HORNSBY QUARRY ROAD CONSTRUCTION SPOIL MANAGEMENT PROJECT EIS HORNSBY SHIRE COUNCIL SUBMISSION

The following specific concerns are raised about the impact of the proposal. Council's requests or actions are presented in bold text at the end of each item.

	1 - ENVIRONMENT PROTECTION		
1.1	NOISE	The EIS proposes that 770 heavy vehicle movements per day will be required to transport spoil to the Quarry and return with Bridge Road as the access point. This will cause noise impacts on an area which is a relatively quiet residential street. Effective noise minimisation measures may require minimising the number of plant items in use in the Quarry site and surrounds at any one time; providing partial acoustic barriers at vehicle entry points; designing the access layout to minimise requirements for visiting trucks to reverse and require the use of 'smart' movement alarms on trucks. Recommendation - That further detailed assessment of this noise concern be undertaken by a suitably qualified acoustic consultant, with further mitigation measures proposed to address noise impacts caused by the development and ancillary truck movements. Part of this assessment should involve community consultation.	
1.2	WATER QUALITY	 1.2.1 Section 6.4.4 Environmental Management Measures Table, Page 195; Dewatering SW9 – Add; Discharge Water Quality will meet ANZECC 2000 Water Quality Guidelines or Hornsby Shire Council derived guidelines (REHV's) which ever affords the greatest protection for downstream environments. Recommendation - Council requests the table be amended to include this comment. 1.2.2 De-watering of quarry/ water quality: managing the quality of water discharged to Old Mans Creek is uncertain, particularly once infilling of the quarry commences. It is noted that, based on monitoring undertaken by Hornsby Council, the current water quality is relatively good and is approaching "potable water standard" (Vol. 1, p189) and is in good condition (Vol.1, p163). Reference is made (Vol.1, p192) to techniques which could be used to reduce turbid water but it 	

is unclear what technique will be used and how effective the treatment train will be. Further inference is made that this water quality will be maintained during dewatering but it is unclear how this water quality will be maintained, prior to discharge, during infill operations.

Recommendation: Measures to mitigate and prevent turbid water be detailed in a Water Management Plan that maintains the high quality of the water discharged to Old Mans Creek and be provided to Hornsby Shire Council - Natural Resources for approval prior to commencement of works. Water quality needs to meet targets, be regularly monitored and mitigation measures assessed for their effectiveness in complying with current license conditions and reported annually, with particular regard to when infill operations commence.

1.2.3 De-watering of quarry/ groundwater discharge – volumes: reference is made to quarry infill having negligible dewatering impacts on the receiving waters (Vol. 1,Table 6-48, p195) as the water discharge quantity (and quality) from the quarry would comply with the requirements of Hornsby Shire Council's existing groundwater licence (ref #10BL602842). To prevent flooding of the receiving water courses the discharge is to not exceed 33 litres per second (Vol.1, Table 6-48, p196). The provisions are to be in place to meet the Secretary's Environmental Assessment Requirements (SEAR's) requirements SW9 and SW12. However, conservative hydraulic conductivity values have been used (Vol. 3, section 4.1). Hence inflow rates used in the EIS are to be considered as minimum. The EIS does not make provision for environmental management measures should inflow rates be higher than predicted, which is probable, in the absence of localised hydraulic conductivity values. If greater discharge volumes are needed then a new or altered discharge license would be required. It is unclear who will manage and be responsible for this, or if in fact, increased discharge volumes would be permissible.

Recommendation: Contingencies and responsibilities be identified in the Water Quality Management Plan to manage volumes, should greater volumes and alterations to the existing license conditions be required to ensure the EIS adequately responds to SEAR's requirements SW9 and SW12.

