

From: [REDACTED]
To: [IPCN Enquiries Mailbox](#)
Subject: Fwd: Cabbage Tree Road Sand Quarry
Date: Friday, 16 March 2018 5:30:58 PM

To whom it may concern,

The nature of this letter is to voice my concerns about the proposed Cabbage Tree Road Sand Quarry in the Port Stephens Shire of Williamstown.

One of my main concerns with the proposal is the environmental impact that the removal of fine sands from the Tomago Sand Beds may have on the quality of ground water, not only in the immediate future, but also the long term consequences of a Sand Quarry in such an important area, beneath which lies an Aquifer which holds 100,000 Mega litres of water.

[Guidelines for Development in the Drinking Water Catchments](https://www.hunterwater.com.au/Building-and-Development/Land-and-Property-Development/Development-in-a-Drinking-Water-Catchment.aspx)<https://www.hunterwater.com.au/Building-and-Development/Land-and-Property-Development/Development-in-a-Drinking-Water-Catchment.aspx>

It states on the above website that the sand beds are anywhere from 0-50 metres thick and are on average around 20 metres thick.

When it rains, the rainwater moves through the sand to the catchment area beneath the sands stored as groundwater.

It also states: "This large storage volume can also be used as a reservoir supply during drought and is available as a back up supply in the event of water quality issues in the surface water storages"

My question is in relation not only to the surface water quality, but also the Tomago Sand Beds water quality which has been polluted by Aqueous Firefighting Foams containing PFAS, such as; PFOA, PFOS and PFHxs.

The surface quality is also affected by the rising water table after significant rain, also impacting on surface quality water when PFAS contaminated water rises.

Hunter Water Regulation in September 2015, Hunter Water has developed and published a new [Guideline for Development in the Drinking Water catchments](#).

Key Threats to the Groundwater Catchments:

Sand is highly permeable; consequently, any spills or contamination tend to move through to the groundwater table quickly in the form of pollutant plumes. Lateral groundwater movement through sands can also be rapid, spreading contamination and threatening drinking water supplies, even if the source of pollution is not close to the extraction bores. The Tomaree Sandbeds are largely within the Tomaree National Park, which provides a good level of protection. Conversely, the Tomago Sandbeds catchment contains expanding industrial/commercial areas, RAAF Base Williamstown, Newcastle Airport, a small area of agriculture, and residential areas, some of which are not sewered. Increasing areas of impervious surfaces in the catchment (buildings, roads and paved or concrete hardstand areas) interfere with aquifer recharge as well as increasing stormwater flows, which carry contaminants.

Having read the above material and guidelines from Hunter Water from this site, it seems unconscionable to think that that a private commercial venture involving Port Stephen's council lands could possibly be approved.

The removal of contaminated sands from a proposed sand quarry site to unsuspecting citizens in other urban areas, who may become the unknowing recipients of toxic waste in the form of contaminated sands is irresponsible and reckless.

This operation and the removal of untreated contaminated sand breaches a number of codes that exist pertaining to the *Contaminated Land Management Act 1997*

The Act gives the EPA power to declare land to be significantly contaminated land

- order a person to undertake a preliminary investigation of land that the EPA suspects to be contaminated
- order a person to take management action in relation to significantly contaminated land
- approve a voluntary proposal to manage significantly contaminated land
- order that land that has been the subject of a management order or approved voluntary management proposal be subject to an ongoing maintenance order

The hierarchy of people that the EPA may direct to take action is as follows

1. the person/s responsible for the contamination (ADF)
 2. the owner/s
 3. the notional owner/s
- The EPA may also direct a public authority to carry out management action in relation to contaminated land. Those ordered to take management action may appeal against the order. They can also recover costs from the person/s responsible for the contamination in some circumstances.

In consideration of the information contained above in the Contaminated Land Act 1997, the proposed Cabbage Tree Sand Mine lies within the Red Zone and is therefore contaminated.

As a result according to the Contaminated Land Management Act 1977, a "Management Action Plan" needs to be implemented to manage significantly contaminated land.

and be subject to an ongoing maintenance order instead of an out of sight out mind policy where the problem is simply shifted to another region who inherit the problems that we were unwilling to face head on deal with.

According to the hierarchy of the people that the EPA may contact is the person or entity responsible for the contamination; the ADF.

Rehabilitation or remediation should be the first thing on councils mind, not a commercial business that will transport toxic sand from one place to another.

According to Hunter water the natural flow of the Aquifer moves in a South Westerly direction.

If we were to remove the sand from this area which is already deemed contaminated, the consequences of removing the sand (a natural filter and barrier) could increase the spread of the PFAS plumes course, westwards.

Are we to trust the EPA and the ADF who were complicit with keeping the contamination issue secret for 3 years?

Are we to believe that the sand from the proposed site for the sand quarry on Cabbage Tree road is not contaminated or that the contamination levels are below the public's cause for concern?

