



# laboratory capability statement

frc environmental has the expertise and experience to deliver insight across the full range of aquatic environments – groundwater, freshwater, estuarine and marine ecosystems. Our wide-ranging capabilities in survey, assessment, management, monitoring and reporting enable us to give you absolute clarity and the confidence for action.

If it involves water, it involves frc environmental.

frc environmental's purpose-built biological laboratory enables us to offer a comprehensive range of services, with rapid turn-around and full quality assurance of biological data. Our specialists can transform samples into meaningful, clearly articulated reports that provide our clients with information that directly supports confident environmental management.

## Laboratory Capabilities

### ○ Identification of:

- freshwater, estuarine and marine macroinvertebrates (family and species-level identification).
- zooplankton and microinvertebrates.
- stygofauna (ground water / hyporheic fauna).
- fish (including identification of specimens and using video footage, such as collected using BRUVs).
- seagrasses, macroalgae, mangroves and saltmarsh plants, and freshwater wetland plants.
- phytoplankton and periphyton, including diatoms and microalgae.
- corals and associated epi-benthos (including photo identification and enumeration using Coral Point Count).
- mosquitos.

### ○ Fish autopsies

### ○ Provision of quality-assured biological data files in user-friendly format

### ○ Analysis and interpretation of biological data, and clear reporting of results, for example:

- calculating biological indices (taxonomic richness, PET richness, SIGNAL-2 Scores, % tolerant taxa) and diversity statistics
- comparison of data and biological indices to applicable guidelines (e.g. biological guidelines scheduled under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019)
- other statistical analyses of biological data, including but not limited to PERMANOVA, non-metric multidimensional scaling (nMDS), ANOSIM, SIMPER and BIOENV.



Stygofauna: *Parabathynellidae*



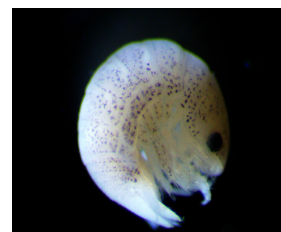
Marine Invertebrate: *Tanaid*



Mosquito Adults: *C. xanthogaster*



Freshwater Invertebrate: *Platybaetis sp.*



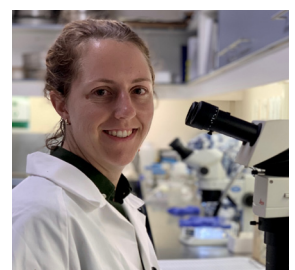
Marine Invertebrate: *Cirolanidae*



Marine Invertebrate: *Clithon sp.*



Freshwater Invertebrate: *Argiolestidae*



Lab Manager: *Therese Hancock*

We also partner with a range of leading and NATA-accredited laboratories to provide analysis of water and sediment samples (e.g. nutrients, ionic composition, metals, petroleum compounds, organic and inorganic pesticides), stable isotope analyses (e.g.  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ ), direct toxicology assessments (DTA), environmental DNA (eDNA), and fish pathology. Our *suitability qualified* and experienced aquatic ecologists can provide analysis, interpretation and reporting services for data generated in our partner laboratories.



If you would like to know more about our laboratory capabilities please contact Ben Cook or Carol Conacher at frc environmental.

○ freshwater

○ estuarine

○ marine