		1.2.4 Erosion and sediment control: Noted in Table 7-27, p263 of Volume 1 is requirement for a 'Soil and Water Management Plan'. Recommendation: That the Soil and Water Management Plan be provided to Council for review prior to commencement of construction activities. 2 - TRAFFIC AND TRANSPORT
2.1	HAULAGE TRAFFIC	Council notes that the traffic routes proposed will minimise, but not eliminate, interaction between construction traffic and traffic associated with Hornsby CBD and the 3 major schools south of Hornsby CBD (St Leos, Barker College and Hornsby Girls). A right turn is not legally possible from Jersey Road North into Bridge Road and providing this movement is not feasible in the project timeframe. The right turn from Peats Ferry Road into Bridge Road West is possible but not feasible given the opposing northbound traffic volumes on Peats Ferry Road. In recognition of the problems accessing the quarry from the north, the EIS proposes that haulage routes be split into two - 1. Inbound haulage is exclusively from the south through Hornsby CBD via the Pacific Highway, George Street and Bridge Road. 2. Empty returns are through the CBD during non peak hours (reverse the above route). During peak periods empty returns are to the north via Bridge Road, Jersey Road North, Pacific Highway and Ku-Ring-Gai Chase Road. Peak periods are defined in the EIS traffic report as 7am to 10am and 3pm to 6pm weekdays. On Page 9 of the Traffic and Transport Assessment Report of the EIS, it is stated that the haulage routes to/from Hornsby Quarry are indicative only and will be developed further during detailed design and will be presented in the Traffic Management Plan as part of the Construction Environmental Management Plan (discussed in Section 7). Any alterations to the proposed routes

will ensure that the impact on existing traffic and transport conditions is minimised.

Recommendation – Council considers that the cost of modifying intersections to allow haulage vehicle access to the north is justified given the main road status of these intersections and the road safety and community benefits of reducing heavy vehicle volumes through the Hornsby Town Centre past major schools. The Department should be satisfied that traffic impacts are appropriately managed by NorthConnex and/or RMS.

A maximum of 385 vehicles per day or 35 vehicles per hour per direction are anticipated to travel through the study area at the peak of site activity. Based on a PCU of 2.9 for haulage trucks, it is envisaged that the quarry traffic will have an impact on the operation of critical intersections in the area in particular along Bridge Road between Peats Ferry Road and George Street. It is also envisaged that haulage trucks will affect several other critical locations such as the intersections of Bridge Road/Jersey St North, Bridge Road/George Street/Railway Parade, Pacific Highway/Unwin Road/Romsey Street, Pacific Highway/Ingram Road and Belmont Parade/Kuring-gai Chase Road.

The traffic assessment provided in the EIS has established that operational performance for the majority of intersections will not reach Level of Service (LoS) E or LoS F following the introduction of project traffic (noting that intersections of Pacific Highway and Pennant Hills Road and M1 ramps will be at that level without haulage vehicles), other than at the intersections of Pacific Highway/Bridge Road (AM and PM peak) and Pacific Highway/Yirra Road (PM peak). However the EIS assessment appears to have underestimated the impacts. The LoS provided in the EIS is the intersection average which is heavily influenced by traffic signal optimisation to favour main road traffic. The actual delay on side streets has not been quantified.

It is noted that the impacts will only be temporary for a period of up 33 months and the short term impacts will be outweighed by the substantial long term benefits for the community. In addition to

		the broader economic benefits of the NorthConnex relieving traffic congestion along Pennant Hills Road the partial filling of the quarry will allow the quicker provision of a regional recreational facility. Notwithstanding the benefits, mitigation measures are required to minimise local traffic impacts. Recommendation: that the proponent of the proposal should commit to facilitating and implementation of required road infrastructure works to facilitate the flow of quarry haulage traffic including but not limited to: • Further optimisation of main road signal timings without incurring significant increases in delays in inside streets; • Extend the right turn bay on Pacific Highway (south approach) into Yirra Road. The traffic assessment in the EIS has established that the 'without project' scenario the associated queue length at this location is approximately 26 metres. The project is forecast to increase the mean maximum queue by 14 metres. Extension of right turn bay is required to prevent lane overspill and blocking of northbound through traffic. • Remove kerbside parking on Bridge Road west of Peats Ferry Road during duration of the project. • Provide peak period clearway parking restrictions on Peats Ferry Road in vicinity of Bridge Road. • Temporary closure of Roper Lane and signalisation of Peats Ferry Road and Watson Avenue. • All equipment at the works site be contained wholly within the site • The proponent should commit to undertake adequate notification and consultation if the proposed haulage routes are changed.
2.2	SWEPT PATH OF HAULAGE VEHICLES	Preliminary analysis of the swept path of truck and dog haulage vehicles established that
	HAULAGE VEHICLES	movements along the route could be completed satisfactorily except for the right turn movement from Yirra Road to Belmont Parade. It is noted in the EIS that the potential conflicts which will
		require further investigation as the design develops and the haulage routes are confirmed.
		Recommendation: Prior to approval of the project, the proponent of the proposal should

