



DA/101/2019 - Hornsby Quarry - Landform Modification

While we accept the development of the Hornsby Quarry for parklands, we object to the following issues regarding this current landform modification development application by Hornsby Council:

1. The lots on the western and south-western extent of the Hornsby Quarry site, Lot 1 DP734459 and Lot 1 DP926449, should not have any earthworks and consequent tree removal undertaken on those lots. **These two lots should be incorporated into Berowra Valley National Park. Both lots have significant sized areas of remnant Blue Gum Diatreme Forest within the lots.**

The Blue Gum Diatreme Forest forms part of the Critically Endangered Ecological Community and has been listed in *Part 2 of Schedule 1A of the Threatened Species Conservation Act*. Relevant excerpts from the Scientific Committee Determination, which was established by the *Threatened Species Conservation Act*, are as follows:

Blue Gum High Forest in the Sydney Basin Bioregion - critically endangered ecological community listing:

6. Blue Gum High Forest is typically associated with soils derived from Wianamatta Shale (Tozer 2003), though may occur in adjacent areas underlain by Hawkesbury Sandstone. **The community also occurs on soils associated with localised volcanic intrusions, 'diatremes'** (Benson and Howell 1994).

9. Blue Gum High Forest has a very highly restricted geographic distribution, and is **currently estimated to cover an extant area of less than 200 ha** (Tozer 2003). The distribution comprises a series of small remnant patches, the largest of which is less than 20ha. Highly modified relics of the community also persist as small clumps of trees without a native understorey. **All remnants of the community are now surrounded by urban development.** Consequently, the distribution of Blue Gum High Forest is severely fragmented. Fragmentation of habitat contributes to a very large reduction in the ecological function of the community.

10. Prior to European settlement, about 200 years ago, Blue Gum High Forest is estimated to have covered an area of approximately 3700 ha (Tozer 2003). Its current extent amounts to less than 5% of this original distribution. The dominant eucalypts of the community live for several hundred years. Blue Gum High Forest has therefore undergone a very large reduction in its geographic distribution within a time span appropriate to the life cycle and habitat characteristics of its component species. **Small-scale clearing associated with residential subdivision, road upgrading, extension and maintenance of service easements, etc. pose a threat of ongoing decline in the extent of the community. Clearing of native vegetation is listed as a Key Threatening Process under the Threatened Species Conservation Act**

The Blue Gum High Forest of the Sydney Basin Bioregion is also listed under the Environment Protection and Biodiversity Conservation Act (Cwlth) as Critically Endangered:

EPBC Legal Status and Documents

EPBC Act Listing Status	Listed as Critically Endangered
Date Effective	26 Aug 2005
Approved Conservation Advice	Department of the Environment (2014). <i>Approved Conservation Advice for Blue Gum High Forest of the Sydney Basin Bioregion</i> . Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/47-conservation-advice.pdf . In effect under the EPBC Act from 11-Apr-2014.
Listing Advice	Threatened Species Scientific Committee (2005). <i>Commonwealth Listing Advice on Blue Gum High Forest of the Sydney Basin Bioregion</i> . Available from: http://www.environment.gov.au/biodiversity/threatened/communities/sydney-blue-gum.html . In effect under the EPBC Act from 27-Aug-2005.

It is considered that the presence of the Blue Gum Diatreme Forest, which is an even rarer subset of the Blue Gum High Forest of the Sydney Basin Bioregion, on Lot 1 DP734459 and Lot 1 DP926449 of the Hornsby Quarry site, must ensure that these two lots are incorporated into the Berowra Valley National Park and little if any works, particularly earthworks, should be undertaken in these lots.

2. It appears from the exhibited documentation as well as earlier published documentation, that there is little risk of land slippage in the south western extent of the Quarry site. Earthworks are not required on Lot 1 DP734459 and Lot 1 DP926449 for reasons of public safety. It appears that the only works necessary are for a single stormwater drainage line through Lot 1 DP926449.

