WILLIAMTOWN & SURROUNDS RESIDENTS ACTION GROUP INC.

Submission to Department of Planning- SSD 13_6125

Introduction

This is the formal submission by Williamtown and Surrounds Residents Action Group Inc. objecting to the proposed development SSD 13_6125 – Cabbage Tree Road Sand Mine.

This action group Williamtown and Surrounds Residents Action Group Inc. was developed to professionally allow the community to have their voice heard in protecting their environment and way of life within Williamtown.

We believe that the below principal needs to be adopted when assessing this proposal in full.

Precautionary principle –

The unknown and known significant risks to this significant Environment can only be avoided by refusing this proposal.

Key Points (not limited)

- Lack of community consultation by Port Stephens Council
- Controversial History of the tender process with Port Stephens Council
- Mayor of Port Stephens conflict of interest with this proposal
- The project changed its name, it had previously been known as the Williamtown Sand Quarry when the proposal went on exhibition and it is now known as the Cabbage Tree Road Sand Quarry. This was perceived as a tactic to confuse interested parties
- The proponents carried out the lack lustre community consultation rather than the engaged environmental company
- No Biodiversity offset strategy – Secretary Requirement
- Umwelt used an unethical approach with attending the community meeting, not identifying themselves until they were approached and then proceeded to use information collected from the evening in the EIS without consent
- The identified site is too close to residents, it does not give adequate buffer zone as per guidelines
- The removal of Koala 'habitat crucial to the survival of the species" cannot be allowed to occur.
- Inadequate noise mapping and analysis
- Nil mention of the 'red zone' of contamination and complete disregard to the directive from NSW EPA that all operations within the red zone must adhere to the cautionary and precautionary principle
- Inadequate surface and ground water modelling and analysis

Controversial History

"I don't blame you, I wouldn't want it anywhere near my house either" Murray Towndrow - Williamtown Sand Syndicate, 1030am 17 February 2015 on the front steps of our home.

The community became aware of the proposal after the initial lack lustre community consultation from 2 members of Castle Quarry Products. Following the release of this information and the proactive approach from the now committee of WSRAG Inc, information was found from many sources on how the proposal had come about and the questionable history with the tender process that was carried out by Port Stephens Council. As information grew a picture of deception, conflict of interest and previous questionable sand mine activities by the proponent came to light.

The proponent CQP had recently had legal action against them for illegally clearing and sand mining the premises 2 Zircon Lane in Fullerton Cove. This action had been brought against them by Port Stephens Council. The same council that gave CQP a lease on the site at Cabbage Tree Road. More questions were raised of CQP when due dilligence was carried out and they seemed to be a $2 shelf company backed by the scandalous Nathan Tinkler and Buidlev.

http://trra.com.au/wp-content/uploads/2015/08/150724-Cabbage-Ttree-Sand-Mine-Story-Part2-.pdfAttached in

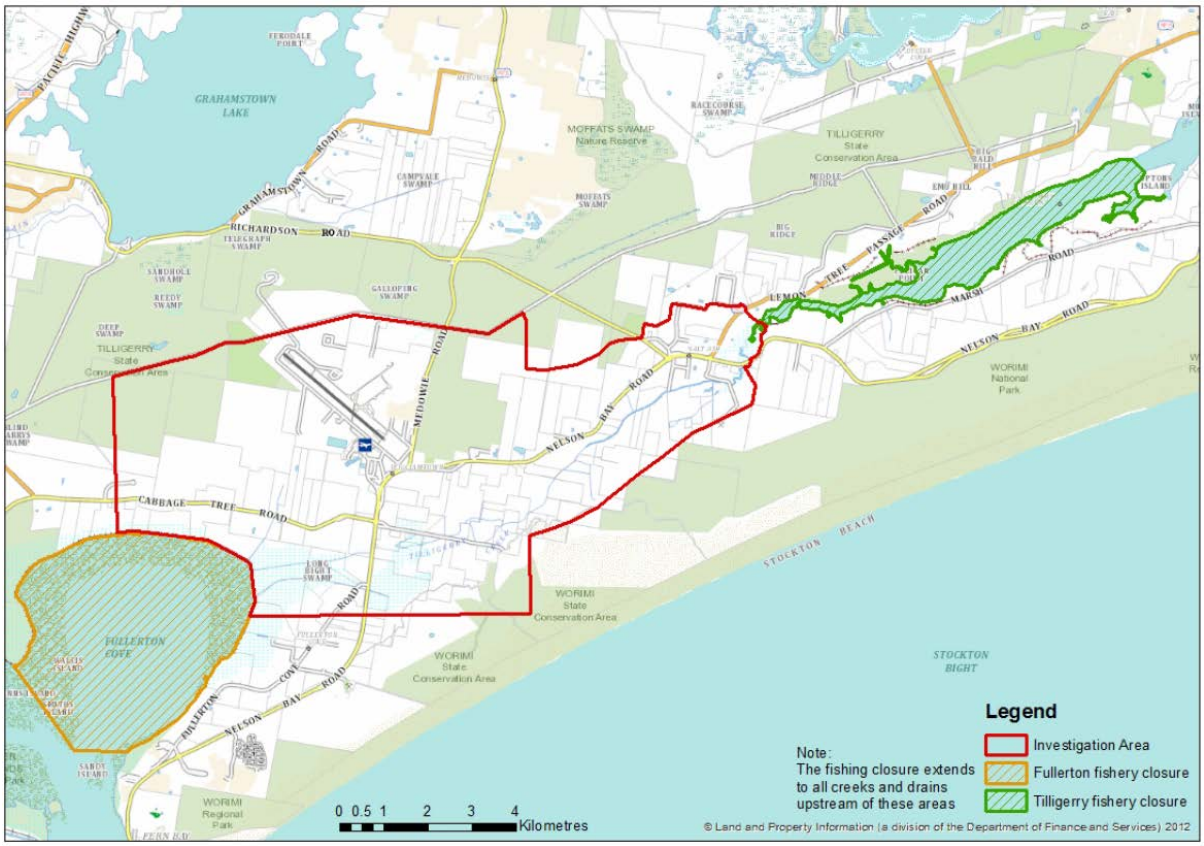
Transcript of Radio National Background Briefing Documentary can be found at http://www.abc.net.au/radionational/programs/backgroundbriefing/the-sandman/6819704

This documentary investigated the tender process and brought to light the questionable process that Port Stephens Council undertook to find a proponent.

Red Zone

The proposal is located within the EPA Red Zone investigation area following the contamination from Williamtown RAAF base of toxic chemical from Aqueous Fire Fighting Foam containing Perfluorooctane sulfonate (PFOS) and Perfluorooctanoic acid (PFOA). The below map outlines the investigation zone and the effected residents and properties. 650 properties sit within this perimeter and all residents are dealing with the situation they currently find themselves in, an unprecedented situation where our ground water and surface water has been contaminated by Defence activities.

In the words of Defence representatives 'we don't know if this is the beginning, the end or the middle of the contamination. These chemicals have been used on base for the last 40-50 years and at present we cannot stop the contaminants from leaching off the base hot spots'



Source; www.epa.nsw.gov.au/resources/MinMedia/152670-williamtown-investigation-area-211015.pdf

The local area that is currently defined as the Red Zone sits upon a unique aquifer known as the Tomago Sand beds, we will discuss this in further detail in under the water impacts. This water source can provide Newcastle with up to 25%of its water supply and has also provided the Central Coast with water in times of drought. Due to nature of the land and the high level aquifer, it has given rise to this catastrophe which is the Williamtown RAAF contamination.

It has significantly impacted residents, their economic stability, way of life and both physical and mental health. Port Stephens Council have already started to add the following statement to 149 (5) Certificates

> *RAAF Base Williamtown Environmental Investigation Project*
>
> *The land is within the RAAF Base Williamtown Environment Investigation Project investigation area. The Department of Defence is undertaking a long term environmental investigation and assessment of the groundwater beneath the RAAF Base Williamtown site and surrounds. The Department of Defence and the NSW Environment Protection Authority (EPA) are leading the investigations testing is being undertaken in affected area and residents are being advised to avoid drinking bore water, eating fish caught from Tilligerry creek or Fullerton Cove or consuming eggs from backyard chicken's. For more information visit the project website http://www.defnce.gov.au/id/Williamtown/Default.asp or contact Department of Defence 1800 011 443 email Williamtown.defence@urs.com*

Residents will obtain 149 (5) certificates when applying for a development application for their property and also if they were to list their property for sale. It would appear that all properties should be under the same rules regarding developments, especially when a proposed sand mine could further interrupt the water table with the removal of the vegetation, removal of the natural typography of the land and could further exacerbate the spread of the contaminates. This is hugely important as the current expert panel headed up the NSW Chief Scientist professor Mary O'Kane and the EPA do not understand the exact hydrology or the interactions between the surface and ground water. The proposal is highly questionable and inappropriate before the news of the contamination, and now given the current situation. The development should not proceed and put further pressure on an already fragile water dependant ecosystem.

Defence and RAAF Williamtown commissioned a report into the contamination; this report was released and received by Port Stephens Council on 23 May 2013. This report was followed up by Defence commissioning the Stage 2 Investigations which lead to the RED Zone Investigation area set by the NSW EPA. This is also when the wider community was informed of the serious nature of the situation. The report is reference below as sources of spread and exposure of PFOS and PFOA. A concern is the local sand mining operations and the potential run off encroaching onto the local flora, fauna and aquifer.

NOTE: the Stage 1 report is too large to attach. A full copy will be posted to the Department of Planning on a memory stick.

GHD – Transfield Services – Conceptual Site Model for AFFF Contamination

(Defence and EPA refer to this as the Stage 1 Report, Defence are now carrying out the Stage 2B of the investigation)

- Workers on sand mining sites immediately south of RAAF WLM. GHD is nt aware of any groundwater extraction for his purpose however, it is possible that dewatering may be required and therefore it is included here as a possible (unconfirmed) receptor.

6.2.1 page 68

- The receiving surface water bodies down-gradient of RAAF WLM, notably, the marine environment of the Pacific Ocean, Port Stephens and the estuarine environment of Fullerton Cove.
- Natural oyster beds in Tilligerry Creek.
- Aquaculture resources.
- Plants and animals as described for on-site receptors above.
- Undisturbed bushland to the west and east of RAAF WLM could potentially receive contamination via airborne material, run-off or surface water.

6.2.2 page 69

Water Impacts

The issue surrounding the water impacts for the environment and the community are very complex and of great concern. The concern is now even greater with the Red Zone investigation area imposed on the community.

These issues will be addressed under this water impacts section, including expert reports and opinions, reference to the history of the site and impacts to the aquifer, bore water results and historical studies completed into the water supply.

The main concerns are the potential damage to Newcastle's Water supply, increase in water table level, spread of contamination, increased surface water and run off. The EIS has not addressed the increase in surface water, the changing levels of the water table or the RAAF Williamtown contamination. There is a requirement to not extract lower than a meter above the watertable. One would think this is quite a hard task given the unique characteristics of the aquifer and that this level is dynamic depending on discharge and recharge rates. There is a question as to if the correct groundwater flow model was the correct model to use. This is due to evapotranspiration accounting for over 80% of the rainfall, so changes to evapotranspiration can be the major issue that will impact the qualities of the grand water and not the ground water flow as stated. Interestingly the EIS only simulation ground water flow and ignored and changes to the vegetation. A key area that needs to be addressed as it is of huge concern for the community.

Tomago Sandbeds

Hunter Water References and Land & Water Conservation

The Tomago Sandbeds is an underground water source that provides about 20 percent of the lower Hunter's drinking water. The sandbeds are parallel to the coast between Newcastle and Port Stephens, starting at Tomago and extending north-east for 25 kilometres to Lemon Tree Passage.

An extensive system of underground bores and vacuum stations draws raw water from the sandbeds and pumps it to Grahamstown Water Treatment Plant. The maximum storage is about 100,000 megalitres of water above sea level, of which Hunter Water can access about 60,000 megalitres with existing infrastructure from a portion of Tomago Sandbeds covering about 100 square kilometres

The sandbeds are a natural geological feature, consisting of a layer of highly permeable fine grained sands underlain by impervious clay and rock. The thickness of the sand layer reaches a maximum of 50 metres, but on average is 20 metres deep. The source of the water is the rainfall that lands directly on the sand surface. While a proportion of the rainfall is lost to plants and evaporation, sufficient water is stored in the sand to provide a viable and significant source of water for ongoing extraction.

The sandbeds are strategically important for both ongoing and backup water supply. Ongoing supply from the sandbeds reduces the load on surface water sources (Chichester Dam and Grahamstown Dam) and thereby allows greater overall yield from the total water supply system. This large storage volume can also be used as a reserve supply during drought, and is available as a backup supply in the event of water quality issues in the surface storages.

http://www.hunterwater.com.au/Water-and-Sewer/Water-Supply/Dams-and-Catchments/Tomago-Sandbeds.aspx

“It is recognised that increasing development and land use pressures in the catchment of source waters causes a decline in raw water quality and a resultant increase in risk to the security of drinking water”.

“The predicted change in distribution of vegetation communities may have an impact on the natural filtration of water”

“Water quality and catchment health Water from the Tomago aquifer is of reliable quality. This has been the result of both favourable natural conditions and forward-looking land zoning. Sand itself is a good filter of contaminants and therefore pollutants do not travel quickly and are normally inactivated. In addition, most of land in the catchment areas has historically been zoned a water reserve which preserves drinking water quality. To date, the most significant issue to water quality has been managing the area’s grey sands which contain iron and arsenic minerals. These can oxidise on exposure to air (eg during mining activities) liberating dissolved forms of these metals to the groundwater. Some areas of the sandbeds are naturally very high in dissolved minerals and other areas may have been contaminated by past mining activities. High mineral levels at some sites have caused the inactivation of some bores. Although industry at Tomago is not new, there has been increasing pressure from industrial land uses in and around the sandbeds due to a demand for industrial land close to Newcastle: • Tomago Aluminium, which produces airborne fluoride as a by-product of the refinery process, has expanded. • Other potentially polluting industries (eg a lead battery smelting facility) have been approved adjacent to the sandbeds. • Large manufacturing plants are being built on the outskirts of the catchment with significant areas of hard surface. • The Defence RAAF base has expanded over the aquifer which brings with it risks of fuel contamination. It is becoming increasingly important to work with land use planners and industry in this area to protect the sandbeds as a natural resource”

http://www.hunterwater.com.au/Resources/Documents/Plans--Strategies/CatchmentMangementPlan_FINAL_Mar2011_lowres.pdf

Hunter Water had been in contact with a local resident regarding personal issues for this resident, they had contacted out group for assistance and forwarded information to see if we could help with their issues. Below are two paragraphs within the email. This below paragraph 1 outlines exactly why the clearing of this vegetation should not go ahead. It is well researched that if you clear trees and vegetation, this can result in changes to the water table. In the current climate where we have

experienced large rainfall which is not uncommon to the area, we are experiencing the water table as high as a 30cm below ground level. We do not believe that the EIS has taken into account the change to surface water when the contours of the land are changed. The proposed extraction is located adjacent to swamp areas. Residents are concerned as to what will happen next time we experience a large rain event, will our properties experience greater amounts of water as the natural water filtration of the vegetation and sand dunes have being destroyed. Paragraph 2 demonstrates the variances and fluctuations with the water table and its relationship with rain fall.

Paragraph 1

The primary source of inflow to the water table is recharge from rainfall, and the primary loss of water is evapotranspiration. Evapotranspiration includes direct evaporation from wet areas, and transpiration by trees, with the trees being the biggest contributor to drawing down the water table.

