



Hayden Beck

Senior Ecologist

Role at RPS

Senior Ecologist

Location

Newcastle, NSW, Australia

Qualifications

BSc (Mar Sc); BEnvSc (Hons); MSc (Res); PhD

BAM Accredited Assessor (BAAS19000)

AUSRIVAS Macroinvertebrate Bioassessment Training

Contaminated Site Assessment, Remediation and Management (CSARM) short course, UTS4X4 driving Certificate

White Card

Rail Industry Safety Induction – RISI

Memberships

Ecological Consultants Association of NSW (Practicing Member)

Why Hayden for this role

Hayden specialises in terrestrial, aquatic and marine ecology. As an Ecologist at RPS, Hayden undertakes fieldwork and prepares reports for diverse projects, including the mining and housing sectors.

Being a Biodiversity Assessment Method (BAM) Accredited Assessor, Hayden has considerable experience preparing Biodiversity Assessment Reports under the NSW *Biodiversity Conservation Act 2016*.

Relevant projects

Woolooga Solar Farm, Lightsource BP, 2020 - 2021

Hayden prepared Preliminary Documentation to assist with Commonwealth assessment for a proposed solar farm in Woolooga, QLD. Preparation of this report involved collating several specialist reports to assess impacts on biodiversity values. As part of this project, Hayden also prepared a Biodiversity Management Plan (BMP) and Offset Management Plan (OMP).

Fernleigh Track Extension REF and EIS, Lake Macquarie City Council, 2020

RPS was engaged for a Review of Environmental Factors (REF) and Environmental Impact Statement (EIS) for the Fernleigh Awabakal Shared Track (FAST) Extension from Belmont to Blacksmiths. Hayden provided ecological advice including Fauna trapping and aquatic ecology.

33kV Power Easement for Mandalong Coal Mine, Centennial Coal, 2019

Hayden prepared a Biodiversity Development Assessment Report (BDAR) to determine the offset liability for this State Significant Development (SSD). This project extended 7.6km easement will extent through multiple Plant Communities. Preparation of this report involved collating multiple years of field data and specialist reports to assess impacts on biodiversity values. As part of this project, Hayden supported the lodgement an EPBC Act referral due to uncertain impacts on threatened flora.

LW22-24a and LW 25-31 Mandalong Coal Mine, Centennial Coal, 2019 - 2021

Hayden organises annual monitoring of sensitive ecological communities, as well as frogs, to detect impacts of longwall mining. As a project manager, he coordinates teams of up to six ecologists to undertake surveys across a vast area.

Jemalong Solar Farm, Genex Power Pty Ltd, 2019

Hayden prepared an EPBC Act referral document for a proposed Solar Farm (SSD) in Jemalong, NSW. This Project involved assessing impacts of removing hollow-bearing trees on Swift Parrot and Corben's Long-eared Bat.

Relevant projects

Basalt Quarry, Boral, 2019

Hayden undertook a feasibility assessment for a proposed basalt mine at North Star, NSW. This project involved undertaking flora surveys across Semi-evergreen Vine Thicket EEC to determine the offset liability to develop the site. Three extraction options were assessed. Involvement included fieldwork, preparation of a report and presentation to the client.

NBN tower Installation, Vision Stream, 2019

Hayden prepared a BDAR to determine the offset liability for an infrastructure Project at Tallong, NSW. Impacts to ecosystems and threatened species were assessed for the installation of an access track, NBN tower and associated facilities.

Newcastle Light Rail (NLR) Project, Downer, 2019

Hayden prepared the ecological sections of an Infrastructure sustainability rating (ISCA) application for the 'As Built' stage of the NLR Project

Tikitere Quarry, SMK Consultants, 2017

Hayden assisted the ecological assessment of a basalt quarry at North Star, NSW. Tasks included fieldwork and assistance with reporting.

Concrete Batch Plant at Bushells Ridge, Advision, 2017

Hayden prepared a Flora and Fauna impact assessment for the proposed establishment of a concrete batch plant. This facility is currently being used to facilitate widening of the M1. This project involved several survey efforts targeting multiple threatened flora and fauna species, including a critically endangered orchid that was found on site.

Roads and Maritime Services, Road Upgrade Projects, 2016 to 2018

Hayden undertook Biodiversity Assessments for 15 road projects. Examples include:

- Widening of Golden Highway, Castlereagh Junction to Dunedoo;
- Shoulder Widening, Golden Highway (Segments 240 to 260), Denman;
- Culvert rehabilitation (23 sites): Old Pacific Highway, Kariang to Mooney;
- Manns Road Upgrade, West Gosford; and
- Drainage Upgrades to M1, Mt Pleasant, Roads and Maritime Services.

Dungog Council, Road Upgrade Projects, 2016

Hayden undertook Biodiversity Assessments and preclearance surveys for two road projects in Dungog Shire Council LGA.

Climate change impacts on tropical fishes, University of Technology Sydney, 2012-2015

This project was aimed at understanding factors mediating the geographic response of marine reef fishes to climate change. This project involved extensive, multi-year underwater surveys of temperate and tropical marine ecosystems in eastern Australia and western Japan. Various aquarium experiments were undertaken to study how predator-prey interactions may structure recruitment success of tropical fishes when colonising a new range. A new method was devised to survey rare reef fish species, which uses a towed GPS to delineate survey effort.

Impacts of soil pollution on reef fish recruitment, Kochi University, 2014

Studied impacts of red soil pollution on reef fish recruitment within Japan, which stems from water pollution arising from agricultural runoff. This project included coral and reef fish surveys, as well as laboratory experiments.

Characterisation of Stormwater pollution in Sydney Harbour, Marrickville, City of Sydney and Leichhardt Councils, 2010-2012

Measured and analysed water pollution within Sydney Harbour catchments, including metals, nutrients and suspended solids. This project involved generating water pollution budgets for different flow conditions, then devising a water treatment strategy.

Research Assistant, Macquarie University, 2007-2010

Organised and conducted fieldwork and laboratory experiments for several aquatic ecology-focused projects, including a sea urchin aquaculture venture and collaborations with James Cook University and NSW DPI. In this role, Hayden surveyed marine fishes and invertebrates throughout NSW.

Water Quality Officer, NSW Department of Environment, 2009

Undertook monitoring of water quality through Sydney's Waterways and Beaches. Role involved operating a small vessel to collect water samples from remote locations.

Connectivity of sea urchin populations between southern and eastern Australian Coastlines, Deakin University, 2007

Undertook hierarchically nested surveys of the sea urchin *Heliocidaris erythrogramma* along the coastline from Sydney to Adelaide. This study demonstrated potential breaks in connectivity between populations on the Southern and Eastern coastlines of Australia. Breeding experiments were undertaken to explore a genetic cause for patterns in colour variation of this sea urchin.