

Residential and Tourist Development Subdivision
Lot 156 Creek Street Hastings Point
MP06_0154 – Environmental Assessment Exhibition

A Review

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Introduction

I have known the subject land since the mid 1990s when I first visited to map and describe the vegetation as part of a project to map and describe vegetation for the whole of the Tweed Coast.

Since then I have visited the site many times to collect and record further information about the vegetation and position of foreshore boundaries.

I have collected a comprehensive library of aerial photographs of the site and have digitized and geo-referenced many of these photos. I have collected other materials, including copies of the original deposit plan, some of the subsequent plans of subdivision and survey plans from the time of the mean high water mark boundary adjustment application of the early 1980s.

I have made numerous submissions about the site to state government agencies and Tweed Shire Council regarding the inadequacy of SEPP 14 wetland boundaries, site specific amendments to Tweed LEP for the lot, the inadequacy of previous biological studies of the site (especially the LES for the early 1990s Tweed LEP amendment) and the failure of the mean high water boundary adjustment application to meet survey practice.

I have also read the court findings on the illegal clearing and filling undertaken on the site in the 1980s.

I claim to be uniquely qualified to make the following submissions on the development application and the environmental assessment.

Mapping of plant communities inadequate.

The most significant inadequacy in mapping of plant communities in the EA is the failure to properly map Coastal Saltmarsh communities at a scale of resolution that is consistent and commensurate with the size of the site.

The EA fails in particular to identify sizable areas of Coastal Saltmarsh EEC in the eastern part of the site to the south of the existing housing on Creek Street.

The boundary of Coastal Saltmarsh in the vicinity of the part proposed to be filled does not appear to include all of this community. If boundaries are drawn with the use of geo-referenced aerial photography from 1944, 1989, 1994 and 2009, the area directly affected by the proposal is about 2275m², not the claimed 1740 m².

Failure to properly assess impacts on Coastal Saltmarsh EEC EA test of significance inadequate

- The EA fails to consider the impacts of stormwater on the areas of Coastal Saltmarsh EEC adjacent to the proposal.
- Coastal Saltmarsh can be highly sensitive to alterations in hydrology, changes in ground level and salinity regimes. The proposal has at least the potential to cause these types of alterations, yet the EA barely mentions them.

- As a consequence, the test of significance for impacts on Coastal Saltmarsh is clearly inadequate.

The test of significance for impacts on Coastal Saltmarsh is in Section 6.1.1 of the terrestrial flora and fauna assessment. There is a passing reference to “implementation of...(a) stormwater quality...management plan” (page 99), but no direct analysis of the impacts of stormwater.

At Section 3.6 (pages 43 and 44) of the EA, there is a summary of proposed stormwater management set out in Section 8 of the Engineering Impact Assessment Report. In Section 3.6 of the EA and Section 8 of the Engineering Impact Assessment Report, claims are made with regard to measures to limit increases in pollutants and sediments, but there is no reference to alterations to hydrology and salinity regimes in adjacent Coastal Saltmarsh.

Further, Section 8 of the Engineering Impact Assessment Report claims only that the proposal will meet the specifications of TSC Design Specification D7 – Stormwater Quality. No final design for achieving the standards are proposed. Use of grass swales is mentioned, but directing water directly to the (piped) road stormwater system and then GPTs is also proposed as a complete alternative (see Section 8.2.4 – pages 16 and 17).

Notably, no GPTs are proposed for catchment C (the area of existing housing along Creek Street). The runoff from this area currently crosses 20 to 50 metres of grassland on the subject site before it reaches the wetlands to the south. The proposal is to eliminate this current infiltration path and pipe the runoff directly to the wetlands at five locations.

All proposed stormwater outlets are near areas of Coastal Saltmarsh (see figure 1 below). (Note, the EA does not identify Coastal Saltmarsh at the location of some of the proposed outlets, but this is yet another failure of the EA. (See a critique of this inadequacy elsewhere in this review.)

