



STEP Inc

Community-based Environmental Conservation since 1978

8 January 2020

The General Manager

Hornsby Shire Council
PO Box 37
HORNSBY NSW 1630

Dear Sir

Hornsby Quarry Rehabilitation Works Development Application – Response to Submissions and Revised Project Scope (RTS) Ref. DA/101/2019

STEP Inc is a local community-based environmental group, with a membership of over 400 in the Hornsby/Ku-ring-gai area. Our main objective is to preserve natural bushland in northern Sydney from alienation or degradation and ensuring proper management of this bushland including ensuring its role as habitat for animal species. Our group has considerable experience in environmental issues and regenerating and preserving natural bushland and native vegetation.

STEP welcomes the reduced extent of earthworks so that more trees are preserved across the site. We also welcome the increased exposure of the quarry walls, particularly the world class face on the eastern side.

STEP would also like access for professionals to the diatreme faces (by permit?). We presume that the designed lookouts will give good views of the faces. During reshaping it would be an excellent idea to collect diatreme rocks for presentation and interpretation at lookouts and other locations.

We fully support offsetting of tree loss on the site.

We still have concerns about the impact of the rehabilitation works on some fauna, particularly the Powerful Owls. Hollow trees, roosting sites and foraging sites need to be protected in all stages of the works.

We are still concerned about the complex management issues of water, erosion and sediment control. We fully expect that these will be managed and monitored throughout the project to ensure that water quality is of the highest standards on site and in the flows to Berowra Valley National Park.

Archaeological remains from the orcharding era need to be protected. No impact is acceptable.

Preliminary Vegetation Management Plan

Our main area of interest is the Preliminary Vegetation Management Plan (VMP). Firstly, thank you for preparing such a detailed plan but we do have some comments on and issues with parts of the plan.

a) Species selection for revegetation

According to the local historian and vegetation expert, Ralph Hawkins, there appears to be no record of the original vegetation in the diatreme. Other areas of the north shore were logged by convicts in the early days of European settlement and so government records were kept of the quantity and species of trees removed. Hornsby Valley was logged by private enterprise and no records were kept.

We are however concerned that repeated disturbances such as logging, firewood collection and clearing in this valley has aided the dominance of *Eucalyptus saligna* as this species is a fast growing pioneer species that would be favoured above species such as *Angophora costata*, *A. floribunda*, *E. pilularis*, *E. paniculata*, *E. resinifera*, *Syncarpia glomulifera*, and various stringybarks that are also part of the Blue Gum High Diatreme Forest. We are worried that if *E. saligna* is replanted in the current ratio to other tree species the ecosystem will be frozen in the early stage of succession. We would like the other tree species, including *Allocasuarina torulosa*, to be given considerable representation.

The original understory composition is equally unrecorded. Species lists and ratios in the 'The Native Vegetation of the Sydney Metropolitan Area' are simply a sample in time and may not represent early composition and species ratios. Repeated disturbances would have favoured certain species over others. Use of understory species for various purposes may also have altered species composition. For example *Acacia falcata*, *A. decurrens*, *A. longifolia*, *Acmena smithii*, *Exocarpos cupressiformis* were used for tanning (Maiden 1889, The Useful Native Plants of Australia). Understorey species composition for revegetation should therefore be selected according to the current science (see point c below), habitat value, landscape value, and any historic records.

An analysis of the photos held in 'Hornsby Shire Recollects' (Old Mans Valley, Higgins, quarry) may lead to some information about native vegetation regrowth and early European plant selection but unfortunately there doesn't seem to be images of the original vegetation. A call to residents for photos of the early valley may produce some useful results.

We suggest using denser foliage trees with a record of low branch drop in high public use areas, for example *E. resinifera* and *Syncarpia glomulifera*. Introduced trees could be considered to provide dense shade in the void. For example English Oak is present nearby at the end of the Blue Gum track near Ginger Meggs Park, obviously an historic planting. The use of introduced species at Bobbin Head has provided shade and a distinct sense of place producing a much loved landscape.

b) Reference sites

The 1930 aerial imagery in the report shows the floor of the diatreme was cleared for orchards and other farming activities. There appears to be no remnant of the original vegetation on the valley floor.

