



Case Study

Josh Mitchell



EPSRC & NERC InDustrial CDT
for Offshore Renewable Energy www.idcore.ac.uk

THE CROWN ESTATE

Josh Mitchell is an IDCORE researcher who has broad and interdisciplinary understanding of the offshore renewables sector. He is bringing this ability and knowledge to deliver value to The Crown Estate, his sponsor organisation, which will have a wider benefit to the offshore renewables industry.

As a big-picture thinker, Josh is drawn to different facets of a subject or challenge and the wider impact of solutions. This developed over the course of his studies – particularly during his masters degree in renewable energy. Simultaneously, Josh is a pragmatic learner – preferring to have a tangible application of theory to build upon. IDCORE and his placement with The Crown Estate have allowed him to combine both of these elements – providing real-world experience of big picture decision making.

Project details

Josh is conducting a research project looking at spatial optimisation of UK Seabed for Net Zero. This involves developing tools and methods for decision-makers at The Crown Estate – who plan the future location of offshore renewable projects around England, Wales and Northern Ireland. The research has evolved to focus on tidal energy deployment.

The industrial supervisor for the project, Anthony, believes that the research evidence will be essential for future leasing activity and will be a key indicator of the project's success. Josh is enthusiastic about the widespread impact the project could deliver and hopes that these project locations come to fruition.

Big-Picture Thinking: A Different Type of Engineering

The work of The Crown Estate requires 'big-picture' thinking: the research project focusses on the highly influential early stage of a project's development (its location) and requires a broad and systems level view of the issue. Anthony Chu, Josh's industrial supervisor, believes this is what makes IDCORE engineers stand out: the ability to take a systems level view of an issue which he sees Josh exemplifying.

Josh recognises that technological research is important to the sector but that research to inform decisions around the economic, social and environmental impact of the sector is vital for the future of the sector. An application of his work includes deconflicting tidal projects to minimise impact on ecology, shipping or other seabed users.

IDCORE has helped Josh to prepare to investigate and address these issues through the broad scope of teaching on the programme.



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As an engineer, the Marine Renewables and Society, and Marine Energy and the Environment modules really make you think quite differently. Really taking a holistic, total view that these things are out in the environment, there's not some kind of forcefield keeping them separate. They're also part of society and have an impact on communities, and people's views can be very different.

Josh Mitchell

Beneficial Partnership

The Crown Estate has been an excellent organisation for Josh to work with – professionally and personally. In return they have been benefiting from the research capacity Josh brings to the organisation and access to the wider IDCORE network.

Josh has engaged with senior managers in different departments across The Crown Estate and brought them together through the research project. He has presented and discussed his work with different teams and specialists. Josh has also had the opportunity to work with several external organisations, expanding his professional network and broadening his understanding of the sector.

Josh has consistently felt supported by the organisation; appreciating that they want him to do well and he attributes this to The Crown Estate's positive work culture. This project was the first IDCORE project for The Crown Estate. The success of Josh's project is evidence by The Crown Estate returning to IDCORE for another research student the following year.

IDCORE is a pragmatic and effective programme – partnering with them is a good way to bring in capable talent early in their careers.

Anthony Chu, Engineering Manager – Digital Products, The Crown Estate



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