Paragraph 2

Water levels across Tomago tend to fall when rainfall is below average (1979 to 1987, 1991 to 1998 and 2001 to 2006, 2010 and 2014), they rise when it is above average (1988 to 1990, 1999 to 2000 and 2007 to 2009, 2011 to 2013 and 2015.

By removing the vegetation and excavating the contours and natural filtration it can decrease evapotranspiration (water usage by the plants), and with natural rainfall the recharge will increase would increase groundwater levels around the vicinity of the mine, this was alluded to in the email by Hunter Water. This reaction is a direct result from an action such as excavation and construction and is widely reported.

Another resident from Cabbage Tree Road has also received a similar message; they had applied to clear 11 hectares of vegetation for agricultural purposes. The application was made for clearing vegetation under the Native Vegetation Conservation act 1997 and it was refused on the basis that it could cause damage to threatened species and the water table. The request was refused for the reasons we are fighting for today. It needs to be the same rules for all.

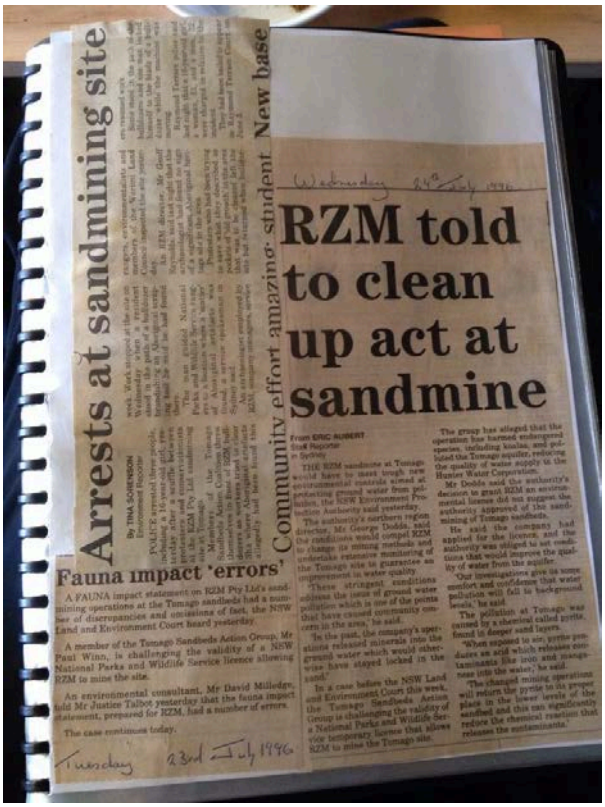
Potential environmental impacts as a consequence of the proposed clearing include the destruction of threatened species habitat, including the koala, the potential contamination of the groundwater aquifer and the disturbance of potential acid sulphate soils (PASS).

Land and water degradation potential

The site is very low lying, with a high water table. Much of the locality has the potential to flood in extreme weather conditions. With less vegetation on site, the chance of waterlogging is likely to increase.

The property is located over the Tomago Sandbeds groundwater aquifer, which supplies drinking water to Newcastle and surrounding areas. The potential contamination of the groundwater system may arise from the leaching of nutrients from fertiliser and cattle waste.

History of Tomago Sandbeds and Mining



Arrests at sandmining site

Community effort amazing student New base

RZM told to clean up act at sandmine

Fauna impact 'errors'

Historically this site was part of the RZM Mine, where it was used to mine for Rutile and Zircon. This mining practise has left damage to this day to the water quality in the area. The photo and the below paragraph are an example how our local community had previously won the battle to protect our environemtn and water supply.(this will be supported by water results in section….)

https://www.greenleft.org.au/node/11849

A number of the HWB pumping stations at Tomago have had to be closed because the water is unusable due to iron contamination.

As well, the minister for land and environment, Kim Yeadon, recently sent letters to 800 local residents, many of whom draw untreated water from the area, saying it was dangerous to use the water from Tomago sand beds due to rising levels of arsenic.

The Tomago sand beds have being widely studied spanning many years, the studies have looked at the mineral mining process and why there was a direct correlation with a rise in Iron and Arsenic levels. Local residents who have lived in the area for decades have advised that the mineral mining operations were shut down due to the arsenic levels in the water. With this historical knowledge in mine, we carried out baseline tests on bore water and a swamp sample. These results showed that the bore water had levels for mild concern of aluminium and arsenic. Dr Steven Lucus from the Tom Farrell Institute at the University of Newcastle analysed the results. The arsenic level exceeded the trigger value for ANZECC. The summery is below and the report is attached in the appendix.

Summary

The Bore Water sample contained elevated Aluminium and Arsenic and exceeded the 95 % level of protection trigger values for freshwater. Aluminium exceeded the 80 % level of protection trigger values for freshwater meaning > 20 % of species would be impacted at these concentrations. The objective is to provide a level of protection for > 99 % of species. Aluminium (equal to guideline value) and Arsenic (~ 3 times guideline value) were equal to or exceeded Australian Drinking Water Guidelines (NHRMC, 2011).

The rise in iron and arsenic level are an issue in sand mining/quarrying proposals, it is a result of air getting into a previously saturated soil profile and oxidising sulphides and resulting in increased metal concentrations. If this result is near an old mine site then these results are not unexpected. However this site has not being mined since the early 90's. If local residents are still experiencing above trigger levels of arsenic and aluminium after two decades, how will further mining affect the levels. Based on the arsenic level of 0.02 mg/L (20 ug/L) for the property adjoin the proposed site on Cabbage Tree Rd. It is elevated and above average. This is of concern due to more unknowns and again not enough investigation in the EIS.

The report "Development of New Trigger Levels and a Data Analysis Protocol – Northern Dune NSW" (found in NSR12/1082-01) tabled the following variability of metal concentrations from baseline monitoring at the Northern Dune

	Dissolved Iron (mg/L)	Total Iron (mg/L)	Dissolved Arsenic (mg/L)	Total Arsenic (mg/L)	Dissolved manganese (mg/L)	Total manganese (mg/L)
Mean	1.306	2.403	0.001	0.004	0.025	0.039
Max	5.190	9.610	0.002	0.020	0.171	0.197
Min	0.005	0.200	0.000	0.001	0.001	0.002

A Ramsar-listed wetlands community with threatened flora, fauna and migratory specie is located 650 meters to the south of the project. These wetlands have National and International significance and as such need to be protected.

INQUIRY INTO ADEQUACY OF WATER STORAGES IN NSW

Name: Ms Prue Bodsworth

Date received: 31/08/2012

The RAMSAR boundaries are notionally listed as the back edge of the Fullerton Cove Mangroves however just as water knows no political boundary, neither do the birds. All of Fullerton Cove including the low lying alluvial plains between the Cove and Williamtown are home away from home to the birds who, (although perhaps not prevalent or obvious during EPBC Self Assessments by CSG companies), arrive in abundance when the rains and surface water inundation occur at various times throughout the year.

The water here does not just support the native and migratory birds. The National Water Commission conducted a survey during 2005-2006 to identify the significant plant species existing in the areas adjacent to Fullerton Cove including the Tomago and Tomaree Sandbed areas.

"seven species were listed as nationally threatened in the Environment Protection and Biodiversity Conservation Act 1999 or the Threatened Species Conservation Act 1995(NSW); one species was considered to be nationally rare…three endangered ecological communities (as listed in the Threatened Species Act) were identified within the sandbeds."

The above quote comes from Waterlines Report Series No.46 May 2011

Submission - Dr Steven Lucus separate submission via website – main concern from Dr Lucus

Detailed groundwater modelling has not been undertaken and until this is known there will be further uncertainty with respect to changes in hydrology, flood extents and export of pollutants within the catchment. Even if there is a business case for this mine there is the larger issue of uncertainty within the Tilligerry catchment that needs to be clarified before any more sand mining approvals in the area.

Appendix – water results – Dr Steven Lucus report

Summary and Recommendations

In summary the impacts to the ground water given the current climate and the importance of the water source are far too great to give any further approvals for development in the area. The potential impacts to the water dependant ecosystem and the local residents would be highly detrimental. Following community and expert opinion the key recommendation is to knock back the development to not put further pressure on the fragile aquifer. If the development is progressed we support the recommendations that the a total hydrology modelling of the underground aquifer is completed and the we understand the full extent of the RAAF Williamtown contamination before giving any approvals for major developments.

Ecological Assessment

Summary

The proposed site is part of a water dependant ecosystem, home to a significant portion of the Port Stephens Koala population. This koala population is currently under review for an endangered listing due to the current predicted levels of a total of 200 koalas. The koala forms and falls under a level of significance at both a state and federal governments. This is recognised by the federal Department of the Environment and the NSW Office of Environment and Heritage. The proposal will wipe out preferred Koala Habitat, a total of 10 koalas were found on site as noted in the EIS, this area is classed as imperative to the survival of the population and to mitigate interbreeding of the current gene pool.

The Koala plan of Management presented in the EIS was presented and as per the opinion of Dr Chris Mclean is one of the lease rigorous plans reviewed. Issues include a lack of understanding of the literature and the ecology of the koala.

Statement of Koalas preferring larger trees (section 2.2). This is not always correct, for example Sally Radford at Pine Creek while radio tracking Koalas found that they actually preferred smaller trees, as these are easier to climb than larger trees.

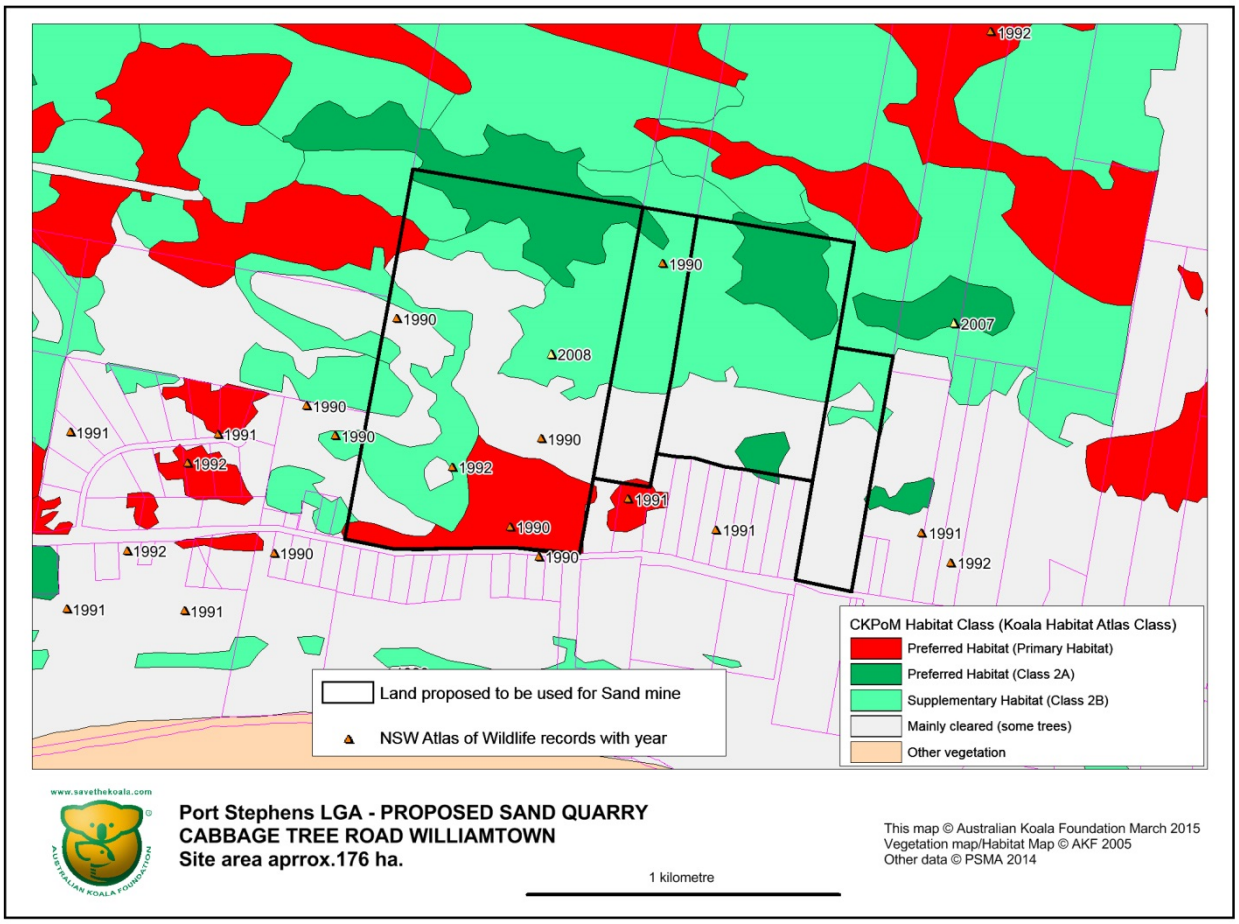
There is a major deficiency with the Koala management plan on many levels including, the danger of vehicle strike due to the location of the site, not attempt has been made to the effect on the accumulation of the impact of the species in the local area and the monitoring program has no scientific background.

The other issues with the EIS and ecology is that there is no overall assessment of the cumulative impacts which is a requirement of the DGR's and the minimum survey requirements are not met for the threatened species both the koala and New Holland Mouse. Other key species that the proposal will impact are the Earps Gum and Wallum froglet as per David Paull's submission in the appendix. Records of the study area indicate that the mine will affect 50% of both of these species.

Of great concern of both our expert opinions and also the community is that there is no formal offset or offset calculations using the NSW Bio banking calculator have been included. This is a key requirement of any development in NSW and not addressed in the EIS.

In Appendix 8, the methodology for how the offsets are to be determined is detailed. However, there are no specific biodiversity offset listed. EIS documents ought to provide details and mapping of the proposed biodiversity areas, to demonstrate a) that offset areas of the type required are in fact available and b) that the offset areas actually are appropriate. The requirement of the DGR's is to include a 'compressive offset strategy'

Wildlife corridor is a sparsely vegetated area and only goes north to south; there is not east to west wildlife corridor. The corridor outlined in the proposal has the site access cutting through it. What wildlife will use this area with such an intrusive operation within the preferred koala habitat? As per the below map represents the significance of the habitat to the koala population.



Appendix – David Paull submission attached

Biodiversity is extremely important factor in maintain and preserving the status quo with the larger environment of the area, from keeping pests at bay to help the farmers to preserving the species that currently use this area as their habitat. The sand dunes have been largely untouched and are the breeding ground and restocking sanctuaries for both vegetation and wild life. The Koala corridor is just one example, however other smaller species of wildlife such as frogs, reptiles and birds such as wrens, that require understory vegetation for their existence, that make it very ecologically important that these last remnants of natural vegetation are to remain.

Aboriginal and Cultural heritage

There are deficiencies in the cultural heritage assessment that was undertaken. There was an absence of the local Aboriginal groups raising concerns with the proposal. One site was noted as significant, where they found 66 objects, it was noted that this area had no historically value in the EIS. Recently a neighbouring property has located a possible 'scar tree' which is currently undergoing investigation for its aboriginal cultural significance. This could possibly link the site with the artefacts to the 'scar tree' and increase the knowledge of the aboriginal history and significance of the area and proposed site. The EIS it makes vague mention of cultural values section 2.4 of appendix 9.

Although not of aboriginal decent, there is various evidence that the sand dunes and their dense vegetation was used by the local Aboriginal inhabitants. There are many sites on the Stockton sand dunes that are sacred sites. The sand that is proposed to be extracted is historically part of the existing sand dunes over 10'000 years ago. It would therefore suggest that the existing use rights of the orginal custodians of the land be considered.