We are concerned that the thin extensions of the Hornsby and Thornleigh diatremes do not represent the type of vegetation that would have been on the broad diatreme floor, not just because of disturbance but because they had different landforms, drainage, soil types and depths. We encourage the use of Peats Crater, Peats Bight, Campbells Crater and Browns Field diatremes as reference sites. These valleys have many different aspects but their vegetation communities may have a better representation of the types of vegetation that would have been on the valley floor before clearing for farming. The name 'Old Man's Valley' seems to have been derived from the presence of 'old man' kangaroos (Hornsby shire Recollects) indicating a forest of trees with a grassy/open understorey but was there also a rainforest element along the creek?

c) Propagule selection

We encourage the inclusion of propagules from areas other than the immediate surrounds. STEP would rather the collection range was broadened to a range of sites that will better incorporate genotypes more suited for the expected climate of Hornsby Shire in one hundred years time. This will provide a wider genetic base for adaptation. Trees in particular are an investment for hundreds of years. The 'Restore and Renew' project of the Royal Botanic Gardens and the Australian Network for Plant conservation, as well as work from Macquarie University's Biodiversity Node are well worth consulting.

We strongly oppose the use of seed from felled trees that were planted as the source of these plants is unknown.

d) Soils

We would again like to state our support of the development of appropriate soils for the types of vegetation to be established. Without appropriate soils plant establishment will be problematical. SESL has an excellent reputation in this area.

e) References

There is a major reference missing from the Vegetation Management Plan. The Society for Ecological Restoration Australasia (SERA) has prepared 'National standards for the practice of ecological restoration in Australia', 2018. The definitions, principles, recovery wheel and standards should be used through the VMP to make sure the best outcomes are possible.

As well as Smith & Smith, 'Native Vegetation communities of Hornsby shire', Kleinfelder's vegetation survey of the Quarry and 'The Native Vegetation of the Sydney Metropolitan Area' (not referred to in the VMP), local books should be referenced to give an in depth view of the local Blue Gum High Forests and diatreme vegetation. Three suggested publications are:

Friends of Berowra Valley Regional Park, 2001. *A Guide to Berowra Valley Regional Park*.
http://friendsberowravalle.org.au/G-BVRP_Pre-Press_Book_6.pdf

Martyn, J. 2010. *Field Guide to the Bushland of the Lane Cove Valley*. Step Inc.

Martyn, J. 2018. *Rocks and Trees. A photographic journey through the rich and varied geology, scenery and flora of the Sydney region*. Step Inc.

Workshop of community groups interested in history and management of habitat and vegetation on the site

STEP would like to suggest a workshop of groups interested in the history and management of habitat and vegetation on the site. This would enable these groups to understand the Council's priorities and issues and to be able to present our skills, knowledge and priorities, both technical and creative. A workshop would probably save an enormous amount of time in the long run with stakeholders able to come to a consensus (hopefully) and to understand other stakeholders perspectives, instead of working in isolation.

We believe that sporting groups, in particular mountain bikers, have been able to directly present their views to Council.

A possible guest list to ensure that a range of expertise is heard could be:

Council staff representatives:

- Natural Resources
- Arborist
- Landscape design
- Bush regeneration
- Nursery

Community:

- Bushland Management Advisory Committee
- Australian Association of Bush Regenerators, two of the committee live in the Shire and may be prepared to contribute
- Conservation Groups, for example STEP and Friends of Berowra Valley
- Hornsby Historic Society
- Local unaffiliated experts, for example Ralph Hawkins, who is a bush regenerator, historian and has contributed extensively to 'Hornsby Shire Recollects'. Council probably knows of other individuals who could have worthwhile contributions
- Higgins family representative

A few suggested discussion points:

- Plant species selection, trees and understory
- Provenance selection
- Ecological restoration methodologies
- Amenity plantings, including tree selection and safety
- Wetland
- Possible themes for the completely denuded areas
 - Original theme – 1788
 - Early European, orchards and Ginger Meggs

- Other – we are sure council has many excellent ideas
- Fire management – this valley is a well know fire path into Hornsby, the most famous fire being that of 1957

Briefing paper

If the idea of a meeting re history, habitat and vegetation management is found by Council to be acceptable then it might aid the process if a list of discussion points is sent out before the meeting.

Thank you for the opportunity to discuss the development of this important recreational, geological and conservation site.

Yours sincerely,

A handwritten signature in cursive script that reads "Jill Green".

Jill Green
President