

SUBMISSION—CUSATO --169 GLEN EWAN RD **SANCROX QUARRY EXPANSION—HANSON**

SUBMITTED By Michael Cusato
169 Glen Ewan Road , Sancrox NSW 2446

Introduction:

We are located along the North/West boundary of the proposed quarry expansion site. Our property has approx. 1km of boundary adjoining this site. We have been residents of that address for more than a decade.

Transparency:

Until 3 weeks ago when a neighbor alerted us of the quarry expansion plans I had no idea of the proposal and had ZERO correspondence or consultation regarding this from the Hanson Group or anyone else.

It is my belief that if any one of the stakeholders being neighbors or otherwise should have been notified regarding this project it should have been us.... who live next door.

The consultation process regarding this expansion process has been as non-transparent as anything I've ever seen.

As mentioned above, as a direct neighbor of this site...we have not been notified as part of any consultation at all.

Amenity:

I've been a local councilor for 7 years. Recently resigned. During that time I've read numerous reports regarding our local Urban Growth Management Strategy..(UGMS).

Much of which have addressed the growth of the Sancrox precinct within our local government area (LGA). This expansion project is smack bang in the middle of our future growth area. This current quarry was in a good spot 30 + years ago but not now. If the expansion is approved it will end up with a 2km long, 500m wide, 80/100m deep hole right in the center of our LGA. With prevailing winds being very variable in this area and with potential growth areas surrounding this quarry the expansion will totally ruin the amenity of the precinct. Not to mention the local urban areas that already exist eg Thrumster, Bushland Drive and Cassagrains to name just 3.

Common sense tells me that to end up with this size hole in the ground at that site is not what the community would expect of the NSW Department of Planning.

The above still doesn't mention the magnitude of the concrete plant and the ash felt production as well as the rock crushing operation planned for the site. These 3 operations would make the local amenity even worse.

WATER:

Water is my main concern. Regardless of anything else, gravity tells me that drawdown of the water table and or aquifer is eminent if this is approved. Below is a comprehensive list of points put together by myself and other local stakeholders to outline our concerns.

Also attached are pictures of our operations on our property. We have a substantial horticultural operation at 169 Glen Ewan Road. We grow numerous lines of vegetables for the local market as well as Markets in Sydney, Newcastle and Brisbane. We have a 50 Meg irrigation license, which includes a 90-meg irrigation dam and a bore.

With an approval for Hansons to excavate over 40 metres below sea level next to our property we have NO guarantees that our horticultural operation will not be affected. We need an iron clad guarantee that we will NOT be affected when it comes to our water allocation and usage.

1 Groundwater Impacts

The groundwater report contained in the EIS provides detail and diagrams based upon a “base case”. Nowhere is the base case defined or is there any comparative modelling between the “base case” and the pre-development and post-development scenarios.

*The report states that the quarry will have a groundwater inflow are between **40,000 and 60,000 litres per day** which equates to **15 - 22 megalitres** per annum.*

There are no mitigation measures proposed within the EIS for the loss of this volume of water from the groundwater aquifer.

The groundwater report has been prepared based on the steady-state analyses of a pre-development scenario of no quarry and the determination of the amount of drawdown expected at the time the excavation has been completed.

- The following limitations of the report should be noted:
 - *The model does not include a transient analysis (groundwater level and flow estimates varying over time). Therefore, the model calculated pit inflows are stabilized, long-term values that do not include groundwater in storage effects. These storage effects, although temporary, **could increase the current estimates significantly** within the initial stages of the quarry expansion where large amounts may be released from aquifer storage.*

(Refer Dot point 4, page 44 of the report.)