Traffic and Road Impact

General comments

There are two traffic appendixes in the EIS both state that the roads are in good working order and can cope with the extra traffic. The community would explore the department to carry out their own investigations into the road as;

1- The surface of the Cabbage Tree road is questionable in many are, recently part was resurfaced. The trucks had caused damage to the new part with holes being filed within days of the works being completed.
2- The heavy vehicles cause buckling of the roads in places and dips within the surface.
3- The road has concealed driveways with overtaking allowed in parts, this causes safely issues with residents entering and exiting their properties.
4- The road has slight bends and vegetation which limit visibility. Many residents on a regular basis have near accidents due to trying to get home.
5- There is no current signage for 'concealed driveways' or 'no stopping'
6- The recommendations for the addition of a truck land on both sides of the mine entrance will cause further
issues with the traffic and danger to residents

Traffic averages

The average traffic was monitored on Wednesday 20 November 2013 which was a Wednesday and on February 15 2014 which was a Saturday. To gain an adequate knowledge of the roads and traffic, would it not be suitable that this would have been done over a longer period of time. As per most roads, Saturdays will experience much less traffic than during the week; hence these results seem to be floored, especially when heavy vehicle traffic is considerable less on weekends.

The EIS has referred to Heavy Vehicle traffic around the project area to be found to be 10% of total traffic – this statement does not seem to be backed up by any evidence other than an off the cuff statement. It is important to also note that heavy vehicle traffic continues right through the night. Sand trucks and truck and dogs are witnessed travelling along Cabbage Tree Road at all hours.

Bus stop

At the entrance to the mine site there is a school bus stop, it is not sign posted or the sign has being removed. We know that this bus stop is used for a local resident who lives opposite the entrance. It would put in question the safely of this nine year old getting off the bus to have a) have the bus stop moved and they have to walk on the busy road and b) to have a bus stop where the entrance to the mine is with trucks both entering and exiting. This will cause undue stress on the family who will be impacted.

Truck Movements

On Page 75 of the EIS it states where the traffic and trucks from the quarry site is likely to go. It gives a percentage of truck movement's to certain areas; this seems to be another off the cuff statement and figures as there is not a study or evidence to back up the statement. This would inturn bring into question is there a need for the sand, especially given there is another 5 sand mines within a 10km radius to this proposal.

Signage

Currently the road safely is questionable for residents part 4.7.5 looks at this area, there no provision for extra signage of concealed driveways, do not overtake, do not use exhaust brakes. All of which need to be considered for local residents. It is not just an operational mine that is concerning the community but the cumulative affects to our quality of life.

Report Assessment

Christopher Hallam and Associates Pty Ltd have scrutinised the traffic impact reports and advise there are some details that need to be followed up. Access is on an RMS road, and the proposed transport routes are all on RMS roads makes the proposal a little different to other development proposals and traffic reports it will make the views of the RMS more important.

It is also note that the Road Safety Audit recommends that the acceleration length be increased to 350 m and signage be installed if the proposal is to proceed. Christopher Hallam advises that the recommendations of this Road Safety Audit be complied with. From the residents perspective especially the properties surrounding the proposed acceleration and deceleration lane, it will pose a significant issue with accessing our properties.

Operating hours and lane Development

The operating hours of transport are 5am to 6pm. This will result in the new deceleration land and acceleration land being used from 5am if not beforehand, given the current heavy vehicle traffic travelling at night time. There are 25 homes within 500 meters either side of the mine entrance. The majority of these residences will be negatively impacted by not only the noise of the trucks slowing down and speeding up but also it will impact entering and exiting their properties. For example the proposed acceleration lane is 315 meters and will end half way across 350 Cabbage Tree Road. If the recommended length of 350 meters is put in, the land will go across the whole of the property and finish on the neighbouring property. This will cause issues with the safety of residents and the use of their homes. Opposite the lane is a local business which will also be negatively impacted by this lane and change to the road framework. This is unreasonable to expect residents to deal with these changes and cause further anxiety with leaving their properties and coming home.

A point that does not seem to be in the EIS is how and where will they get the width of the road to make an acceleration lane? This development on the road has many questions that are unanswered, many aspects that will affect residents. It will also affect the drainage between the road and properties; this does not seem to be identified by the EIA

A suggestion would be to actually discuss with all affected residents how often we deal with near accidents because of an inappropriate overtaking lanes, concealed driveways and other traffic not slowing down for turning vehicles. Most residents don't have an escape route option if they are going to have another vehicle run up their behind. There have being many near misses, many accidents, many brake marks and vehicles in ditches. This will only increaser with the [proposed road changes and ultimately it will be the residents who pay the price with either personal or property damage.

ACTION: There is nothing I am aware of, apart from refusing this proposal, which can insulate our home and our small community from the devastating economic impacts this project would have. We are not totally against sand mining; we have always said that, however the proposed site is totally inappropriate and unacceptable from a social and community perspective. We have millions of tonnes of fugitive sand blowing off the sand dunes just to the East of the proposed site and onto native vegetation which could be easily harvested. There is also another 5 sand mines within a 15km radius of the proposed site.

Social Impact

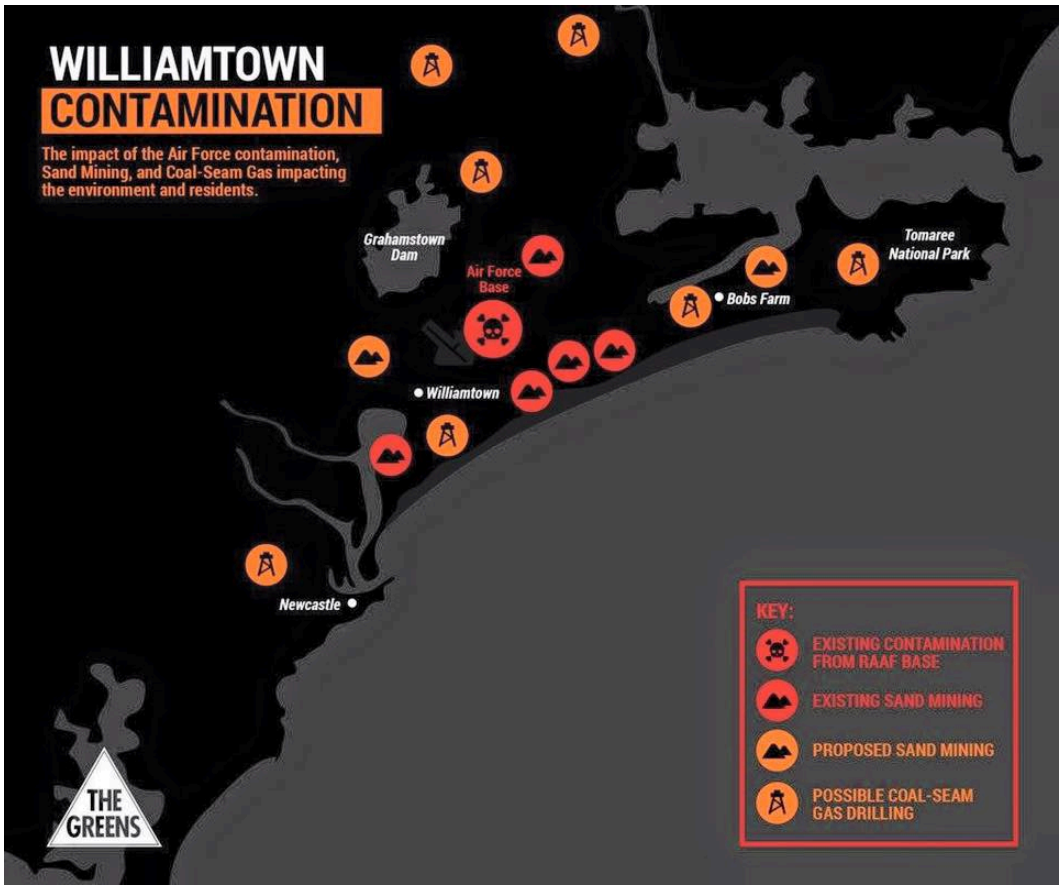
Summary

The impact of the proposal will have a significant impact on the local residents and community. The proposed sand mine would kill our way of life. Noise from the operations on site, air vortex separator, tub grinders, trucks, and general machinery would disturb the peaceful enjoyment we currently have. The removal of significant landforms and associated vegetation to the west, North West and north of properties would provide unfettered noise from the RAAF Base to travel right to the heart of homes and further expose our families and animals.

There is an increase in sources of stress for the community, from an increase in noise to a change in the traffic conditions to having the realisation that our economic stability could be affected. There is a huge question mark over the community consultation, or lack thereof especially from Port Stephens Council and the minimal consultation from CQP.

At present the community feels and quite rightly has this opinion that Williamtown and Surrounds is under threat, this is outlined in the picture below and also the flyer that was authorised by Lee Rhiannon – Greens Senator.

Appendix – Williamtown Area Under Assault – The Greens flyer



The above picture outlines that there are five other sand mines in the local vicinity where the product can be already mined. There is no need for this inappropriate development as it can be sourced from more appropriate and sustainable locations without the desecration of a water dependant ecosystem and rural hamlet on Cabbage Tree Road.

Community View

During the community meeting that were held by WSRAG Inc. it was very clear that the local community was concerned about the impacts that this proposal was going to have on each individual. At the initial meeting over 120 people turned out to the Williamtown Hall. During this meeting we asked the question 'who was visited by the representatives from CQP?' a total of 11 people put up their hands. This coupled with the letter box drop carried out on Barrie Close was the extent of the community consultation. It left questions unanswered and concerns. Many community members had tried to contact the number left on the flyer, with no luck. It would seem that the proponent was non-existent. Especially when CQP was investigated and the number was disconnected and the registered office was unattended and had no signage. Some of the questions were answered when the lease transfer came before council. More questions were then raised as to who would be operating the mine, now that the director of the new company was an accountant with no mining experience. Interesting enough the same man Murray Towndrow was still linked to the new proponent Williamtown Sand Syndicate.

Appendix – two way Port Stephens Council.

Patricia Gillard – Comments on Social Impact Study – report will be attached to the Wilderness Society, please refer to official report when assessing social impacts.

Patricia echos the communities worries in her report stating 'The report contains very few pages about the social circumstances of the affected communities and the ways that sandmining may change these to the detriment of families, community groups or businesses.

Issues with the social impact report are that they have only used secondary sources, that being media reporting, a door knock and taking notes from our WSRAG Inc. meeting. We agree with Patricia and had found it very intrusive and rude that Umwelt had used information gathered at a community meeting for the EIS. It is very unethical especially when they did not advise that the beginning of the meeting that they were in attendance. Page 126 has s graph with community concerns, where did the information come from?

The approach from Umwelt and Williamtown Sand Syndicate is to treat the issues instead of the impacts the community face, there is no understanding as to how the day to day life of residents will be changed as a direct result of the sand mining. The emphasis has been put on the industry perspective and not the local residents or those specific issues with Williamtown. There was no two way communication other than the initial community consultation, the result was a total lack of community engagement. The EIS has not developed any form of mitigating the impacts from the

proposal but rather the onus is on the resident to keep a diary of any issues that arise. These should have been addressed when the project was designed.

The proposed site was being designed without taking into account the local residents or adequate buffer zones between the sand extraction and properties. Please refer to Air quality section for buffer zone distances. This appears to be an unprecedented proposal with its close proximity to homes and properties.

Air Quality

Air quality is a huge concern for the community, whether it be the severe threat of silicosis or impacts on other respiratory conditions. More information is becoming available as to the threat of sand and silica dust. In America local communities are feeling the impact of sand mining.

The proposed air quality management measures listed in section 4.9.5 of the main text of the EIS is that 'quarry operations will be subject to a staged shutdown of equipment based on a rolling 24 hour average PM 10 concentrations, PM 10 concentration spikes and adverse meteorological conditions. This inclusion of such a requirement would be to protect the community and these needs to be put in as a condition of approval if the proposal is to proceed. This will make it clear what measurements and conditions would be trigger points for the staged shutdown.

With any mine or quarry operation there is a risk of increased dust and diesel emissions. We know that dust travels as per Dr Van Steenis, Visit to the Hunter Valley: Urgent Reform of Coal Industry Operating standards; Children living 1.5km from a coal mine have 33%risk of Asthma, at 3km the risk is 22% and at 5km it is 12%. The quarry will be as close as 20 meters to a resident's boundary. The product that will be mined is classed as high grade silica sand; there is a real risk of not only silicosis but also other related respiratory diseases, Asthma, COPD and chronic rhinitis.

The airborne particle/dust study seems to be flawed. It was carried out with a wind speed of 3.1 m/s whereas we are regularly subjected to winds >70kmh i.e. >20m/s. Real established risk of sand dust silicosis was dismissed in the report, which is of great concern to all surrounding residents

Silica Sand Safety

The risks of silica sand are clearly outlined in the DPI document below and safety material data sheets, full documents in appendix.

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Health Issues

Crystalline silica inhaled in the form of quartz or cristobalite has been identified as a carcinogen by the International Agency for Research on Cancer. Most countries have regulations controlling exposure to silica and other hazardous products. In Australia, the National Occupational Health and Safety Commission establishes exposure limits and handling guidelines for a wide range of materials.

Health issues related to silica are prompting an increasing use of substitutes. There are many alternatives for silica raw material. (Harben & Kužvart 1996). Manufacturers of abrasives are using alternative, harder materials — such as ilmenite, garnet and calcined bauxite, and calcium carbonate is replacing silica in cleaning compounds for similar reasons. In foundries, bauxite and alumina, chromite, olivine, vermiculite and zircon can substitute for silica. Calcium carbonate, ilmenite, olivine and pyrophyllite can replace silica as fillers, and activated carbon can replace silica as filtration media. Magnesite, dolomite, graphite and bauxite can be used instead of silica in refractories. Wollastonite can supplant glass fibre as a reinforcing agent in plastic manufacture.

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H335 - May cause respiratory irritation
H350 - May cause cancer (inhalation)

Buffer Distances

Given our research into buffer distances, this would seem to be an unprecedented proposal in close proximity to homes. Given the guidelines for other states and the risks they take into account, we feel it necessary that the proposal is changed to make the extraction sites at least 500 meters from resident's homes.

Western Australia EPA – Guidance for the Assessment of Environmental Factors – No 3 June 2005

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Electric power generation	generating electricity – 20 megawatts or more (total) for natural gas & 10 megawatts or more (total) for other fuels	√ (52)	DoIR, WRC		√ NO_X, SO_X	√	√			3000-5000, depending on location & size
	natural gas-fuelled electricity production – more than 10, but less than 20, megawatts total	√ (84)	DoIR, WRC		√ NO_X	√				2000-3000
Extractive industries – hard rock, Darling Scarp	quarrying (including blasting), crushing and screening	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√		√	1000
– not hard rock	blasting, grinding and milling works – material processed by grinding, milling or separated by sieving, aeration etc	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√		√	case by case

Screen shot from http://www.epa.wa.gov.au/EPADocLib/1840_GS3.pdf

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
– no blasting conducted	grinding and milling works – material processed by grinding, milling or separated by sieving, aeration etc	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√			case by case
– sand and limestone extraction	no grinding or milling works		WRC, local gov't			√	√			300-500, depending on size

Screen shot from http://www.epa.wa.gov.au/EPADocLib/1840_GS3.pdf

Table 6: Recommended minimum buffers (metres) for primary industries

(NB: The desirable buffer in the circumstances will be the separation distance and conflict avoidance strategy that protects: community amenity, environmental assets, the carrying out of legitimate rural activities in rural areas and the use of important natural resources.)