It is therefore considered that the Extent of Works as shown in Diagram #1 should be reduced to exclude Lot 1 DP734459 and Lot 1 DP926449 with the exception of the stormwater drainage line (Diagram #2), and that only future landscaping works be undertaken to revegetate this area. Indeed, this is one of the best areas on the Quarry site for Green Offset planting to occur, to offset any necessary tree removal on other portions of the site. As can be seen in Diagram #3, both the riparian zone around Old Mans Creek and nearby Forest would benefit from revegetation.

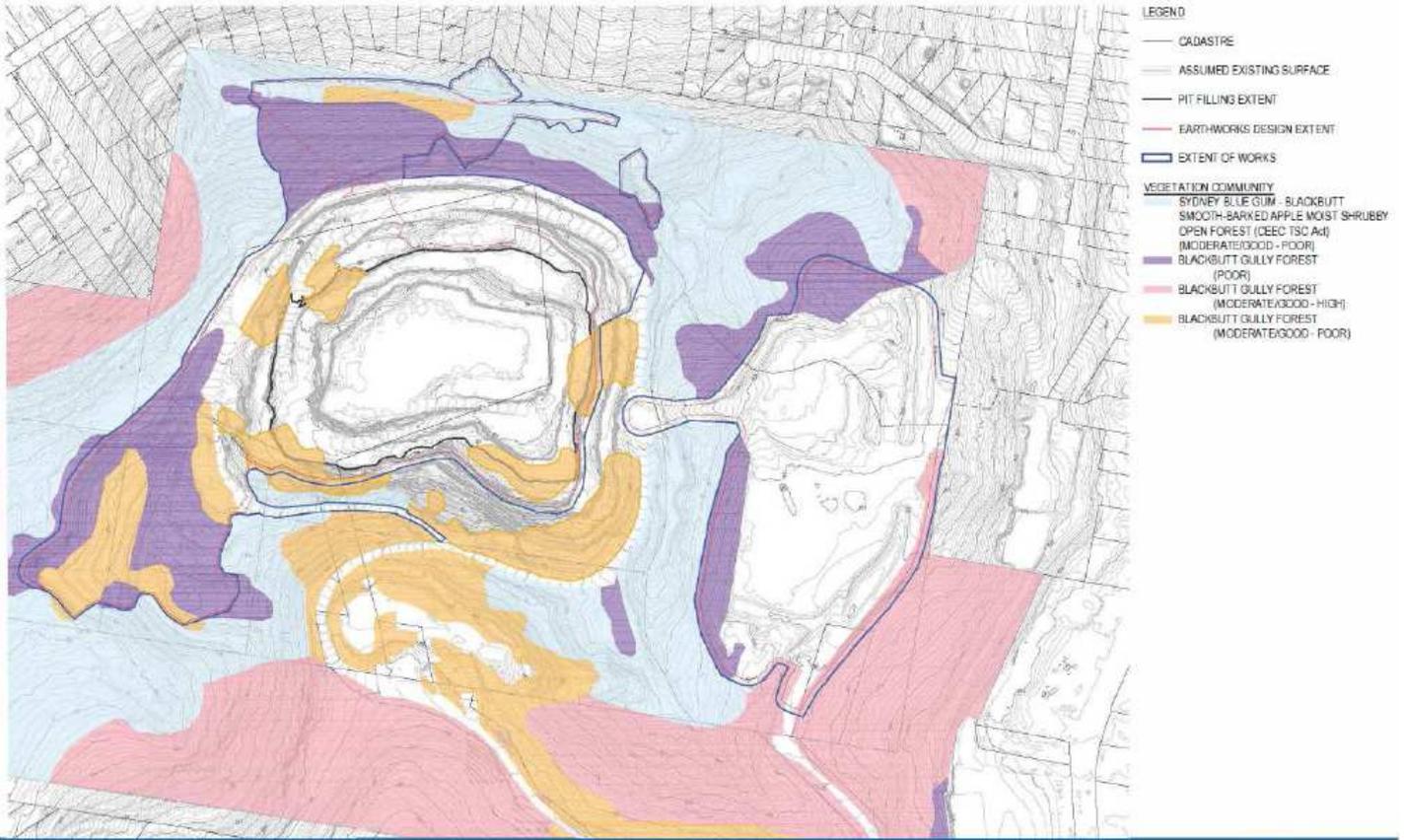


Diagram #1 - Extent of Works extending into the two south-western lots shown by blue line



