficiency, and sustainable infrastructure development.

4. Contribution to sustainability and the UN SDGs

The project strongly aligns with several United Nations Sustainable Development Goals (SDG's) and demonstrates how port infrastructure can contribute to global sustainability objectives:

- **SDG 9 – Industry, Innovation and Infrastructure:** Berth 53 delivers resilient port infrastructure while integrating innovative solutions such as the open piled jetty design and Auto Mooring System, supporting sustainable industrialisation.
- **SDG 13 – Climate Action:** The project reduces emissions through operational efficiencies, future OPS capability, and reduced vessel transit distances, contributing to climate mitigation efforts.



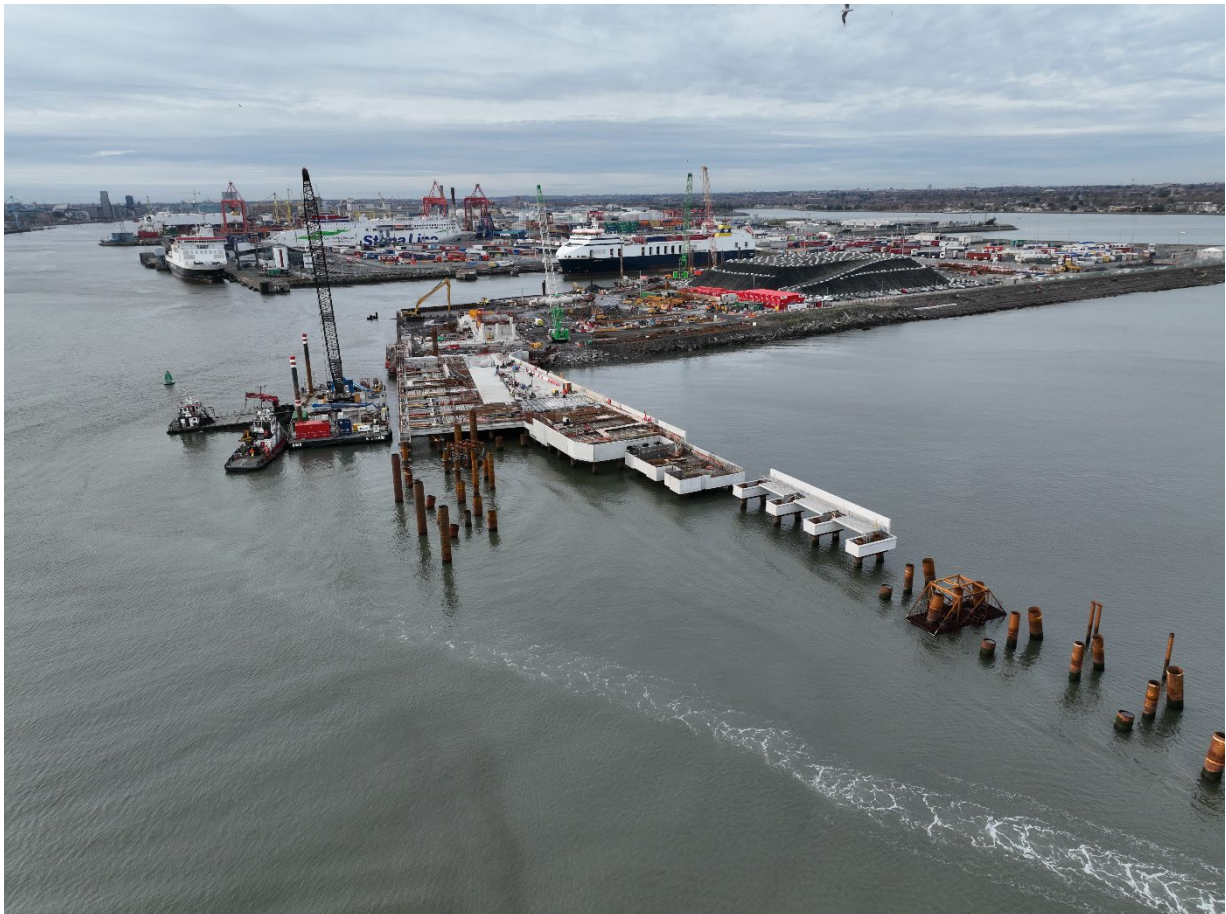
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- **SDG 14 – Life Below Water:** The protection of the Tolka Estuary SPA, through careful design, hydrodynamic modelling, and construction controls, directly supports marine ecosystem conservation.
- **SDG 11 – Sustainable Cities and Communities:** Improved air quality and reduced emissions benefit the surrounding urban environment, supporting more sustainable port-city integration.
- **SDG 17 – Partnerships for the Goals:** European co-funding through CEF and collaboration with regulators, environmental bodies, and stakeholders highlight strong partnerships underpinning the project.