		Residential areas & urban development	Rural dwellings	Education facilities & pre-schools	Rural tourist accommodation	Watercourses & wetlands	Bores & wells	Potable water supply/ catchment	Property boundary	Roads
Piggeries[1]	Housing & waste storage	1000	500	1000	500	100	SSD	800	100	100
	Waste utilisation area	500	250	250	250	100	SSD	800	20	20
Feedlots[2]	Yards & waste storage	1000	500	1000	1000	100	SSD	800	100	100
	Waste utilisation area	500	250	250	250	100	SSD	800	20	20
Poultry[3]	Sheds & waste storage	1000	500	1000	500	100	SSD	800	100	100
	Waste utilisation area	500	250	250	250	100	SSD	800	20	20
Dairies[4]	Sheds & waste storage	500	250	250	250	100	SSD	800	100	100
	Waste utilisation area	500	250	250	250	100	SSD	800	20	20
Rabbits[5]	Wet shed, ponds & irrig.	300	150	150	150	100	SSD	800	50	50
	Dry shed	120	60	120	60	100	SSD	800	20	20
Other intensive livestock operations[6]		500	300	500	300	100	SSD	800	100	100
Grazing of stock		50	50	50	50	BMP	SSD	BMP	NAI	BMP
Sugar cane, cropping & horticulture		300	200	200	200	BMP	SSD	BMP	NAI	BMP
Greenhouse & controlled environment horticulture		200	200	200	200	50	SSD	SSD	50	50
Macadamia de-husking		300	300	300	300	50	SSD	SSD	50	50
Forestry & plantations		SSD	SSD	SSD	SSD	STRC	SSD	SSD	BMP	STRC
Bananas		150	150	150	150	BMP	SSD	SSD	BMP	BMP
Turf farms[8]		300	200	200	200	50	SSD	SSD	BMP	SSD
Rural industries (incl. feed mills and sawmills)		1000	500	500	500	50	SSD	SSD	SSD	50
Abattoirs		1000	1000	1000	1000	100	SSD	800	100	100
Potentially hazardous or offensive industry		1000	1000	1000	1000	100	SSD	800	100	100
Mining, petroleum, production & extractive industries		500 1000*	500 1000*	500 1000*	500 1000*	SSD	SSD	SSD	SSD	SSD

* Recommended minimum buffer distance for operations involving blasting.

Screen shot from NSW DPI Living and Working in Rural Areas Chapter 6

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0019/210196/Living-and-working-in-rural-areas-Ch6.pdf

Mining and extractive industry				
Open cut coal mine	Harvesting, crushing, screening, stockpiling and conveying of coal		1000	
Gas and oil extraction	All natural gas or oil production wells including tight, shale and coal seams		250	
Mine for other minerals	Crushing, screening, stockpiling and conveying of other minerals		250	
Quarry	Quarrying, crushing, screening, stockpiling and conveying of rock	Without blasting	250	
		With blasting	500	
		With respirable crystalline silica	500	

Screen shot from - Recommended separation distances for industrial residual air emissions Victoria EPA

Publication Number 1518 – March 2013

http://www.epa.vic.gov.au/~/media/Publications/1518.pdf

Sand Separator and Tub Grinder

The proposal mine will use a tub grinder to mulch the vegetation and a sand air vortex separator. Both of these will create both noise and dust for local residents. Another reason to have an adequate buffer zone between extraction and homes.

Local Residents Health

See the below article discussing our neighbour Max and how the change in air quality will affect his quality of life and puts a question on whether they will be able to remain in their home. This is totally unacceptable to put any resident at risk of respiratory health.

http://www.theherald.com.au/story/3538086/max-gasps-for-breath-over-sand-quarry-plan/

By JOANNE MCCARTHY Dec. 4, 2015, 11:57 a.m.

With only 20 per cent lung capacity caused by the childhood condition bronchiectasis, Mr Reddie, 64, fears for the future if the Cabbage Tree Road quarry on the council-owned site is approved only a few hundred metres from his home.

"I'm worried about my lungs and the silica dust that's going to be thrown up because it's straight behind our place. We're the closest ones to it," Mr Reddie said.

Air quality modelling found the potential for exceedances of national standards under some circumstances, but "impacts to air quality can be managed", the EIS said.

Supporting documentation from America

Chrispin Hayes Pierce Phd – 19 February 2009 Potential Health risks to proposed sand mining at Chippewa Falls – presentation attached in appendix

Dr Wayne Feyereisn – Assistant Professor of Medicine

http://www.minnesotamedicine.com/Portals/mnmed/May%202013/Commentary-Feyereisn.pdf

Conclusion

Silica sand mining and processing are associated with several potential public health risks. Given that there will be pressure to increase both sand mining and processing in Minnesota within the next decade, there is an urgent need for further study of the health risks they pose.

We know silica dust is a public health threat and that we need to set standards for reasonable exposure limits. Once standards are set, then individual sites need to be monitored by independent contractors

http://www.sandpointtimes.com/Potential-Public-Health-Risks-of-Silica-Sand-Mining-and-Processing.htm

- Why is it risky
- Our lungs have a great clearing mechanism in the bronchi- Anything larger than 10 microns is effectively cleared. Deposited in the mucus layer, goes to our gut and gets cleared.
- Anything smaller than 10 microns, especially those particles smaller than 4 microns easily go all the way to the alveoli (air sacs)

http://fracsandfrisbee.com/wp-content/uploads/2013/12/Tools-for-Local-Govt-draft-DECEMBER-13_2013.pdf

From a health perspective that the Environmental Quality Board (Minnesota) has done a good job of creating a tool kit and an offer on the table to help communities and counties with their expertise when reviewing mining and sand processing applications. It is essential that all communities and counties tap that resource.

Quote from Assoc Prof Wayne Feyereisn - As health professionals we have a duty to try and protect our patients from health risks. I do not think it hurts to point out that Quality of Life issues and safety issues from a traffic perspective are also important that are not addressed

GHG Emissions Assessment

The projected greenhouse gas (GHG emissions are analysed is at section 4.12.2.1 of the main text of the EIS. This analysis fails to include an estimate of GHG emissions from petrol combustion for onsite vehicles and from land use clearing; on the groundsheet they are not forecast to be a major source of energy use of GHG emissions. No justification for this statement is provided.

In respect for petrol combustion for onsite vehicles, this exclusion is unusual. Other EIS for large scale quarries were found that petrol combustion from onsite vehicles were fully projected in the GHG emissions analysis. It would seem to through doubt into the efficacy of the GHG emission analysis as a whole.

ACTION: The precautionary principle must be adopted in this instance and the mine proposal refused.

RAAF and Airport Significance

- Located in close proximately to runway
- Potentially an international airport
- JSF fleet will be arriving in the next couple of years
- If contours taken away will effect sound mapping
- Sand dust impacts aircraft performance with significant safely and financial implications#
- #.Department of Aerodynamics and flight mechanics. I. LEKAS, G. KALLOS, J. KUSHTA, S. SOLOMOS, E. MAVROMATIDIS. 6th International workshop on sand/dust storms associated with dust fall. Sept 2011 Athens.

RAAF Williamtown and Defence will have to revaluate the ANEF noise mapping to accommodate for the change in noise when the natural landscape is flattened.

Economic Impact

There are a few main features that come into play when you think about the economic viability and also the economic stress it will place on local residents.

This is all summed up in our expert report by Dr Samuel Wills below.

Cabbage Tree Road Sand Mine

Dr Samuel Wills

13 February 2016

This note raises some about the amount of compensation being paid to the local community from this project, and the way it will be directed. I understand that Port Stephens Council will receive $20 million compensation. This represents a small share of the gross revenue from the mine, and is unlikely to cover the direct and indirect costs borne by the local community. The compensation will also be incorporated into the Council's general revenue, so is unlikely to directly benefit those most affected by the mine. This will be a particular concern if Port Stephens and Newcastle councils merge.

The AU$20 million compensation paid to the local community, via Port Stephens Council, represents 1-6% of the mine's gross revenue. The mine is expected to produce 3.32 Mt of high quality silica sand (WSS, 2015). Rough estimates of the export price of this sand range from AU$125-450, depending on the market (USGS, 2013). The local community is therefore realising a very small share of the retail value of the resource.

$20 million is unlikely to cover the direct and indirect costs the mine will impose on the local community. Direct costs include the impact on land values. If the value of the 60 properties within 750m of the mine drop by $100,000 each the total cost will be $6 million. If they drop by $330,000 each then the total cost will be $20 million. Direct costs also include health costs, which have the potential to be considerable.

Indirect costs include reductions in the environmental and amenity value of the area, which the community should also be compensated for. While environmental and amenity values can be difficult to estimate, there is an international push for them to be included in local, state and national accounts (see the UN's System for Environmental and Economic Accounting, 2015). One (admittedly rough and incomplete) method of valuing the local environment is based on the value of fauna. There are an estimated 10 koalas in the area. A UQ and ANU discussion paper placed the value of Australia's Koala population at $0.3-1.6 billion in 1997 (Hundlow and Hamilton, 1997). This amounts to a conservative estimate of $500 million in 2016. Save the Koalas conservatively estimate the nation's koala population at 100,000, amounting to $5 million per koala. Displacing a small proportion of these koalas may therefore have a significant impact. Indirect costs also include the additional cost of traffic congestion, and visual and air pollution.

Finally, as the compensation will be paid into general revenue, it is unlikely to benefit the community members most affected by the mine. It is homeowners and businesses along Cabbage Tree Road that will bear the brunt of the proposal, through lower property values, worse traffic and potentially adverse health effects. This will be a particular problem if Port Stephens and Newcastle councils merge, as general council revenue will be spread even further.

In summary, the compensation paid by this mine is unlikely to cover the direct costs of the mine to the local community, let alone the indirect costs. Furthermore, the compensation that will be paid is unlikely to reach the community members who need it the most. Port Stephens deserves better.

References

Hundloe T. and Hamilton C., 1997. Koalas and Tourism: An Economic Evaluation. The Australia Institute, UQ and ANU Research Paper.

UN, 2015. System for Environmental and Economic Accounting. www.unstats.un.org.

USGS, 2013. 2013 Minerals Yearbook: Silica. US Department of the Interior.

Williamtown Sand Syndicate, 2015. Environmental Impact Statement: Proposed Sand Quarry, Cabbage Tree Road, Williamtown. Volume 1.

ACTION: There is nothing I am aware of, apart from refusing this proposal, which can insulate our home and our small community from the devastating economic impacts this project would have. We are not totally against sand mining, we have always said that, however the proposed site is totally inappropriate and unacceptable from a social and community perspective. We have millions of tonnes of fugitive sand blowing off the sand dunes just to the East of the proposed site and onto native vegetation which could be easily harvested. There is also another 5 sand mines within a 15km radius of the proposed site.

Noise Impacts

We have had a noise impact expert review the noise impact assessment in the EIS and made the following comments.

- Projected noise levels should be given in statistical format not averaged. Averaging the noise levels, as in the noise impact assessment, does not provide detail on peak noise levels that may cause disturbance

- The impacts of noise cannot be accurately estimated by reference to noise level alone. It requires consideration of the human response to the noise, to determine the actual impact it will have on residents. This is not considered in the noise impact assessment.

- The assessment does not include a noise impact survey of the impacts actually experienced by residents currently, to provide a base noise impact measurement. Particularly, there is no assessment of the actual, quantifiable impacts experienced by the two distinct noise sources: The RAAF base and road traffic.

- Data collected by local residents indicates there is a bimodal age distribution, and the two age groups (17-25 and 25-71) are affected by noise differently. Without appreciating and analysing this data, the actual impacts on residents cannot be properly predicted. Such analysis is absent from the assessment.

- When the quarry is operational, the noise levels will rise and may impact upon residents. It is this impact which needs to be accurately and quantifiably assessed in the noise impact assessment to make it meaningful. However, the noise impact assessment does not have an accurate assessment of the increase in noise levels (in relation to existing noise levels), and makes no attempt to estimate what the likely response of residents to these noise level rises will be. The consultant preparing the assessment should have been able to make these predictions, as they should have information on the sound power of the machinery to be used at the quarry and the likely attenuation of the bunds used for noise attenuation (no data on the likely attenuation to be achieved by the bunds is included in the noise impact assessment).

- These failures mean the current assessment cannot be relied upon as an accurate assessment of noise impacts.

Noise - Community Concerns

- Operating hours between 7am and 6pm Monday to Friday and 7am to 4pm on Saturdays
- Transportation and loading between 5am and 6pm Monday to Friday and 7am to 4pm on Saturdays
- Noise of the clearing and mulching of the vegetation, bulldozers and tub grinders, bull dozers and tub grinders are well about the 100 decibel reading.
- Noise and impact of the trucks on the road and driving on the mine site
- The contours of the sand and trees are a natural noise buffer to the RAAF Base Williamtown and Newcastle Airport. The removal of significant landforms and associated vegetation to the west, north west and north of properties would then provide unfettered noise from the RAAF Base and airport. This became evident when the bushfires in October 2013 burnt out the vegetation. Many residents have shared their experience with the increase in noise without the vegetation, they are concerned about what will happen if the mine goes ahead.

ACTION: An appropriate and industry standard buffer between the site boundaries and any neighbouring properties of between **300-500** meters be enforced**.**

ACTION: Appropriate noise barriers be erected around the perimeter of the site with a height no less than the height of the highest piece of machinery to be used on the site – including the Air Vortex Separator.

Visual Impacts

The EIS has not taken into account the visual impacts of the proposed mine. The extraction zone will be 20 meters from a boundary of one property, where the residents will be able to see the operation of the mine. Residents who are on the higher levels to the East of the proposed site will look out over onto the proposed mine either to the side or behind their properties.

The below photos are looking out at the back of two of the houses that are on the hill to the east of the site, at present all higher up homes enjoy views of a bus outlook, the proposed mine will soon change this for these residents to the East of the Mine site and also for the Residents to the West who will also look out over the operation.

Politician Input and Correspondence

During the last 12 months WSRAG Inc. has been involved and had many discussions with the local, state and federal politicians. All of whom have being very active with opposing the sand mine and sending correspondence to other departments involved in the process.

Attached in the appendix is correspondence and materials produced from Jeremy Buckingham, Kate Washington, Lee Rhiannon, Dr Mehreen Faruqi and Sharon Claydon.

Key Recommendations

We are calling on your department to refuse the proposal

ACTION: An appropriate and industry standard buffer between the site boundaries and any neighbouring properties of between **300-500** meters be enforced**.**

ACTION: Appropriate noise barriers be erected around the perimeter of the site with a height no less than the height of the highest piece of machinery to be used on the site – including the Air Vortex Separator.

The precautionary principle must be adopted in this instance and the mine proposal refused
There is nothing I am aware of, apart from refusing this proposal, which can insulate our home and our small community from the devastating economic impacts this project would have. We are not totally against sand mining, we have always said that, however the proposed site is totally inappropriate and unacceptable from a social and community perspective. We have millions of tonnes of fugitive sand blowing off the sand dunes just to the East of the proposed site and onto native vegetation which could be easily harvested. There is also another 5 sand mines within a 15km radius of the proposed site.

In relation to protecting Koalas and their habitat your department must step in where the council and the proponents have turned a blind eye and take immediate action to stop the proposal.

ACTION: Decrease the speed limit to 70km/h for 2 km either side of the proposed entry. Widen the road. Create safe turning shoulders for residents to enter and exit their properties. Install speed cameras. Install noise barriers for the length of the acceleration and deceleration lanes on either side of the road to shield nearby homes. Install concealed driveway signs and limit compression braking signs.