- *The storage effects during the drawdown phase appear to be substantial.*
- *Calculations undertaken based upon the base case equipotentials referenced within Figure 5.4 when combined with the expected groundwater drawdown as shown within figure 5.5 indicate that the volume of in situ material affected by the drawdown is in excess of 65 million cubic metres.*
- *Assuming an average porosity of 0.1 (10%), drawdown of the storage effects would add an additional 220 megalitres per annum or over 610,000 litres per day to the groundwater take during the quarry expansion phases.*
- *It should be noted that an increase in the average porosity of the surrounding soils would similarly result in the increase to the groundwater inflow during this phase.*
- *The impact of the extraction of existing standing groundwater has not been considered within the groundwater report.*
- *The management/disposal of the additional extracted groundwater similarly has not been considered within the groundwater report.*
- *Similarly, the drawdown estimates are long-term, stabilised estimates that represent the largest cone to be formed by the quarry dewatering. In reality, the cone of depression will **expand gradually** over time. (dotpoint 5, Page 44 of the report)*
- *The report acknowledges that the extent of the drawdown will continue to increase over the extreme long-term post-excavation of the quarry. This suggests that, although the drawdown estimates are long-term, they do not represent the ultimate drawdown of groundwater resources that will be experienced by the surrounding land.*
- *The current model is not sufficiently detailed to identify pit wall – groundwater issues and does not include additional estimates for pit slope or pressure reduction. Should such systems (e.g. Horizontal pit wall wells) be required, groundwater flows would be higher than current estimates. A more detailed*

analysis including transient flows and more detailed pit geometry configuration will be required to assess such issues. (Dotpoint 7, Page 44 of the report)

- *Any works resulting in increases to the property of the surrounding soil and rock Strata will result in further groundwater inflows into the pit, as well as an increase to the area affected by the drawdown of groundwater surrounding the site. It is essential that additional modelling be undertaken to quantify the worst-case scenario for groundwater drawdown as a result of this development to allow the full potential impacts of groundwater drawdown to be assessed on surrounding properties.*
- *The report notes that the excavation for the quarry will results in intersection of groundwater, causing substantial drawdown of the water table in the area surrounding quarry excavation.*
- *No discussion has been included within the report on the impacts of this drawdown groundwater on the surrounding properties. In particular the effect on the existing vegetation including trees and pasture with increased depth to groundwater as a result of the quarry expansion.*
- *The report does not include the expected changes to the groundwater equipotentials as a result of the drawdown within the excavation area.*
- *The report does not provide any indication on what effects the drawdown will have on underground water subsurface movements generally and in particular, the risk of saltwater from the Hastings River being drawn southwards towards the excavation resulting in salinisation of the Hastings River floodplain.*
- *An analysis of the expected equipotentials following the excavation of the quarry based on the information provided within figures 5.4 and 5.5 of the report indicates that the expanded quarry will act as a localised sump for groundwater flows. The plan showing the existing equipotentials indicates the groundwater generally moves from South to North towards the Hastings River, however, when taking into account the expected drawdown as shown within figure 5.5 of the report and generating new equipotentials for the post development case, groundwater flows are significantly modified to be drawn towards the quarry. (Refer Attachment 3)*

- *In extreme cases, groundwater flows appear to reverse in the area to the north and northwest of the quarry resulting in groundwater flows moving southwards from the Hastings River towards the quarry excavation.*
- *The report does not provide any discussion on the impacts of the reversing of groundwater flows. The potential risk that saltwater from the Hastings River may be drawn into the groundwater towards the quarry excavation must be quantified.*
- *The report does not quantify the risk of increasing salinity of the groundwater to the north of the quarry, nor the impact of this on existing vegetation and water uses.*

The report states that the expected groundwater inflow as being modest for a pit of this proposed size, stating the expected Steady State groundwater inflow of 15 to 22 megalitres per year. As discussed above, the groundwater inflow during excavations could reach an order of magnitude higher. No discussion on the management of these higher inflows is included within the report.

Final Summery:

Thank you for the opportunity to submit our concerns regarding this quarry expansion. We understand there is a need in all regions for quarry material but we believe there has to be guarantees that the above concerns are addressed. So far they haven't been.

If the State Government and Hansons do not address the amenity and the water issues we believe the only alternative is to find an alternate site. Hansons already have other sites including one at Bago(Wauchope). There are literally 1000's of acres of fringe areas surrounding are beautiful LGA to cater for this project.

Please consider the concerns of are community and not just the concerns of a malty national company with many more options in front of them. Please think of the local community that will be here during this projects operation and long after it is gone.

Regards
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