

## May Patterson

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**From:** Howard Reed  
**Sent:** Friday, 22 June 2018 10:55 AM  
**To:** May Patterson  
**Cc:** Lauren Evans  
**Subject:** FW: Submission on the proposed Sutton Forest Quarry (SSD 6334)  
**Attachments:** Sutton Forest Proposed Quarry Water Quality and Aquatic Ecology 21 June 2018.pdf

One more.

Howard

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**From:**  
**Sent:** Thursday, 21 June 2018 11:55 PM  
**To:** Howard Reed <Howard.Reed@planning.nsw.gov.au>  
**Subject:** Submission on the proposed Sutton Forest Quarry (SSD 6334)

Dear Mr Reed, please find my attached submission for the proposed Sutton Forest Quarry.

Best wishes,

Director Resource Assessments Resource Assessments & Compliance

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21 June 2018

Attention: Mr Howard Reed,

Dear Sir,

Submission Regarding Environmental Impact Statement (EIS) by Sutton Forest Quarries Pty Ltd, SSD 6334.

On behalf of myself and the Southern Highlands community (including Sustainable Southern Highlands and Save our Sandz) I am making this submission for your consideration. It is in response to the EIS for the Sutton Forest Quarries Pty Ltd (EIS) and the construction and operation of a proposed sand quarry in Sutton Forest, NSW.

This submission is based on a brief examination of the EIS. I was only provided the EIS documents two weeks ago, in a very short period for public comment, and given the complexity of the issues and sensitivity of the environment, I am unable to provide an adequately detailed submission.

I object to the proposal on environmental grounds and my recommendation is that the development application should be rejected. In my opinion it will cause water pollution and damage to high conservation-value wetlands of a considerable scale.

In my opinion the EIS documents that I examined are grossly deficient. My expertise and my submission are focussed on the surface water and aquatic ecology aspects of the proposed quarry and its potential environmental impacts. My following comments are based on a very brief amount of time to review the EIS documents, and thus my comments are provisional. Given the risk to the waterways and aquatic ecosystems, I strongly urge that a longer review period is provided to fully understand the issues posed by the proposed development.

## **Surface Water Assessment.**

### **1. Inadequate water samples and array of tests**

The water quality for the EIS (Surface Water Assessment: Table 2 Water Quality Test Results and Trigger Values) was based from three sampling sites (WQL1, WQL2, WQL3) on two occasions (August 2013 and March/April 2014). I consider that this is a grossly inadequate sampling intensity for an activity that I consider risks causing considerable water quality problems. If the quarry was to be constructed, these 6 samples would become the sum total of 'before data'. They were also collected many years ago. Given that Long Swamp is an aquatic system of very high conservation significance, having only 6 samples of water, from many years ago, to form an adequately detailed understanding of its water quality regime is unacceptable.

In addition, the water quality tests in Table 2 included only 6 water quality attributes (pH, EC (salinity) phosphorus, nitrogen, oxygen, alkalinity and suspended solids). Such an array of tests is also inadequate. In my opinion the sampling should have included a larger number of sampling sites, under a range of weather and waterway flow conditions, and should have included a much larger

selection of water quality attributes. The attributes should have included turbidity, suspended sediment; major anions and cations (potassium, calcium, magnesium, sodium, chloride, bicarbonate, sulfate) a selection of dissolved and total metals (such as: iron, manganese, aluminium, zinc, nickel, barium, strontium, copper, lead).

## **2. Inappropriate Water Quality Targets for sediment basin discharges**

Table 12 of the Surface Water Assessment provides water quality targets for the proposed quarry sediment basins. Section 6.4.1.2 explains that during the operation phase of the quarry the water quality targets of Table 12 are recommended for the discharge of stormwater to the receiving environment. I consider three of the water quality attributes to be inappropriate and pose a high risk of damaging to the downstream environment. These three attributes are pH (6.5-8.5) and total suspended solids (<50 mg/L) and Salinity (EC) <350 uS/cm. The EIS text suggested that these targets could be used in a site specific Environmental Protection Licence (that they suggested are used as performance targets by the EPA). In my opinion these recommended water quality targets are environmentally dangerous and would damage the downstream environment. Given that the development would need to satisfy the SEPP Neutral or Beneficial Effect on Water Quality (in the Sydney Drinking Water catchment) the suggested discharge targets would be attempting to legitimise the water pollution from the quarry.

## **3. Inappropriate Water Quality Triggers for Long Swamp Creek Endangered Ecological Community**

One of the largest environmental issues of concern, in my opinion, in the EIS are the suggested 'Water Quality Triggers' suggested for Long Swamp Creek (Table 13 'Stream Water Quality Investigation Triggers'). I was also alarmed that the text of this section of the Surface Water Assessment failed to acknowledge that Long Swamp Creek is an Endangered Ecological Community (EEC) – Temperate Highland Peat Swamp on Sandstone. Such peats swamps are endangered biodiversity 'hotspots' that are also highly fragile. I regard such systems as amongst the most significant aquatic systems, in term of their conservation significance, in Australia. The Long Swamp EEC also contains several flora and fauna species that have NSW and Commonwealth listing (as rare or threatened species). The EIS provided no guidance on how impaired water quality and disturbance to natural flow regimes, due to the quarry construction and operation, could cause damage to the Long Swamp EEC and its resident species. In my opinion the water quality targets have been adopted from the 'default' ANZECC (2000) Australian Water Quality Guidelines without any consideration for the sensitivity of the potentially highly sensitive nature of the endangered aquatic ecosystem. I am greatly concerned that such water quality targets would be a major risk of damaging the health of the Long Swamp EEC and for the many species of flora and fauna (of conservation significance) contained within it. A far more detailed study is urgently required to monitor the water quality requirements of the Long Swamp EEC. The recommended procedure in ANZECC (2000) explains that monthly sampling over 2 years is required in reference site locations to calculate site specific water quality triggers (based on the 80<sup>th</sup> percentile of most attributes).

## **4. Lack of detail in an 'Integrated water management strategy'**

The executive summary of the EIS claims that potential reductions in water quality could be managed through the implementation of an integrated water management strategy. No detail was provided on such a strategy, and given my concerns listed above, I have no confidence that the development will be able to prevent have operation water pollution issues that will cause significant water pollution and loss of aquatic biodiversity to the Long Swamp EEC.

## **5. The quarry development provided a clear admission that it will fail the Neutral or Beneficial Effect on Water Quality (NorBE)**

In my opinion adequate detail is provided within the EIS documents that suggest that the quarry development, in both the construction and the operational phase will be likely to cause substantial degradation to catchment water quality and will consequently fail the NorBE test. The development is within the Warragamba Dam (Lake Burragorang) drinking water catchment. It is the largest water storage reservoir for the Greater Sydney area, providing water for more than 5 million people. A comparison of the water quality of Lake Burragorang (see the 2016 Audit of the Sydney Drinking Water Catchment) with the suggest sediment basin water quality targets (Table 12 of the Surface Water Assessment) and also the water quality targets for the Long Swamp EEC (Table 13) actually show that the operation of the Quarry will provide a negative effect on water quality. As one example, both Table 12 and Table 13 have much higher salinity (<350 uS/cm) as a recommended target than is generally measured in the Warragamba Dam sampling sites (generally under <200 uS/cm). Remarkably, this signifies that the proposed quarry development is actually designed to deliver degraded water quality to the drinking water catchments and storages.

I look forward to further communication on my comments relating to this proposed development. Once again, I also request further time to examine the EIS documents more thoroughly.

Regards