		confirm that the adopted route including all turns at junctions complies with the swept path of truck and dog haulage vehicles.
2.3	TRAFFIC MANAGEMENT LOCAL ROADS	Council believes the adverse construction traffic impacts associated with hauling spoil to Hornsby Quarry are acceptable given that the impacts are temporary and given the longer term community benefits in filling the quarry. However, while traffic delays and inconvenience are acceptable on a temporary basis, any reduction in road safety is not. While the management of traffic at intersections between state roads is a matter for the RMS, Council is able to assist with management of traffic from local roads to the state road network.
		2.3.1 Bridge Road To safely maintain 70 heavy vehicle movements per hour on Bridge Road parking should be removed from each side of Bridge Road west of Peats Ferry Road during approved work hours, to reduce vehicle and pedestrian conflict. No Stopping restrictions 6 am to 7 pm weekdays and 8 am to 1 pm Saturdays are required, with parking available other times for residents. However, under state government legislation, Council is only able to issue infringements to illegally parked vehicles. Only the RMS and Police have the authority to have illegally parked vehicles towed. Pedestrian access into TAFE via Bridge Road must also be deterred. Recommendation: The Department needs to be satisfied that RMS and/or Police have procedures in place to promptly remove vehicles illegally parked in Bridge Road West. The Department also needs to be satisfied that pedestrian access in Bridge Road is safely managed.
		2.3.2 Roper Lane Roper Lane is used by local residents in the area bounded by Bridge Road, Peats Ferry Road and Berowra Creek accessing traffic signals at the intersection of Bridge Road and Peats Ferry Road. These residents have no other signalised access to the state road network and as a result contribute up to 100 movements per peak hour in Roper Lane. Performing right turns out of that residential area into Galston Road or Peats Ferry Road is difficult during peak periods. While

Council endorses the temporary closure of Roper Lane to safely manage spoil haulage in Bridge Road, such a closure leaves those residents with no safe signalised alternative.

Recommendation: While Council endorses the closure of Roper Lane at Bridge Road, the endorsement is conditional on residents having a signalised alternative to access Galston Road and Peats Ferry Road during the closure. There are two projects in Council's Section 94 Plan that will provide alternative signalised access that can be operational when the quarry filling commences.

2.3.3 Peats Ferry/Watson/Mildred intersection.

This site will serve the southern half of the residential catchment effected by the closure of Roper Lane. Design is significantly advanced and negotiations with RMS regarding the design detail are ongoing.

Recommendation: Council requests the Department be satisfied that the traffic signals will be operational before approving the closure of Roper Lane.

2.3.4 Galston Road and Ethel Street.

This site will serve the northern half of the residential catchment effected by the closure of Roper Lane. Council's S94 Plan identifies traffic signals will be required at the intersection of Galston Road and Clarinda Street. Due to site constraints in Clarinda Street and the need to serve a local bus route in Ethel Street, Council is preparing designs to provide traffic signals at the adjoining intersection of Galston Road and Ethel Street instead. A design is significantly advanced and negotiations with RMS regarding the design detail are ongoing.

Recommendation: Council requests the Department be satisfied that the traffic signals will be operational before approving the closure of Roper Lane.

2.3.5 Bridge Road and Railway Parade.

Significant geometric delays limit the efficiency of traffic signal operation either side of the railway bridge on Bridge Road. All inward hauls to the quarry, and all out of peak period empty returns,

