



CASE STUDY

STRATEGIC DECARBONISATION PLANNING FOR BELFAST HARBOUR

CLIENT: BELFAST HARBOUR

LOCATION: NORTHERN
IRELAND

HIGHLIGHTS

- Renewable feasibility
- Solar-first strategy
- Decarbonisation pathway

THE CHALLENGE

Belfast Harbour, Northern Ireland's principal maritime gateway, is committed to achieving long-term decarbonisation across one of the UK's most diverse mixed-use estates. The estate encompasses port operations, logistics facilities, commercial and industrial buildings, residential developments, film studios and transport infrastructure, creating a complex energy environment with a wide range of operational requirements.

With increasing demand for low-carbon energy solutions and a growing need to support future development, Belfast Harbour required a strategic approach to renewable energy that would align with its sustainability ambitions while accounting for infrastructure, regulatory and operational considerations across the estate.



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THE SOLUTION

Arthian delivered a comprehensive renewable energy feasibility study and decarbonisation roadmap for the Belfast Harbour estate. The project involved reviewing energy demand patterns, existing infrastructure, and the potential rollout of a range of renewable and low-carbon technologies in supporting the harbour's net-zero ambitions.

Drawing on energy analysis, site assessments and technical appraisal, we developed a phased strategy to help Belfast Harbour prioritise investment, maximise the value of renewable energy opportunities and support the long-term transition to a lower-carbon future. The recommendations considered technical feasibility, commercial viability, regulatory requirements and future operational needs.

The resulting roadmap provides Belfast Harbour with a clear framework for informed decision-making, enabling the organisation to progress its decarbonisation objectives while maintaining energy resilience and supporting sustainable growth. The project demonstrates Arthian's ability to develop practical, commercially focused energy strategies for complex estates with varied stakeholders, infrastructure challenges and ambitious environmental goals.



“Arthian brought real clarity to a genuinely complex energy picture across our estate. Their feasibility work and phased roadmap gave us a practical, evidence-based way to prioritise renewable investment, without losing sight of commercial and operational realities. It's given us a clear framework to keep moving on our decarbonisation goals with confidence.

Simon Gibson, Sustainability Lead, Belfast Harbour



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