



## Managing expectations and outcomes on the path to successful revegetation

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### **Biography:**

Mark is an Environment Officer with NSW Roads and Maritime Services who has worked in various environmental sections within RMS over the last 15 years, including the last nine years on the Pacific Highway upgrade.

Working on the Pacific Highway upgrade projects has required a large amount of government agency and stakeholder engagement through all stages of major project development – EIA, through to construction and the operational phase of projects. Throughout this time Mark has had the opportunity to work with multiple organisations from the environmental and construction industry, including designers, contractors, consultants, and technical specialists.

Mark enjoys the challenge of assisting project teams to identify and manage environmental risks, navigate complex approval requirements and facilitate environmental best practice outcomes.

Wayne is the Landscape Manager for Pacific Complete, currently delivering the Woolgoolga to Ballina Pacific Highway upgrade project. He has a background and keen interest in erosion & sediment control, rehabilitation and revegetation of disturbed areas.

*Key aspects of his current role are to ensure that best practice techniques are applied during design and implementation to ensure both contractors and greater project team achieve a successful revegetation outcome for all stakeholders.*

### **Abstract:**

The Woolgoolga to Ballina Pacific Highway Upgrade is the final link in the Pacific Highway, between Hexham and the Queensland border, to be upgraded to four lanes. Key project features include:

- More than \$4.9 billion project
- 155km of dual carriageway
- nine interchanges,
- more than 170 bridges
- Bypasses 5 towns
- 14 million cubic metres of earthwork
- 9.5 million square metres of revegetation
- 1.4 million plants
- 1 project wide Environmental Protection Licence

The process to design, construct and revegetate a road project is fairly standard, however the size, scale, delivery approach and complex nature of the Woolgoolga to Ballina project provide unique challenges to the project team, including:

- Multiple contractor interfaces between initial excavation and revegetation
- Single Project-wide Environmental Protection Licence
- Urban design and landscape project approval requirements
- High level of community and regulatory stakeholder interest and involvement



As part of contract and project completion, projects traditionally use methods such as the 70% cover, quadrat method to demonstrate that the representative area is stabilised as per Blue Book. While this method is generally accepted, it does not necessarily provide the level of rigour required to demonstrate that all relevant project requirements have been met. The project team needs to ensure that:

- a) individual contractors have fulfilled their requirements,
- b) the project has achieved landscape / revegetation 'success', and
- c) community and stakeholder expectations can be met.

The question of 'what is successful revegetation' is traditionally an area of conflict that the project team needs to manage.

The Woolgoolga to Ballina project team worked with Landloch Pty Ltd and David Tongway AM to develop a Modified Landscape Function Analysis (LFA) process specific to the project. This outlines the target criteria for landscape establishment for key parameters of Stability, Infiltration, and Nutrient Cycling.

This target is embedded in contract specifications and monitoring outcomes provide the project with verification of contractor performance. In addition it provides a robust technique to demonstrate to agencies that landscape success has been achieved, meeting project approval and EPL relinquishment requirements. Much less opinion and discussion, replaced with a more scientific approach, and demonstrated evidence over time.

While developed specifically for the W2B project the approach has potential to be repeated elsewhere on linear infrastructure projects to project teams with a more robust approach to determine how they are tracking towards a successful revegetation outcome.