In addition to its environmental and operational benefits, Berth 53 delivers significant economic and strategic value. By increasing ro-ro throughput capacity and enabling the development of the UPT, the project optimises the use of limited port land while supporting future growth in trade and passenger traffic. It strengthens Dublin Port's role as Ireland's primary gateway for imports and exports, ensuring continued economic resilience in a changing global trade environment.

Of particular significance is that Dublin is the only capital city in the world located within a UNESCO-designated Biosphere, and the Berth 53 is designed and delivered with this in mind.

5. Cooperation with other ports and/or engagement of societal and commercial stakeholders



The project has been delivered within a strong governance framework, with planning permission granted following comprehensive environmental assessment and regulatory review processes, all the way through to Board approval. Stakeholder engagement, including with environmental bodies and port users, has been integral throughout the project lifecycle, ensuring transparency and alignment with regulatory and community expectations.

Importantly, Berth 53 offers a high degree of replicability. The open piled jetty design provides a proven solution for port expansion in environmentally sensitive areas, while the integration of AMS and OPS readiness demonstrates how technological innovation can drive sustainability outcomes. These features make the project a valuable

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model for ports worldwide facing similar challenges of growth, decarbonisation, and ecological protection.

The project has required a very extensive array of stakeholder engagements. Key stakeholder types were:

- Tenant companies and operators with whom we have worked on the design, and also operational workarounds while the construction is ongoing. Dublin Port's increased capital investment in port infrastructure was also a key component of repricing conversations, with a €15 infrastructure levy rolled out from March 2026, delivered in consultation with tenant companies.
- Local communities who were affected by the noise of 228 piles being installed – the Port has an extensive community engagement programme supporting neighbouring areas, and with direct contact with local resident groups. Noise monitors were installed in local areas with updates to community as required. As part of the “community gain” committed under the overall MP2 project, of which Berth 53 is a part, a €1million investment in the local primary school St. Joseph's Co-ed, East Wall was also committed. €1.2million investment provided to Dublin City Council towards the proposed Dublin Bay UNESCO Biosphere Discovery Centre, North Bull Island – for further information [Dublin Bay UNESCO Biosphere Discovery Centre](#) | [Dublin City Council](#).
- In terms of other stakeholders, an array of national and local regulators, and oversight has been required, particularly during the consenting phase. At the highest levels, government support for the project has been invaluable. At a site inspection in late 2025 to the wider MP2 project, which includes Berth 53, Jack Chambers TD, Minister for Public Expenditure, Infrastructure, Public Service Reform, and Digitalisation *“As Ireland's economy grows, it is crucial that investment in major infrastructure continues to meet growing freight demand at Ireland's largest port. Dublin Port's MP2 Project will help future-proof Ireland's supply chain and provide the logistics sector with improved facilities to move goods efficiently. It's encouraging to see innovative, and nationally critical infrastructure like MP2 reaching key milestones and making strong progress.”*

Conclusion:

In conclusion, the Dublin Port Berth 53 project exemplifies best practice in sustainable port development. It successfully balances capacity expansion and operational resilience with robust environmental protection and forward-looking climate measures. Through innovation, strategic European support, and alignment with UN Sustainable Development Goals, Berth 53 delivers a future-ready infrastructure asset that contributes to both national and international maritime sustainability objectives.