HORNSBY PARK STORMWATER DRAINAGE LAYOUT

Diagram #2 - Stormwater line shown through south-western lot



Diagram #3 - Google satellite showing area around Old Man Creek riparian zone to the south west of the Quarry

3. It can be seen from Diagram #1 that earthworks are proposed for the east, west and north of the Quarry site. However it appears that Hornsby Shire Council has only undertaken a Tree Inventory of the northern slope of the site, with **no Tree Inventory at all being exhibited** for the large areas of trees to the east, west or south-west portions of the proposed extent of earthworks.

This is inconsistent with the requirements of the *Environmental Planning and Assessment Regulation 2000 Schedule 1 Forms, Part 1 Development applications, 2 Documents to accompany development application, (2)(b)* which requires that "existing vegetation and trees on the land" be shown.

There can be no excuse for any Council lodging a Development Application on its own behalf to NOT be compliant with the requirements of the Environmental Planning & Assessment Act.

The requisite Tree Inventory and Survey for all areas where works are proposed must be undertaken and exhibited by Hornsby Shire Council. Of the 1000s of trees on the Quarry site, Council has apparently inventoried only 315 trees. Hornsby Shire Council has NOT provided the documents that are required under the EP&A Act to accompany a development application despite our advising the Hornsby Shire Council Deputy General Manager on 13 March 2019 that this information was missing from the exhibition documents. **Council must commission and exhibit these documents. The Development Application must consequently be re-exhibited to enable the community to comment on those documents.**

4. These areas of proposed works that have apparently not been inventoried contain Blue Gum Diatreme Forest. Hornsby Shire Council must not simply ignore the *Environmental Planning and Assessment Act*, the *Environment Protection and Biodiversity Conservation Act (Cwlth)* and the *Threatened Species Conservation Act*.

It may otherwise be necessary for the proposed action to be referred to the Minister by the community under the *Environment Protection and Biodiversity Conservation Act (Cwlth)* for a decision as to whether formal assessment and approval is necessary.

5. The Tree Inventory prepared for Hornsby Shire Council by Dennis Marsden, dated 16 April 2018, shows that the vast majority of trees on the northern slope are Blue Gum High Forest species, including 109 x Sydney Blue Gum as well as Turpentine, Blackbutt and Red Mahogany trees.

The Tree Inventory records that most of these Blue Gum High Forest trees are "early-mature" ("between immaturity and full size") or "semi-mature" ("a tree that is more or less of mature dimensions"), even when they are over 20 metres tall. No approximation of age has been made. Most conspicuously, no DBH have been provided in the exhibited Tree Inventory. The DBH (Diameter at Breast Height) would have given some indication of age. This is considered to be an unacceptable omission in the provision of an arboricultural report, site constraints or not.

6. In the absence of a completed Tree Inventory of the northern slope being provided for exhibition, a comparison (Diagrams #4 & #5) has been done with another recent survey commissioned by Hornsby Shire Council, this one undertaken by Richard Lamb and Assoc in conjunction with Time Heritage Landscapes. That survey was of the large Turpentine, Blackbutt and Red Mahogany trees on 62 Manor Rd, Hornsby, to be considered for Heritage Listing. They are ON THE OTHER SIDE OF THE ROAD FROM THE QUARRY, just metres away from the trees on the northern slope of the Quarry. In that survey all Turpentine, Blackbutt and Red Mahogany trees with a DBH of over 1 metre were recorded. This is significant as Time Heritage Landscapes stated that **trees with a DBH of over 1m are likely to be over 100 years old**, as the excerpt from their report below shows -

Whilst growth rates vary between species this group of trees is considered likely to be over 100 years old. Turpentines are particularly slow growing and resilient trees, and specimens with a Diameter Breast Height of over 1m are likely to be approaching 200 years old or more.²⁸

The following table lists trees located on the site with a Diameter Breast Height (DBH) and/or diameter of the trunk immediately above the root buttress (DAB) of over 1m.³⁰