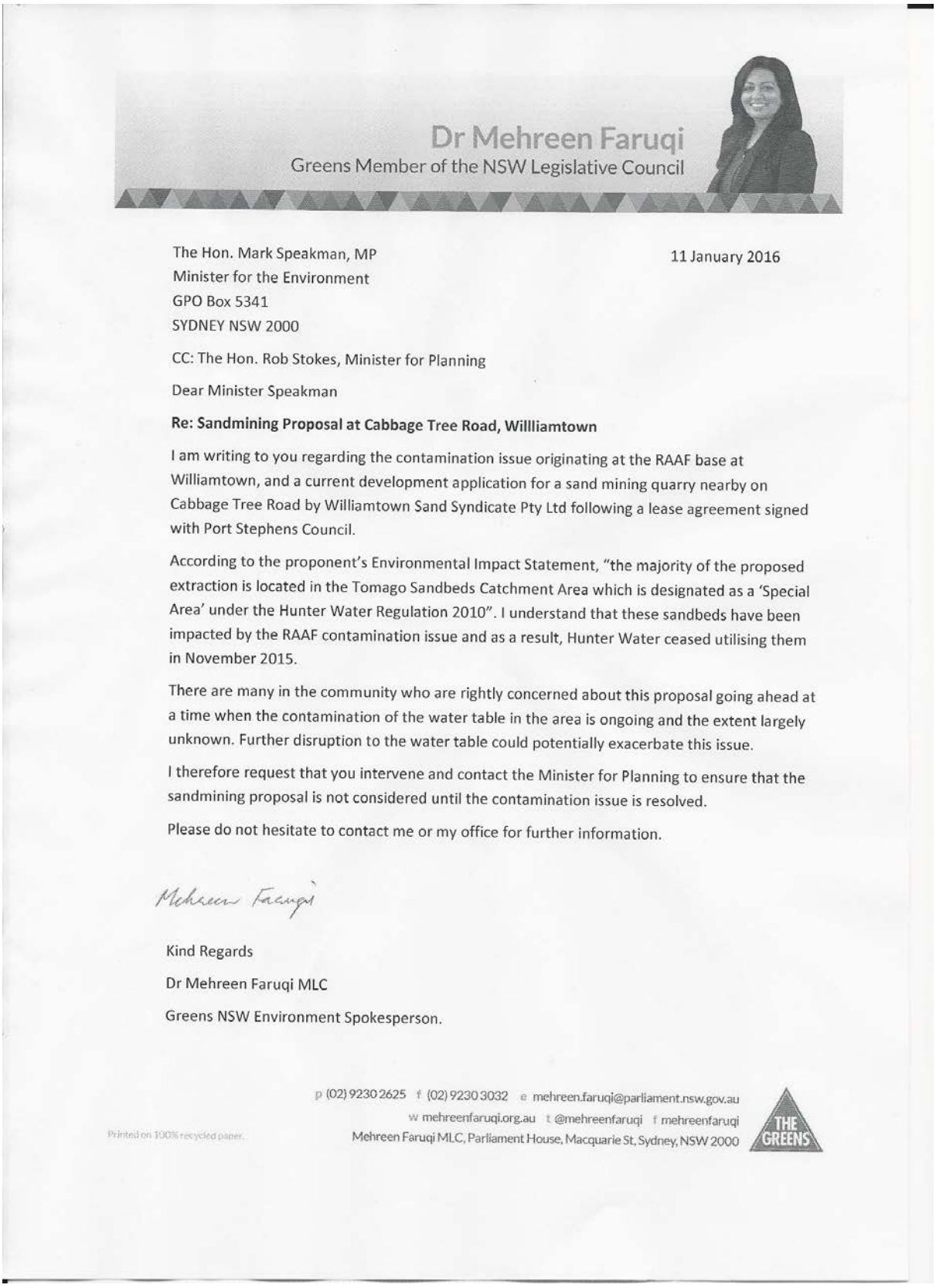
ACTION: Provide double glaze windows for nearby properties.

ACTION: Narrow the hours of operation proposed to between 8am and 5pm weekdays and between 10am and 4pm weekends.

Clearing and levelling of the site will create huge water run-off problems during high rain events. This run off would flow directly onto our property and proper ground and surface water studies have not been conducted nor have any measures been put in place to mitigate our property being flooded from the proposed site.

ACTION: Only by conducting a proper hydrological assessment of the site and effects of surface and ground water impacts to neighbouring properties can a decision be made as to adequate measures which will need to be put in place to protect our property.

Appendix attachments



Dr Mehreen Faruqi
Greens Member of the NSW Legislative Council

The Hon. Mark Speakman, MP
Minister for the Environment
GPO Box 5341
SYDNEY NSW 2000

11 January 2016

CC: The Hon. Rob Stokes, Minister for Planning

Dear Minister Speakman

Re: Sandmining Proposal at Cabbage Tree Road, Willliamtown

I am writing to you regarding the contamination issue originating at the RAAF base at Williamtown, and a current development application for a sand mining quarry nearby on Cabbage Tree Road by Williamtown Sand Syndicate Pty Ltd following a lease agreement signed with Port Stephens Council.

According to the proponent's Environmental Impact Statement, "the majority of the proposed extraction is located in the Tomago Sandbeds Catchment Area which is designated as a 'Special Area' under the Hunter Water Regulation 2010". I understand that these sandbeds have been impacted by the RAAF contamination issue and as a result, Hunter Water ceased utilising them in November 2015.

There are many in the community who are rightly concerned about this proposal going ahead at a time when the contamination of the water table in the area is ongoing and the extent largely unknown. Further disruption to the water table could potentially exacerbate this issue.

I therefore request that you intervene and contact the Minister for Planning to ensure that the sandmining proposal is not considered until the contamination issue is resolved.

Please do not hesitate to contact me or my office for further information.

Mehreen Faruqi

Kind Regards

Dr Mehreen Faruqi MLC

Greens NSW Environment Spokesperson.

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Mehreen Faruqi MLC, Parliament House, Macquarie St, Sydney, NSW 2000

THE GREENS

Sharon Claydon MP

FEDERAL MEMBER FOR NEWCASTLE

9 April 2015

Mr Cain Gorfine
350 Cabbage Tree Road
Williamtown NSW 2318

Dear Mr Gorfine

Thank you for your correspondence of 12 March, 2015 and your discussions with my office regarding the Williamtown Sand Mine project on behalf of the Williamtown and Surrounds Residents Action Group.

I appreciate that there is a range of community concerns in relation to the Williamtown Sand Mine project, including concerns about the environmental impact of the project, the likely increase in noise pollution, along with concerns about the lack of transparency and community engagement throughout this process.

I note from your correspondence that you have had contact with the Independent Commission Against Corruption (ICAC). ICAC's principal function is to investigate and expose corrupt conduct in the NSW public sector and I can advise that this is the correct course of action regarding any allegations of corruption.

Given the range of community concerns across multiple portfolio areas, I have made formal representations to the Prime Minister, the Hon. Tony Abbott MP asking him to address the issues you have raised.

I will forward the Prime Minister's response to you as soon as it is received.

Once again, thank you for contacting me about this important issue.

Yours sincerely

Sharon Claydon

Sharon Claydon MP
Federal Member for Newcastle

Address: 427 Hunter Street, Newcastle NSW 2300 **Phone:** (02) 4926 1555 **Fax:** (02) 4926 1895
Email: sharon.claydon.mp@aph.gov.au SharonClaydonforNewcastle @SharonClaydon
Web: www.sharonclaydon.com

THE HON. JEREMY BUCKINGHAM MLC
Member of the Legislative Council
THE GREENS NSW

The Hon. Pru Goward, MP
Minister for Planning
GPO Box 5341
SYDNEY NSW 2001

16 March 2015

Dear Minister Goward,

RE: Major project No SSD 13-6125 – Williamtown Sand Mine

Please find attached a letter from the Williamtown and Surround Residents Action Group, which I received on March 11, 2015 following a recent visit I made to the Williamstown area.

On my visit I met with members of the Williamtown and Surround Residents Action Group who are very concerned about the prospect of a large sand mine in their community. The proposed sand mine has the potential to seriously damage the Tomago Sandbeds, the fragile water supply for the Hunter region, as well as cause significant air and noise pollution for local residents.

As you can see in the attached letter in addition to the inappropriateness of this mine from a social, economic and environmental perspective, there are a number of outstanding and serious concerns about the planning process for this mine to date.

Could you please provide me with a response to the concerns listed in the attached letter as soon as possible, as well as an update as to where this proposal is up to in the planning process and whether the government holds any other concerns regarding this mine.

Yours sincerely,

Jeremy Buckingham

Parliament House, Macquarie Street, Sydney NSW 2000 | Phone: 02 9230 2202 | Fax: 02 9230 3341
Email: jeremy.buckingham@parliament.nsw.gov.au | www.jeremybuckingham.org

THE HON. JEREMY BUCKINGHAM MLC
Member of the Legislative Council
THE GREENS NSW

The Hon. Rob Stokes, MP
Minister for Planning
GPO Box 5341
SYDNEY NSW 2001

4 May 2015

Dear Minister Stokes,

RE: Major project No SSD 13-6125 – Williamtown Sand Mine

Please find attached a letter from the Williamtown and Surround Residents Action Group, which I received on March 11, 2015 following a recent visit I made to the Williamstown area.

I sent this letter to the previous Planning Minister, Pru Goward, on 16 March 2015 but have not yet received a response.

On my visit I met with members of the Williamtown and Surround Residents Action Group who are very concerned about the prospect of a large sand mine in their community. The proposed sand mine has the potential to seriously damage the Tomago Sandbeds, the fragile water supply for the Hunter region, as well as cause significant air and noise pollution for local residents.

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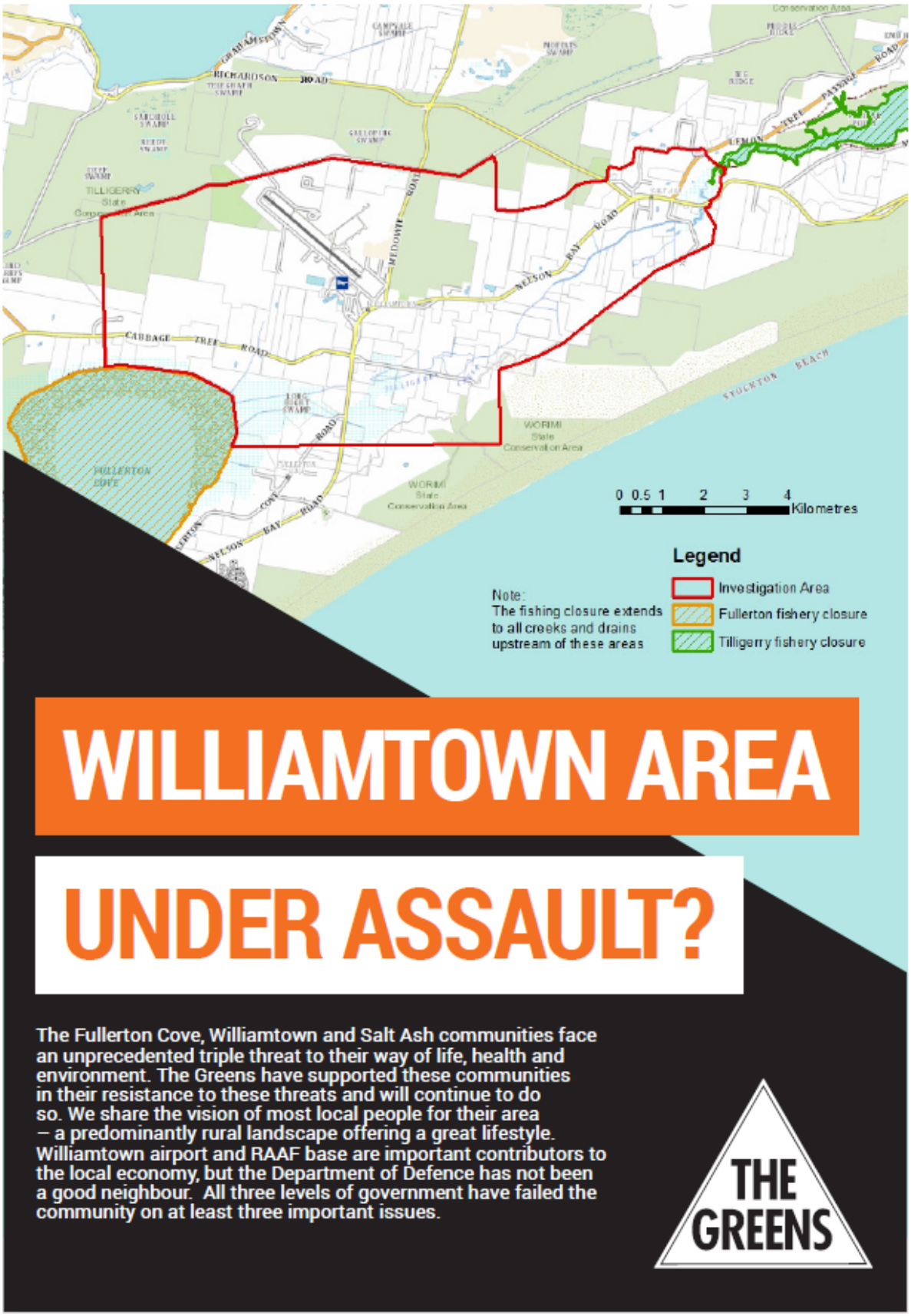
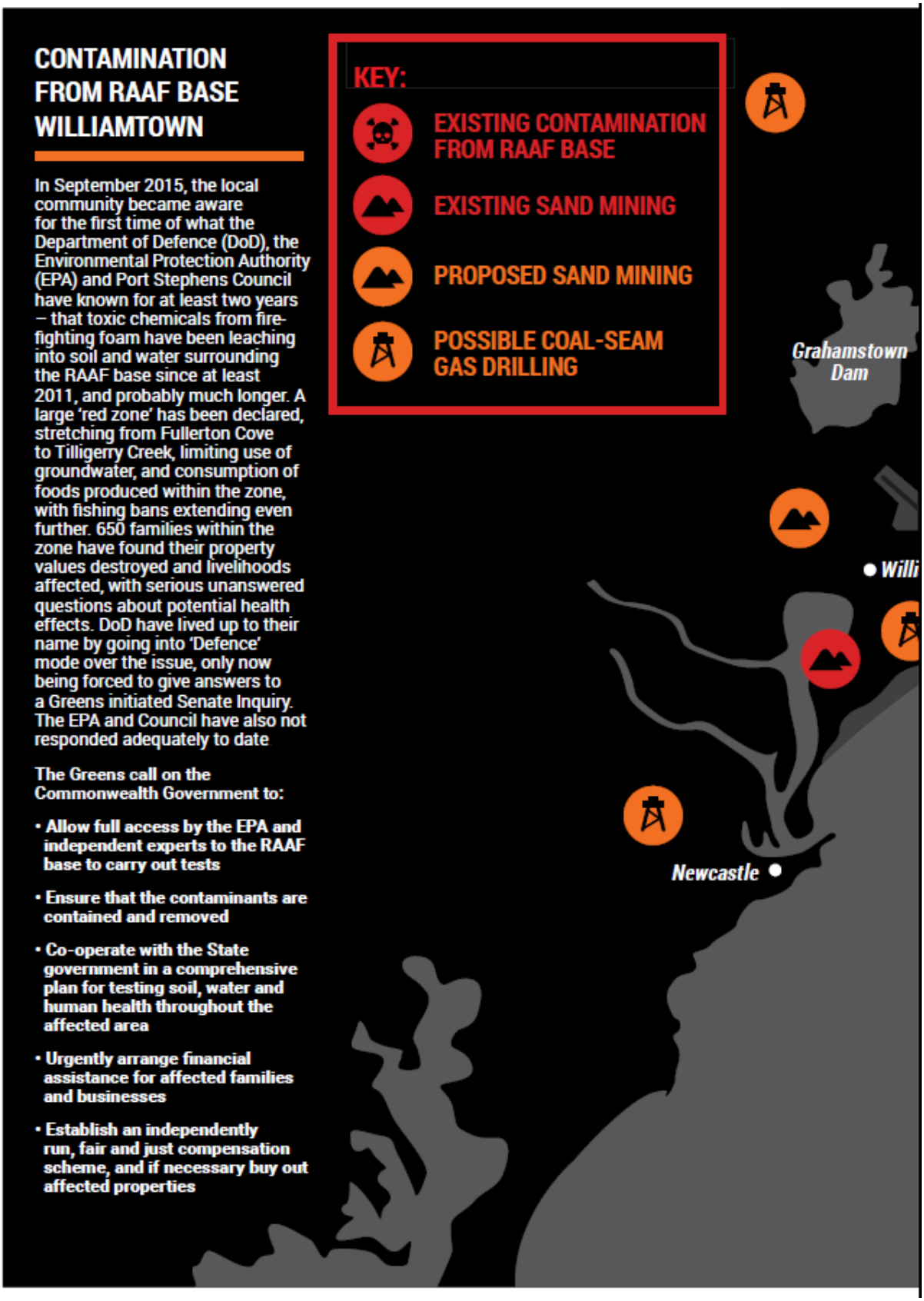
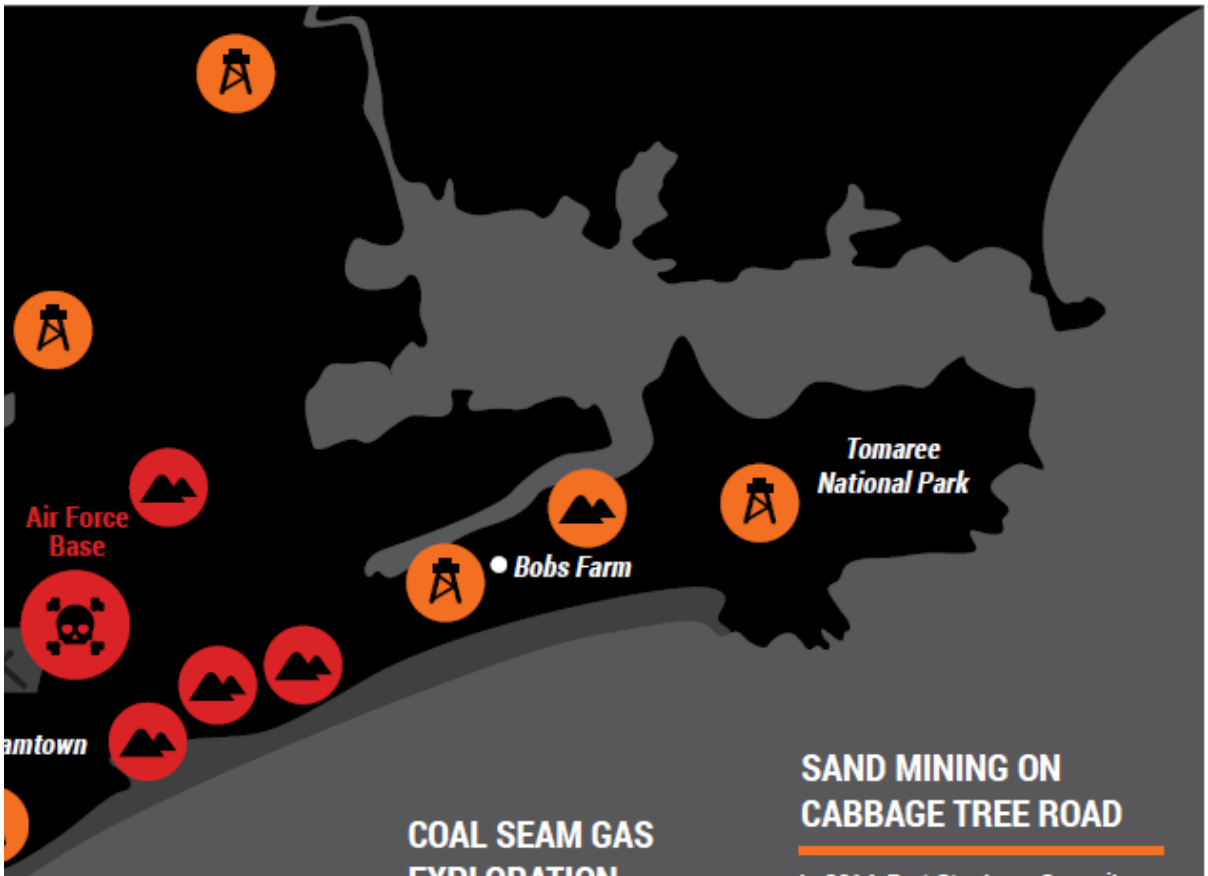