If that is the case then council must surely provide an independent environmental impact study, free of bias to win back the trust of the people who were betrayed when the EPA and ADF were complicit in keeping the contamination secret.

Further causes for concern are also found on Hunter Waters Guidelines for Development in Drinking Water Catchments | 9

Sand mining and mineral extraction also present potential risks to groundwater quality within the groundwater catchments. Onsite sewage systems in and around the groundwater catchments are also of concern as unsewered residential development continues to expand in these areas, increasing the potential for the discharge of effluent directly to land within or close to the drinking water catchments.

Another area of concern is the amount of dust and air pollutants that will be caused from the proposed sand quarry.

The disturbance of these sand beds could also potentially disturb unknown quantities of contaminants which will impact heavily on the quality of life of the local residents in the form of dust and the air we breathe, water quality, noise pollution and increased traffic problems and damage caused to roads used by heavy vehicles.

Pursuant to the Conveyancing Act 1919 (NSW), Hunter Water as a prescribed authority may, with the consent of the landowner, create covenants over parcels of land within Hunter Water's Special Areas to protect water quality from inappropriate development or activity. A covenant is a legally binding instrument which restricts the uses of the land on a case-by-case basis, in response to specific circumstances. Covenants are either 'positive,' whereby the land owner is directed to undertake a specified activity on that land; or 'restrictive,' whereby the land owner is not permitted to undertake specified activities on that land.

I believe the guidelines set out by Hunter Water in accordance with the Conveyancing Act 1919 (NSW) as a prescribed authority to take measures to "protect water quality from inappropriate development or activity" would serve the people of this electorate well and I believe that no development of land in and around the Red Zone should be able to take place until more is known about the implications to health and the environment and certainly no land in the form of sand should be moved from those areas further increasing the potential risk of contamination.

It is irresponsible, reckless and surely a breach of the Contaminated Land Act 1997 to knowingly move toxic land from one place to another for commercial purposes without proper remediation or rehabilitation of the land, putting fellow citizens at risk.

Contaminated land: Role of the Environment Protection Authority

The *Contaminated Land Management Act 1997* (CLM Act) sets out the role of the EPA and the rights and responsibilities of parties it might direct to manage significantly contaminated land.

The *Contaminated Land Management Regulation 2013* (CLM Reg) prescribes a number of matters for the purposes of the CLM Act.

Significantly contaminated land

If the EPA has reason to believe that land is contaminated and that the contamination is significant enough to warrant regulation, the agency may declare the land to be 'significantly contaminated land'.

The former declarations of land as investigation areas and declarations of remediation sites are taken to be declarations of significantly contaminated land on or after 1 July 2009.

Section 12 of the CLM Act defines matters to be considered by the EPA in assessing a site to determine whether or not to declare the land to be significantly contaminated including

- whether the substances have already caused harm **Affirmative**
- whether the substances are toxic, persistent or bioaccumulative or are present in large quantities or high concentrations or occur in combinations **Affirmative**
- whether exposure pathways are available to the substances (that is if there are routes open to the substances allowing them to move from the source of contamination to human beings or other aspects of the environment) **Moors Drain, Dawsons Drain, Fourteen Foot Drain, Ten Foot Drain**
- whether the uses to which the land are currently being put are likely to increase the risk of harm from the substances to uses on adjoining land (such as child care, dwellings or domestic food production) **Disturbing sands from the proposed Sand Quarry within the contaminated Zone could cause further harm to human health through increased exposure to dust particles containing contaminants which could be breathed into the lungs.**
- whether the approved uses of the land and land adjoining it are such as to increase the risk of harm from the substances **Removing the sands could run the risk of the increasing the the contamination area further westwards by removing the natural barriers and**

filters provided by the Dunes.

- whether the substances have migrated or are likely to migrate from the land If the sand
is removed without rehabilitation or remediation the contaminants will be transported to another area
unbeknown to local residents.

Along with the matters listed in section 12 of the CLM Act, the EPA may also consider site-specific factors which were unchanged in the 2009 amendments to the Act

The *Contaminated Land Management Act 1997* clearly states the role of the EPA and the rights and responsibilities of parties it may direct to manage significantly contaminated land.

Considering the above criteria and the affirmative answer to all of these questions on whether the substances are toxic persistent or bio-accumulative, whether exposure pathways are available to the substances, whether the uses to which the land are currently being put are likely to increase the risk of harm from the substances to uses on adjoining land, whether substances have already caused harm and finally whether the substances have migrated or are likely to migrate from the land, I think it would be foolhardy to go ahead with such a project and be facing further possible problems and liability in the future related to the lack of foresight and care needed to properly contain and manage the current problems faced in light of the contamination of state lands by the ADF.

Thank you for the platform to voice my concerns and I hope that positive changes may come from these suggestions and please feel free to contact me in regards to my submission.

Yours Sincerely

Joshua Cowell