

# Establishing Victoria's Ecological Infrastructure: Guidelines for Building Climate Future Plots



**7. Monitor the  
site and manage  
your data**



# Monitoring is vital

Enable restoration practitioners to get a better understanding of the long-term outcomes for plantings (survival, growth and reproduction), and how these vary between seasons and years and across species, provenances and locations. Ideally it will provide information on how animals are using these areas as well.



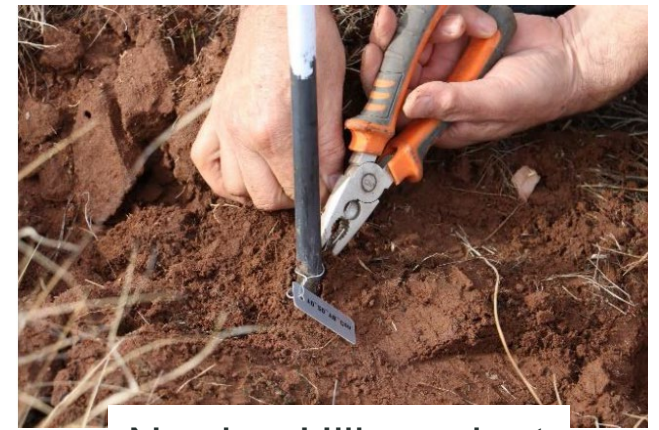


# Marking and mapping of plots

Thorough mapping and marking of plots are essential for ease of ongoing monitoring and data collection

At planting time:

- Use a robust weatherproof marker (e.g., a metal post with a metal tag) to indicate the position of the first plant in each plot
- Mark all four corners of the plot with markers (star pickets), with the first plant being given a consistent position (e.g. south-eastern corner of each block/plot)
- Take GPS coordinates of the four corners of each plot.
- Mark all provenance blocks within a plot (incl GPS coordinates)
- Map where each plant is (including species and provenance) relative to the first marked plant.



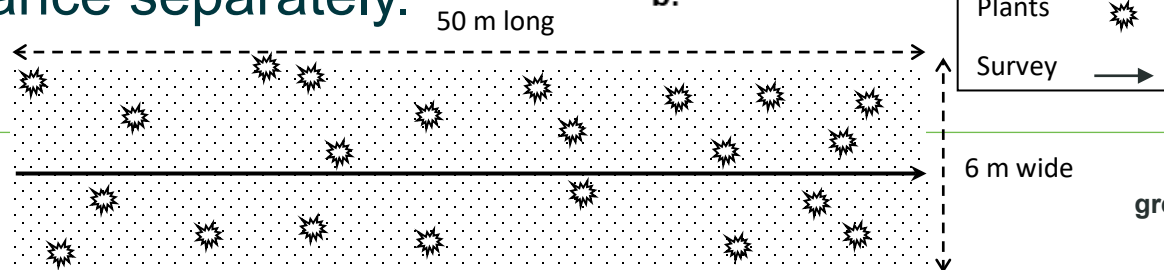
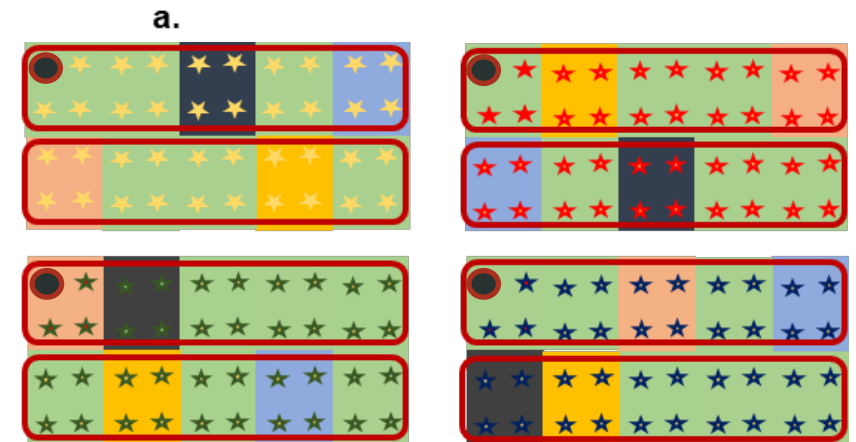
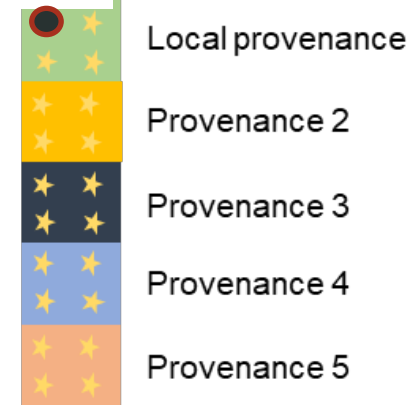
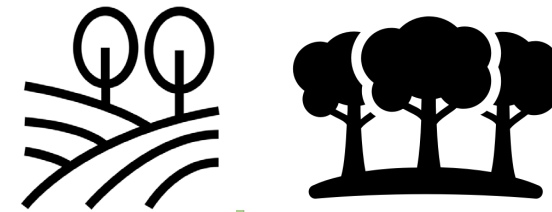
Nardoo Hills project



Connorville TAS

# Establishing a monitoring strategy

- We suggest that a species containing one provenance be planted in a group, so that the four - five provenances of that species make up a plot.
- At a minimum, mark first plant of each plot (black dot) & randomly allocate provenance position within plot
- Example:
  - Four species (stars - each colour representing a different species) from five provenances (60% local, 10% wetter/cooler, 10% 2030 analogue, 10% 2050 analogue & 10% 2090 analogue).
  - Set up two 50 m x 6 m survey areas (red rectangle - size dependent on number/spacing of plants) per plot.
  - Record the details for each provenance separately.



# Steps for monitoring

- Mark out two or more monitoring areas for each species/provenance combination within a planting site
  - Record all the species, number and approximate height (of first 5 plants) of each planted species directly after planting.
  - Revisit the site during flowering or after summer (March/April) - record alive plants, height & flowering/seeding occurring.
  - Revisit the site after extreme events (heatwaves, flash floods)
  - Monitor annually for the first three - five years, and then every five years after that (or as appropriate for the species being monitored).
  - Consider the resources you need to achieve this, such as people, time and a monitoring database.
  - Long-term datasets extending to 30 years or more generate invaluable data about how revegetated areas change, performance and b/w different provenances & environments and over time.
- improves our understanding of short and long-term revegetation outcomes.





# Managing planting and monitoring data

Suggested  
database  
fields in  
Guidelines  
Appendix 4

- Collate and store data in a robust and accessible format to ensure its longevity
- A well-designed database allows users to store and update data and quantify how their on-ground activities are achieving biodiversity and potentially social benefits over time.
- Enter information into a centralised database (e.g. *Atlas of Living Australia BioCollect* or *ArcGIS Collector*). Start with a spreadsheet with consistent column headings.
- The most commonly used metadata for conservation projects is Darwin Core
- Provide information about intellectual property and access agreements to ensure data is correctly cited.
- The *Atlas of Living Australia* has five data sharing options that may be useful to consider.