

Zone 3A - North Shelly Beach



Background

Shelly Beach is a highly modified landscape. In its current condition the vegetation, the species mix and the profile and extent of the landscape are not characteristic of an established coastal dune.

The issues

The prevalence and growth form of Cottonwoods in the area is dominating the foredune vegetation community and limiting available space for turtle nesting habitat above the high-tide mark.

The opportunity

Proposed opportunity to trial and monitor effectiveness of Cottonwood management techniques for application in the broader North Shelly Beach area to support dune health and turtles.

Pilot site selection process

The pilot site selection process was informed by the following key considerations:

- Identification of the dune area most heavily dominated by Cottonwood Trees and limiting available space for natural turtle nesting.
- Avoiding most consistently successful natural turtle nesting areas on North Shelly Beach.
- Avoiding current preferred / successful turtle nest relocation areas.
- Recognition that successful turtle nesting habitat requires approximately 18 months to settle post significant disturbance of sand dune to minimise poor nest outcomes.
- Risk of wide-spread coastal / dunal erosion if entire area was managed at the same time.
- Risk of significant impact on successful turtle nesting from poor outcomes if Cottonwood management is not delivered in a staged and sequenced manner integrated with dune management etc.

Staged habitat restoration program with pilot initiative



Future action for consideration - Low amenity planting to integrate and screen Coastal Path

In the 5 year time frame undertake a design process to consider in detail the option of establishing low (up to 2m) plantings on the western side of the coastal path between William and Russell Streets, to provide a level of privacy to adjoining residents, in anticipation of the coastal path becoming busier.

Design process to include species selection and placement in conjunction with CPTED principles and adjacent residents inputs.

Establish and enhanced dunal ecology and vegetation diversity achieved through:

- The assisted staged reduction in the current extent of Cottonwoods on the foredune at North Shelly Beach.
- Dune vegetation rehabilitation activities to establish a functional foredune vegetation community informed by Regional Ecosystem 12.2.14, including spinifex on the frontal dune grading to Foredune Herbland and then into Casuarina equisetifolia, Banksia integrifolia, and Pandanus tectorius.
- Dune vegetation rehabilitation activities to establish a pseudo hind-dune vegetation community within available space incorporating Acronychia imperforate (Fraser Isle apple), the ubiquitous Cupaniopsis anacardioides (tuckeroo) and Hibiscus tiliaceus (cottonwood).
- Dune vegetation species composition, density and height to provide equivalent to or enhanced dark sky and light glow management outcomes (elevated dark horizon supporting ocean-finding behaviour).
- Outcomes to balance enhanced ecological diversity, dune stabilisation against coastal erosion processes, and turtle conservation.

Establish an expanded area of turtle nesting habitat located above high tide to optimise available nesting habitat and hatchling success – achieved through the removal of woody vegetation for a distance of 10m landward of high-tide mark, and rehabilitated with appropriate coastal grasses and herbs dominated by coastal spinifex.

The same 10m strip of enhanced turtle nesting habitat will provide valuable turtle nest relocation receiving sites located above high tide to provide alternative receiving sites and optimise hatchling success.

Ensure Pandanus tectorius plantings are maintained approx. 10m landward of the turtle nesting habitat area to minimise risk of Pandanus root impacts on turtle nests, particularly during dry seasons / drought years.

Manually remove any marine couch grass growing at high tide mark to remove physical restrictions to turtle nesting, and replace with coastal spinifex plantings

Close the informal beach access point located between Russell Street and William Street, fence completed and dune rehabilitated.

Undertake infill planting on bare and degraded areas of the dune consistent with the recommended establishment of a functional foredune and pseudo hind dune as above.

Dune areas subject to disturbance through removal of woody vegetation become unsuitable as nesting habitat for a period of 18 months.

Any turtle nests laid within this pilot zone within the 18 month dune settlement period to be relocated to minimise the risk of poor nest outcomes.

Lift Cottonwoods off fence line separating the dune and grassed recreation open space area to a distance of 1m – achieving a reduction in fence maintenance, and reducing competition for the recommended Parks and Gardens amenity plantings between the fence line and coastal path.

Establish Parks and Gardens amenity plantings utilising small native trees to maximum height of 5m – achieving improved amenity, shading for park users, and contribute to enhanced light glow management.

Enhanced management of dune areas to disrupt occasional anti-social behaviours, and to minimise associated fire risk and dune erosion.

Consistent approach to Council's messaging, response and regulation of unauthorised vegetation management (clearance and/or planting) on public land under Council's care and control.

Enhanced coordination and collaboration between Council, contractors and volunteer groups operating in accordance with endorsed guidelines and operating procedures – achieving improved awareness of activities and collective outcomes.

Reinstate appropriate mowing regime for the grass open space recreation areas in accordance with Councils levels of service.