		will be via the railway bridge. Closure of Railway Parade will allow elimination of one signal phase serving the side road, providing approximately an additional 20 seconds for main movements. Council's S94 Plan includes part closure of Railway Parade, which has been deferred pending the provision of traffic signals at the intersection of Bridge Road/Miller Avenue and Hunter Street. Construction of the latter site is due to start around end of September 2015 after which Council will consult with the local community regarding the part closure of Railway Parade. RMS has made the part closure of Railway Parade a condition of approval for Bridge/Miller and Hunter. Recommendation: Council recognises that further amelioration of traffic impacts may be possible by bringing forward the part closure of Railway Parade currently listed in Council's Section 94 Contribution Plan.
2.4	CONSTRUCTION TRAFFIC MANAGEMENT PLAN	All works and haulage associated with spoil management at the Hornsby Quarry site shall be confined to standard day time hours comprising: • 7 am to 6 pm, Monday to Friday • 8 am to 1 pm, Saturdays • No work on Sundays or public holidays. Recommendation: A detailed traffic management plan (TMP) shall be prepared by the proponent as part of the construction environmental management plan. The TMP shall be prepared in consultation with Council and should include the guidelines, general requirements and procedures to be used when construction activities would have a potential impact on existing traffic arrangements.
2.5	MINOR ANOMOLIES AND CORRECTIONS	General - In June 2014 Council gazetted the name change of the former Pacific Highway, between Westfields Hornsby and Asquith shops, to Peats Ferry Road. The EIS documents incorrectly refer to this section as Pacific Highway. 2.5.1 In Section 4 of the Traffic and Transport Technical Paper of the EIS, it is indicated that George Street, Jersey Street North and Bridge Road between Peats Ferry Road and George

		Street and Ku-ring-gai Chase Road serve sub arterial function. These sections of the road network are in fact arterial routes.	
		2.5.2 Section 4.1.9 Refers to pedestrian footpaths on both sides of roads. This is generally correct however the lower part of Bridge Road near the TAFE entry has no footpaths. Also reference to two pedestrian overpasses at Hornsby Station: only one is available to general public, the other is a station platform only link.	
		2.5.2 Section 4.2.1 – Intersection Traffic Volumes and Tables 4-5 and 4-10, the EIS also refers to the intersection of Pacific Highway/ Ku-ring-gai Chase Road. Pacific Highway does not intersect with Ku-ring-gai Chase Road. This needs to be clarified.	
		2.5.3 Construction of residential dwellings at Asquith and Waitara is scheduled to occur in parallel with construction of NorthConnex. It is noted that Works regarding the Asquith rezoning are anticipated to require single lane closures on the Pacific Highway, north of the Hornsby Quarry site. This is not envisaged to occur at any location on Peats Ferry Road/Pacific Hwy north of Bridge Rd.	
		2.5.4 South of High Street, the Pacific Highway has 2 through travel lanes in each direction and not three lanes in either direction as noted in 'Section 4.1.1 – Pacific Highway', of the Traffic and Transport Technical Paper of the EIS.	
		2.5.5 Table 4-3 Station entry and exit barrier counts (2013). Latest barrier counts are available for 2014.	
	3 – BIODIVERSITY		
3.1	BIODIVERSITY GENERAL	3.1.1 De-watering of quarry/ aquatic biodiversity: An aquatic assessment was not undertaken to assess potential impacts to downstream environments as all the works will be undertaken in accordance with Council's existing de-watering/ groundwater licence (Vol.1 p250). It has	

therefore been assumed that dewatering of the quarry would not have a significant impact on downstream biodiversity and these works would operate under Council's existing licence with no cumulative/ additional impacts. Concerns are raised about the adequacy of baseline monitoring of aquatic biodiversity for Old Mans Creek and whether or not existing data is sufficient to monitor changes in water quality after project commences, with particular regard to monitoring the impact of a pollution event, should one occur.

Recommendation: Baseline aquatic biodiversity data be obtained as part of the Water Management Plan to monitor the biological condition of Old Man's Creek during infill operations to assess the adequacy of mitigation measures which prevent the occurrence of pollution incidents and discharge of poor water quality. Aquatic biodiversity should be regularly monitored and mitigation measures assessed for their effectiveness and reported annually.

3.1.2 Native vegetation removal: Details of vegetation condition and quantities of clearing proposed (Vol. 1, p258 and 259). The location of the proposed spoil stock piles are dominated by exotic grassland. However, it is understood that out of the 3.62ha of Blue Gum High Forest (BGHF) on site 0.06ha will be impacted. The EIS indicates BGHF on-site does not form part of the EPBC listing, however it should be noted that the Commonwealth Government's 2014 Conservation Advice now includes diatremes but the stand is excluded due to its condition due to the absence of the shrub layer (Smith and Smith 2012). Out of the 1.84ha of 'Smooth Barked Apple Red Bloodwood Peppermint Forest' on site 0.84ha will be impacted. A further 0.74ha of other regenerating vegetation would also be removed (dominated by A.littoralis). Total amount of native vegetation to be impacted is 1.64ha.