0 0.5 1 2 3 4
Kilometres
Legend
Investigation Area
Fullerton fishery closure
Tilligerry fishery closure
Note:
The fishing closure extends to all creeks and drains upstream of these areas
WILLIAMTOWN AREA
UNDER ASSAULT?
The Fullerton Cove, Williamtown and Salt Ash communities face an unprecedented triple threat to their way of life, health and environment. The Greens have supported these communities in their resistance to these threats and will continue to do so. We share the vision of most local people for their area – a predominantly rural landscape offering a great lifestyle. Williamtown airport and RAAF base are important contributors to the local economy, but the Department of Defence has not been a good neighbour. All three levels of government have failed the community on at least three important issues.
THE GREENS


CONTAMINATION FROM RAAF BASE WILLIAMTOWN
In September 2015, the local community became aware for the first time of what the Department of Defence (DoD), the Environmental Protection Authority (EPA) and Port Stephens Council have known for at least two years – that toxic chemicals from fire-fighting foam have been leaching into soil and water surrounding the RAAF base since at least 2011, and probably much longer. A large 'red zone' has been declared, stretching from Fullerton Cove to Tilligerry Creek, limiting use of groundwater, and consumption of foods produced within the zone, with fishing bans extending even further. 650 families within the zone have found their property values destroyed and livelihoods affected, with serious unanswered questions about potential health effects. DoD have lived up to their name by going into 'Defence' mode over the issue, only now being forced to give answers to a Greens initiated Senate Inquiry. The EPA and Council have also not responded adequately to date
The Greens call on the Commonwealth Government to:
• Allow full access by the EPA and independent experts to the RAAF base to carry out tests
• Ensure that the contaminants are contained and removed
• Co-operate with the State government in a comprehensive plan for testing soil, water and human health throughout the affected area
• Urgently arrange financial assistance for affected families and businesses
• Establish an independently run, fair and just compensation scheme, and if necessary buy out affected properties
KEY:
EXISTING CONTAMINATION FROM RAAF BASE
EXISTING SAND MINING
PROPOSED SAND MINING
POSSIBLE COAL-SEAM GAS DRILLING
Grahamstown Dam
Willi
Newcastle



COAL SEAM GAS EXPLORATION

The local community fought off Dart Energy's plans to drill CSG wells at Fullerton Cove in 2012, but the new licence holder is expected to try to drill again before long. The exploration area, which could eventually see industrial scale production, extends as far east as Bobs Farm and north to the Myall Lakes (as well as most of Newcastle). Exploration and production wells would threaten the precious Tomago sandbed water supply, with a range of other environmental and potential health risks. This area is simply not suitable for CSG activity, which in any case is an unwanted and unnecessary industry anywhere in NSW.

The Greens have called on the State Government to buy back the CSG exploration licence PEL458, as it has in many other areas of NSW, to remove this threat from the local community once and for all.

SAND MINING ON CABBAGE TREE ROAD

In 2014, Port Stephens Council controversially awarded a contract for quarrying of 4.6 million tonnes of sand over 15 years from Council owned land north of Cabbage Tree Road. The quarry would remove habitat for koalas and other at risk species, would destroy the quality of life of local residents, and would add hundreds of heavy truck movements to already overloaded and unsuitable single carriageway roads. It would also threaten the water table and disturb potentially contaminated soil within the recently declared 'red zone'. With a staggering lack of sensitivity to the Williamtown residents already struggling with the contamination issue, the quarrying company has just released its Environmental Impact Study for the quarry, which while scaled back will still seek to extract 3.3 million tonnes, clearing vegetation from 54 hectares.

The Greens call on authorities to defer assessment of the Cabbage Tree Road sand quarry Development Application until the contamination issue is resolved.

OTHER THREATS

On top of these three major threats, Williamtown faces inappropriate commercial 'strip' development around the junction of Nelson Bay Road and Cabbage Tree Road. Port Stephens Council has already irresponsibly approved multiple developments of fast food restaurants and pubs on rural zoned and flood prone land contrary to its own planning policies, and more are expected. Mature trees have already been felled even before any approval.

Aerospace related developments on land adjacent to the airport and already zoned for business make sense and can bring much needed jobs and income to the local economy. But restaurants and other facilities aimed at passing traffic will only further suck jobs out of established local centres including Raymond Terrace and Nelson Bay, while blighting the environment and ruining the rural character of the area.

The Greens call on Port Stephens Council to stop approving commercial developments on rural zoned land around Williamtown, and ensure that its own planning policies are respected.

... And don't get us started on the activities of Port Stephens Mayor Bruce Mackenzie on his own landholdings in the Williamtown and Salt Ash areas!

For further information, contact:

Greens candidate for Paterson, John Brown

0439 279 170 jsbrown@live.com.au

Greens Senate candidate and Newcastle Councillor Michael Osborne, 0439 442 984 sustainable.enviro@gmail.com

Port Stephens Greens Secretary Nigel Waters, 0407 230 342 email@portstephensgreens.org.au

www.portstephensgreens.org.au

Facebook PtStephGreens

Below: Greens Senator Lee Rhiannon and Senate candidates Michael Osborne and Jane Oakley meet Williamtown residents, Nov 2015

www.portstephensgreens.org.au

Front Cover Image: NSW Environmental Protection Agency Williamtown Contamination Investigation Area
Back Cover Image: Taken by Michael Gormly.

[2015] Authorised and printed by Greens Senator Lee Rhiannon, 72 Campbell St, Surry Hills NSW 2010

THE TOM FARRELL INSTITUTE
FOR THE ENVIRONMENT

Prepared by Dr Steven Lucas

Interpretation of Water and Sediment Results from the 14th August 2015

2 x water and 3 x sediment samples were taken from the Williamtown area and submitted to ALS on the 14th August 2015 for analysis. The Chain of Custody (COC) shown in Figure 1 shows the identification of samples taken.

Figure 1: COC submitted to ALS on the 14/8/2015

Table 2 shows the trigger values for metals extracted from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000); and these are used as a suitable comparison to sampled waters at Williamtown.

Table 2: Extract from the ANZECC guidelines indicating trigger values for metals

Table 3.4.1 Trigger values for toxicants at alternative levels of protection. Values in grey shading are the trigger values applying to typical *slightly–moderately disturbed systems*; see table 3.4.2 and Section 3.4.2.4 for guidance on applying these levels to different ecosystem conditions.

Chemical		Trigger values for freshwater (µg/L[a])				Trigger values for marine water (µg/L[a])			
		Level of protection (% species)				Level of protection (% species)			
		99%	95%	90%	80%	99%	95%	90%	80%
METALS & METALLOIDS									
Aluminium	pH >6.5	27	55	80	150	ID	ID	ID	ID
Aluminium	pH <6.5	ID	ID	ID	ID	ID	ID	ID	ID
Antimony		ID	ID	ID	ID	ID	ID	ID	ID
Arsenic (As III)		1	24	94 [C]	360 [C]	ID	ID	ID	ID
Arsenic (As V)		0.8	13	42	140 [C]	ID	ID	ID	ID
Beryllium		ID	ID	ID	ID	ID	ID	ID	ID
Bismuth		ID	ID	ID	ID	ID	ID	ID	ID
Boron		90	370 [C]	680 [C]	1300 [C]	ID	ID	ID	ID
Cadmium	H	0.06	0.2	0.4	0.8 [C]	0.7 [A]	5.5 [A,C]	14 [A,C]	36 [A,C]
Chromium (CrIII)	H	ID	ID	ID	ID	7.7	27.4	46.6	90.6
Chromium (CrVI)		0.01	1.0 [C]	6 [A]	40 [A]	0.14	4.4	20 [C]	80 [C]
Cobalt		ID	ID	ID	ID	0.005	1	14	150 [C]
Copper	H	1.0	1.4	1.8 [C]	2.5 [C]	0.3	1.3	3 [C]	8 [A]
Gallium		ID	ID	ID	ID	ID	ID	ID	ID
Iron		ID	ID	ID	ID	ID	ID	ID	ID
Lanthanum		ID	ID	ID	ID	ID	ID	ID	ID
Lead	H	1.0	3.4	5.6	9.4 [C]	2.2	4.4	6.6 [C]	12 [C]
Manganese		1200	1900[F]	2600[F]	3600[F]	ID	ID	ID	ID
Mercury (inorganic)	B	0.06	0.6	1.9 [C]	5.4 [C]	0.1	0.4 [C]	0.7 [C]	1.4 [C]
Mercury (methyl)		ID	ID	ID	ID	ID	ID	ID	ID
Molybdenum		ID	ID	ID	ID	ID	ID	ID	ID
Nickel	H	8	11	13	17 [C]	7	70 [C]	200 [A]	560[F]
Selenium (Total)	B	5	11	15	34	ID	ID	ID	ID
Selenium (Se IV)	B	ID	ID	ID	ID	ID	ID	ID	ID
Silver		0.02	0.05	0.1	0.2 [C]	0.8	1.4	1.6	2.6 [C]
Thallium		ID	ID	ID	ID	ID	ID	ID	ID
Tin (inorganic, Sn IV)		ID	ID	ID	ID	ID	ID	ID	ID
Tributyltin (as µg/L Sn)		ID	ID	ID	ID	0.0004	0.006 [C]	0.02 [C]	0.07 [C]
Uranium		ID	ID	ID	ID	ID	ID	ID	ID
Vanadium		ID	ID	ID	ID	50	100	100	280
Zinc	H	2.4	8.0 [C]	15 [C]	31 [C]	7	15 [C]	23 [C]	43 [C]

1

Results from the Bore Water and Swamp Water samples are shown below in Table 3. Results in a red circle indicate the trigger value has been equalled and/or exceeded (level of protection for 95 % of species in Table 2). Note that values in Table 2 (µg/L) need to be divided by 1000 to get values in Table 3 (mg/L).