Tree No	Genus Species	Common Name	Height (m)	Canopy (m)	DBH (mm)	DAB (mm)	Location
7	<i>Syncarpia glomulifera</i>	Turpentine	14	14	2*500, 1*750	1250	On site
8	<i>Eucalyptus pilularis</i>	Blackbutt	25	20	1300	1900	On site
18	<i>Angophora costata</i>	Sydney Red Gum	15	15	1050	1300	On site
21	<i>Eucalyptus pilularis</i>	Blackbutt	25	20	1200	1600	On site
22	<i>Eucalyptus pilularis</i>	Blackbutt	18	16	1500	2300	On site
24	<i>Eucalyptus pilularis</i>	Blackbutt	16	20	1200	1500	On site
40	<i>Eucalyptus resinifera</i>	Red Mahogany	16	11	800	1200	On site
41	<i>Eucalyptus resinifera</i>	Red Mahogany	17	15	800	1100	On site
58	<i>Eucalyptus resinifera</i>	Red Mahogany	20	18	750	1000	On site
73	<i>Corymbia gummifera</i>	Red Bloodwood	22	20	700	1000	On site
85	<i>Eucalyptus piperita</i>	Sydney Peppermint	14	10	1*250, 1*250	1200	On site

Diagram #4 - Tree Survey excerpt by Council's consultant Time Heritage Landscapes on 62 Manor Rd, Hornsby

7. It must then be noted that the heights of some of the Red Mahogany in Manor Rd, which Time Heritage Landscapes states are over 100 years old are 16m, 17m and 20m. The 100 year old Blackbutts are 16m, 18m and 25m (Diagram #4). **The Turpentine that is over 200 years old in 62 Manor Rd is a relatively miniscule 14 metres high.** It must then be further noted that a large number of the Blue Gum High Forest species of Turpentine, Blackbutt and Red Mahogany recorded on the Hornsby Quarry site are up to and over 20m high (Diagram #5).

227	Sydney Blue Gum <i>Eucalyptus saligna</i>	Semi-mature	> 20m	Intermediate	Small	Normal	3	Local BGHF species
228	Sydney Blue Gum <i>Eucalyptus saligna</i>	Semi-mature	10 - 20m	Intermediate	Small	Normal	3	Local BGHF species
235	Blackbutt <i>Eucalyptus pilularis</i>	Semi-mature	> 20m	Intermediate	Small	Normal	3	Local BGHF species
238	Blackbutt <i>Eucalyptus pilularis</i>	Semi-mature	10 - 20m	Intermediate	Small	Normal	3	Local BGHF species
239	Blackbutt <i>Eucalyptus pilularis</i>	Semi-mature	10 - 20m	Intermediate	Medium	Normal	3	Local BGHF species
5054	Turpentine <i>Sycaoria glomulifera</i>	Early-mature	10 - 20m	Intermediate	Large	Normal	2	Local BGHF species
5063	Blackbutt <i>Eucalyptus pilularis</i>	Early-mature	> 20m	Co-dominant	Medium	Normal	3	Local BGHF species
5086	Blackbutt <i>Eucalyptus pilularis</i>	Mature	> 20m	Co-dominant	Small	Normal	3	Local BGHF species
5093	Blackbutt <i>Eucalyptus pilularis</i>	Mature	> 20m	Dominant	Medium	Normal	4	Local BGHF species
5108	? Red Mahogany <i>Eucalyptus resinifera</i>	Early-mature	10 - 20m	Intermediate	Small	Normal	3	Local BGHF species
5109	? Red Mahogany <i>Eucalyptus resinifera</i>	Semi-mature	10 - 20m	Suppressed	Small	Normal	2	Local BGHF species
5110	Sydney Blue Gum <i>Eucalyptus saligna</i>	Early-mature	> 20m	Co-dominant	Small	Normal	3	Local BGHF species
5242	Blackbutt <i>Eucalyptus pilularis</i>	Early-mature	> 20m	Intermediate	Medium	Normal	3	Local BGHF species
5251	Blackbutt <i>Eucalyptus pilularis</i>	Semi-mature	> 20m	Intermediate	Small	Normal	3	Local BGHF species

Diagram #5 - Tree Survey excerpt by Denis Marsden of Hornsby Quarry northern slope