Recommendation: No further vegetation and impact assessment studies are required to be undertaken.

3.1.3 Opportunities for rehabilitation, soil seed bank topsoil translocation and seed collection: The BGHF, removed for road widening near Bridge Road, presents an opportunity for seed collection

(prior to vegetation removal) and seed bank topsoil translocation (during vegetation removal). It is noted that 'filled in void would be stabilised through hydro-seeding or similar. These measures would allow hand-over back to Council in an appropriately stabilised state managed by Council in the interim period before eventual rehabilitation into recreation land use' (Vol. 1, p61) and that 'rehabilitation efforts will be as per the landowners requirements' (Appendix G- Biodiversity Assessment Report, p47). Whilst it is understood that a separate EIS will be prepared for the geotechnical stabilisation and final landform rehabilitation works, it is recommended that RMS provide more information on the opportunities soil seed bank topsoil translocation and seed collection as part of the vegetation clearing process (not the post rehabilitation process/ after clearing has taken place) as an impact mitigation measure.

Recommendation: that a Soil Seed Bank, Topsoil Translocation and Seed Collection Plan be prepared as an Appendix to the proposed Flora and Fauna Management Plan and be provided to Hornsby Shire Council - Natural Resources for approval prior to commencement of works. Within the plan it must be noted that (i) seed collection will rely upon a narrow and suitable window period/season for collection and should be undertaken in accordance with the Florabank Seed Collection Guidelines by a qualified and experienced bush regeneration company, (ii) the specific methodologies for soil seed bank translocation (and recipient site preparation) should be prepared and supervised on the ground by a suitably qualified and experienced bush regeneration company, and (iii) ensure these rehabilitation requirements do not conflict with Parks recreational Masterplan for the site. The Flora and Fauna Management Plan will need to define who is responsible for and the timing of the rehabilitation activities.

3.1.4 Threatened Species and Biobanking Agreement / Offset Strategy: The targeted survey methods (Vol. 1, p250) are in accordance with NSW Government 'Framework for Biodiversity Assessment' (FBA) (as described Vol. 1, p247). The surveys reported, (i) a total of 8 (eight) x hollow-bearing trees are proposed for removal, (ii) Gang-gang Cockatoo Endangered Population potential habitat was identified on-site (no species observations during surveys), (iii) Threatened

bird - Varied Sitella record from the locality (Hornsby Park record from 2014) has been acknowledged in the assessment, and (iv) Genoplesium baueri (threatened orchid) was adequately surveyed using 2 reference sites to confirm flowering status and habitat suitability.

Information is provided (Vol. 1, p271) on Ecosystem and species credits requiring offsets. No offset strategy is provided at the moment (noted as forthcoming). This section describes the calculation of 30 ecosystem credits (Sandstone Blackbutt Woodland) and 33 species credits (for 1.64ha of Gang-Gang Cockatoo Endangered Population habitat). It should be noted that the site is on the margin of the Cumberland IBRA subregion and the Pittwater IBRA subregion and that application of the FBA methodology on the margin of 2 IBRA subregions may cause results that do not accord with local knowledge. Gang Gang Cockatoo credit requirement is an example of a potentially spurious result as the species doesn't occur on the site, has not historically and may only occur here in the future as refugia from climate change, whereas there is concern that insufficient attention may have been paid under the FBA framework to Varied Sittella and Powerful Owl with the area a known hotspot (breeding within 400m of the site) and Square-tailed Kite is a local breeding record less than 1km, with dispersal of young and foraging to the quarry vicinity.

Recommendation: It is recommended that in order to recognise the importance of the local breeding records that ecosystem credits be sourced from within the Hornsby Local Government Area where possible.

3.1.5 Mitigation measures: Noted in Table 7-27, p263 of Volume 1 is a Table of Avoidance and Mitigation Measures. It includes the provision of nest boxes, pathogen management, weed management and re-establishment of native vegetation.

