



Alice Harrison

Senior Project Engineer

Alice is a Senior Project Engineer at the UNSW Water Research Laboratory. She has the unique qualifications of being a specialist water engineer with a background in economics, having completed both a Bachelor of Civil Engineer (Hons 1) and Bachelor of Commerce in 2015.

Alice is interested in estuary and coastal processes and works to bridge the gap between engineers, economists, and decision makers to improve coastal and estuary management. Her work is highly varied, from detailed hydrodynamic modelling to inform coastal floodplain and estuary management, to extensive fieldwork in both pristine and degraded environments, to completing cost-benefit analysis for large scale wetland restoration projects in NSW.

Alice is particularly interested in the growing and evolving field of environmental economics, with a focus towards ensuring that the true value of the environment is acknowledged and accounted for by decision makers.

Qualifications and affiliations

BE Hons 1 (Civil Engineering), UNSW, 2015
BComm (Finance), UNSW, 2015
GradIEAust: Engineers Australia

Awards

2015: **DN Foster Award**, National Committee, Coastal & Ocean Engineering, Engineers Australia

Professional history

2022-Current: Senior Project Engineer, UNSW WRL
2015-2021: Project Engineer, UNSW WRL
2013-2014: Undergraduate Engineer, Leighton Contractors

Expertise

- Coastal structures
- Coastal processes
- Economic analysis in coastal zone projects
- Cost benefit analysis techniques
- Beach geomorphology and coastal stabilisation
- Environmental data collection
- Physical model design, construction and testing
- Climate change adaption planning

Summary of relevant experience

Coastal processes and structures

NSW Beach Profile Database
Eurobodalla coastal hazard study
Dune management, Freshwater Beach
Central Coast UAV storm erosion and monitoring
Coastal tailwater levels: Adventure Bay and Snug Bay
Lake Illawarra entrance channel management study
Sea level rise impacts at Margate, Tasmania

Estuary processes, hydrology and restoration

NSW coastal floodplain prioritisation project
Assessment of overtopping of Bray Park weir
Big Swamp restoration monitoring
Everlasting Swamp

Environmental economics

Big Swamp cost benefit analysis
Cooperook Swamp cost benefit analysis

Numerical modelling

Manly Lagoon hydrodynamic modelling
Tuckean Swamp hydrology and hydrodynamic study
Botany Bay stormwater modelling