

Integrating horticultural and forestry
technology on areas with low resilience,
with bush regeneration in higher resilience
Cumberland Plain Woodland

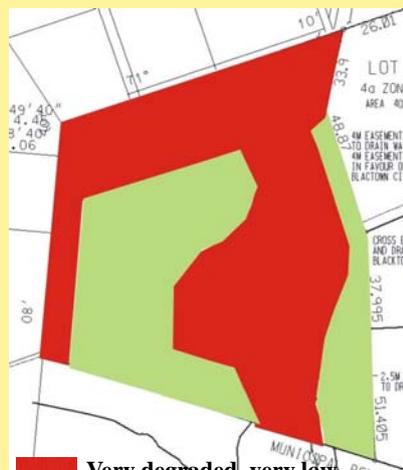
*An example of some ecologically and economically
viable techniques for the restoration of CPW at a
development site in Seven Hills, NSW*



*Checking what was low & high resilience helped
work out how much could be treated by either bush
regen or reveg/reconstruction techniques...*



Low -medium resilience level
weed-affected bushland



Very degraded, very low
resilience parts



The low resilience sites were treated using “tritter” machinery, which have been developed to clear vegetation economically and safely in forestry situations...

Nov
06



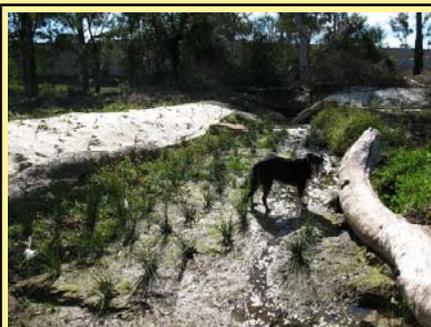
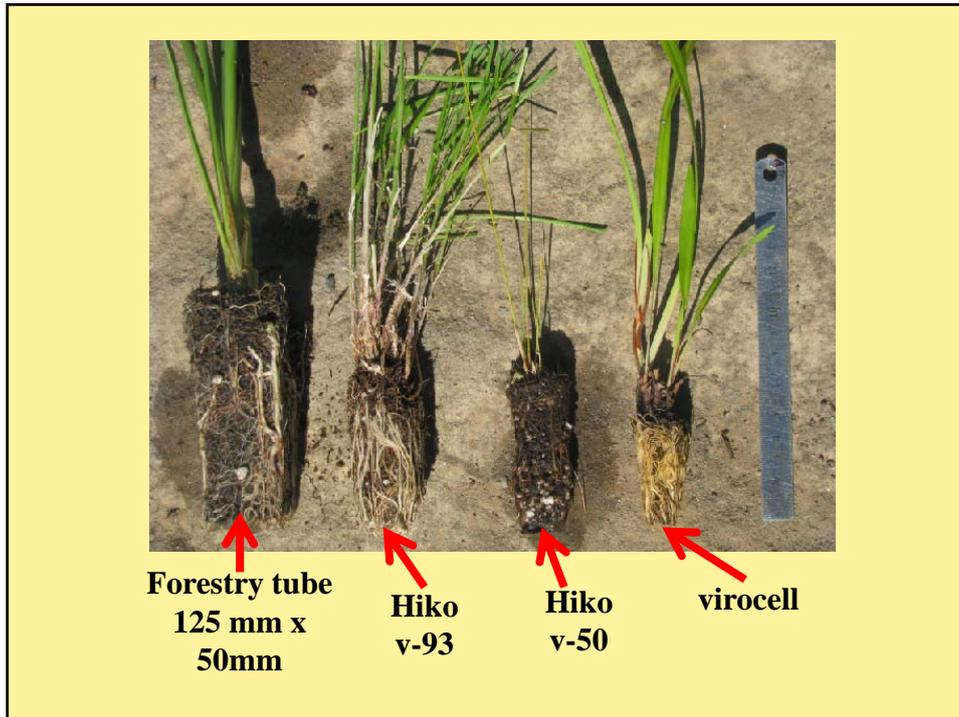
Jan
07



Jun
09



*-Low resilience, disturbed & tritter cleared areas were revegetated using grass cells and hiko tubes for trees and shrubs.
- The more resilient areas were treated to initial hand primary clearing & ongoing follow-up weeding only*



Nov
06



Jun
09



The higher elevated very low resilience, tritter cleared & sprayed areas were revegetated using native grass seed and hiko tubes for trees and shrubs.



An example of the native grass seeding area not long after germination...



Thick swards of native grass now occur in the areas seeded two years ago...

Jan
07



Jun
09



The above slides show one of the more resilient areas that was treated to initial hand primary clearing & ongoing follow-up weeding only

The main “critical factors for success” associated with the restoration techniques used on the Seven Hills site:

- Up-front restoration costs were lower and native plant diversity and spread was better in the areas subject just to bush regen weeding, compared to areas subject to reconstruction planting/seeding.
- Treating very low reliance parts of the site mechanically was cheaper & less risky from an OHS viewpoint compared to hand clearing.
- Planting grass cells and seeding native grasses instead of planting tubes was far cheaper and just as effective, as long as site soil preparation and conditions were acceptable and adequate soil moisture levels were maintained, (using an irrigation system).

Main “Limitations” associated with the restoration techniques used on this site:

- Follow up weeding costs in areas treated to bush regen techniques alone are comparable, if not higher than in mulched and planted areas, (due partly to the predominance off bare ground in the early stages).
- Mechanical trittered weedy veg should be ground down below ground level or stumps left high for follow up cut and paint to minimise reshooting. Follow-up treatment of regrowth is required regardless.
- Trimming of disturbed ground is required post trittering.
- Planting grass cells and seeding native grasses requires a more rigorous irrigation regime compared to planting tubes to ensure initial survival and establishment.
- It is more difficult to prick-out seedlings into cell containers, compared to pricking seedlings into larger tube containers. This may mean that less diverse range of plants may be able to be propagated, particularly if small seed batches are available.
- Large quantities of seed are required for direct seeding compared to planting cells or tubes. At this stage, a more limited range of grasses are available in seeding quantities.