Recommendation: With regard to the forthcoming 'Flora and Fauna Management Plan' that it provide details for the implementation of these measures and that (i) an appointed Project Ecologist/ Environmental Officer be present during commencement of on-ground works, (ii) Council have the opportunity to approve the Plan, (iii) soil seed bank topsoil

		translocation and seed collection be considered as a 'standard' mitigation measure prior to commencement and during works, and (iii) the collected seed be donated to Council's community native nursery at Pennant Hills. It should be noted that ideal seed collection times should be identified as soon as possible so that satisfying this requirement does interfere with timing of clearing works (a common issue with seed collection and development).	
		3.1.6 Noise impacts on fauna: Limited to during the day. Unlikely to significantly impact fauna (no nesting sites of threatened species have been established near the works area). The Flora and Fauna Management Plan (noted as forth coming) would address protocols to ensure this issue. Recommendation: No further recommendations are made on this issue.	
		3.1.7 Closure and changes to walking and MTB trail: Figure 4-5 of Volume 1 shows areas being investigated for bike trail access. Recommendation: That trails be relocated to retain a safe and viable trail network in accordance with a Trail Relocation Plan during the period of works and reinstated following works, for the approval of Council.	
	4 – COMMUNITY FACILITIES		
4.1	GENERAL	Council's goal is to provide a public benefit in facilitating state significant infrastructure (NorthConnex) and converting Hornsby Quarry and adjoining recreation space in Old Mans Valley into usable and much demanded recreation facilities for the growing population of Hornsby Shire. This is the best opportunity for such a conversion of the quarry since it passed into Council's hands in 2002 and may be the last such opportunity for some time.	
		Council has commenced preparation of a new plan of management for the Quarry, Old Mans Valley and Hornsby Park that will bring the three areas into one plan and clearly indicate Council's intention to create new recreation facilities and continue to manage existing facilities there.	

4.2	MINOR ANOMOLIES AND CORRECTIONS	Figure 1-3, Indicative Site Layout, and other figures used elsewhere in the EIS, that the proposed sealed road stops at the southern end of the stockpile area. The current access track from Quarry Road to this point is unsealed and rarely used by Council. Recommendation: Given that construction traffic will be using this access track, it is considered that it should be upgraded and sealed to Council's standards. Figure 1-3 Indicative Site Layout (and the numerous variations of base figure throughout the EIS) show the "Existing quarry void fence" in the wrong location. Generally the fence should follow
		the line identified as "Fence around project zone".
		5 - HERITAGE
5.1	INVENTORY	The Hornsby Quarry and environs contain a number of heritage items including item No.538 (Hornsby Quarry Diatreme and surrounding vegetation), No.537 (Sandstone Steps – Quarry Road), No.13 (Hornsby Park, Lone Pine and sandstone steps – 203X Pacific Highway) and also contains two archaeological items being No. 55 (Higgins family cemetery, sandstone receptacle, cool room, site of Higgins Homestead and memorial) and No.54 (Diatreme, Hornsby Quarry and surrounding vegetation) listed under the provisions of Schedule 5 (Environmental Heritage) of the Hornsby Local Environmental Plan 2013 (HLEP).
		The property is located in the vicinity of the Hornsby West Side Heritage Conservation Area and a number of items are also located in the vicinity of the Quarry and access areas in Dural Street, Bridge Road and Peats Ferry Road under the provisions of Schedule 5 (Environmental Heritage) of the Hornsby Local Environmental Plan 2013 (HLEP).
5.2	RECOMMENDATIONS	5.2.1. The uppermost section of the exposed Diatreme rock face should remain visible (uncovered) for future public view, with any fill material not exceeding RL 55 on the eastern face. 5.2.2. The EIS measures to protect the Diatreme from the proposed conveyor located on the eastern side of the Quarry and associated machinery should be implemented, including those measures outlined in Section 10 of Appendix I, Tables 7.42 and 7.46 Environmental Management Measures for Non-Aboriginal and Aboriginal Heritage.

	6 - COMMUNITY		
6.0	COMMUNITY INFORMATION	The operator to – 6.1 establish a register to record community complaints received during works; and 6.2 provide adequate signage with contractor contact details on site fencing around works.	