Proposed filling of Coastal Saltmarsh fails to meet current policy standards and is not justified

The proposed filling of Coastal Saltmarsh is contrary to a number of relevant policies. The filling is clearly only necessary to increase the yield of houselots and could easily be avoided.

The authors of the EA attempt to justify this failure to meet standards by claiming it is adequately compensated. For the following reasons the justification is not well founded.

- Avoidance is the first option and no good reason is given for not adopting this strategy.
- The proposed recreation of Coastal Saltmarsh itself does not meet policy standards (see below)

Proposed compensation for direct loss of Coastal Saltmarsh inadequate

Even if the proposed filling of Coastal Saltmarsh is approved, the creation of 640 m² of Coastal Saltmarsh to compensate the direct loss falls well short of a number of relevant policies for compensation. (Note: the proposed area of replacement depicted

in the EA is actually nearer 798m² – see Table 1 below.) It is claimed in the EA that the loss would be 1740m², but it is more likely 2275m² in size (see above).

The area proposed for compensation for loss of Coastal Saltmarsh was Coastal Saltmarsh prior to earthworks undertaken in the 1980s which the Land and Environment Court has ruled to be illegal. It seems illogical and counter to policy objectives to accept rehabilitation of illegally cleared native vegetation as compensation for further clearing of native vegetation (see below).

Proposed management of some dedicated areas to create/maintain views to estuary affects their value as compensation

The EA proposes that two areas of land proposed to be dedicated as compensation / mitigation are to be managed so that “existing vegetation (is) maintained with clear understorey.” (See discussion below about uncertainties with regard to areas proposed to be managed in this way).

The proposed management regime clearly affects the value these areas would have as mitigation and should be taken into account in assessing the value of the mitigation package. It should be noted that the vegetation in these areas currently consists of grassland with no mid stratum and only about 4 – 6 trees in total.

Rehabilitation of illegally cleared areas should not be counted as compensation

A significant part of the area proposed to be rehabilitated and counted as mitigation was illegally cleared in the 1980s by previous owners and more recently by current owners.

The value of the mitigation package should be discounted accordingly.

Buffers to EECs inadequate

The minimum standard set in a number of relevant policies for buffers to EECs, other significant native plant communities and the foreshore (mean high water mark) is 50 metres. The proposal clearly fails to meet this standard, most notably on the western side, but also on parts of the central southern side. The proposed flood access track is also well within 50 metres of Coastal Saltmarsh, Mangroves and the foreshore.

The authors of the EA attempt to justify this failure to meet standards. The justifications are not well founded.

Description of bushland rehabilitation inadequate

Material in the EA describing the creation of compensatory native plant communities and the rehabilitation of others does not meet current standards of practice and is inadequate.

Inadequacies include a lack of detail on methods proposed to be used, the standards to be met, the qualifications of those to undertake the work and arrangements to ensure the proposed outcome.

Internally inconsistent and erroneous depictions of proposed vegetation management

The EA proposes to mitigate the impacts of the proposal on native flora and fauna by dedicating areas of existing native vegetation and recreated native plant communities.

- There are internal inconsistencies in the depictions of the types of management for particular areas proposed for dedication.
- There are internal inconsistencies in the claims made for the size of areas of proposed dedication.
- A GIS analysis of the proposed dedications reveals many errors in the claims made with regard to the size of the areas proposed for dedication.

Some of the inconsistencies and errors are significant.

- In Figure 22 – Rehabilitation Plan, an area in the eastern part of the site south of the proposed flood access track is labeled “informal open space (existing vegetation maintained with clear understorey)”. In Figure 14 - Landuse Plan it is labeled “rehabilitated vegetation”, not “informal open space (existing vegetation maintained with clear understorey)”. The area in question is about 2,500 m² in size. See Figure 1 in this submission for a depiction of the location which is labeled “1?”. See also Table 1 below.
- There is a difference of 2992m² between the area claimed in Figure 22 for all types of dedication (apart from “area of intact remnant vegetation”) and area calculated using GIS.
- The figures for dedications in the executive summary do not add up (see Table 2 below). The error is 0.48 ha in size.

