



## Environmental Systems Modelling Platform

### EnSym Tools: Site Assessment Tool

**EnSym's Site Assessment Tool estimates the impact of actions on the landscape, allowing natural resource managers to understand and quantify the environmental benefits of on-ground conservation and revegetation works.**

This tool is designed to ensure the consistent and objective calculation of the change in environmental service expected as a result of management actions (like weeding and revegetation) across a landscape. Importantly, it provides a score, known as the 'Environmental Benefits Index', for each site which can be used alongside information on costs to identify cost effective projects.

The Site Assessment Tool uses a series of calculators endorsed by the Department of Sustainability and Environment (DSE) to measure the current condition of a site and to predict the change expected as a result of undertaking management actions. It includes:

- Current condition calculators, including Habitat Hectares for terrestrial sites, Index of Wetland Condition for wetland sites and Index of Stream Condition for riparian sites.
- Gain calculators to predict changing condition over time due to management actions.
- Models to estimate changes in recharge, erosion and runoff.
- An overall score representing a combination of the above scores to signify the net 'environmental benefit'.

The practical design of the Site Assessment Tool ensures a simple transition from collecting data in the field to delivering a management

plan and calculating a site score. These features are designed to save time, whilst also improving the quality and professionalism of the project. The simplicity and practicality of the design of the Site Assessment Tool has led to its uptake across Victoria by various organisations that aim to deliver cost effective environmental investment.

### Applications of Site Assessment Tool

The Site Assessment Tool is useful for comparing sites across a catchment. It can be used for:

- Ranking sites for environmental tender programs
- Assessing sites for grant programs
- Generating management plans
- Site monitoring and program evaluation.

### User requirements

The Site Assessment Tool is user-friendly, designed for use by field staff and project managers in natural resource management with basic computer skills.

EnSym programmers will provide users with on-going support including:

- Training in EnSym Site Assessment Tool
- Designing a suitable scenario
- Updating the metric scoring
- Data quality control.

## Using the Site Assessment Tool

**1. Collect data in field:** Collect field data using hand-held field computers<sup>1</sup> that have been programmed to be compatible with the Site Assessment Tool. These computers contain GPS for site mapping, as well as the required fields for terrestrial, wetland and riparian site assessments.

**2. Load field data into EnSym:** Download site data into EnSym from the field computer. Alternatively, download shape files from other GPS devices or draw polygons manually.

**3. Record management actions and create land management plan:** Enter proposed management actions into the system through a series of checkboxes that include the type of action, the species to be planted or removed (if applicable), the year and the season this action should occur. Then automatically generate the management plan into a word document which contains a photo of the site, plant lists, yearly actions and site maps.

**4. Calculation of environmental scores:** Model the change in environmental service as a result of management actions and produce a score that represents the overall change, known as the 'Environmental Benefits Index' (EBI) by pressing the *calculate* button. Combine landholder bid sheets along with EBI information to assess the value of the site. Then use the *Bid Assessment Tool* to identify valuable investments.

**5. Administer contracts:** Automatically generate agreements for successful landholders in a word document by using the *administration* feature.

**6. Evaluate projects:** Select site features to be consolidated in an excel spreadsheet for analysis. Examples include: area under management, rare and threatened species, ecological vegetation classes, current condition and changes in erosion.

### Case Study: Wimmera Catchment Management Authority

WCMA decided to trial the Site Assessment Tool in 2010 as it offered a number of benefits to administering their upcoming Wetland Tender. It could assess multiple sites, including terrestrial, wetlands, and rivers. It also enabled changes to the scoring metric to prioritise wetlands. Finally, this tool offered an easy way to extract site data for reporting requirements.

WCMA is now a loyal user of the Site Assessment Tool. Between 2010 and 2011, WCMA used the tool for six tenders, including Habitat, Wetlands, Woodlands and River tenders. The flexibility of the scoring allowed WCMA to change metric weightings to align with program priorities. They also value the Site Assessment Tool's streamlined design that saves time and effort, whilst increasing the professionalism of their projects.

<sup>1</sup> Available on loan by request from DSE's ecoMarkets.

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