8. Given that the trees in both the Quarry site and the Manor Rd site are in the identical geographical and climatic zone and are of similar heights, it is considered safe to assume, in the absence of Council providing the DBH on the Quarry trees, that the trees in Diagram #2 would be of a similar diameter and age to the Manor Rd trees, ie **over 100 years old.** Even more concerning is that the slow growing Turpentine (Quarry Tree no. 5054) could be **over 200 years old.**

9. As the Tree Inventory for the Quarry states, **most trees in the 10-20m category are in the upper range in height.** It is considered unacceptable that a complete and accurate inventory was not undertaken of the trees on the northern slope. There are simple inexpensive laser rangefinders that are used by professional arborists to calculate the height of trees. **The environmental impact and the loss of amenity due to the removal of these trees cannot be properly considered if incomplete information is provided by Council.**

10. While it is understood that there needs to be earthworks undertaken on the northern slope for reasons of public safety, without an accurate Tree Inventory it cannot be ascertained whether there should be special efforts made to protect and preserve any trees that are of heritage value.

The Legend that accompanies the Tree Survey provides a symbol of a tree with a cross through it indicating which trees are to be removed. However the Tree Survey of the north slope shows NO trees that have that cross.

This would lead the community, who are making submissions on this Hornsby Shire Council Development Application, to believe that NO trees would be removed on the northern slope (mound). Yet on 3 April 2019 we received an email from the Hornsby Shire Council Deputy General Manager and Infrastructure and Recreation Manager, Mr Robert Stephens, that *"the proposed works in the area (northern mound) will involve the removal of about 200 trees"*.

11. It is considered to be inadequate for Hornsby Shire Council to simply state that there will be 0.74 hectares of Blue Gum High Forest removed and a total of 2.5 hectares of native trees removed. Council needs to provide an accurate inventory of the number, species and size of the trees to be removed. **Of the 1000s of trees on the site, it appears from the exhibited documents that Council has only inventoried 315 trees.** This is not acceptable and is inconsistent with the EP&A Regulation 2000.

12. It is expected that ALL trees removed from the site will be replaced by an appropriate number of trees in accordance with Hornsby Shire Council's Green Offsets Code multiplier, current at the time the Hornsby Quarry Development Application was lodged. It is therefore important for the number and species to be documented as the Offset Multiplier is based on the species of tree. For the Blue Gum Diatreme Forest species, the applicable multiplier is x8. For the Blackbutt Gully Forest species the multiplier is x6. For all other native species the applicable multiplier is x2.

For the tree loss on the north slope alone, 200+ x 8 Offset trees would be required - over 1,600 trees.

13. The lack of a complete Tree Inventory for the whole of the works area means that there is no record of the number of hollow bearing trees that are within the works area and will potentially be removed. Hollow bearing trees are crucially important to endangered species such as the Powerful Owl which has been recorded in the adjacent Manor Rd. Loss of hollows is a Key Threatening Process yet without an accurate Tree Inventory the impact on the Powerful Owl species cannot be ascertained.

13. **Heritage** - The exhibited documentation envisages that there may be damage to the Higgins Family cemetery caused by vibration and because the cemetery *"is partially within the earthworks extent"* and *"archaeological remains associated with the Higgins family occupation of the site may be impacted"* as it is within the earthworks extent. This Heritage Item is one of the few fully conserved family cemeteries dating back to the 1800s.

The extent of the proposed works MUST be reduced so that it does not incorporate or impact upon the State Heritage listed Higgins Family Cemetery AT ALL.

We think that to do otherwise might be considered to be consistent with the colloquial meaning of 'Philistines'.

<p>Old Mans Valley Cemetery (Higgins Family Cemetery, sandstone receptacle, cool room and site of Higgins homestead on which the Higgins Family Memorial is located)*</p>	<p>Quarry Road, Hornsby Located on the south-east portion of the site, this is one of the few fully conserved family cemeteries in New South Wales and contains the graves of the early families that settled in the Hornsby area.</p>	<p>Register of the National Estate (non-statutory) NSW Heritage Act 1977 Hornsby Shire LEP (1994) National Trust Australia (NSW) (Non-statutory)</p>
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14. It is unacceptable for the exhibited reports to conclude *"Mitigation and management measures have been identified to address potential impacts"*. **There must be NO impact.** NOT that impacts will be mitigated. This State Heritage listed site has been undisturbed because it has been inaccessible to the public. There is no risk of landslip because obviously if the headstones from the 1800s are still standing, then no spoil was dumped on this area of the Quarry site.