Table 3: Water analysis results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	BORE WATER	SWAMP WATER
			Client sampling date / time	[14-Aug-2015]	[14-Aug-2015]
Compound	CAS Number	LOR	Unit	ES1520453-001	ES1520453-002
				Result	Result
EA005P: pH by PC Titrator					
pH Value	---	0.01	pH Unit	6.69	---
EA015: Total Dissolved Solids					
* Total Dissolved Solids @180°C	---	10	mg/L	115	---
ED037P: Alkalinity by PC Titrator					
Hydroxide Alkalinity as CaCO3	OMO-210-001	1	mg/L	<1	---
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	---
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	26	---
Total Alkalinity as CaCO3	---	1	mg/L	26	---
ED040F: Dissolved Major Anions					
Sulfate as SO4 2-	14808-79-8	1	mg/L	15	---
ED045G: Chloride by Discrete Analyser					
Chloride	16887-00-6	1	mg/L	33	---
ED093F: Dissolved Major Cations					
Calcium	7440-70-2	1	mg/L	8	---
Magnesium	7439-95-4	1	mg/L	3	---
Sodium	7440-23-5	1	mg/L	23	---
Potassium	7440-09-7	1	mg/L	2	---
EG005T: Total Metals by ICP-AES					
Aluminium	7429-90-5	0.1	mg/L	0.19	---
Arsenic	7440-38-2	0.01	mg/L	0.02	---
Beryllium	7440-41-7	0.01	mg/L	<0.01	---
Boron	7440-42-8	0.1	mg/L	<0.1	---
Cadmium	7440-43-9	0.005	mg/L	<0.005	---
Chromium	7440-47-3	0.01	mg/L	<0.01	---
Cobalt	7440-48-4	0.01	mg/L	<0.01	---
Copper	7440-50-8	0.01	mg/L	<0.01	---
Iron	7439-89-6	0.05	mg/L	2.61	---
Lead	7439-92-1	0.01	mg/L	<0.01	---
Manganese	7439-96-5	0.01	mg/L	0.02	---
Molybdenum	7439-98-7	0.01	mg/L	<0.01	---
Nickel	7440-02-0	0.01	mg/L	<0.01	---
Selenium	7782-49-2	0.01	mg/L	<0.01	---
Vanadium	7440-62-2	0.01	mg/L	<0.01	---
Zinc	7440-66-6	0.01	mg/L	<0.01	---
Arsenic	7440-38-2	0.001	mg/L	---	0.001
Cadmium	7440-43-9	0.0001	mg/L	---	<0.0001
Uranium	7440-61-1	0.001	mg/L	<0.001	---
Chromium	7440-47-3	0.001	mg/L	---	0.001
Copper	7440-50-8	0.001	mg/L	---	0.001
Nickel	7440-02-0	0.001	mg/L	---	0.002
Lead	7439-92-1	0.001	mg/L	---	<0.001
Zinc	7440-66-6	0.005	mg/L	---	0.017
EG035T: Total Recoverable Mercury by FIMS					
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001
EK040P: Fluoride by PC Titrator					
Fluoride	16984-48-8	0.1	mg/L	<0.1	---
EK057G: Nitrite as N by Discrete Analyser					
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	---
EK058G: Nitrate as N by Discrete Analyser					
* Nitrate as N	14797-55-8	0.01	mg/L	<0.01	---
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser					
Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	---
EN055: Ionic Balance					
* Total Anions	---	0.01	meq/L	1.78	---
* Total Cations	---	0.01	meq/L	1.70	---

Aluminium in the Bore Water sample exceeded the ANZECC trigger value for all levels of protection in freshwater (% species) and is of concern for the environment. For example, the Bore Water had a value of 190 µg/L (0.19 mg/L) and exceeds the 80 % level of protection (150 µg/L at pH > 6.5) which indicates that Aluminium at this concentration is

2

detrimental to > 20 % of all species. The aim would be to protect 99 % of species (at least). Aluminium at 0.19 mg/L is very near the Australian Drinking Water Guideline (NHMRC, 2011) limit of 0.2 mg/L for human consumption; and considering rounding up to one decimal place it is right on the guideline limit.

Arsenic in the Bore Water sample exceeded the ANZECC trigger value for 95 % level of protection in freshwater (% species) and is of minor concern for the environment. For example, the Bore Water had a value of 20 µg/L (0.02 mg/L) and is near the 95 % level of protection (24 µg/L at pH > 6.5) which indicates that Arsenic at this concentration is detrimental to < 5 % of all species. Arsenic at 0.02 mg/L exceeds the Australian Drinking Water Guideline (NHMRC, 2011) limit of 0.007 mg/L for human consumption (~ 3 times the guideline limit) and is of major concern.

None of the measured water quality parameters exceeded ANZECC (2000) or NHRMC (2011) guidelines in the Swamp Water sample.

Table 4 summarises sediment analysis and provides the ANZECC (2000) trigger values (low and high).

Table 4: Sediment quality and associated trigger value guidelines (from ANZECC, 2000)

Compound	*Unit*	SWAMP SLUDGE	SAND2LIGHT	SAND 1 DARK	ISQG-Low trigger value	ISQG-high trigger value
Moisture Content (dried @ 103°C)	%	90.8	<1.0	1.2	NA	NA
Arsenic	mg/kg	9	<5	<5	ND	ND
Cadmium	mg/kg	<2	<1	<1	1.5	10
Chromium	mg/kg	7	3	6	80	370
Copper	mg/kg	17	<5	<5	65	270
Lead	mg/kg	55	<5	<5	50	220
Nickel	mg/kg	7	<2	<2	21	52
Zinc	mg/kg	122	<5	<5	200	410
Mercury	mg/kg	<0.2	<0.1	<0.1	ND	ND

Arsenic and Mercury do not currently have a trigger value. SAND2LIGHT and SAND 1 DARK did not exceed any trigger value and pose no immediate concern. Lead results for the SWAMP SLUDGE indicate that the ISQG-Low trigger value was exceeded and warrants further investigation.

Summary

The Bore Water sample contained elevated Aluminium and Arsenic and exceeded the 95 % level of protection trigger values for freshwater. Aluminium exceeded the 80 % level of protection trigger values for freshwater meaning > 20 % of species would be impacted at these concentrations. The objective is to provide a level of protection for > 99 % of species. Aluminium (equal to guideline value) and Arsenic (~ 3 times guideline value) were equal to or exceeded Australian Drinking Water Guidelines (NHRMC, 2011).

Sediment analysis results for SAND2LIGHT and SAND 1 DARK indicate that the sediment samples did not contain elevated metal concentrations of major concern as results were below trigger guideline values. The SWAMP SLUDGE sample exceeded the ISQG-Low trigger value for Lead and is of concern; and warrants further investigations into potential sources.

References

ANZECC (2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality - Volume 1*, Australia and New Zealand Environment and Conservation Council (ANZECC) and the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), ISBN 09578245 0 5.

NHMRC (2011) *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*, National Health and Medical Research Council, National resource Management Ministerial Council, Commonwealth of Australia, Canberra, ISBN Online 1864965118.

Review of adequacy of the assessment of ecological and biodiversity issues undertaken for the Williamtown Quarry Project Environmental Impact Statement (SSD_6125).

Report for the *Williamtown Residents Action Group* with reference to matters of NSW and national environmental significance

By David C. Paull (BSc, MResSc, Dip. Hum.)

26 January 2016

Summary

The Williamtown Quarry Project is a State Significant Development assessed pursuant to Part 4.1 of the Environmental Planning and Assessment Act 1979. Environmental Impact Statement documents were assessed for the adequacy that the impacts on ecological and biodiversity matters were undertaken for this project. The main documents studied were prepared on behalf of Williamtown Sand Syndicate Pty Ltd form Appendix 8: 'Ecological Assessment' (Umwelt Australia Pty Ltd, 2015) and Appendix A of Appendix 8 'Ecological Constraints and Opportunities Report' (RPS Group, 2011) of the EIS.

There are significant deficiencies in the ecological assessment for this project, including:

- Impacts on key species which may be significant have not been adequately assessed in the report;
- Key information regarding the Koala usage within the study area are missing;
- Poor assessment of impact on groundwater dependent ecosystems;
- Absence of an offset proposal.

The absence of an offset land package or any calculations consistent with the NSW offset policy, in order to demonstrate which ecosystem and species credits are able to be retired, mean that significant residual impacts are outstanding.

In this regard the Director-General's Requirements remain unmet. Given the deficencies in the assessment documents regarding impacts on biodiversity matters, it would be reasonable to say that the DGR regarding a '*detailed assessment of the potential impacts of development*' has also not been met.

The development application should be rejected or returned to the proponent for the provision of further information.

Background

Following delaration as a State Significant Project for the Department of Planning and Environment and the issuing of Director-General's Requirements (DGRs) on the 14 October 2015, an Environmental Impact Statement (EIS) for the Williamtown Quarry Project was submitted to the DPE in November 2015.

As this is a State Significant Development, the EIS for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.*

The land within the mining lease (study area) covers some 176 ha, north of Cabbage Tree Road, while the area of proposed extraction covers some 54 ha. The proposal borders small residential landholdings, Tilligerry State Conservation Area and Hunter water Corporatin (HWC) land.

Figure 1. Extent of mining lease and proposed disturbance area

The DGRs state in relation to specific biodiversity matters which must be included in the EIS are:

- measures taken to avoid, reduce or mitigate impacts on biodiversity;
- accurate estimates of proposed vegetation clearing;
- a detailed assessment of potential impacts of the development on any: terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; migratory bird species listed under CAMBA,

JAMBA and/or ROKAMBA; and regionally significant remnant vegetation, or vegetation corridors;
- a comprehensive offset strategy to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term

This assessment will outline the adequacy of the EIS documents in question in terms of:

- Adherence to relevant guidelines;
- Adherence to the conditions as outlined in the DGRs.

Adequacy of impact assessent

Adequacy of survey effort

Biodiversity surveys undertaken for this EIS combine results from two survey periods (2011 and 2013-2015). For the most part, surveys covering the description of the vegtation communities and threatened species have been undertaken according to OEH Survey Guidelines (DEC 2004), however, one species has not received adequate investigation to warrant a fair assessment of presence or absence on the site.

Koala

Surveys were undertaken to inform the RPS surveys (2011) and the Umwelt (2015) reports. RPS did '8 man-hours' over two nights spotlight survey across the study. Whether areas of Koala habitat were targted is not clear from the decriptions of the surey effort, though RPS (2011) identifed one indivdual onsite during spotlight surveys.

Koala scat surveys were not used in the RPS surveys (2011) though RPS states that, "… scats consistent with Koala were identified under Koala feed trees *Eucalypytus robustus* and *E. parramattensis ssp decadens* across the site. While intensive scat searches were not undertaken across the entire site it is predicted that Koalas move throughout the site but foccus on particular areas of vegetation in terms of foraging preference …"

Umwlet (2015) supplemented this survey effort with 10 SAT survye sites (designed to survey for Koala scats), searching under 300 trees for scats in total. The locations of the SAT survyes are described in the report. However, Umwelt do not detail the results of this survey. This is critical to understanding current activity levels in the study area and would assist in developing suitable mitigation measures as well as providing better information as to the expected impact of the project.

When presenting the results of the field surveys, Umwelt have used the public data available on the BioNet webpage for their desktop analysis (Figure 3.1 in Appendix 8), showing 10 locations for Koalas across the study area including six from within the development footprint (Figure 2).

However the map of the results of the fauna surveys (Figure 4.4 in Appendix 8 - Figure 3 below) show the same ten locations as that already depicted in the desktop map. The results of the SAT assessments has not been indicated, indeed there is no information on the location or number of any Koalas provided by Umwelt in Appendix 8 other than that already publically available. Whether this error is mistake or not, it is potentially misleading.

Figure 2. BioNet locations for the Koala in the study area on overlaying CKPoM habitat map.

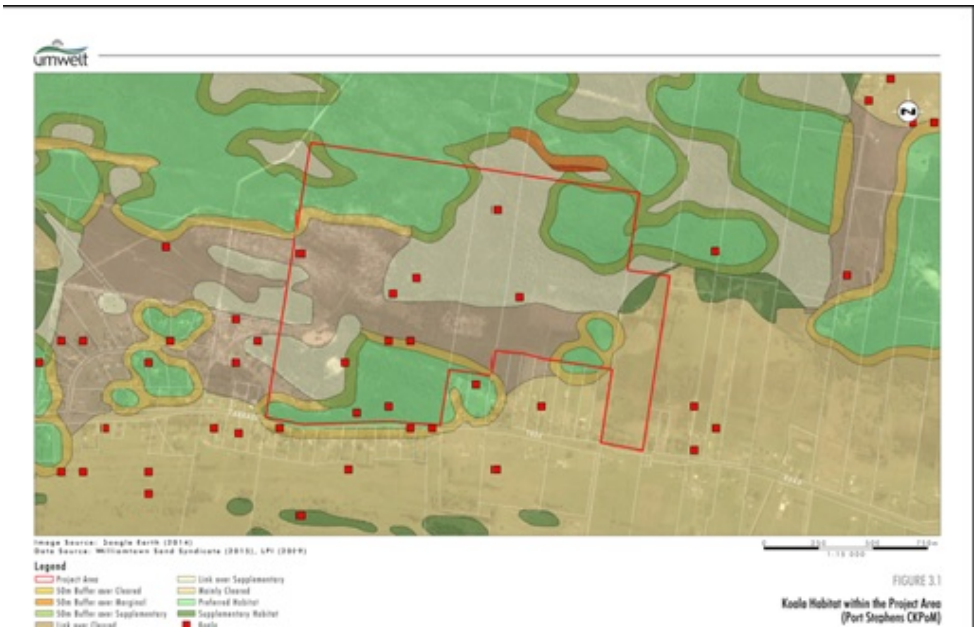


Figure 3: Map in Appendix 8 showing 'Results of fauna surveys'
(Koala locations are indicated by red squares).

Summarising this survey effort for the Koala in the EIS, spotlight surveys undertaken by RPS (2011) may have been adequate, though it is not clear whether Koala habitat was included in the transects. No SAT tests were undertaken by RPS despite the public information being available suggesting the site may be a high-use area and that it is dominated by preferred habitat.

A SAT survey was undertaken by Umwelt in 2015, though the results are not presented in the EIS. No further spotlight surveys were undertaken by Umwelt and no additional information on the distribution or habitat preferences in the study area is provided.

Adequacy of impact assessment on affected threatened species and ecosystems

In general, the assessments of significance that have been undertaken in the EIS are pursuant to Section 5A of the EP&A Act (7-Part Test). Yet there is one substantial criticism that could be applied to all tests undertaken, in that they suffered by an omission to consider the extent of removal of habitat or affected habitat in relation to the extent of that habitat within the study area. The extent of the study area varies with each entity being considered and is related to the population ecology and mobility of each species.

As a result, only one matter is identified as having a significant impact, the Koala, yet others, not identified in the EIS, warrant a re-assessment here.

Koala

Significant impact on Koala. Approximately 40% (48 ha) of preferred habitat in the project area will be removed. Umwelt state that despite the avoidance of 'high quality' habitat, that the proposal, "… *may potentially result in a significant impact on this species*". However, the substantial areas of Blackbutt- Scribbly Gum-Apple woodland on the site contains the species *E. signata, E. piperata* and *E. punctata*, species recognised as important for the foraging Koala in the Port Stephens CKPoM. The proposal will result in the removal of over 48 ha of this habitat, subjecting Koalas to substantial direct (and indirect) impact upon the local Koala population. If considered under the local government consent pathway, it is unlikely that this proposal could proceed in its current form, due to restrictions on the removal of preferred habitat (Primary and Secondary A) under the Port Stephens CKPoM.

There are six historic records of Koalas within the development footprint, though where the consultants detected Koalas during surveys is not indicated. Umwelt have provided misleading information in that the figure which is supposed to show locations of Koalas detected in their surveys only shows the BioNet records. The number and location and age, sex or any information on Koalas detected during surveys is not provided.

Major disruption of habitat connectivity for the Koala in the locality has been addressed in the EIS by the provision of a 'habitat corrridor' through the centre of the development area on one side of the footprint. This may provide some east-west movement of animals, however, the chief disruption is

to the movement of Koalas in and out of the Tilligerry SCA. This knwn important movement corridor has been idenited in the RPS report of 2011, but not in the Umwelt report.

