



karreman quarry case study

Investigation Environmental Prosecution – Karreman Quarry

March 2003 – October 2003

Following charges laid against Karreman Quarry under the Environmental Protection Act 1994, frc environmental was commissioned by Connor O'Meara Lawyers to assess the validity of the charges.

frc environmental undertook a focused investigation of both the mechanism of alleged environmental harm and the environment said to have been harmed. Our investigations revealed that there was likely to be insufficient evidence to support the charges. Through negotiation with the EPA, Connor O'Meara were subsequently able to achieve a negotiated outcome satisfactory to all parties.

Project requirements overview

Connor O'Meara required a broad assessment of the scientific basis for charges laid against Karreman Quarry. This in turn necessitated a detailed understanding of Tingalpa Creek (the waters alleged to have been harmed); and of the events that lead to allegations of environmental harm. An assessment of the EPA's investigation of the allegations was also sought.

The project required particularly broad and effectively integrated expertise, spanning water and sediment quality, phytoplankton and macrophyte ecology, invertebrate, fin-fish, platypus and turtle; frc environmental was able to credibly meet these requirements in-house.



frc environmental ecologists are adept at working effectively with a range of allied professions to achieve optimal results

Project Performance

- Rapid implementation of a broad and effectively integrated field study
- Timely identification of key issues, enabling prioritisation of resourcing
- Effective understanding of relevant legislation, regulation and the planning scheme, enabling focused studies
- Effective negotiation with the EPA – establishing credibility and integrity
- Effective liaison with allied professions ensuring integrity of approach
- Rigorous results instrumental to the downgrading of charges



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Like mining, the scale of operations associated with quarry development and operation present significant potential for environmental impact - environmental assessment must be well focused to discriminate impacts



To those with the expertise and experience, macroinvertebrate community structure provides a compelling recent history of conditions in the creek

Our tailored approach and methodology

frc environmental senior scientists understand the value of 'fresh eyes' and take nothing for granted. Our initial approach was to establish the facts *de novo*. The discovery of an eroding easement on adjoining land, and a tributary watercourse suggested that the EPA's investigation may have overlooked a number of key facts.

Our understanding of the Act, and particularly of the significance of specific charges laid, supported Connor O'Meara's ability to develop an appropriate strategic response.

To arrive at a credible and highly defensible set of conclusions, **frc environmental** ecologists had to draw upon their in-depth understanding of the relationships between water and sediment quality, and biotic communities that encompassed macrophytes, macro-invertebrates, fishes and turtles.

Comparison of stream sediment characteristics confirmed the likelihood that damaging sediment was in fact principally originating from the easement (not the quarry); whilst our assessment of ecosystem health demonstrated that the creek was highly impacted as a consequence of activity higher in the catchment and that floral and faunal communities were consequently highly resilient.

The EPA's ability to demonstrate either the extent of the quarry's contribution to degraded habitat quality, or the extent of environmental harm was substantially diminished as a consequence.

frc environmental's Dr John Thorogood supported the legal negotiations that resulted in charges being substantively downgraded, and a negotiated outcome reached.



Leslie Harrison Dam, on Tingalpa Creek downstream of quarry

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