There must be NO earthworks AT ALL in the vicinity of the State Heritage Listed Higgins Family Cemetery.



Photo #1 - Higgins Family cemetery must remain undisturbed - courtesy of Cardno report

For a Council that is committing to spending \$3 million on a Heritage Study and Inventory over the next few years to then desecrate a historical cemetery that has been undisturbed for over a century (Photo #1) we think could be considered as institutionalized vandalism and could show a lack of respect for Hornsby's heritage.

15. The preservation and protection of the State listed Old Man's Valley Cemetery (SHR 01764), the Higgins Family Cemetery, sandstone receptacle, cool room and site of Higgins Homestead on which the Higgins Family Memorial is located (LEP A55), the Hornsby Park Lone Pine and sandstone steps (LEP 513) and Sandstone Steps (LEP 537) **must take highest priority.**

16. The exhibited GHD Application Summary includes the statement *"It is noted that **preservation of the exposed diatreme** and reinstatement of surrounding vegetation in the site generally as part of the future parkland development would assist in mitigating any potential physical and visual impacts and, as such, the project is considered acceptable from a heritage perspective" and "at present the diatreme and heritage items including Old Man's Valley Cemetery and Diatreme are inaccessible"*.

The GHD Summary continues *"The project, by improving safety and accessibility of the site, would potentially result in enhanced community visitation and engagement with the heritage items located within this historic precinct, and provide opportunities for greater understanding of their significant values and associations"*.

This statement appears to suggest to the community that the exposed Diatreme will be preserved and that people will be able to see the Diatreme and understand its "significant values". However it can be seen from comparison of the before and after filling of the Quarry (Photos #2 & #3) that the exposed Diatreme has been all but buried. Photo #3 shows only a small portion still exposed and it is unknown how little of the Diatreme is visible at this time.



Figure 5-7 Photograph of the Diatreme Area Located on the Eastern Face of the Quarry Wall.

Photo #2 - Exposed Diatreme prior to filling of the Quarry - courtesy of Cardno report



Photo #3 - Buried Diatreme after filling - courtesy of Hornsby Shire Council

17. It is more than disappointing that it is not intended to clear the NorthConnex spoil that has buried and likely damaged the Diatreme, which is listed as a Heritage Item in the Hornsby LEP.

It is considered essential that as much of the Diatreme as possible be again exposed and what is to be exposed is professionally cleaned under the supervision of professional geologists.

Hornsby	Diatreme Hornsby Quarry and surrounding vegetation	1X Quarry Road	Lot 1, DP 926103; Lots A and D, DP 318676	Local	538
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18. The EIS Volume 2 Section 4.3 states that attendees of a Stakeholder Meeting on 30 October were *"happy to hear that the diatreme wall will still be exposed"*. However only a small fraction of the diatreme will be exposed for future generations to see. The IES Volume Main Report Table 3.2 states *"The diatreme will remain exposed above the filling already approved under the 2016 Planning Approval"*. It is not known whether the participants of the Stakeholder Meeting were shown the extent of the burial, given that at the time of the site visit for the GHD report *"the diatreme was not visible due to the filling works associated with the NorthConnex project which temporarily covered it"*.

19. The exhibited GHD Summary Section 1.9.5 Non-Aboriginal heritage states that *"The project would not result in any direct physical impact to "* and goes on to list all the Heritage Items in the Quarry precinct EXCEPT Item 538 Diatreme Hornsby Quarry.