Table 1
Inconsistent labeling
Erroneous calculation of areas

| Label (In Figure 1 to this submission) | Description (In Rehabilitation Plan) | Area (m ²) Rehabilitation Plan | Area (m ²) Landuse Plan | Area (m ²) (Calculated using GIS ^a) |
|---|---|--|---|---|
| 1 | Rehab area A Subtropical Flood Plain Forest | 7088 | | 6079 |
| 1? | Informal open space. Existing vegetation maintained with clear understorey (Rehab area A Subtropical Flood Plain Forest?) | | | 2805 |
| Subtotal (1+1?) | | 7088 | | 8884 |
| 2 | Rehab area B Swamp She-oak Forest | 4700 | | 5707 |
| 3 | Rehab area C Coastal Saltmarsh | 640 | | 798 |
| 4 | Rehab area D Swamp Sclerophyll | 6972 | | 7362 |
| Subtotal (1 to 4 + 1?) | | 19400 | 19400 | 22751 |
| 5 | Public open space | 5100 | 5100 | 4821 |

| | | | | |
|-------------------------------|--|-------|------|--------|
| 6 | Informal open space. Existing vegetation maintained with clear understorey | 4800 | 4800 | 4662 |
| Subtotal (1 to 6 + 1?) | | 29300 | | 32292 |
| 7 | Area of intact remnant vegetation | | | 106956 |
| Total | | | | 139248 |

a Calculated from a GIS polygon file drawn over a geo-referenced copy of Figure 22 – Rehabilitation Plan

Table 2
Internal inconsistencies in calculation of proposed open space areas

| | Description (in Executive Summary) | Area (ha) (Executive Summary) | Area (ha) (Calculated using GIS^a) |
|--|--|--|---|
| | Total area | 17.77 | 17.84 |
| | Total public open space | 0.51 | 0.48 |
| | Total development footprint including roads | 4.03 | 3.92 |
| | Total area minus (Total public open space + Total development footprint including roads) | 13.23 | 13.44 |
| | Total dedication area (environmental lands) excluding public open space | 12.75 | |
| | Internal inconsistency in calculation of area of “total dedication area” (13.23 minus 12.75) | 0.48 | |

a Calculated from a GIS polygon file drawn over a geo-referenced copy of Figure 22 – Rehabilitation Plan

FIG 22 Rehabilitation Plan
PROPOSED RESIDENTIAL DEVELOPMENT

- Note:**
- All revegetation to include Kooka foraging trees Eucalyptus rubicola and Eucalyptus Alabasteriana floribunda
 - All revegetation to include Glossy Black Cockatoo foraging trees Allocasuarina littoralis
 - Revegetation to include Banksia and Winter flowering Eucalyptus for Squirrel Gliders
 - Swamp Sclerophyll and Subtropical Flood Plain Forest for Squirrel Gliders, Rainforest pigeons and Flying Foxes
 - Installed nest boxes to be a variety of sizes suitable for microchiropteran bats, Squirrel Gliders, small birds (ie Lorkeets), Parrots and Owls

LEGEND

- Nest Boxes to be installed
- Raptor Pole to be installed
- Boundary between the Environmental Protection Zone and the Residential Zone
- Rehab Area A
Subtropical Flood Plain Forest
7,088m²
- Rehab Area B
Swamp She-oak
4,762m²
- Rehab Area C
Coastal Salt marsh
6,401m²
- Rehab Area D
Swamp Sclerophyll
6,922m²
- Area of Intact Remaining Vegetation
(This includes any remaining or revegetated areas which meet the definition of native vegetation in the Rehabilitation Plan - 2019/2021)
- Proposed Lot Layout
- Formal Public Open Space
5,700m²
- Informal Open Space
(Including vegetation revegetated with native vegetation) $4,800m^2$