However, the key issue for the Koala as a result of this proposal will be the consequences of the extensive removal of habitat and indirect impacts of light, noise and dust, would probably make the majority of the study area unsuitable for the Koala. The mitigation measures proposed in the EIS for this species will not eleviate ths impact as the most likely result if this development proceeds would be that Koalas may avoid the vicinity of the quarry. The issues of indirect impact have not been dealth with in the EIS.

Given these considerations, and the present state of information on the Koala in the study area the impact on the Koala with the mitigation measures included are likley to remain highly significant, making it a 'residual matter'.

Umwelt also state that using Commonwalth criteria, the impact of the proposed quarry on the local popualtion of koalas is likely to be significant. I would concurr with this assessment and expect that a referral with respect to this matter will be made.

Earps Gum

Earps Gum records collected during field surveys undertaken for this EIS indicate that 50% (284 out 586) of the local population will be removed if this proposal is given consent. Even if the specimens on the site are planted, this does diminish their localand regional significance.

The assessment of significance used for the impact on this species does not consider the impact within the study area as defined within the terms of the '7-Part Test'. Had it done so, a significant impact would have been the result.

Being a Commonwalth-listed species, it is a matter of national significance and the matter should be referred to the Minister.

Wallum Froglet

Wallum Froglet Records indicate that the proposed mine will directly affect or be in close proximity to 50% of known records (the distribution) of this species in the study. However, as before, the assessment of significance used for the impact on this species does not consider the impact within the study area as defined within the terms of the '7-Part Test'. Had it done so, a significant impact would have been the result.

Other species

In addition, as the scale of vegetation removal on the project site is large (54 out of 169 ha or about 30%) several other species may also suffer a significant reduction in habitat or be affected by indirect impacts to such an extent that it may jeopardise their survival in the study area. The most likely to suffer extensive removal of habitat include the Varied Sittella *Daphoenositta chrysoptera* and the Eastern Freetail Bat *Mormopterus norfolkensis*, both recorded within the study area.

Adequacy of assessment of groundwater dependent ecosystems

The GDE assessment in the EIS identifies five communities as being likely obligate GDEs (according to Bell and Driscoll 2006):

- Coastal Wet Cyperoid Heath (10 ha)
- Swamp Mahogany Forest (25 ha)
- Earps Gum Sedge Woodland (1 ha)
- Coastal Sand Wallum Heath (42 ha) – (Facultative or Obligate)
- Freshwater Wetland (10 ha)

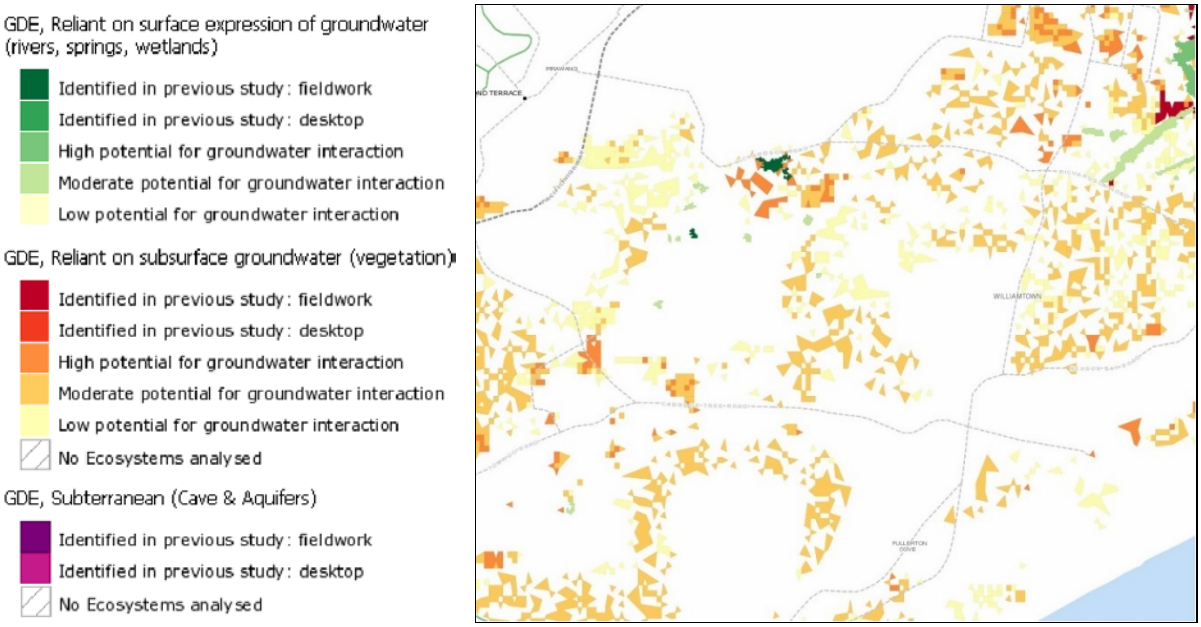
This seems to be consistent with the distribution of of high and moderate potential GDEs as shown in the search conducte using the GDE Atlas of Australia (http://www.bom.gov.au/water/groundwater/gde/map.shtml).

The assessment of impact on GDEs asserts the groundwater impact assessment for this project saying the project will not result in any dewatering of the Tomago Beds aquifer, with excavation not proceeding below the water table. The direct impact on GDEs is said to be very small, (0.3 ha of Swamp Sclerophyll Forest).

Sand crests such as that being proposed for sand mining generally lie well above the water table, but their landscape function is to act as zones of water recharge. How this development plan will affect levels of recharge into the surrouding environemnt as wel as natural flow patterns and resultant impats on GDEs (includingThreatened Ecological Communities) has not been addressed in the EIS.

While the area of Swamp Forest that will be removed may be small, this suggets that the development plan will be encroaching into a lower lying swamp area. If this is the case, then impacts of edge effects and reduced re-charge rates on neighbouring areas of GDE have not assessed either in the 7-PartTests or the GDE assessment.

Figure 4. Map of study area and surrounds showing extent of predicted GDEs (Source GDE Atlas)



Adequacy of Offset Strategy

There is no Offset Strategy as such provided in the EIS, merely a strategy in order to obtain one. The options listed are standard approaches open to any developer. Any genuine offset strategy needs to include a package of land that could be available for offset, along with a transparent, quantifiable approach to detemine the adequacy by which impacts on biodiversity are offset, or their biodiversity credits are retired. This is generally done using the BioBanking Assessment Methdology (BBAM) or use of the new Framework of Biodiversity Assessment (FBA). Neither of these approaches has been used by the proponent.

Umwelt suggested that any offset proposal should use a 'traditional approach' using offset ratios of 2-3 :1. Adequacy of offset however must abide by the offset policy which was in place at the time of the submission of the EIS. As this was done after the introduction of the new NSW Offset Policy for Major Projetcts (October 2014), this policy should be the point of reference for this project.

The introduction of this policy and the implementation of the FBA mean specific requirements for proponents on how to conduct major project developments and to offset them is provided. As information regarding how adequate the development proposed to offset its impacts, the regulatory agency responsible for the *Threatened Species Conservation Act 1997*, OEH will not be able to make an assessment pursuant to the EP&A Act.

Under these circumstances, the consent authority (Department of Planning and Environment) should request further information concerning the offset strategy from the proponent before any decision on the consent could be made.

References

East Coast Flora Surveys (2006). Vegetation of the Tomago and Tomaree Sandbeds, Port Stephens, New South Wales. Report to Hunter water Corporation.

RPS. (2011). Ecological Constraints and Opportunities Report. 398 Cabbage Tree Road, Williamstown, NSW. Report prepared for Port Stephens Council.

Umwelt (Australia) Pty Ltd (2015). Appendix 8: Ecological Assessment. Proposed Sand Quarry, Cabbage Tree Road, Williamstown. Report prepared on behalf of the Williamstown Sand Syndicate Pty Ltd.

Appendix 1 : Results of Search of BioNet Database (10/12/2015)

Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1Â°; ^^ rounded to 0.01Â°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria: Public Report of all Valid Records of Threatened (listed on TSC Act 1995) ,Commonwealth listed, CAMBA listed, JAMBA listed or ROKAMBA listed Entities in selected area [North: -32.75 West: 151.76 East: 151.87 South: -32.85] returned a total of 2,308 records of 54 species.

Class	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Amphibia	3137	*Crinia tinnula*	Wallum Froglet	V,P		49
Aves	0001	*Dromaius novaehollandiae*	Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area	E2,P		2
Aves	0216	*Oxyura australis*	Blue-billed Duck	V,P		1
Aves	0214	*Stictonetta naevosa*	Freckled Duck	V,P		1
Aves	0183	*Ephippiorhynchus asiaticus*	Black-necked Stork	E1,P		6
Aves	0977	*Ardea ibis*	Cattle Egret	P	C,J	5
Aves	0197	*Botaurus poiciloptilus*	Australasian Bittern	E1,P	E	1
Aves	0178	*Plegadis falcinellus*	Glossy Ibis	P	C	1
Aves	0218	*Circus assimilis*	Spotted Harrier	V,P		1
Aves	0226	*Haliaeetus leucogaster*	White-bellied Sea-Eagle	P	C	72
Aves	0230	*^^Lophoictinia isura*	Square-tailed Kite	V,P,3		1
Aves	8739	*^^Pandion cristatus*	Eastern Osprey	V,P,3		1
Aves	0130	*Haematopus longirostris*	Pied Oystercatcher	E1,P		1
Aves	0161	*Calidris ferruginea*	Curlew Sandpiper	E1,P	CE,C,J,K	11
Aves	0978	*Calidris melanotos*	Pectoral Sandpiper	P	J,K	1
Aves	0168	*Gallinago hardwickii*	Latham's Snipe	P	C,J,K	3
Aves	0149	*Numenius madagascariensis*	Eastern Curlew	P	CE,C,J,K	1
Aves	0150	*Numenius phaeopus*	Whimbrel	P	C,J,K	4
Aves	0155	*Tringa brevipes*	Grey-tailed Tattler	P	C,J,K	1
Aves	0158	*Tringa nebularia*	Common Greenshank	P	C,J,K	1
Aves	0159	*Tringa stagnatilis*	Marsh Sandpiper	P	C,J,K	1
Aves	0160	*Xenus cinereus*	Terek Sandpiper	V,P	C,J,K	1
Aves	0109	*Chlidonias leucopterus*	White-winged Black Tern	P	C,J,K	2
Aves	0112	*Hydroprogne caspia*	Caspian Tern	P	C,J	1
Aves	0117	*Sternula albifrons*	Little Tern	E1,P	C,J,K	1
Aves	0260	*Glossopsitta pusilla*	Little Lorikeet	V,P		3
Aves	0309	*^^Lathamus discolor*	Swift Parrot	E1,P,3	E	3
Aves	0248	*^^Ninox strenua*	Powerful Owl	V,P,3		6
Aves	0252	*^^Tyto longimembris*	Eastern Grass Owl	V,P,3		2
Aves	0250	*^^Tyto novaehollandiae*	Masked Owl	V,P,3		3
Aves	0329	*Merops ornatus*	Rainbow Bee-eater	P	J	1
Aves	0603	*Anthochaera phrygia*	Regent Honeyeater	E4A,P	CE	1
Aves	0448	*Epthianura albifrons*	White-fronted Chat	V,P		3
Mammalia	1008	*Dasyurus maculatus*	Spotted-tailed Quoll	V,P	E	2
Mammalia	1017	*Phascogale tapoatafa*	Brush-tailed Phascogale	V,P		4
Mammalia	1162	*Phascolarctos cinereus*	Koala	V,P	V	1014
Mammalia	1137	*Petaurus norfolcensis*	Squirrel Glider	V,P		22
Mammalia	1175	*Potorous tridactylus*	Long-nosed Potoroo	V,P	V	1
Mammalia	1280	*Pteropus poliocephalus*	Grey-headed Flying-fox	V,P	V	15
Mammalia	1321	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	V,P		2
Mammalia	1329	*Mormopterus norfolkensis*	Eastern Freetail-bat	V,P		6
Mammalia	1372	*Falsistrellus tasmaniensis*	Eastern False Pipistrelle	V,P		2

Mammalia	1346	*Miniopterus australis*	Little Bentwing-bat	V,P		15
Mammalia	1834	*Miniopterus schreibersii oceanensis*	Eastern Bentwing-bat	V,P		11
Mammalia	1357	*Myotis macropus*	Southern Myotis	V,P		3
Mammalia	1361	*Scoteanax rueppellii*	Greater Broad-nosed Bat	V,P		12
Mammalia	1455	*Pseudomys novaehollandiae*	New Holland Mouse	P	V	20
Mammalia	1543	*Arctocephalus forsteri*	New Zealand Fur-seal	V,P		1
Flora	3363	*Maundia triglochinoides*		V,P		3
Flora	14618	*Commersonia prostrata*	Dwarf Kerrawang	E1,P	E	9
Flora	4067	*Eucalyptus camfieldii*	Camfield's Stringybark	V,P	V	2
Flora	9163	*Eucalyptus parramattensis subsp. decadens*		V,P	V	968
Flora	5280	*Persicaria elatior*	Tall Knotweed	V,P	V	3
Flora	10009	*Grevillea parviflora subsp. parviflora*	Small-flower Grevillea	V,P	V	1

PORT STEPHENS COUNCIL

TWO WAY CONVERSATION PROGRAM

KEY DISCUSSION POINTS

Tuesday 28 July 2015

TITLE: **Request for Assignment of AFL for proposed sand extraction facility on Council owned land at Cabbage Tree Road, Williamtown**

PRESENTER: **Sean Fox**

PURPOSE

To update Councillors on a recent request to assign the Agreement For Lease over Council owned properties at 282, 282A, 282B and 398 Cabbage Tree Road, Williamtown (the 'Site').

BACKGROUND

- Council entered into an Agreement for Lease (AFL) over the Site with Castle Quarry Products P/L (CQP) on 15 July 2013 for sand extraction purposes.
- A $250,000 Security Deposit was provided by CQP.
- All AFL milestones have been met by CQP and upon approval by the Department of Planning for the sand extraction Council will enter into a 15 year lease with CQP with a base rent and royalties to be paid to Council.
- The Sunset Date of 14 July 2016 has not changed from the original agreement despite some extensions being provided to CQP to complete Environmental Studies (delayed due to bushfires) and additional community consultation.
- An earlier request (August 2014) to assign the AFL from CQP to Benelli Holdings P/L did not proceed.
- A new request for assignment of the AFL has been received, this time to a new entity, Williamtown Sand Syndicate P/L (WSS).
- WSS is a stand alone company with no connections to Nathan Tinkler or any of his companies or operations.
- Correspondence was also received from Nathan Tinkler as the majority shareholder in CQP, requesting Council assign the AFL to WSS.
- The request nominated the lead investors in WSS that comprise Newcastle businessmen that have been successful in business enterprises.
- Proof has been provided that the entity is currently capitalised to $1,000,000, said to be sufficient to cover all current liabilities and anticipated further costs to secure all required approvals and licences.
- An additional $2,000,000 in equity is said to be available as required before debt funding is utilised.

CONCLUSION

Council officers and Harris Wheeler have reviewed the provided information and have concluded that the requested assignment will not disadvantage Council provided the following is agreed to by WSS:

- A replacement $250,000 Security Deposit being provided by WSS.

- WSS meeting all outstanding creditors of CQP in relation to the Development Application process.
- WSS to provide Director's guarantees for the performance on the AFL and the Lease.
- All completed expert reports to be provided to Council by 31 July 2015 and thereafter as they become available.
- No change to the Sunset Date being 14 July 2016.

A Deed of Consent for execution by all parties is being drafted by Harris Wheeler in advance, should Council resolve to proceed with the assignment from CQP to WSS.