Any works in the close proximity to the face and top of the Diatreme will have a direct physical impact on the Diatreme. It is considered unacceptable that the report omits reference to potential physical impact on the Diatreme by the proposed landform modification. **Hornsby Shire Council must commission and exhibit an addendum to the GHD report which details the physical impacts on the Diatreme of the works proposed in close proximity to the Diatreme for this Development Application and the method by which is the Diatreme to be cleaned.**

21. In 2007 the respected Engineering Consultants, Pells Sullivan Meynink Pty Ltd, were commissioned by Hornsby Shire Council to provide a report on the geotechnical and hydrological constraints of the land use options for Hornsby Quarry. It is considered that this Report (Appendices #1 & #2) provides a very detailed analysis of the constraints and should be taken into consideration for this Development Application. It would have been useful for this Report to have been made public.

22. **Aboriginal Heritage** - The exhibited GHD Application Summary states that an Aboriginal Archaeological Survey Report (ASR) was undertaken on the site and that ***"The survey did not result in the identification of any Aboriginal sites or PAD*** (Potential Archaeological Deposits). *The ASR concluded that the project is unlikely to impact any intact archaeological remains and therefore no further archaeological investigation or mitigation is required"*.

However the Hornsby Quarry Land Filling Preliminary Impact Statement commissioned by Hornsby Shire Council dated April 2013 by the eminent engineering company Cardno (Appendix #3) reported that in 2002 an Aboriginal heritage survey was undertaken of the Quarry and Old Mans Valley. Their report states that ***"two shelters were identified with Potential Archaeological Deposits (PAD)"***. Obviously their exact location could not be divulged. However the two surveys appear to be inconsistent. **Further Aboriginal archaeological investigation MUST BE UNDERTAKEN.**

Brayshaw (2002) conducted an Aboriginal heritage survey of the quarry and Old Mans Valley. There was no engravings, axe grindings grooves, occupation or art shelters, scarred trees or open artifact scatters to evidence Aboriginal occupation. However, **two shelters were identified with Potential Archaeological Deposits**, located in the western portion of the study area, near the Benowie Walking Track.

Aboriginal heritage studies which have been undertaken show that the LGA is generally an archeologically sensitive area (PB, 2004).

23. It is considered unacceptable for Hornsby Shire Council to exhibit a commissioned report that appears to be inconsistent with its earlier commissioned report, without exhibiting the earlier report as well. Particularly where the inconsistency concerns such an important matter as Aboriginal Sites.

24. **Visual Amenity** - There will be a significant visual amenity impact on the properties north of the Quarry site due to the removal of the trees on the northern slope (spoil mound). This must be adequately addressed and mitigated.

25. **Purchase of properties / compulsory acquisition** - It is understood that Hornsby Shire Council has just recently approached some residents of Manor Rd, Hornsby with a view to acquiring a portion of their property. It appears that 36 and 38 Manor Rd have Quarry spoil intruding into their land. This may need to be remediated as part of the north slope (spoil mound).

While it is accepted that there may be reference to this land acquisition by Hornsby Shire Council in the copious documentation on exhibition, to date no such reference could be found. Council should have made it clear that additional ratepayers monies will be required to purchase Manor Rd properties for remediation purposes for this development proposal.

It should also be made clear to the owners of these Manor Rd and to the community, whether these properties will be sold in the future, as it is difficult to perceive of Council holding these lots in perpetuity. Particularly when they will have little biodiversity value after being highly disturbed by remediation. **Whether they are to be resold or not would have and should have an impact on the acquisition cost so it is essential that this information is provided.** While details of any acquisition negotiations would be regarded as 'Commercial in Confidence', the community and the property owners have a right to expect a degree of transparency with regards to expenditure.

26. The northern spoil mound also intrudes onto the unformed continuation of Summers Ave, Hornsby. This will also need to be remediated. We trust that Council will not then form Summers Ave and resell (undoubtedly at a significant profit) the properties 36 & 38 Manor Rd, and potentially 40 & 42 Manor Rd, which are currently undevelopable from Manor Rd due to the steepness of the lots that front Manor Rd.

CONCLUSION

While the remediation of the Quarry site and the provision of a parkland for the community to enjoy is commendable, the exhibited documentation lacks essential information that should have been provided to the community for comment. As such we cannot approve of this Development Application as we believe the exhibition process is compromised. **At the very minimum all the documentation required under the EP&A Act and Regulation 2000 must be exhibited. When these documents are exhibited all documents must be unsecured so that diagrams and quotations can be copied into submissions.**