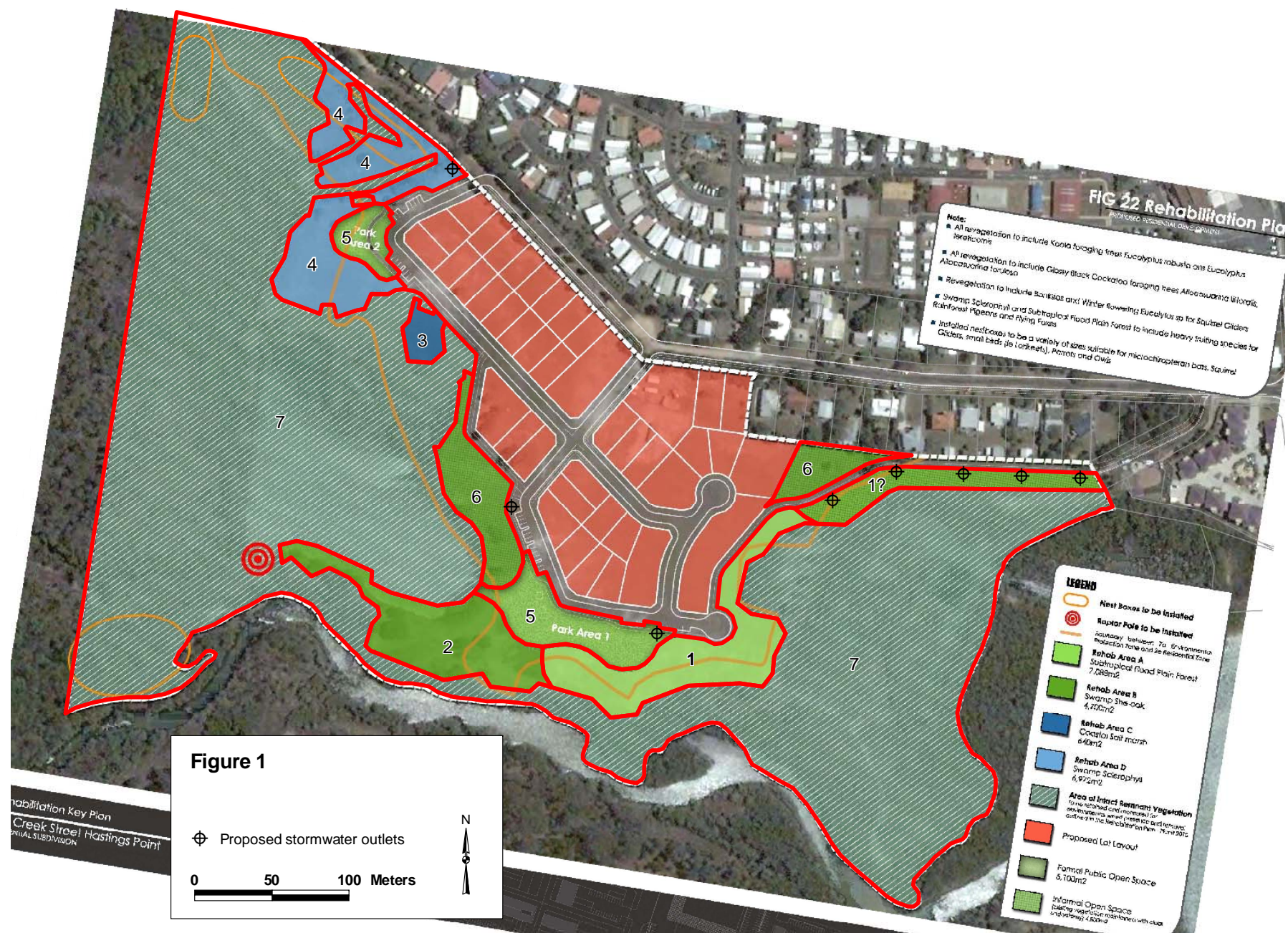
Figure 1

Proposed stormwater outlets

0 50 100 Meters

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Rehabilitation Key Plan
Creek Street Hastings Point
INITIAL SUBDIVISION



Henry James
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